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EDITED BY
Matteo Treleani & Francesco Zucconi

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Remediating distances

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Matteo Treleani & Francesco Zucconi

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EDITORIAL

ISSUE 03 OCTOBER 2020 Remediating Distances

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According to Walter Benjamin to "bring things spatially and humanly closer" is a social desire which the technical reproduction of art aims to satisfy (2003, p. 255).
At least starting from *The Work of Art in the Age of Its Technological Reproducibility*, media can thus be conceived as technical forms capable of modulating temporal and spatial distance.
Some media propose to bridge the divide between two or more remote subjects, while others underline the gap between here and elsewhere.
Finally, others still –such as immersive technologies– promise to cancel distances and mediation itself.

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The obligation of physical and social distancing imposed over the last few months, due to the Covid-19 pandemic, has subjected a large number of social, cultural, working and educational practices to digital remediation.
This condition provides an opportunity to reflect analytically and critically on the very notion of 'distance' and its relationship to media and artistic practices.
By proposing *Remediating distances* as the title of this issue of *IMG journal*, we have borrowed the successful term introduced by Jay David Bolter and Richard Grusin (1999) in the field of media studies, associating it with a notion that concerns our relationship with space and time. This project takes shape from the union of these terms and seeks to reflect on the ways in which physical distances are remediated.
Why should we talk about *remediation* of distances and not simply about their *mediation* linked to emergency contingencies? Behind this choice lies the idea of not conceiving the media as something that comes *a posteriori* or subordinated to a pre-established physical and social reality. As previously noted by Marshall McLuhan (1994), in his extended conception of communication technologies, and subsequently pointed out by Bolter and Grusin, the media do not represent or reproduce something immediate that precedes them, but participate in the continuous processes of remediation that characterize social practices: "just as there is nothing prior to the act of mediation, there is also a sense in which all mediation remediates the real. Mediation is the remediation of reality because media themselves are real and because the experience of media is the subject of remediation" (1999, p. 59).

In this sense, to speak of the remediation of distances means to reflect on the relationship that is established between technological tools and the dispositives of proxemics interaction characterizing the practices of everyday life: the architecture of a school, the seats of a cinema, road signs, behavioral norms of a given environment, etc. This process of remediation not only shapes spatial issues but also deeply affects our perception of time. Devices that punctuate the duration of the day model our understanding of time: the clock, the bells, the alternation of day and night, the lunar cycles, etc. From the invention of writing to digital devices, technology has influenced the perception of space and time (Stiegler, 2018). Remediating distances thus means to consider the technical and formal infrastructures that are necessary to modulate the in-between, approaching distant subjects or objects, manipulating movement, and even allowing oneself the illusion of being able to stop, accelerate or reverse the process of an event. The recent industrialization of traces (Jeanneret, 2020) can therefore be seen as a tendency to compress or decompress spatial as well as temporal distances (Treleani, 2017). The tendency to propose virtual reconstructions of archaeological sites, for example, shows the will to be immersed in the past, thus abolishing temporal distances. Digital time machines (Kaplan, 2015) are devices offering immersive anachronistic experiences that bypass distance in its temporal shape.

Following the further developments of Grusin's thought, we encounter a 'radical' conception of mediation, in which this term concerns more than just technologies. In a radical conception, mediation is always at work, in our encounter with others and, beyond us, as a natural process: "all bodies (whether human or

nonhuman) are fundamentally media and life itself is a form of mediation" (2015, p. 132). According to this perspective, the need for physical distancing during the pandemic derives from a simple observation: in a globalized world that is characterized by the hyperstimulation of sensibilities and intersubjective relations, the medium does not coincide exclusively with a technological instrument of communication: any object or surface can be seen as a medium. We are media ourselves, in our ability to contract and spread the virus.

In the context of the Covid-19 pandemic, the theoretical question of immunization, already recurrent in philosophical reflection (Esposito, 2011; Sloterdijk, 2011; 2014; 2016), has therefore manifested its multiple links with the media. On closer inspection, even Giorgio Agamben's (2020) stances against political protocols and digital technologies used in the professional and educational field during the pandemic end up confirming how the biological problem of the spread of the virus intertwines with the social and media circulation of subjects and information. If our own bodies can be considered as the medium of the virus (Maiello, 2020), during the phases of greater spread of the pandemic, digital media have performed a function of community glue as well as biological and social immunization (Zucconi, 2020). In this sense, physical distancing and remote communication technologies have constituted a strategy aimed at limiting the circulation of the virus without completely annihilating intersubjective relationships and social space.

If a radical network of mediations is a matter of fact in the analysis of social practices, the pandemic made visible what is at stake when digital devices replace other physical and social processes of mediation. Technical, industrial and economic

structures intervene in our social relations and are strongly criticized. But it is precisely the attention paid to these technical devices that can offer us the opportunity to observe, understand and discuss the norms and practices that we have naturalized. In this sense, through the expression 'remediating distances' we intend to reflect on how the new media reconfigure preexisting communication devices already used to connect or disconnect physical environments, geographic spaces near or far. As mentioned above, the reflection goes so far as to investigate the way the interface of *Zoom*, *Microsoft Teams*, *Skype* or other forms of meeting at a distance reshapes but also represents and recalls the arrangement of in-person meetings.

Summing up, the expression 'remediating distances' can be interpreted in two ways. On the one hand, it may be tempting to say that any technological device is a 'remedy': the lack of physical contact—that is, the fact of being in the same room—is achieved through audiovisual interaction, through a digital technology. Therefore in order to make contact possible through a media device, the latter will give us a sense of immediacy by hiding itself. Within this vision, both the live encounter and its technological remediation tend to be naturalized. On the other hand, distance is remediated precisely because it is represented by figures and elements that signify it within the media. The spatial and temporal coordinates, as well as the arrangement of the actors of the initial situation are here explicitly reconfigured according to the technical and sensorial characteristics of the new medium. On one side, thus, we could say that the notion of immediacy, the transparency of the medium, is meant to abolish distance, while on the other side, the presence of the medium reminds it in its new configurations.

The process of remediation of distances is therefore charged with environmental implications. The technologies do not simply connect two or more points on the map, they establish and exploit channels of contact, both material and immaterial; they install stations or at least define positions where the user can make their own media experience with variable forms of sensory involvement, and according to different standards of comfort. As expressed in Gilbert Simondon's thought, each technology enters into a relationship with an *associated milieu* that "mediates the relation between technical, fabricated elements and natural elements, at the heart of which the technical being functions" (2016, p. 57). Media and especially digital media reconfigure the public or private environment in which the spectator or user finds himself or herself when meeting others and the world. In this sense, any attempt to remediate distances seems to coincide with a "relocation" of the experience (Casetti, 2015).

But speaking of environment, it becomes necessary to consider the impact on the Planet of any movement in space, the energy required to run the World Wide Web, and all the technological infrastructure through which we communicate remotely. It is no coincidence that some of the most important contemporary scholars highlighted the multiple links between the Covid-19 phenomenon and climate change (Latour, 2020; Mbembe, 2020). From our point of view, to open a reflection on the forms and techniques of distance management means to deal indirectly with the issue of the Anthropocene: to reflect on the forms of geographical dislocation and media aggregation that characterize the long and very long-term presence of man on Earth.

Long before Covid-19, words from biology and microbiology were used to describe and study the functioning of the media. The term 'viral' has been widely and freely employed as a metaphor to describe the dynamics of the dissemination of information and images on a large scale (Nahon & Hemsley, 2012; Mills, 2012; Sampson, 2012). At the same time, other studies have enriched the fields of media studies and visual studies by reconstructing the history of computer viruses (Parikka, 2007) or investigating the transformations of visual culture as biological processes (Mitchell, 2011).
During 2020, numerous books, journal issues and essays were published to reflect on the social and political aspects of the pandemic and, therefore, on its media and visual implications. Given the impossibility of offering an exhaustive survey, we want to mention the supplement of *Critical Inquiry* focusing on the environmental, political, and economic consequences of the spread of the pandemic, with writings by Lorraine Daston, Catherine Malabou, Slavoj Žižek, N. Katherine Hayles and many others (Scotch, 2020). In the same months, some scholars used the lens of philosophy and social sciences to critically reflect on the biological but also aesthetic character of the pandemic (De Gaetano & Maiello, 2020), while a wide range of disciplinary perspectives investigated the complex relationships between face, mask and screen (Carbone, 2020; Leone, 2020; Lorusso, Marrone, & Jacoviello, 2020; Parikka & Soncul, 2020). Other studies examined, from a technological and social point of view, how the media have operated and are becoming a response to the global crisis (Keidl, Hediger, Melamed, & Somaini, 2020; De Luca & Spalletta, 2020), or analyzed the impact of the pandemic on the theories, forms

and practices of cinema (Baer & Hanich 2020; Barra & Noto 2020), and television (Sala & Scaglioni 2020).
Compared to such studies, the objective of this volume is not simply to analyze the functioning of the media during the pandemic. With the launch of the *Remediating distances*' Call for Papers in summer 2020, we referred to a vast and multifaceted theoretical and methodological framework, inviting the authors to draw inspiration from the pandemic contingency in order to push their gaze towards the future or towards the past. The response was extraordinary. The result is not a monograph on the pandemic but a relaunch of those research projects that, in recent years, have critically reflected on the forms of "real-time communication with a physically remote location" (Manovich, 2001), on the "logistics of perception" (Virilio, 1989), or on the "war at a distance" (Farocki, 2004).
The monographic session of this issue of Img Journal questions the dialectic between 'distance' and 'proximity' in the configurations and reconfigurations made possible by new media from a long-term historical and theoretical perspective. As Carlo Ginzburg (2019) pointed out, within Western culture the term 'distance' takes on both a concrete and a metaphorical meaning and its social, ethical and political implications need, today more than ever, to be investigated. To do so, we asked the various authors to extend the time horizon of the research beyond the limits of the recent discovery and diffusion of the virus to reflect on the mediatic character of architectural, military, artistic, cinematographic, performative, and educational projects that call into question the issue of distance. What emerges is a constellation of reflections that draw on current experience to analyze the ways in which different

forms of media have stimulated the spectator's imagination, leading him to explore places near and far. The overall result is a reflection on the capacity of media to detach and approach, separate and join, screen and reveal.
As in previous issues of the journal and due to the composite nature of the contributions, the index adopts an alphabetical order that leaves the reader the pleasure of choosing his or her own route, perhaps guided by the keywords that accompany each essay. To conclude this editorial, however, we would like to mention a possible path that winds it way through the monographic contributions of *Remediating distances*.
The essays written by Bruno Bachimont and Pietro Montani set the theme of the issue from a philosophical point of view: the former adopts a phenomenological perspective to observe how the technical device modifies our being in the world; drawing inspiration from a neuroscientific experiment, the latter reflects on the importance of technical distancing for the emergence of a meta-operative agency as a key element of the anthropogenesis. A philosophical approach also characterizes the essay written by Cavallari, who observes how the social uses of digital media show that presence is the effect of the organization of several distances.
Through different disciplinary perspectives, a series of papers bring out the infrastructural character of the mediations through which spatial distances are managed and temporal performances are optimized. From architecture to logistics, the effects of the pandemic make visible the mediations underlying daily practices. The mechanism through which Amazon managed its deliveries to customers in the first phase of the pandemic

is an exemplary case study (Salles). The visual elements used to produce physical distancing in railway stations (Chevalier) and the interior architecture of houses, when the barriers between work and home space are broken by the pandemic, also show the emergence of architectural mediations that modulate physical communication in everyday environments (Charitonidou). The infrastructural processes of digital machines thus have to be questioned: Heiko Schmid looks at them through the lens of magic, arguing that the working structure of digital machines can be embedded within the long history of magic conceptions.

The remediation of distances is loaded with geographical and political implications. Nicola Perugini shows how the notion of the human shield is a way to modulate the distance between different actors in war and to legitimize the use of violence. In particular, studying the human shield as a "human screen", it becomes possible to understand how what is usually called a human shield functions simultaneously as a human weapon and a media technology. According to Iain Chambers, distance is an eminently geographical and political fact. The bodies in motion of the migrants highlight the role of the Mediterranean as a medium that can be conceived both as a form of connection and as a barrier. Through a confrontation with artistic production and post-colonial theoretical debate, he invites us to reflect critically on pre-established and presumptively unchangeable cartographies and chronologies. Even the urban spaces of our cities are subject to practices of remediation. In this regard, Paola Puma investigates social distance through the notion of "non-place", proposed by Marc Augé, and reconceives it in an original form in reference to the spaces and times of city life. In her essay,

Karen Pinkus observes some spaces in New York City during Covid-19 and reflects on the pandemic as a form of anticipation of the effects of climate change. The investigation of urban spaces thus becomes a reflection on time; our present tends to coincide with a countdown of which we are impassive spectators. What emerges is the point of view of a media ecology capable of identifying the links between space and time management technologies and the sensitive topic of climate change. Francesco Casetti studies the specific media environments in which we have spent and are still spending these final months of 2020. The mask and the screen are therefore conceived as theoretical objects for a reflection on the mechanisms of creating "existential bubbles" that limit our actions and interactions with others but, at the same time, make us feel safe. Ways of constructing digital environments in which it is possible to meet or, in any case, to arouse and experience effects at a distance is central in a number of essays. Several authors test the distance/proximity dichotomy through a variety of case studies. We encounter an archaeological perspective aimed at describing the formal dispositives through which, in Western culture, distance and proximity have been produced as visual effects (Acquarelli). Emanuele Arielli focuses on a very specific aspect of digital remediation practices and remote interaction: the relationship between exposure and control of one's own image; the possibility of establishing how the other will see me, along with seeing myself being seen by the other; the redetermination of performative affordances of the spaces of communication. The functioning of immersive environments, where distances seem to be denied or reconfigured in the name of immediacy, is analysed using the tools of semiotics (Biggio).

The social and media practice of travel selfies is questioned by Kris Belden-Adams who argues that these photographs are driven by a different relational impulse than traditional travel images. Elena Moskatova reconceives the construction and functioning of media environments in relation to the philosophical question of immunization to which we made explicit reference in the first part of this editorial.
The phenomenological experience of time, the problem of chronologies, and the countdown mechanism are at the center of many articles. Indeed, the remediation of time distances is the explicit focus of two contributions to the volume. Ferdinando Gizzi develops a history and archaeology of the technical representations of the divine. Pietro Conte analyzes the experiences in virtual reality that promise reunions with the dead. The remediation of distance arises here as a continuous desire to use increasingly advanced technologies to approach or cancel the threshold with the hereafter.
Distance learning technologies and practices are expressly analyzed in the essay of Veronesi, Chizzoni, Raineri, Schmalz and Taferner. If the software and interfaces of remote interaction constitute the most explicit case study to investigate the relationship between media and pandemic, the understanding of these forms of communication is further enriched by the different historical and theoretical perspectives that characterize the volume. The archaeological investigation of the technical and formal dispositive through which people have interacted at a distance over time, allows us to reflect on the quality of mediations in contemporary educational and professional practices.

For this issue, we are also pleased to welcome two artistic projects. Farah Saleh approaches physical distance with an interactive dance video project featuring eleven Palestinian performers, some living in the diaspora, others in Palestine. This project underlines that distance is always a political issue. The performance re-conceives and re-appropriates the digital device as a tool for inclusion that challenges military and political barriers. Elsa Gomis interprets the topic of distance with a video installation that compares two anachronistic temporalities: through the reuse of family footage, she illustrates the feeling of grief and attempts to remediate the distance between present and past, the living and the dead. With the aim of elaborating this distance, she films herself watching images of her grandmother shot at the beginning of the 1960s. While watching these images, she mimics a connection that no longer exists, and creates a new relationship that can only be found now through fiction.
The papers published in the following pages identify a theoretical and practical legacy of the terrible historical phase that we are facing in the problematic management of distances. The multidisciplinary and interdisciplinary character of the contributions, as well as the ethical and political positions that emerge in the essays, do nothing but restore the abstract and concrete, in a certain sense binding, character of the issue. The territories, temporalities and experiences investigated by the authors show how physical and social distances are linked to a series of practices, devices and norms capable of structuring spaces, times and forms of life. Our impression is that this kind of approach is the most suitable to continue to reflect on distances as mediation and therefore on the forms of remediating distances.

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ON THE DISTANCE AND PROXIMITY OF A VISUAL OBJECT AS A CHIASMIC NOTION

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ESSAY 41/03

FRAME EFFECTS
ENUNCIATION
PAINTING
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VIRTUAL REALITY

Through a series of short analyses of visual objects the article questions the nature of the dialectic distance/proximity. This dialectic actually concerns a boundary that is at the same time necessary for its articulation, but also only partially expressible within it: the boundary between spectator and observed object/image/medium. By trying to understand what distance is through the definition of some of its opposite forms (immediacy, oceanic feeling, Merleau-pontian flesh of the world), we will look for an answer to this complexity through the intelligence of the images themselves. The chiasmic nature of the relationship between the seeing subject and the seen object therefore seems to become a central theme.

IN FRONT OF THE IMAGE

The wish to reduce the distance between the image and its user has a very long history. It is not a question of thinking about the physical distance between subject and object, but rather about how much the dialogue that is established between them can lead to a confusing of the boundaries that apparently divide them. So the genealogy in question is that of the precarious border between two spaces, that of the spectator and that of the image, ontologically distant, but specularly constituent. So much so that the image is redefined every time the subject looks at it, so that the spectator receives from the image a certain effect of subject that is also a spatial position, to which he can adhere or not adhere. The break that creates distance (the being able to say "this is an image!") is also the trigger for a continuous desire for rapprochement, founding the dialectic of the aesthetic relationship between the viewer and the viewed.

The dialectic that we suppose here does not necessarily want to take up the question from a strictly philosophical perspective from which access to the object, the experience of the object itself, can only be mediated, that is, summarily, the condition to which the Kantian *a priori* refers, the pre-experiential condition of a power of knowledge. In the same way, it is not directly inspired by a Husserlian phenomenological point of view that focuses on the intentionality of consciousness –which is always consciousness of something– that makes the appearance of objects in their phenomenality possible: in other words a distance that is indispensable for the visible to happen. Therefore, if this article is placed against the background of these founding problems that focus on distance as the very presupposition of the distance/proximity articulation, it cannot but question the aporiae of the dialectic we mentioned before. Every process of mediation seems to be consubstantial with a process of immediacy, building in fact an irresolvable tension between the two polarities of the mediate and the

immediate: if theoretically productive, these two polarities are never empirically given.

In a more strictly semiotic jargon, the process of *débrayage*, which frees the utterance and makes it usable within space-time boundaries, thus rendering it transparent and distant, will inevitably be accompanied by a process, however minimal or unnoticed, of *embrayage*[1], i.e. a return to the effects of enunciative subjects, inscribed in the image itself, but projected outside it, recreating a dimension of opacity that somehow questions distance. This release and reconnection to the imponderable situation of presence has to do with the effects of distance and proximity that can be created by mediations. Among these effects, therefore, more than a dialectic, a form of vertigo is established, around which a weave made up of polarities such as transparency and reflexivity and other concepts such as mediation (with the various suffixes hyper, re etc.), presence and immersion, is worked.

SOME NOTES ON IMMEDIACY

Let us try to grasp what it means to be distant from an image, starting from the opposite meaning. Frequently quoted in support of research hypotheses or in a critical sense, Bolter and Grusin's passage on immediacy says:

> We have so far used the term immediacy in two senses: one epistemological, the other psychological. In the epistemological sense, immediacy is transparency: the absence of mediation or representation. It is the notion that a medium could erase itself and leave the viewer in the presence of the objects represented, so that he could know the objects directly. In its psychological sense, immediacy names the viewer's feeling that the medium has disappeared and the objects are present to him, a feeling that his experience is therefore authentic. (Bolter & Grusin, 2000, p. 69)

Fig. 1 Domenico Zampieri called Domenichino, *The Archery Contest of Diana and Her Nymphs*, 1616, oil on canvas, cm 225 × 320, Galleria Borghese, Rome. Retrieved October, 15, 2020 from https://en.wikipedia.org/wiki/Archery_Contest_of_Diana_and_her_Nymphs

The question is therefore whether one can consider immediacy thus defined as the dialectical opposite of distance. And this effect of immediacy, when is it produced? Is it the case when the aesthetics of the image conceal the intervention of the person who produced it, triggering an intensified effect of reality? Or when the image remains ambiguously suspended between its space and that of the spectator? Or when it tries to imitate the sensory perception of the sensitive world, embracing the viewer in the flow of images, following the more or less finely captured body movements (compare today the different experiences that go under the name of virtual reality)?

In the 'sensible' logic of images, the semantic axis consisting of the distance/proximity opposition hardly seems to be practicable within a simple polarity. Besides the fact that there can be a constituent or attractive distance (that of the subject of power or more generally of worship) and a repelling proximity (that of an abject image), there are mechanisms that produce this complex interweaving that are specific to the very intelligence of the images. The aim of this article will be to briefly analyse some of them in order to draw out some perspectives for study and some conclusions.

In the rooms of the Galleria Borghese, Domenichino's large painting, *The Archery Contest of Diana and Her Nymphs*

(1616), provides what could be a perfect example of how the frontier between the space of the image and that of the spectator is managed in a dimension of distance (Figure 1).

Although in a completely original way, reconstructing a typically male hunting scene with female figures, Domenichino depicts a well-known mythological episode –an archery competition inspired by the Aeneid– where the characters are arranged in a theatre of action, absorbed in watching and wondering at the virtuosities of archery and bird hunting, with an extraordinary movement in the dog held back by a woman in the act of launching into the capture of the prey. We could say that the scene takes place without explicitly considering the spectator's presence, reiterating the boundary between the object being watched and the subject watching.

In the lower part of the painting, however, this enunciative situation is overridden by what seems to be the only gaze that does not go towards the prey in the hunt, that of a young bather who, ignoring the call of the figure beside her, persists in an intense stare which projects outside the painting, as if immersed in looking at something in the museum room. This figure therefore seems to belong to a different time to that of the painting, as if she were turning her back on the latter, already projected into the present of the spectator's space. The whole painting is affected by this figure, and so is our reading of it, as we look for other clues of this kind, which we have no difficulty in finding, with, hidden among the leaves of the shrubs depicted on the right edge, the gaze of a male who is telling us to keep silent with his finger to his lips, while his companion is spying on the scene. From mere contemplative detachment we suddenly find ourselves plunged into a dialogue of glances that presupposes the secret of the *voyeur*'s condition and a dual complicity: with the male duo hidden among the leaves at the edge of the painting and with the nymphet lolling in water, morally

unspeakable, but impudently and inevitably highlighted by the internal light of the painting.

Does this look towards our space attract us or keep us at a distance? Although it undoubtedly involves us with an effect of unexpected presence, reducing the distance, at the same time it pulls us back to awareness from a momentary credulity, from our temporary suspension of disbelief. Moreover, we are not only faced with the interpellation, a typical gesture of return towards the virtual space of the enunciation that captures the spectator's attention, but also with what we could call an 'environmental' quality of the image: the image is made environment thanks to the multiplicity of times and spaces it encloses.

This stratagem is recurrent in the history of painting, so much so that it has become a recognizable formal structure. It is often used precisely to undermine the detached perception of a painting whose theme is an established religious motif. In the Pinacoteca di Brera, the page holding the book for Saint Anthony Abbot in Veronese's painting[2] is making fun of the solemn structure of the presentation of the saint enthroned, not only throwing the symmetry of the scene into disarray, but also creating a direct contact with the spectator's space. In addition, the large book that the page is holding shields from the saints' gaze the twisting of his head causes his gaze to impertinently exit towards the outside of the painting. None of the saints represented can see the page's face and expression, which are, offered only to the spectator (Figure 2).

In this regard, speaking of this effect of 'looking into the camera' in cinema, where it is much less present than in painting, Casetti rightly evoked the case of the theatrical 'aside', that convention whereby the actor, speaking to himself and therefore sheltered from listening by others, is actually informing the spectator about narrative elements and thus partially including him in the theatrical play.

The viewer "participates in the game while remaining apart from it" (Casetti, 1998, p. 49): although aware of

Fig. 2 Paolo Caliari called Veronese, *Saint Anthony the Abbot with St. Cornelius and St. Cyprian*, 1565-1571, oil on canvas, cm 270 × 180, Pinacoteca di Brera. Retrieved October, 15, 2020 from https://pinacotecabrera.org/en/collezione-online/opere/santantonio-abate-tra-i-santi-cornelio-e-cipriano/

the phantasmagorical nature of the image, the spectator connects by visual contact to the other space-time of the image itself. In this type of connection there is, at the same time, a suspension of the detachment between the work and the observer (by *embrayage*), but also an inevitable awareness of an external role. Inside and outside suspend their own boundaries, reaffirming them. It is not a matter of erasing the medium, as Bolter and Grusin suggested, to explain the immediacy, but somehow just by acting on the nerve centres of the medium, the image triggers this dialectical movement, potentially vertiginous.

OCEANIC FEELING AND THE LOGIC OF ATTRACTION/ PROJECTION

In psychoanalysis Freud calls "oceanic feeling" what a subject one feels when they fully adhere to the external world, experiencing a complete immersion of the ego in the world, i.e. when the boundaries between inside and outside are temporarily blurred. The feeling of ourselves, Freud writes, can be a good example of oceanic feeling. It can also be exemplified in two spheres, that of religion and that of falling in love, situations in which the subject merges with his faith or with the otherness of the loved one. Freud's hypothesis is that oceanic feeling can emerge in those moments in which the newborn child's ancient ego is reactivated.

This ego is still confused with the mass of external sensations, and in the non-pathological development of the child, and then of the adult, it gives way to an ego capable of drawing the boundaries between its own person and the world around it. The original ego of the newborn child survives alongside that of the adult, and this now feeble memory, in the experience of oceanic feeling, nourishes the sensation of a 'return' to an origin.

> Originally the ego includes everything, later it detaches from itself the external world. The ego-feeling we are aware of now is thus only a shrunken vestige of a far more extensive feeling -a feeling which embraced the universe and expressed an inseparable connection of the ego with the external world. (Freud, 1949, p. 14-15)

Oceanic feeling therefore seems to be one of the conditions that moves further away from the concept of distance, deconstructing its own presuppositions since it originates from the disappearance of the sensation of bodily boundaries, the latter underlying the opposition distance/proximity.

Looking, *ante litteram*, for this kind of psychological effect, the period of Baroque painting and architecture experimented, with great inventiveness, with old[3] and new strategies of dissolving boundaries, with great use of *trompe l'oeil* and

Fig. 3 Andrea Pozzo, *Triumph of St. Ignatius of Loyola*, 1685, fresco, Church of St. Ignatius of Loyola at Campus Martius, Rome. Retrieved October, 15, 2020 from https://upload.wikimedia.org/wikipedia/commons/8/80/Frescos_of_Ignatius_of_Loyola_HDR.jpg

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foreshortening. Just think of the phenomenon of *quadratura* at work in numerous ceilings of churches or baroque palaces, for example in the case of the *Allegory of Divine Providence and Barberini Power* fresco in the Palazzo Barberini by Pietro da Cortona or Andrea Pozzo's *Triumph of St. Ignatius of Loyola* in the Church of St. Ignatius in Rome (Figure 3).

The latter fresco in particular plays on the dual movement of attraction and projection effected by the image in its dizzying foreshortened perspective: the architecture in *trompe l'oeil*, through a series of columns, parapets and arches that continue the masonry architecture, captures and draws the gaze upwards, magnifying the central figure of St. Ignatius wrapped in a dazzling light. A whole series of characters set in the threshold of this architecture seem to stand in the way of this ascension, recalling our 'terrestrial' space. The hypothesis is therefore that beyond the *grandeur* of the scene above the believer, it is once again threshold mechanisms that induce the dual movement of attraction/projection, as if these *impasses* that germinate in the spaces of the frame, obstacles to the ascension towards the celestial dimension, constitute the real nucleus of a confusion of boundaries between the space of the spectator and the space of the image. If one can speak of pseudo-oceanic feeling, one can do so considering that it is precisely the duplication and the indication of what is sup-

posed to be eliminated, the boundaries between the two spaces and their avatars, as frames and thresholds, that constitute the suspended time that allows such pseudo-oceanic feeling.

In the Baroque period, the same strategy was found in paintings of rather small dimensions[4] which present images of more intimate fruition: think of Juan Sánchez Cotán's *bodegones*, where the *trompe l'oeil* recess of the niche, combined with the not insignificant contribution of the completely black background, was nothing more than a way to a better 'jutting-out' effect for the the fruits and vegetables represented. By creating a depth effect, therefore, in order to better provide a feeling of projection into the spectator's space, the *trompe l'oeil* frame offers us the co-ordinate of this suspension of two opposite movements (Stoichita, 1997).

It is not dissimilar to the movement in 3D cinema experiences, which exploits the general perspective of the photographic nature of the image at the same time as the jutting-out effects of the figures that appear to move from the screen into the room space. Casetti in his recent book described the mechanism of 3D as an overturning of perspective:

> When an object extends off the delineated space of the screen and into the theatre, the object attains a real presence and is in an actual relationship with the apex of the vision, which, instead of being an arbitrary point, is now the actual viewer's eyes. (Casetti, 2015, p. 147)

Perspective and 3D, however, most of the time coexist, and it is these incessant comings and goings between the perspective points and the projections of figures in the spectator's space that create a remediation of the distances.

VIRTUAL EXPERIENCES AND THE PERSISTENCE OF THE FRAME

The various versions of today's virtual experiences, equipped with more or less sophisticated tracking systems, where the image develops on an immersive bubble following,

Fig. 4 Chung Lee, Mr Buddha, 2018, 360° film.
Retrieved October, 15, 2020 from https://www.tribecafilm.com/films/mr-buddha-2019.

without difficulty, the horizon of the viewer's points of view, are the most recent stage in this desire to reduce distance. Although this *dispositif* tends towards a progressive annihilation of frames, often and deliberately willingly the aesthetic level of the experience tries to re-propose within it thresholds to capture the viewer's attention in order to satisfy basic narrative needs (Figure 4).

As in other experiences we have already written about[5], the recent case of Chang Lee's film *Mr Buddha* seems to be quite emblematic of this trend. Without going into the narrative details of the short film, in which thieves steal an ancient statuette and cannot agree on the division of the loot, let us say that even though he is aware of the freedom to look in all directions, the viewer's gaze is repeatedly redirected by diegetic frames. In this case, the logic is one of positioning the gazes in diegetic containers: our point of view is in fact located in the same place as the stolen statue inside a box. The characters will drill a hole in this box, thus recreating for the viewer a situation very similar to that of the cinematographic apparatus. Once the action passes from the inside of the van carrying the box to the outside, it is the opening of the van doors themselves that recreates the situation of a framed view.

Mr Buddha therefore offers us an aesthetic of virtual reality still in its beginnings, which is limited to enjoying the possibilities of its all-encompassing nature, a characteristic due not only to its nature as an enveloping phantasmagoria, but also to its ability to reproduce within it an inventory of the vision apparatuses that historically preceded it. Among the aesthetics encompassed by virtual reality, we must obviously not forget those developed over the years in the field of video games and in particular that of the 'delegated observer' through the appearance of an avatar through which we 'act' in the represented space. The interactivity of video games turns the spectator into a player and increases the proximity between the latter and the image: however, the fact of being able to act in the represented space does not necessarily create the effect of presence, and the temporary dissolution of boundaries is caused rather by the strategies described above.

This series of examples bring us to the hypothesis that in many mechanisms that lead to making the distances of mediations closer, the frame and its figures play a fundamental role. In general, in order to reduce the distance, this distance must be emphasized. The spectator is required to circumvent the attractive obstacle of the frame or threshold figures and this circumvention feels like a necessary *pendant* of the distance reduction effect.

This hypothesis can be useful when dealing with a genealogical discourse on the reduction of the distance between spectator and image. The recent spread of virtual reality devices has had the merit of reactivating the debate on immersion, another concept to be put in a dialectic with distance. Much of the current literature on immersion and its figures focuses on the all-embracing image, the environmental image, i.e. the fact that the image is built as a 360-degree spherical vault around the spectator, dissipating the frame as a constitutive element of the image itself. This phenomenal fact, in addition to a visual rhetoric of empathy, opens up to a precise genealogy of the effect of immersion that questions the nineteenth-century

panorama as a paradigm that emerged only belatedly, but in fact can already be found in ancient painting, and that somehow survives in the immersive techniques of virtual reality. One of the texts that has provided a model in this sense is that of Olivier Grau, *Virtual Art. From Illusion to immersion* (2003), where the author focuses more on the fact that to have an immersive effect one must have a circular image that develops around the spectator rather than on the importance of threshold effects. His genealogy therefore appears somewhat lacking, because it does not project a wider spectrum of semiotic pertinences. For example, when Grau rightly notes an immersive effect already in the *triclinium* of the Villa of Mysteries in Pompeii, he fails to underscore how the line of characters that develops around the spectator adopts a whole series of postures that covers the borders marked by the threshold of the base on which they are placed. This negligence seems to run through Grau's important study, favouring the thesis of the primacy of the spherical image as an immersion apparatus.

REMEDIATING DISTANCES THROUGH LONG-TAKE AESTHETICS

On the other hand, however, it is possible to give examples of distance remediation in cases where neither the frame, the interpellations or the various threshold effects, nor the image physically surrounding the spectator, are explicitly present. In fact, we might think that they are only the manifestation of mechanisms that, even in a latent way, can act on the proxemics of the image. Regardless of the numerous narrative strategies that capture the spectator, starting from the simplest forms of identification, which we will not discuss here, we will limit ourselves, in conclusion, to highlighting one of the environmental quality forms of the images: the long take and, subsequently, its use as a form of extenuation of the figurativeness peculiar to some experimental films.

The long take, which has been part of the grammar of cinema since its origins, has seen, over the history of cinema, periods of glory, for example in the Hollywood films of the 1940s, driven by the exceptional innovations of a director like Orson Welles. Recently, thanks also to the new virtuosities offered to the long take by digital techniques, it has once again become established as an aesthetic and narrative strategy: think of the recent *Gravity* by Alfonso Cuaron or the emblematic *The Russian Ark* by Sokurov, a 96-minute film consisting of a single sequence shot. This comeback does not seem so alien to the parallel spread of narratives in virtual reality, which are themselves poor in editing cuts and therefore characterized by a strong use of the long take. In fact, it is not secondary that one of the directors who in recent years has made the long take one of his recognizable trademarks, see for example the films *Birdman* (2014) or *The Revenant* (2015), the Mexican Alejandro Gonzalez Iñarritu, has moved on to the experimentation of narration in a virtual reality experience, of the kind included in the installation *Carne y Arena* (2017). The mediation of distance offered by the long take is only partially referable to its presumed effect of reality provided by the continuity of the unfolding of the action. The camera movement, instead of tending towards its cancellation, imposes itself on the spectator, paradoxically adding a further mediation effect. This new agency of the camera movement seems, however, to bring back an effect of environmental totality, of potential cancellation of the off-screen, thus compensating for the lack of narrative possibilities offered by the editing.

The long take returns as a strategy in many experimental films of the 1970s that somehow push its implications to the extreme. In particular, the use that Michael Snow makes of it in some of his films and emblematically in *La Région Centrale* (1971), where the persistence of the camera eye, accompanied by continuous camera movements performed at different speeds by a gyroscope, ends up extenuating the figurative possibilities of a landscape (Figure 5). This condition of

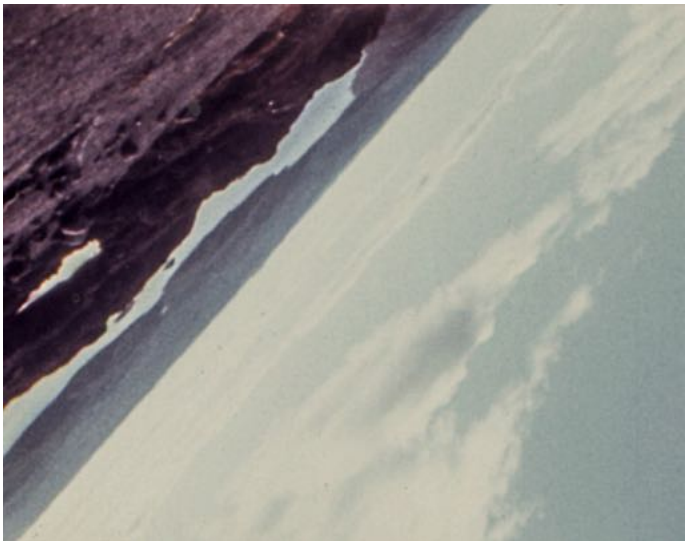

Fig. 5 Michael Snow, *La Région Centrale*, 1971, film. Retrieved October 15, 2020, from https://lcmf.co.uk/16-Dec-Lockwood-Snow

extenuation is accompanied by a growing vulnerability of the spectator who exhausts himself in the attempt to find a subject effect to adhere to during the three hours of the film's duration. This condition of the spectator ends up triggering a somatic and phenomenological conversion to the revelation of the landscape: in a more Merleau-Pontian sense, the vision of the film produces the place of that flesh of the world where the chiasm between the viewer and the visible object is possible, thus seeming to share the same matter, the same 'rhythm of existence' dissolving borders and distances (Acquarelli, 2016). The film seems then to be a non-linguistic expression of the experience of the Merleau-Pontian flesh and its chiasmic phenomenology, which is detached from the Husserlian one, briefly recalled at the beginning of this article, more centred on the 'meaning donation' by the consciousness.

Although the methodological precautions cannot be negligible, given the unifying direction of Merleau-Pontian phenomenology and that, more disjunctive, of psychoanalysis, both Freudian and Lacanian, the notion of the flesh of the world could in fact reach that of oceanic feeling, if we think of them both first as effects of interobjectivity rather than

as gnoseological assumptions. Effects that refer us back to the problem of distance mediations, which at this point we must understand no longer in a simple dialectic of distance/proximity, but in a wider spectrum of possibilities that stand out on the always potentially porous border between subject and object, in the chiasmic nature of this relationship.

NOTES

1 I leave the two terms in French, taken from the lexicon of the semiotics of the enunciation. For more details see Greimas and Courtés, 1982.
2 Veronese (Paolo Caliari), *Saint Anthony the Anthony the Abbot with St. Cornelius and St. Cyprian* (1565-71), Pinacoteca di Brera.
3 Think, for example, of the oculus of the *Camera degli Sposi* by Andrea Mantegna (1465-74).
4 However, Renaissance *trompes l'œil* do not seem to be any less effective. Think, for example, of the great experimentation of a painter like Carlo Crivelli in placing fruits and vegetables in the architectural thresholds reproduced inside or at the edges of a painting.
5 See the case of *I Philip* in Acquarelli, Treleani, 2019 and that of *Carne y Arena* in Acquarelli, 2020.

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SPHERES OF ACTION
THE TECHNOLOGICAL SHIFT OF CONTROL

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AFFORDANCES
ORDER OF INTERACTION
CONTROL

Social interaction and experience are defined by their action possibilities; that is, they can be analyzed from the perspective of performative control (or lack thereof), namely their dynamics of activity and passivity.

What I am able to influence in my environment and what lies beyond my reach determines my disposition and identity in relation to others. In this regard, media and communication devices are not only technical forms capable of modulating physical distance, but they can also transform the structure of action possibilities, rearranging the relationship between who controls whom, between what is possible and not possible. From this standpoint, the present paper will suggest a different take on the well-known dichotomy presence/distance, reframing it through the opposition activity/passivity, or controllability/non-controllability, seen as a relevant perspective in investigating the nature of mediated experience.

Perceptual and social experiences are determined by the structures of action possibilities; that is, they can be analyzed from the perspective of performative control or lack thereof. For example, an image on a screen –a face speaking to us– does not provide us with enough information to determine the kind of experience we are dealing with if we do not take into account the actions that led to it. As a matter of fact, the same image could be the result of two completely different pragmatic events, based on opposite states of active control and passivity: the first is the familiar situation of watching a person who gets ready for an online conversation, activates her camera and, after getting our attention, addresses us. The second completely different scenario would be that of the observers remotely activating the camera, or even pointing it towards the person like a moving CCTV, making her appear on the screen and finally commanding her attention. This scenario would upset even the most seasoned scholar in surveillance studies, but paradoxically it is more similar to how we normally orient ourselves in the physical environment when we direct our attention to someone and address him directly.

Media and devices are technical forms capable of modulating physical distance, but also, as we have just seen, shape action possibilities, determine the relationship between who controls whom. From this perspective, in addition to the well-known dichotomy presence/absence (or proximity/distance), I would like to highlight here how the dichotomy activity/passivity or controllability/non-controllability is a relevant issue in investigating the nature of mediated experience.

FROM PRESENCE TO CONTROL

Investigating how visual experience is mediated and determined by technologies, but also how any social and cultural system regulate the visual order, has been the task of research about the "scopic regime" (Jay, 1988). Screens,

in this regard, constitute the most pervasive contemporary technological device framing most of our experiences with visuality (Carbone, 2016). Even though the term 'regime' seems to connote a form of coercion or manipulation, every form of cultural setting and technical innovation necessarily determine how we relate to reality and to others. Just as, for instance, architecture or landscaping organize the way in which we interact and move in the environment, likewise online communication is a technological system that redetermines the structure of our spatial and temporal experience (Stiegler, 2018).

The ubiquity of media technologies facilitates an overcoming of spatial barriers, and in an event like the pandemic, it also substitutes face-to-face encounters with the intensification of synchronous live communication, stretching beyond the old asynchronous communication we are used to. Synchronicity reveals the performative character of media use, the asynchronous production of messages (texts, recordings, and documents) gives way to activities and interactions. This leads to a reconsideration of the crucial opposition between presence and absence (or closeness and distance). In the philosophical debate, presence is associated with a state of experiential immediacy or spatial co-presence, or more generally to the idea of immediate intuition, transparent self-awareness, and "nowness" (Noë, 2012). A well-known conceptual complication consists of the fact that images and media in general contribute to the recreation of this presence in *absentia*. The effect of presence by means of images and media coexists with its opposite, distance, or absence (Wiesing, 2005). Moreover, a further complication arises if images are no longer objects of pure contemplation, but something with which we effectively act and interact with. An image in this sense ceases to be framed solely by the perspective of imaginary detached observers looking at something in which one "sees something in it", as Richard Wollheim (2015) notoriously put it. Instead, an image becomes something in which we 'act' and are involved with as subjects. In the case of screens and

interfaces that simulate realities, we can pragmatically operate by moving icons on a desktop, throwing them in a trashcan, building a CAD model of a house, playing in a virtual environment, video calling someone and talking to the screen as if I were talking to the person in presence. The pragmatic dimension of acting 'with' and 'in' images defines a new kind of presence and blurs the boundaries between mediated and non-mediated reality, eventually requiring new conceptual categories.

As mentioned at the beginning, this pragmatic dimension can be described through the structure of action possibilities or as cognitive science would say, through the 'enactive' dimension. Action possibilities and their constraints have a role in constructing the nature of experience and, in a more radical way, in building subjectivity. In other words, I am the product of what I can control, as opposed to what is outside my sphere of reach. If one wants to recall J.G. Fichte, the "I" begins to recognize itself through the encounter with what resists its actions, namely the "not-I" (Fichte, 1794/1997, p. 30).

Control in this sense has an affinity to the idea of presence, not in the sense of spatial co-presence and temporal synchrony, but in the sense of the possibility of a subject to reach and transform his object, his capacity for influence. Absence of control would instead be the impossibility of action, such as absence of influence, and therefore pragmatic distance. Pragmatic presence differs from physical, spatial presence; in fact, there can be control in the distance, as it is in the case of most remote communication, and there can be absence of control in physical presence, as when a person is prevented in reaching his object or having influence over someone else, despite their closeness.

Under notions such as reach, influence, or control, we understand not only the possibility to manage our environment directly but also to influence the perceptual, cognitive, and affective experience of the other. More precisely: I am 'in control' of the person in front of me in reference to the visual dimension, not only if I am able to determine when and how to observe him (as in the aforementioned case of the surveil-

lance device), but also if I can impose my appearance onto his perception, and therefore command the other person's attention. Similarly, I am in control under the domain of 'touch' if I have the possibility to influence the tactile experience of the other person, that is, if I can approach and touch him. Clearly, the relationship between influence and control can be asymmetric. For example, an asymmetry in power may reveal itself in the fact that an authority figure is allowed to approach and touch another subject, demonstrating her sense of control, but not the other way round. The well-known concept of 'gaze', for instance in the Sartrian phenomenological-existentialist perspective, or in the Lacanian analysis of subjectivation, can be here generalized beyond the specific context of the psychoanalytic 'scopic drive' and be extended to any enactive aspects related to all action types and perceptual orientations toward the environment and other subjects. We here redefine the process of subjectification not in terms of perspective and viewpoint, but rather of action and potentiality: the subject defines himself through his level of activity and passivity. This brings us close to the classic Spinozian view of the individual as defined by his power of action, as resulting from the dynamic of self-determination as opposed to external determination. All entities, according to Spinoza, exist on a range of different degrees of action capacity and dynamic potentiality. Interestingly, Spinoza's capacity-driven view of individuation was influential to thinkers like Gilbert Simondon, whose analysis of technology as a human mode of existence in the world (Simondon, 1958) defines a new conception of individuation as determined through our relationship to technology. According to this view, human action is determined by technology and our relationship with the world and with the others is accordingly transformed.

Given such premises, I prefer here to keep a narrow understanding of the notion of control, focusing on its enactive and operational aspects, and to refrain from expanding it toward a Foucaultian viewpoint on the social and cultural determinants of power and on the dynamics of gaze and

surveillance practices (Foucault, 1975; for an overview: Lyon, 2007). The disciplinary nature of power is a broader issue than the technical and practical aspects of control as defined here: to be the one who maneuvers a communication device (as in the opening example) is not in itself an expression of subjective autonomy or emancipation. Yet, investigating the operational level of micro-practices and the strictly pragmatic dimension of how devices shape the 'affordances' of potential actions can offer useful analytical tools for broader thoughts on power relations.

FROM INTERCORPOREALITY TO THE INTERACTION ORDER

From a pragmatic and action-theoretic point of view, a subject's activity can be analyzed through the set of potentialities (or absence thereof) manifested in the environment and made possible by its configurations. There are aspects of the environment we are able to manipulate and aspects that are beyond our intervention. We can decide to focus our attention on some features, but sometimes other cues take hold of us. In a social setting, we could mostly determine our physical posture and perspective toward other subjects, but we cannot change their appearance, nor how their presence acts upon us. Some objects are within our reach, others are beyond it.

The description of this grammar of 'enactive' potentialities is not the subject of a single theoretical approach. The cybernetic theory of control, quantifying the 'degrees of freedom' of a system, could here be linked to the notion of "affordance" of Gibsonian ecological psychology. Moreover, it can be also related to Merleau-Ponty's phenomenology of corporeality as well, which is central in the contemporary orientations of cognitive sciences investigating the embodied and enactive dimension of experience. More specifically, Maurice Merleau-Ponty's notion of "intercorporeality" suggests the necessity of including the personal and social features of the

environment, since the norms and rules of conduct, as well as other people's behavior, regulate what is possible and what is not possible in a social scenario. As Merleau-Ponty (1964, p. 119) stated, "the other's intentions somehow play across my body" as a set of possibilities for my action: what the other is doing reveals the potentialities of my actions in the case of an engagement with that individual.

Therefore, not only the material structure of the environment but also the invisible system of behavioral norms determine a system of social affordances that guide our decisions in the encounter with the other. It is not surprising that those approaches have also been compared to Erving Goffman's classical investigations on the micro-sociology of interaction and identity construction (Dolezal, 2017). Goffman is perhaps the scholar who in more detail developed a phenomenology of the interaction order. In a way recalling Georg Simmel's contributions, according to Goffman the use of interpersonal space has a physical but also a symbolic function that is oriented to manage the "egocentric territoriality of the self", including all strategies of 'social distance' as a system of rules managing interpersonal relations (Romania, 2020). Those rules consist in a complex dialectic of masking and revealing, of 'backstage' and 'front stage' activity, in which every subject deals with the boundary between what is controllable and what is not controllable in the environment and in the performative situation, ranging from basic rules of politeness to the public management of failures and slips. They constitute a system of complex symbolic exchanges mostly regulating physical movements and signals in the space through kinesics, proxemics, gestures, 'facework', expressions of attention/distraction, rituals of deference such as gaze avoidance (as in 'civil inattention'), and respect of personal space (Goffman, 1959, 1967, 1971).

Norms have a constraining character since their violation leads to conflict, stigmatization, and alienation. This can happen when behavior is perceived as weird because it does not conform to those norms, such as excessive body or

eye contact, lack of response during dialogue, unwarranted pauses and interruptions, violations of personal distancing. "When individuals come into one another's immediate presence," Goffman writes, "territories of the self-bring to the scene a vast filigree of wires which individuals are uniquely equipped to trip over" (Goffman, 1971, pp. 135-136). It is no coincidence that many artistic avant-garde practices, from situationist acts to radical theatre and performance art, often aimed to violate those complex balances, using social provocations as an emancipatory gesture by disrupting the rules of interpersonal conduct, civil decency, and behavior in public (Stephens, 1998)[1].

THE TECHNOLOGICAL RESHAPING OF ACTION POTENTIALITIES

The crucial point in Goffman's view is the fact that there is no 'unmediated' relation with the others and the environment since all relations are dramaturgical in their nature: the others are the audience and each individual, through his staged persona, is a medium. This is a viewpoint that opposes the idea of a state of immediateness and rather follows the postmodern view of a staged self that echoes, among others, Judith Butler's notion of the constructed and performative self (Butler 1990). Consequently, the distinction between the 'offline' (direct, in presence), and 'online' (distant, mediated) relationship becomes less straightforward than the distinction between simple physical presence and absence. The transformation given by the advent of new forms of communication cannot be defined as a transition from a state of immediacy to that of a mediated absence. Rather, what we have is a reconfiguration of the interaction order, of the dynamics of control and passivity. More precisely, each specific medium or device redesigns the physical and social affordances, each system restructures the possibilities of action (Thompson, 2020).

To make a specific example, in recreating presence through digital communication an observer is no longer the one who directs and masters her gaze toward the observed subject. In the remote connections with others, moving in space, exploring it, focusing one's own gaze on other people is no longer possible. The observer is now in a passive state regarding to their orientation to the other, the relationship between observer and observed is inverted: in fact, the observed subject sets up her camera, microphone, and environment; constructs the observer's perspective; and decides how and what the other will see (and hear) of her. Usually, this inverted relationship works in both ways, so that everyone is engaged in the effort of setting up his own image for the other to be seen. The attention previously dedicated to exploring the environment and directing his gaze to the others is now channeled into self-presentation.

Higher self-government and control of my appearance does not necessarily result in an increased effectiveness toward others. Even though I have almost total control of how I appear, I have no control over how this appearance will be used and how it will affect others. In fact, the appearance on the screen becomes an object of potential manipulation, the speaker can be silenced, his image be sidelined or hidden, his presence ceasing to command attention. Even if the other person believes that he is visually present to me, I can privately set aside his presence by not looking at him on the screen, obscuring it or surfing the web on a different window. That is, I can modulate his impact on me. This is radically different from what Goffman called "civil inattention", which is an openly performed act of "not looking" as a manifestation of tactfulness or avoidance of conflict. (Goffman, 1971, p. 85)

In a virtual context, and depending on the kind of device and platform, one can modulate and stage his presence to the social interaction in ways that are not shared and that cannot be necessarily directed by others, except

when explicitly asked to do so. I can put on an invisibility cloak, so to say, giving me powers otherwise denied. On the contrary, the appearance of the other person can stimulate an unwelcome and unplanned curiosity, since his image could be freely magnified, scrutinized, recorded, shared, and archived.

On the one hand, those examples show that we have an extension of action potentiality: I manage the gaze of the other (that is, 'how' the other sees me) and at the same time, I have perfect control of the materiality of his appearance on the screen. However, this double capability of the subject is counterbalanced by the fact that one's digital presence is also the object of the same kind of exposure.

These ways of influencing how the other will see me, along with seeing myself being seen by the other and, thirdly, being able to freely process or attend the other's image, contribute to new and heightened forms of corporeal and postural self-awareness, in the construction of self-image through the setting up of the other's gaze. At the same time, this intensification of Goffman's theatrical stage concept could also potentially converge in a process of reciprocal "avatarization" (Pinotti 2020), in which we become the puppeteers of carefully constructed public images of ourselves. Although, on the surface, certain modes of online communication seem to favor informal, more intimate and spontaneous modes of relationship, the higher self-agency leads to an increase of the immaterial self-presentation labor. This intensification of individual efforts around one's appearance leads to a greater self-reflexivity (which is also practically intensified by the presence of one's own image on the screen: I see myself talking), and a higher feeling of accountability towards previously contingent environmental aspects, such as the personal spatial setting of the 'background' for which I now become responsible.

Overall, what we see here is technology's redetermination and in some cases reversal of performative affordances of the spaces of interaction, where proximity's usual struc-

tures of controllability give way to new possibilities of intervention and loss of old ones. Consequently, technological re-mediation determines a shifting of the manageability of experience and, in general, of the micro-dynamics of the self-other relations. By mutating the structure of action possibilities, technology shapes perception and experience using remodulations of what is open to control and what is not, of who affects what and when. At the same time, we experience a contraction and an extension of our reach to the other. Factors previously outside of my control, which belong to the contingency of the environment and are characteristic of spontaneous encounters, become elements I have to plan for and for which I am accountable[2].

As a final note, it should be observed how the technological change of the structure of performativity also lays the foundations for a transformation of the order of affectivity. The change in enactive possibilities determines a transformation of what is the product of affection compared to what is the product of action. Therefore, an analysis of these transformations cannot avoid detailed investigations about the features of each specific device and technology. Just as aesthetics has recognized how the structure of our corporeality is an essential foundation for understanding our perceptual relationship with the world, so does the understanding of the transforming functions of technologies become an essential part in investigating how experience and performative possibilities are redefined by them.

NOTES

1 One could be reminded of classical performances like *Valie Export's Genital Panic* (1969), where aggressive staring and nudity were directed to provoke the public, as well as many well-known works by Marina Abramovic. In his *Frame Analysis* (1974), Erving Goffman refers to the long tradition of plays by Jean Genet, Eugene Ionesco, Joseph Heller, but also to examples from radical theatre groups and happenings performances of his time, such as the *Living Theatre's Paradise Now* (1968) that led to arrests for indecency, and the *Performance Group's Dionysus* in '69.

2 On the loss of contingency, see Alloa, 2020.

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SEPARATING BODIES, SYNCHRONISING MINDS
THE ROLE OF DIGITAL TECHNOLOGY IN MEDIATING DISTANCE

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WRITING
DIGITAL
TIME
MEDIATING

Digital technology reconfigures the organization and status of archives. Immersed in the eternal present of their technological youth necessary for their consultation, digital archives potentially no longer bear the marks of time, whereas they show the past. They gain a new appetence, based on the communication uses of the moment. But how then to give them their sense of archive, how to restore their own temporality? The challenge is to allow what we call 'historical empathy' without falling into psychological anachronism. We argue here that the mediatization of digital audiovisual archives must allow us to feel concerned, with the concessions no doubt necessary to the technology and aesthetics of the moment, while perceiving the strangeness of the contents and the definitively bygone aspect of this past.

It is therefore a particular critical hermeneutic to build, where mediation must show a past that technology displays in a permanent and persistent contemporaneity.

INTRODUCTION

Communicating is obviously a matter of time and space. The canonical figure is conversation, dialogue, where we share the same time, the same space, the same encounter between eloquent bodies. It is built on the basis of a co-constructed experience, where openness to others and to their irruption constitutes the principle of a successful, happy conversation, to use an analogy with the happy memory of Paul Ricœur (2000). But how can we communicate, dialogue, share, and build an experience when we do not share the same space, it is the 'dislocation' of bodies, nor the same time, it is the 'desynchronisation' of minds? Our cultural traditions have bequeathed us with different tools and multiple approaches to enable communication in such conditions. To understand them, it is useful to situate and compare them in their capacity to overcome these obstacles and to propose effective substitutions. From the epistolary relationship, to historical narration through fiction, information, literature, etc., there are innumerable forms of mediation to enable the hoped-for encounter between distant bodies and non-synchronous minds. But all of them are based on the very possibility of human consciousness to meet others, to project itself onto an elsewhere, to mobilise itself towards something else. It is therefore a phenomenological matrix that should be proposed in order to analyse the forms of mediation proposed. This is all the more necessary as digital technologies have recently asserted themselves as being precisely capable of abolishing distances and restoring the conditions of an immediate encounter: digital technology is asserting itself as mediation removing the discrepancies of mediation. In 'real-time', in 'teleconference' or 'videoconference', in 'live', the digital, and with it the various techniques of telecommunication, audio-visual teletransmission, claims to restore the properties of shared presence. Is it a decoy, an illusion, a reality? Probably a bit of both. The challenge here is to be able to situate the contribution of digital technology to

these different mediations both to underline its innovative and irreplaceable character and to insist on the ineffaceable technical mediations. First, we will come back to a phenomenological matrix of human consciousness, between manipulation and synchronisation, then we will approach the traditional mediations and finally the digital mediations that we will situate and criticise from this matrix.

AWARENESS BETWEEN MANIPULATION AND SYNCHRONISATION

Contemporary and traditional mediations do not only consist in bringing things closer together in a human proximity, in spatial and temporal coincidence, but also in bringing people, individuals, consciences closer together. Why such a need? It is that being human is to constitute oneself as a consciousness by interacting with one's environment and others. Taking up the phenomenological inspiration of Husserl (1928/1964), without claiming here an exegesis of his work, we understand consciousness as a temporal flow that is constructed by synchronising itself with external flows, whether it is the course of experience where an object is revealed and constituted at the end of a flow of perception or perceptual sketches, or when others are encountered when we synchronise ourselves with their words and actions, through listening and interaction.

According to the approach we adopt, and which is no longer Husserlian, human consciousness is deployed in two complementary components, two operations, which are manipulation and synchronisation. Manipulation refers to technical consciousness, which seizes objects in order to arrange them and produce an action. Whether direct or instrumented, manipulation is a technical grasp by the hand, whether or not augmented by the tool. Manipulation can also be seen solely from the point of view of what is being manipulated, i.e. the objects

grasped and arranged. Manipulation becomes a sequence of operations, an algorithm where only movements and arrangements are considered. Synchronisation, on the other hand, is the flow of time in which the manipulations take place. It corresponds to duration, the one that takes a certain amount of time and not another (Bergson, 1990). Manipulation is a succession of technical captures, integrated into a flow but remaining indifferent to the actual duration of the captures and the times separating them: a succession of operations can remain the same succession even if it is more or less rapid. Synchronisation is built from a flow that has its own duration, regardless of what happens in it. The two notions are complementary: a synchronisation without manipulation is a duration where nothing happens. A manipulation without synchronisation is a virtual calculation, an algorithm without execution. These two notions are linked via the notion of rhythm which articulates them: rhythm is what structures a duration by giving a grip to the input: repetition, substitution, reordering, etc. Reciprocally, rhythm gives a reality to the input: it corresponds to what makes it possible to speed up or slow down the succession of inputs.

Between manipulation and synchronisation, consciousness is structured between the different tempos or rhythms it needs to articulate or take into account. Indeed, the technical grasp is grasped of something which is not peculiar to the grasping consciousness but is external to it (even if it is fictional). It is a form of intentionality, the fact of relating to something. Moreover, duration corresponds to a process imposing its duration and its flow. This process is not peculiar to consciousness, it is undergone by it. Thus, at the crossing of a double exteriority, that of the seized realities on the one hand, and that of the processes imposing their duration on the other hand, the consciousness is constructed as a rhythm which is determined by its capacity to articulate itself to the different rhythms of its exteriority. These rhythms are multiple: first of all there are our own

biological rhythms, the rhythms of our physical environment, the rhythms of social life, and finally the rhythms referring to the presence of others. Consciousness then becomes the place where these different rhythms resonate, each consciousness being an original result of these multiple resonances. Among all these resonances, it is the resonance with others that interests us here, because it is a question of being able to determine in this framework how communication can be understood as a rhythmic synchronisation with others, that is to say the resonance of our own rhythm with that of others.

We will hypothesize, based on the possibilities logically constructed by our matrix, that there are three possible configurations: either our consciousness is wedged on the time of the other, the rhythm of others; or on the contrary, its time becomes a declination of our own rhythm; or finally, the two rhythms enter in resonance and build a common rhythm. The first figure is that of the narrative: the time of consciousness is projected into a narrated time, which structures and gives rhythm to our own conscious life.

One reads oneself while reading another, it is the projection of our time in that of the other that makes us return and gives us the opportunity to discover ourselves in this way. The second figure is that of play, where the other's time is reduced to being the echo of our actions. Too often, what we call interaction in computer tools is only the resistance encountered by our actions in their own rhythm without there really being an alter-ego, an encounter with others, even if there is an otherness that resists. Finally, the third and last figure is that of resonance, where two subjectivities articulate and rhythm each other. This figure of resonance, recently revived by Rosa (2016), in particular, is that of communication in the literal sense, of encounter and dialogue. The different mediations between individuals can be situated according to these three configurations of projection, reduction and resonance.

TRADITIONAL MEDIATIONS

Mediations become necessary as soon as there is a desynchronisation of minds and dislocation of bodies. How indeed how can we meet others when we do not share the same space at the same time? Traditionally, the very fact of not occupying the same space implies desynchronisation because one cannot reach another place instantaneously: it takes time. Therefore, separation implies desynchronisation. In order to overcome dislocation and desynchronisation, material representations, essentially graphic and textual, were invented. But whereas graphic representations allow us to represent a world without being able to access it or live in it, thus becoming a pretext to synchronise with what representations evoke in us, texts, through the form of narrative, allow the representation of other people's time and to project oneself into it. The narrative, whether historical (bringing back a past that has disappeared) or fictional (imagining an elsewhere), is based on empathy where the other is a transcendental figure allowing synchronisation.

These two modalities, graphic or textual, pictorial or linguistic, refer to two particular resonances: the first is the resonance with oneself, where the image is revealed to the consciousness according to modalities that are not those of the represented object but those of the perceiving consciousness. In fact, a photo of a house does not allow one to have an experience of the real object that is the house (I cannot enter it, go around it, touch the materials, etc.), but only of the object that is the photo and its manipulation. As the experience of the photo is not that of the object photographed, I resonate with my past experiences of the object, which can lead to losing myself in memories, an endless meditation. Rosa (2016) evokes Petrarch who, at the top of Mont Ventoux, loses himself in what inspires him to the majesty of the place instead of investigating the place itself. In short, here, the other is me. I tell myself through this resonance triggered by the graphic object. In the textual experience, the relationship is different because the time narrated

is no longer mine but that of the writer, which I assume by my very act of reading: if it is written, someone has written it. The resonance can only be made then with the other's time as it is revealed through the discursive and narrative structures of the text. It is even a cinematic commonplace: a letter shown on the screen is initially read by the reader's voice and then switched to the writer's voice. Because reading means listening to a voice that speaks to us. This is why epistolary relations are so effective and have such a rich tradition. However, the resonance we are talking about here is a projection, not an effective articulation: in other words, the other is constructed like an alter-ego that I project, but it is not there, of course. The textual content proposes an exit from oneself without yet being an encounter with the other. This is why, here again, it is an encounter with myself that is inaugurated, reading myself through my reading of the words of another, of the history of another.

The figure of the narrative therefore calls for another, that of the narrative actually told, of the narrative played and represented in a lively way by an actor, an orator, a mediator present here and now. It is the figure of the theatre that would be the ideal-type for this mediation. The theatrical narrative does indeed present a story of what is neither there nor present, but through the presence of an eloquent body that is indeed there, in the flesh. The experience of living art is to live with the actor an experience of resonance of what is not there but projected. This is the magic of the book told in person: the speaker's present voice makes it possible to live, like a dialogue since it is to us that he tells the life of what is not there, of those who are not there. But beware, for magic to work, there must be a shared presence: the recorded book, for example, does not give the same experience, even if the voice, even if recorded, is the very medium of presence, of the coming to the presence of myself thanks to the encounter with the voice of others. But there is a gap, a difference between the eloquent body present, bothered by a fly while it is telling a story, and the recorded voice, which nothing can come to bother me except a defect in my audio player.

In the same way, we can take, through the figure of the cinema, the ideal-type of another communication experience. Indeed, cinema shows us, in our present, an actor who lives another present to tell, to represent an elsewhere. There is therefore no shared experience in this configuration. Cinema is a purely projective narrative, without sharing the experience lived with the actors. Theatre presents the story of an elsewhere in a shared experience with actors. Cinema presents a projected time in a singular experience. The theatre makes present, the cinema allows to escape. Two singular experiences here opposed. These same modalities therefore distinguish the audio book from the book told in person. But all these examples are precisely the occasion for us to take an interest in technological media, particularly digital media, which reconfigure the very nature of mediations.

REAL-TIME MEDIATIONS

Indeed, mechanised artificial representations (audiovisual and digital for the main ones) have made it possible to create dynamic, interactive, immersive representations where the potential for resonance has been multiplied: with oneself (recorded audiovisual), with the world (immersion), with others (interaction, direct audiovisual). What characterises them is the possibility of suggesting an experience lived here and now with the very object of the experience: immersion in an absent object or direct communication with someone who is not there. We will focus here on the latter configuration as the main experience representative of the possibilities of digital technology, without claiming for all that it sums them all up.

The very possibility of these mediations as a direct face-to-face encounter is, however, a paradox. Mechanisation is in fact the result of manipulation, as mentioned above. A mechanism consists in the execution of a succession of steps whose calculation is the ultimate formalisation. And a calculation consists in the simple manipulation of formal

symbols. Between two steps, time can be arbitrarily short. A formal symbol is only defined as that which is distinguishable in type (it is a 0 or 1) and in position: two 0 symbols can be distinguished in the manipulation space independently of the distance between them (this is why miniaturisation does not question the laws of calculation, contrary to that of physics). In other words, the content becomes a signal, in an arbitrarily low time, in an arbitrarily small spatial density. It then becomes possible to transfer it at the speed of signal transmission, therefore close to the speed of light, for a human being, in other words instantaneously.

Thus, by representing the content in a calculatory way, i.e. as a pure manipulation independent of any consideration of duration, the content can be transmitted instantaneously (physical light time) and restored according to the appropriate rhythm: its absence of its own duration, of intrinsic rhythm, allows it to match at any rhythm. It is not a question here of resonance, because there are not two rhythms to harmonise, but a manipulation which is executed according to the rhythm proper to the context of its realisation.

The result is prodigious. For the first time, dislocated content can be simultaneous. Distant individuals can have 'real-time' communication. But what happens to these communications in separate spaces and simultaneous (human) time? What is the status of these remediations and resynchronisations across distances? Several factors have to be considered: on the one hand the formatting of the communication which inserts a fundamental gap between the people communicating, on the other hand a simultaneous interaction allowing each person to experience the unexpected of the other. In other words, digital technology would introduce a new configuration of communication, between narration, play, and theatre.

So there is format. In fact, all digital communication is based on a prior recording that formats, segments and de-contextualises. Even if the conditions of capture and trans-

mission are technically faithful, they introduce a bias (a particular framing, variable image and sound qualities) and are subject to the famous 'live' hazards, i.e. the hazards of transmission which can be altered. In particular, the communication situation is particular in that the only effective sharing during the communication is the technical quality of the communication, since each interlocutor, being in his or her own place, is immersed in a particular context.

The temporal simultaneity does not cancel out the fact that it is not the same presence because there is no split context, the screen becomes a frame, and the frame becomes a screen. In other words, I know that what the other is experiencing is not what I am experiencing: it is at a distance. The characteristic of presence is to establish, even if locally and temporarily, a shared destiny. There is nothing like this with live communication: if the other person is burned, or is caught in a catastrophe, I for my part remain untouched by it (hence an even greater trauma induced by the feeling of powerlessness and empathy having to accept the failure of an impossible sharing of experience).

However, as these examples or commonplaces suggest, technically mediated direct communication makes it possible to discover what the other person is experiencing and the unforeseen events he or she encounters. Recently, in the periods of confinement due to the Covid pandemic, the frequent videoconferences that have made it possible to continue communicating and exchanging have marvellously illustrated the unforeseen events of daily life that interrupt the normal course of these exchanges: a delivery boy ringing the bell, a child saying hello to the camera, a cat barging in on the keyboard. These communications therefore allow us to suddenly project ourselves into the life of another, to experience events that we do not experience ourselves, except in representation. And, unlike a cinematic experience, the unexpected is not calculated, is not reportable to a scriptwriter who would have planned everything in advance.

In other words, this is not cinema. The other is the actor of his own life, now and over there, and we are the spectator. In the same way, we live our lives before the eyes of the other. So there is a common but not shared experience.

From this perspective, digital can pose a problem if it passes off as a shared presence what is a re-mediated distance. From the perspective outlined here, interactive digital tools are closer to a shared narrative than to direct communication. Like narrative, they make it possible to project oneself into the time of others, and to live what one is experiencing at the same time as the other. But living at the same time is not living together. Living at the same time is not a shared destiny. Simultaneity alone does not allow for a co-constructed resonance between individual rhythms that pair up to produce a unique experience (in the sense that it is the same for both interlocutors, and is potentially not repeatable in its idiosyncrasy, any successful conversation opening immediately to nostalgia for its advent that is over and gone). From this point of view, digital communication would therefore be the symmetrical aspect of the theatrical experience as we have idealised it above: the theatre brings together a spectator and an actor who, for an instant and in the common space of the theatre, share the same experience to project themselves into another time. Live mediated communication allows us to project ourselves into the now of another. Simultaneity therefore does not cancel out the fact that there is projection, it simply modifies the projection towards another time. To sum up, theatre is a common space-time to reach a projected spatio-temporal elsewhere, live mediatized communication is a common time allowing to project oneself in the present lived by the other.

Distance remediation does not abolish distance but enables communication with what is absent or distant. If digital promises a shared presence, it becomes a decoy mechanism, since it always remains a hidden part, inherent in the very fact that digital is a formatting, a recording, a transmission. That the *hic et nunc* encounter with others always consists of

an unfinished dialogue should not be confused with a dialogue masked by mechanical mediation. The hermeneutics of the infinite and always open interpretation of dialogue or co-presence is not of the same nature as the hermeneutics of deconstructing the decontextualization effects of recording and transmission. The former is based on an encounter, from body to body, from word to word, from loving dialogue to intellectual exchange, while the latter is a projection built on a shared temporal guide, the flow of image and sound. The separation of bodies cannot be overcome: being in the same space-time is the principle of shared experiences and assumed by the interlocutors because by definition what happens to one happens to the other. This community of destiny gives the charm and the interest of these exchanges and conversations, where the resonance allows the construction of a shared elsewhere, other resonances consequently, but projected these while the resonance of the eloquent bodies present is effective.

CONCLUSION

Communication and dialogue are a singular experience where individual consciences resonate, articulating their own rhythm with each other to build a common experience. To this basic experience, others can be declined: that of the narrative where the reader's time is articulated on the projected time of the narrative and of the other who speaks to him through him, that of the game where we reduce the relationship to the other to the consequence and the response to our actions. Co-construction, projection, reduction are therefore the three essential figures in the construction of meaning by individual consciences. The latter are in fact to be understood as a singular rhythm, composed of duration and grasping, synchronisation and manipulation. Since manipulation implies grasping something, and synchronisation a temporal flow printed by a process, every consciousness must be

constructed by articulating itself to grasps of objects which are external to it in relation to flows which are also external to it. All consciousness is thus the resonance with a transcendence, an exteriority to the consciousness.

Beyond these three figures, particular compositions are constructed according to the contexts of communication and exchange. Two of them have interested us here: theatre and direct mediated communication. The first one consists in a living experience, here and now, shared between the spectator and the actor, the latter allowing to project himself in a spatio-temporal elsewhere, which is not lived by either of them. The theatre brings back into the shared living time an elsewhere lived by neither of the protagonists. The second composition, direct communication through the media, allows at the same time, to project oneself into the experience lived by the other but not by me. Attending an event in real -time is not necessarily living it or considering that it happened to us: it happened to others, and we were there, but at a distance... As a result, direct communication through the media would be close to the cinematic experience, where we would watch the film at the very moment it is made.

This allows us to conclude on the interest of digital technologies and their ambiguity. Indeed, if our analyses are correct, digital technology allows us to have a new type of experience. It is therefore important to resist the temptation to assimilate it to an existing type of experience in order to praise its efficiency in reporting it or, on the contrary, to denounce it in its incapacity to do so. Digital is not the expected means of being together when we are not, allowing us to have a dialogue, a conversation, a shared destiny here and now: believing it is a mistake, pretending it is a decoy. But as soon as we consider for ourselves the communication that digital technology makes possible, and we do not try to relate it to a pre-existing type, a ideal-type of direct communication mediated by digital technology emerges: the simultaneous time of a projected lived experience. What digital technology allows here is therefore irreplaceable and unprecedented,

without calling into question pre-existing communication experiences. This is to be welcomed and not to turn it into a panacea for communication.

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PHOTOGRAPHING EVERYTHING AND SEEING NOTHING

TRAVEL SELFIES AS PERFORMANCE, AFFIRMATION OF SOCIAL-COLLECTIVE PERCEPTION, SPATIAL COLLAPSE

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ESSAY 44/03

SELFIE
VIRAL
PHOTOGRAPHY
TOURISM
TRAVEL

In *White Noise*, Don DeLillo wrote of a well-trafficked tourist destination he called "The Most Photographed Barn in America." Because it is known through a proliferation of photographs, he suggests, "no one sees the barn" anymore. Thus, making a picture of the barn is not about '*looking*', but akin to "taking pictures of taking pictures" –a performative mass social ritual of image-making. This behavior also is a relational means of collapsing physical space to connect psychologically and virtually with larger narratives of the human experience for both the selfie subject and their social-media followers. Thus, travel selfies remediate physical and psychological distances and, in Walter Benjamin's terms, "bring things spatially and humanly closer."

This essay takes a closer look the reframing of both physical distance and psychological presence by digital travel selfies. Rather than being a means of producing subjects/objects to behold and to archive as 'embalmed' memories or artifacts of personal history for later review, digital social-media travel photographs are driven by different relational impulses: the collapse of material conceptions of time and space, the performance and promotion of self-as-'avatar', the dissolution of psychological space between viewer and subject, and by communal/network participation.

INTRODUCTION

In the novel *White Noise*, Don DeLillo wrote of a well-trafficked tourist destination he called "The Most Photographed Barn in America" (DeLillo, 1999, p. 11). The barn itself is not particularly exceptional, majestic, or historic in any way, but instead derives its fame from the mere fact of *'being photographed'*. Moreover, because this structure is so well-known through others' photographs, DeLillo writes: "No one sees the barn" anymore. Making a picture of the barn, he suggests, is not about *looking*, but akin to "taking pictures of taking pictures" a performative social ritual of image-making tied to the mass-cultural behavior and experience of tourism. The sharing of these images remediates physical and psychological distances between photographer and viewer by making faraway sites accessible. In Walter Benjamin's terms, such images "bring things spatially and humanly 'closer' " (1935-1969, p. 5).

Although DeLillo imagined this scene in 1985, and Benjamin was writing even earlier in the 1930s, their observations about the psychological impact of image reproduction and dissemination are remarkably prescient of the state of the medium in today's Post-Digital age, as digital photography's diverse social practices have become normalized and entrenched in our sensorium. Smartphones and social media enable users worldwide to share their digital images online with a global audience almost as quickly as they are made. The acts of photographing, uploading and 'sharing' images on social media, and 'reacting' to them, have become mere reflexes in a culture in which we skim a dizzying succession of visual stimuli very quickly, enjoy keeping up with a network of others (with whom we may or may not be 'real-world friends'), and employ such images as a means of virtual socialization. As a result, Om Malik (2016) quipped that in the digital age, more than ever, we "photograph everything and look at nothing". A travel destination cedes importance to the '*photographer's presence*' with it and often does so literally, as the backdrop for a selfie. Social/psychological spaces thus su-

persede and provide a surrogate presence for online viewers in an actual, tangible, material space.

This essay takes a closer look at digital social-media travel self-portrait photography. Rather than being a means of producing subjects/objects to behold and to archive as 'embalmed' memories or artifacts of personal history (an approach often associated with analog, or pre-digital, photography), digital social-media travel photographs are driven by different impulses: the collapse of material conceptions of time and space to enable a mediated virtual presence, the performance and promotion of self-as-'avatar', the dissolution of psychological space between viewer and subject, and by communal/network participation.

TRAVEL PHOTOGRAPHY AS PERFORMING COMMUNAL CULTURE, TWICE OVER

As the characters arrive at "The Most Photographed Barn in America", DeLillo offers this commentary on photography in the dialogue of *White Noise*: "We're not here to capture an image, we're here to maintain one. Every photograph reinforces the aura. Can you feel it, Jack? An accumulation of nameless energies" (1999, p. 11). These "energies", he notes, have a momentum of their own, derived from the seductiveness of participation in an exercise that unites mass-culture-connected humankind. DeLillo writes that "thousands who were here in the past, those who will come in the future. We've agreed to be a part of the collective perception. […]. A religious experience in a way, like all tourism" (1999, p. 11). In analog and digital photographic practices alike, photographers are motivated by the desire to mark one's own presence at a site of mass-cultural significance. At this point of the image-making process, the material space (of the original, singular site –such as the barn itself) remains important. In this last section of chapter three of *White Noise*, DeLillo suggests that the act of photographing the barn "maintains"

the "aura" of the act of photographing the barn, which is a ritual of the "collective" that droves of people before him have enacted (1999, p. 11). This allows the individual to connect to a grand narrative larger than him/her/itself, and to contribute to the site's mythology by supporting the pilgrimage's importance. When each tourist shoots a photograph, they enact near-'religious' mass-cultural behaviors that DeLillo suggests are an innate part of the 'tourism' experience. Moreover, they act according to peculiar anxiety about human mortality that Roland Barthes discusses in *Camera Lucida: Reflections on Photography* (1981, p. 87) by marking the importance of their own life within a grander cultural narrative and shared experience, and by endowing "a certificate of presence" at the tourism site before death would steal their opportunity to do so.

Performing communality is not only about connecting to humankind on the site of pilgrimage. In the digital age, photographers rapidly and easily 'share' such images on social-media pages to enact a "*second*" and significant facet of social relations. Mette Sandbye has suggested that digital photographs embody a very different approach to documenting and preserving the past. She writes: "[t]oday photography is predominantly a social, everyday activity rather than a memory-embalming one, creating presence, relational situations, and communication" (Sandbye, 2016, p. 97).

Indeed, the making and online-sharing of photographs is a means of documenting the self, of connecting to others, of conveying the desired persona, and of maintaining relationships. This is to say, social-media photography functions as visual rhetoric that weaves a calculated personal narrative, rather than functioning as an 'objective' document that maintains a critical distance from its subjects. For example, in the dialogue of *White Noise*, DeLillo asks:

"What was the barn like before it was photographed?" he said. "What did it look like, how was it different from other barns, how was it similar to other barns? We can't answer these questions because we've read the signs, seen the people snapping the pictures. We can't get outside the aura.

We're part of the aura. We're here, we're now." (DeLillo, 1999, p. 11) This is to say, travel photographs have a different function. They stop being about 'the barn', the material site, and affirming its greatness (for virality often renders the tourist destination's historic/cultural significance optional), but are about the '*photographer*', and the opportunity to share a certification of their presence with others. Material space transforms into a psychological, relational, and social space. This does not obliterate the site's literal material presence (which is still important for the practicality of pilgrimage), but reinforces of its nebulous, viral 'aura' while maintaining a more privileged temporal digital space that brings the material site within vicarious reach of online viewers. These social-media viewers enjoy a surrogate presence in that site's space through the photographer's, while affirming the site's 'aura'.

For example, in the BBC television series and book *Ways of Seeing* (1990), John Berger commented that the experience of viewing Leonardo da Vinci's seminal painting *Mona Lisa* (1503) is not about appreciating the actual painting, which became the subject of viral fascination and extensive mechanical reproduction for the first time after its theft from the Louvre Museum in 1911, and its two-year disappearance. The painting's virality, therefore, was not a direct result of its unique quality among da Vinci's work, but was a consequence of media coverage. As a result, a journey to see the artwork is not about a quiet, contemplative art-viewing experience. Once visitors enter the gallery housing the *Mona Lisa* (and countless other tourists), they are kept a distance the artwork, which many viewers comment is –in person– much smaller than they expected (from the many parody memes, postcards, mousepads, cookie jars, ties, t-shirts, refrigerator magnets, cartoons, etc., that they have seen of the painting before making the trip to see the original). Of those who wait to get a spot near the front of the rope-line, surprisingly few people actually '*look*' at the painting. Most miss the more mysterious aspects of the *Mona Lisa*, such as the winding roads in the background that differ on each side of the canvas.

As Berger suggested (1990, pp. 19-34), it is amazingly difficult for viewers to form new thoughts and ideas about this artwork because its likeness has been so widely circulated and parodied by the time they see the original version. This is to say, mass culture and mechanical/digital reproduction have assimilated the *Mona Lisa* into the pantheon of ritual, communal art-tourism, stripping of it of its original intent and framing as a masterwork of fine art and lending it a visual repackaging becoming of social-media-circulated selfies and memes. The taking of a selfie in the presence of the *Mona Lisa* functions as a verification of oneself in the artwork's popular presence (Berger, 1977, pp. 7-34) for sharing with others.

Berger's proposition was based on ideas raised in Walter Benjamin's 1935 essay *The Work of Art in the Age of Mechanical Reproduction*, in which Benjamin coined terms such as 'aura', 'authenticity', and 'cult value' to describe how photomechanical media's dissemination of images pluralizes their meanings. Berger's and Benjamin's essays are especially germane to our study of the 'viral effect' of social media today, which have sped up this phenomenon and placed photographic dissemination in the hands of anyone possessing an internet-enabled device. Virality, as this essay has suggested, regularized the selfie, its unspoken conventions, and encouraged its replication – especially for sharing certification of one's presence in a site of tourism.

What the *Mona Lisa* has become –a prompt for the socialized practice of relational photography, with its reconfiguration of spatial and temporal relationships– is no less interesting for academic study. Certainly, seeing the *Mona Lisa* is an act of participating in a 'collective' behavior of making the pilgrimage, and an affirmation of the importance of the artwork' material presence. Tourism function as means to belong to a historical narrative larger than ourselves. We are not born knowing that we need to photograph the *Mona Lisa*, or ourselves with it. This is also a behavior learned from the example of others' ritualistic behaviors at the destination, or shared on social media. It is born from the desire to connect

to humankind via participation in that pilgrimage (which is then shared on social media). The performance of photographing, enacted by many –in the spirit of producing a tangible, lasting souvenir that testifies to one's presence with the painting– produces an expected, anticipated 'normative' expectation of photograph-taking by all, with smartphones, on the site of the *Mona Lisa*.

Once made, the resulting digital photograph has an additional communal function as it is typically shared on *Facebook*, *Instagram*, *Snapchat*, *Twitter*, and more –with social media 'friends'. These often are people we may not have spoken to, or seen in 'real life', for extended periods of time. Nonetheless, one's social-media 'friends' opt to follow a person's posts– which include travel photography. The illusions of social intimacy and physical proximity are affirmed by social mediation. This was especially urgent during COVID-19 quarantines worldwide, as the freedom to travel and enjoy social intimacy were challenged, especially during the 'lost' summer of 2020.

The experience of travel, in particular, provides social-media friends with a surrogate 'presence' for their own, as well as the touristic, vicarious experience of being there (only without having to '*be*' there). This allows viewers to feel a personal investment in –or connection to– a news event or historical/touristic site when they might not otherwise have one. Space is thus collapsed and an association with the site is enabled via social connection to the poster.

Social-media photography also participates in an arena of online reception that invites a unique array of emoji-expressed external judgments from viewers or 'friends', including a 'thumbs-up' (for approval, or 'likes'), hearts (to denote 'love'), 'sad'/'angry'/ 'laughing'/ and 'wow' faces. Social-media posts also have prompts that invite 'friends' to add written commentary that may evolve into semi-public conversations among the poster and his/her/their mutual 'friends'. Such digital vernacular photographs are '*relational*', and their functions are rooted in the genre's function as social commu-

nication with an online audience, and a desire to connect to the outside world. This is another way the digital, vernacular, social-media travel photograph enacts communality and relational behavior to collapse previous notions of space and render them psychologically accessible.

Such images and the narratives that they encourage, however, convey a distorted sense of intimacy and an immediacy of the connection between the taker and viewer, and between the site and the viewer. Photographers may form bonds with social-media 'followers', bonds that often themselves are built on a narrative that conveys a desired, edited, contrived version of the self, an online, semi-public version of an online persona, or 'avatar'. Digital social-media photography thus functions visual rhetoric that weaves and supports a calculated personal contextualizing narrative (one in which the photographer or selfie subject is witnessing history on that very site, firsthand), rather than functioning as an 'objective' document, or as proof of what Barthes (1981, p. 96) called a "that which has been". This inherently marks a shift away from discourses that see such images only in 'analog' terms of 'embalming memory' and preserving the past in materialized form. Instead, the selfie creates and maintains a social persona, a version of the self 'as the poster/author wants to appear' to others. Travel photography, in particular, kindles the persona of the jet-setting, enviable 'friend' who has the financial means, physical mobility, and the adventurous spirit to engage in mass-culture-encouraged acts of pilgrimage. (Before the digital era, inviting neighbors and friends over to your house to enjoy snacks, conversation, and to watch a narrated version of your vacation slide show was a common middle-class social practice in the United States in the 1950s-1970s.) In the internet age, showing off one's travels is a means of displaying one's worldliness, wanderlust, and wealth, all of which are markers of internationalist politics and/or financial privilege.

PERFORMING COMMUNALITY: A RELATIONAL PHOTOGRAPHY

As images that convey a desired narrative of the self for a semi-public audience of social-media 'friends', travel photographs do not assume a traditionally assumed documentary function. They are an example of "the power of authentification exceed[ing] the power of representation" (Barthes, 1981, p. 89). Rather, travel selfies certify the presence of both the selfie-taker and the site of tourism, rather than provide a lasting material touchstone for the appearance of that tourist destination. Digital social-media travel photographs are driven by different impulses: the participation in a communal cultural event, providing a virtual touchstone for projected presence in another space and time, contributing to a collective perception of the site, the performance of virtual-sociality, and the maintenance of a social-media narrative that is synonymous with one's online persona, or 'avatar'.

While travel selfies are visually forgettable for their rigorous compliance with established selfie norms or pose and expression, their memorability resides instead in their performance of relational, virtually-social, performative behavior that supports the selfie-taker's image 'as they wish to appear' in the eyes of others. Selfies –frequently dismissed by commentators on visual mass culture as shallow and depthless– thus reveal themselves to be rich artifacts that reveal encultured social behaviors, and speak to the importance of virtual social connections and surrogate presences. As DeLillo suggested in a description of the touristic experience of 'most photographed barn in America' in *White Noise*: "We're not here to capture an image, we're here to maintain one." (1999, p. 11). Only in the selfie age, it is not just the 'barn' whose 'auratic' image needs constant maintenance and connection to something larger than itself, but the selfie-maker's, the viewer's, and the site's, as well.

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SEMIOTICS OF DISTANCES IN VIRTUAL AND AUGMENTED ENVIRONMENTS

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ESSAY 45/03

DISTANCE
IMMERSION
ISOLATION
AUGMENTED REALITY
DISTANT READING

The interpretations of emerging media as virtual and augmented reality debate the theme of distance to highlight aspects of immersive mediation: from the rarefaction of enunciative and referential distance, to that which leads to the solipsistic isolation of the user behind the screen. By tracing the semantic articulation of these interpretations, the contribution aims to place emphasis on the way these media remedy the concept of distance by investing it with new meaning. In particular, we will focus the illusory cancellation of the distance that occurs during an immersive experience and the establishment of a critical distance in the user, which can be linked to the emergence of a meta experiential competence, by means of the installation of an interstitial device such as the prosthesis and the interface.

INTRODUCTION. PRAGMATIC AND SEMANTIC DIMENSION OF VIRTUAL SPEECH

Distance is a semantically complex concept: it can denote either, quantitatively, the measure of an interstitial space between two or more elements or subjects of communication, or qualitatively, if understood as an adjective, a synonym of 'far', of 'not close to' in space and time. These meanings of distance open to two possible paths of analysis, to theoretically investigate the condition of the subject-user in the reception of a technologically mediated communication.

On the one hand, it is possible to locate the enunciative distance, which concerns the pragmatic dimension of the discourse. This is also intrinsically linked to the physical-topological distance between the subjects of a communication: this distance occurs since from the transition from oral to written communication in which a physical distance is established between the producer of a message (or enunciator), who writes within a written text his/her own simulacrum (*débrayage*), and the recipient (or enunciatary), which acts as an activator of the semiosis of the text through strategies of interpretation by interacting directly with the text.

On the other hand, we find the second conception of the distance, which instead concerns the semantic dimension of the object of speech. With the establishment of the enunciative distance, what was before the listener –now reader and user– turns out to be no longer able to immediately trace the identity of the author and to attest a semantic correspondence between the subject of the speech, i.e. the material referent and enunciator. This referential distance, by considering immersive mediation, is connected to an effect of sense of truthfulness and authenticity of the sign represented by means of image computing techniques.

In both conceptions there are effects of meaning. In the course of this contribution we would like to consider the ways in which, by means of immersive mediation, the referential distance can be illusorily deleted by the adoption of

enunciative strategies that simulate an enunciative proximity (by canceling, in this way, the non-referentiality effect of the physical-topological distance) and, secondarily, how this cancellation produces effects of meaning on the semantic, affective and value level. The illusory cancellation of a referential distance (which is remediated in a sense of immediacy with the digital objects of experience), and the cancellation of a physical-topological distance between the enunciator and the enunciatary create, as a whole, the effect of immersiveness, presence and cohesive hermeticism of the media environment within which the users find themselves during the experience. It is precisely this condition that social discourses interpret both in the dysphoric sense (immersivity as isolation) and in the euphoric sense (immersiveness as an experiential increment).

Both remediations will be understood as they resolve a pragmatic problem of 'writing technologies' that, as we will see, begins to be addressed since from the emergence of the paradigm of secondary orality with synchronous telematic communication.

THE TRAP OF THE DELETED DISTANCE

It is interesting to observe how, during an immersive experience, the enunciative distance is erased and, at a semantic level, it is remediated in an illusory sense of presence and a sense of simulated immediacy. In immersive media, the actuality of an enunciative act is simulated by leveraging on the synchronicity, immersiveness and geolocation of the communication, and this fact leads to the emersion of a sense of presence of the contents: among the various interpretations that we can give to the concept of presence, one is that which conceives it as the effect resulting from a communication (simulated and apparent as) located here and now. In immersive media, the user is 'implanted' into a computer-generated reality and enjoys a content which ap-

pears not as a reproduction (of an expression produced prior to its current fruition, as in writing), but as current, that is, it is perceived as if the interlocutor was close, in space and time, or even as if its expression depended on pragmatic acts of the user-enunciator.

Immersive media "simulate in the statement the situation of its enunciation with an effect of presence […] and enhance our perceptual, cognitive and bodily abilities, installing real prosthesis of listening and gaze" [my translation from Italian] (Paolucci, 2020, p. 46).

By moving from these assertations, we can begin to highlight the main 'risks' of the cancelled distance, that several social discourses support and denounce, by valuing negatively immersive media. This problem had already been highlighted by Baudrillard's philosophical concern (1981) for whom all media representations, especially those produced by the mass media, are *simulacra*, and hence must to be considered as the result of a specific discursive production that combines the strategies of narration of reality to those typical of the show. As for the immersive media, the referential distance that is deleted is no longer only the one between sign and referent, but also the one that regards the difference between the size of the virtual experience (generated by the computer) and reality (that is a physical-material dimension). This is still a problem of reference which however, by means of a non-veridiction pact, asks to be ignored by the judgment of the user. This is why the effects of presence and immersivity may have as a consequence the loss of the mediation's awareness and of the same condition of immersivity in which users find themselves (which can ultimately lead to develop a sense of distrust and perplexity for immersive experiences in general). The illusory cancellation of distance in immersive media communication, therefore, begin to be conceived as a thematic isotopy that passes through a series of heterogeneous social discourses and texts characterized by equally heterogeneous rhetoric.

For economy of job, we propose in the first place the reference to narrative constructions that sanction a certain type of social practices –by considering them as alienating– and value negatively the immersed and distanced condition of the user. As in social network, where the user is conceived as confined within an ideological 'bubble', also in immersive media is difficult, if not impossible, to be in a direct relationship with the real world and the others: this requires to recognize the simulation process of the virtual representation and the difference with the physical space that denotes the real world.

At the level of expression, we refer to a series of practices of interactivity that characterize the immersive experience and that are well described (linguistically and visually) in some texts: from facts of socio-psychological relevance as *The blue whale*, to audiovisual texts such as the series *Kiss me first*, whose subject is directly inspired by this fact of news, from rhetorical journalism of the 'apocalyptic' type, to *Black Mirror*.

It is immediate to recall the concepts of filter-bubble and echo-chamber whenever talk about the condition of social isolation inside a metaphorical 'bubble' of the digital media user. The leap to computational media, compared to immersive media, is not a casual one. In fact, it is possible to match the individual's enunciative distance (and isolation) from social reality (social isolation), with the cognitive distance, a condition that also concerns the configuration of scopic regimes within social media platforms –now much more on the agenda than futuristic immersive experiences. Obviously, the perceptive prosthesis that the user occupies –a filtering entity– has prepared by a social media platform and does not coincide with the individual (who is physically isolated from social reality), but with an enunciative position from which the user can see and know the world. Our thesis is that the 'bubble' of which the critical media discourses speak, by referring to the so-called filter-bubble and echo-chambers (which are effects of communication, but also software architectures with a specific configuration), share the same common basis with the isolated condition of virtual reality users.

Therefore, it is a matter of understanding how the isolation of the user, created by immersive media, led to the inability to recognize the enunciative distance, as that created by computational and algorithmic systems known as filter-bubbles, in which, in a similar way, the cancellation of the enunciative and semantic distances is concealed by the expressive possibilities of synchronic-telematic communication. As for immersive media, however, it is a question of understanding, on the one hand, how these concealments and simulations produce the enunciative proximity that affects the pragmatic dimension, and on the other, on the semantic level, how the evanescence of enunciative distance corresponds both with 'apocalyptic' interpretations, which connect it to a sense of social isolation and, positively, to a sense of engagement, empathy and closeness. In this perspective, distance becomes a positive and persuasive value that drives the viewer to enjoy of an immersive experience.

Whether it is a matter of enunciative distance, between the user and the object of communication, or a semantic one, between the object simulated in the sign and its referent, the issue concerns a series of questions: how the sense of distance is being articulated in interactivity with immersive and pervasive media of virtual and augmented reality, compared to that of digital writing with the computer or smartphone, that characterizes communication in social media and the paradigm of secondary orality (Ong, 1982)? How is the effect on user perception of immersive technologies interpreted? And how is the perceptive model (or scopic regime) of social networks, in particular that of the so-called filter-bubble architectures (Pariser, 2011) remediated and renewed in that of immersive media?

ISOLATION: THE PROBLEM OF SECONDARY ORALITY

Rosamaria Loretelli writes in the introduction to the Italian edition of *Orality and literacy*: "oral society is participa-

tory and magical, it has difficulty in separating the object from the subject of perception; writing realizes this distancing, even where the object of perception is the self, the own psyche" (Ong, 1982, p. 9). The enunciative distance between the producer of a written text and the recipient exists, therefore, in every communication (or representation), written or articulated by digital codes, and enables into the individual a new perception of self, both aesthetically and semantically, with respect to that of oral culture, which Ong calls "a sense of verbal and analytical precision" (Ong, 1982, p. 9).

It is precisely this –always in renewal– perception of the communicative self to foster the constant improvement of information and communication technologies. Writing technology[1], for example, is well suited for the practice of solipsistic reading, but its effectiveness in interpersonal communication is problematic, as it presents high levels of latency. In this regard, Ong proposes the idea of "secondary orality" (Ong, 1982, p. 190) to denote both the forms of mass media communication such as radio and television (especially those of the subgenus of live transmissions) and, by referring to the 'global village' of McLuhan (1964), those typical of peer-to-peer communication in digital environments where users adopt more informal language patterns able to generate a communitarian sense, authorized by the synchronicity of communication.

Secondary orality activates a process in which the enunciative distance is remediated in the sense of presence, which arises from the synchronous nature of digital communication, able to simulate the enunciative act as current. With immersive media, secondary orality can be said to be completed.

A negative interpretation of the cancellation of the enunciative distance (completion of secondary orality) is the one that leads to consider as isolated, from a social and cognitive standpoint, the user immersed in a digital environment. Users who use an augmented reality app like *Pokémon Go* in a public space, for example, may be stigmatized

by co-present individuals for being inattentive to the real world; in this case, immersive media, instead of increasing, prevents and compromises the overall cognitive prehension of the real world.

Another consequence of the illusory cancellation of the enunciative distance is the establishment of a cognitive distance, which emerges from the progressive development of the processes of technical delegation (Montani, 2014) of the perceptive and cognitive faculties to the device. By adopting immersive technologies, simultaneously embodied (i.e. integrated in the body, able to translate motor inputs into machine instructions) and locative (i.e. equipped with GPS), the technologically mediated experience of the real space has to be conceived as phenomenological, and the semiotic process of spatialization through an augmented body as inseparable from that experienced by a computational entity like a computer-vision software.

Let's look at a specific case. Augmented reality applications, such as *Ikea Place* or *Metro*, delegate to computer vision software the perceptions' elaboration processes whose, by operating computationally and 'deeply', measures real spaces by returning an output to the user, who, in the meantime, is free to enjoy the medial experience and the sublime mathematical accuracy of the calculus. However, the user, by delegating to a computational entity the perceptual and operational faculties, can allow it to anticipate –for example through algorithmic strategies of recommendation– the contents to be experienced, by ending with the production of an image that is distanced from a heterogeneous and idiosyncratic representation of the world: "as Augmented Reality will become ubiquitous, it will likely take over most aspects of our daily interactions with surrounding objects and human beings, making it practically impossible to distance ourselves from this added dimension of future society, much in the same way that most people can no more leave their house without making sure they have their mobile phones on them" (Palermos, 2017, p. 134).

A very similar process is already evident in the social network communication.

At this point we would like to begin to sketch the connection between the semantic distance of the user in immersive media and the cognitive distance of the scopic regime installed by a social media platform: indeed, both computational architectures that govern such media environments, in which the user is virtually embedded, are currently designed to isolate it in a self-referential and illusory environment.

The observer-user is illusory conscious that the semiotic articulation of the experimented text (consisting of the set of contents displayed within a feed page) depends only on their contingent choices: the hierarchical succession of the post that follows would be unique and in a certain sense unrepeatable. But he does not know (or perhaps did not know, until a few years ago) that this articulation is instead the result of a complex deep work, carried out by algorithms based on data processing, and that, therefore, the possibility of encountering insufficient or deceptive representations of the world is far from lacking.

Here, again, we retrieve the problem of the reference of a subject of enunciation. The presence of an automated and computational interlocutor not only opens the way to post-truth (Lorusso, 2018) but, from a phenomenological and subjective point of view, can cause the emergence of unpleasant and disturbing sensations, which inevitably affect the meta-experiential level, such as the so-called 'Fomo', that is the fear of missing out an important event, or of not participating in the collective discussion that develops from this. In this case, distance is conceived as absence and it is related to a sense of social isolation.

Always at the level of the values, we can look to the extreme political consequences of the succeed of secondary orality; they concern the relationships of knowledge and power that are expressed in algorithmic language (Finn 2017). We can now understand how the isolation of the user within the media environment, created by an immersive media, is

semantically related to that created by the computational and algorithmic systems that govern social media platforms by creating echo-chambers. The computational and algorithmic systems that govern the functioning of social media platforms have been associated with the production of a filtering and echo effect (Pariser, 2011) and this form of power and influence on the fruition of texts within a common and shared space can be further associated with that characterizing the theory of *Panopticon* in Foucault (1975).

Finally, there is also the technological factor: the screens of the devices, such as glasses for augmented reality, are designed to be wearable, to incarnate and occupy the space closest to the individual, the intimate one, by making difficult to break free from the aesthetic and cognitive grip of the virtual world. They inaugurate a new typology of orality that subsists between human user, endowed with natural language, and computational entity, endowed with artificial language.

Therefore, the conceptualization of the distance in immersive media must be understood in the enunciative sense, and referred to the interstitial physical space between the couple user-text and the surrounding physical-material world, and referred to a condition of the user who finds himself alone and estranged, cognitively immersed and isolated in an extra-earthly dimension from which it is impossible to recognize the real world from the one generated by the computer.

This is the 'problem' of the secondary orality that proposes the sense of distance in relation to facts, objects and individuals who, although they perceive themselves as neighbors, are distant, or in any case do not belong to the situation in which they are present, are not *in situ*, and yet consider themselves true in order to feel immersed. The cyber-dystopian imagery of fictional narratives and the techno-phobia that develops from actual news events contributes, day by day, to feed the social and psychological concerns that arise from this problem.

WHAT IS IT TO BE DISTANT?

At this point, a doubt can arise: the cancellation of the enunciative distance, that characterizes the immersive media (and in general, from the computational and algorithmic media), may be problematic to the extent that it may lead the users to alienate and lose themselves within the intimate and virtual space in which the reception and activation of a message occurs. But this negative interpretation of the totalizing mediation, we might say 'apocalyptic' (Eco, 1968), is just a first type of interpretation.

The simulation of the situation of enunciation within the text means that the perception of the enunciative distance between producer and text produces a sense of immersivity, hermeticity and presence. A phenomenal reunion occurs with the objects of speech, which appear as present and immediate: this reunion re-energies the affective and axiological dimension in the observer, and puts the emphasis on the spontaneity and corporeity of interactivity, by making the link with orality even stronger. The characters of a virtual reality film appear as present and current: with them the user can interact in a natural and immediate way and this has consequences on the sense of empathy, for example, that the viewer can try (Dal Pozzo et al., 2018; Arcagni, 2020). In addition, on a thematic level, many of the virtual reality products that provide an interactive component adopt languages typical of the videogames and, in this sense, the corporeity of interaction is the most important aspect of the immersive experience.

By looking instead to the communicative (and distributive) strategies for the commercialization of applications and experiences related to immersive media, it is typical to incur in persuasive interpretations of the cancellation of enunciative distance, which emphasize the increasing informational and aesthetics experience, the recovery of intersubjective experience, an humanitarian sense and empathy of interaction, by emphasizing the expressive possibilities of these innovative devices and their ability to develop meta-operational skills of

augmented cognition of the prosthetic subject, comparable to the sense of verbal and analytical precision of which Ong spoke. Unlike the previous interpretation, whereby the sense of hermeticism emanating from the virtual environment led to a condition of social and cognitive isolation, here it is the sense of immersivity to be connected to the cancellation of a critical distance linked to the use of telematic media.

The first positive interpretation of the cancelled distance goes in the direction of a recovery of the in-presence experience, in which the immersive media represents a tool of conjunction, and not of disjunction, between subjects. The augmented reality media, by visually connecting real world perceptions and virtual contents within the same display, put the user into the embodied experience and, in the case of alternate reality games like *Pokémon Go*, it physically places him within the public space shared with other players. The sense of the cancelled distance flows both from the process of visual augmentation and from the recovery of social interaction and the presence of bodies: it is no longer a matter of being always on, of alienating oneself in a fruition of only computer-generated images, of not "to go down more in the street and not to meet more physically" (Fadda, 2018, p. 21). It is instead a matter to be present and current in the place prescribed by the mediation, in order to become (re)enunciators –at each mediation– of a geo-localized content.

However, the enunciative act, experienced visually and aesthetically (in the sense of sensory), corresponds, as we have said, just to an illusory simulation of it: the simulation of the cancellation of the enunciative distance by the content's authors. Players at *Pokémon Go*, in this sense, are still the target of an earlier, more or less conscious communicative and entrepreneurial project, which updates the issues related to the topological and axiological distance between enunciator and recipient[2].

A second type of positive interpretation of the erased distance, instead, emphasizes the evasive character and the aesthetic distance from the place where the mediation takes

place, that especially virtual reality enables. Virtual reality movies like *Carne y Arena*[3] or exploration video games like *Apollo 11*[4] are aesthetically appealing insofar they are able to 'transport' the user in the dimension of elsewhere, physically and topologically, by letting user to perceive a reality otherwise impossible to experience through the human body; in the first case, exotic territories inaccessible for contingent reasons, in the second one, places no longer usable because physically insubstantial (in the case of *Apollo 11*, the distance is also temporal: experience consists of a sort of 'time travel' –and this helps to emphasize even more the referential distance from the laws of nature that regulate the real world to which the user is accustomed). In both cases to be pursued is an integration of the phenomenological and aesthetic knowledge of the individual, which acts by rarefying the topological distance between the user and the object of the visual content.

These two interpretations give rise to the idea that immersive media are innovative (positive appreciation) insofar they increase the knowledge of common users, compared to those of social media, by emphasizing a rediscovery of the value of the presence and proximity of bodies in space (whether real or virtual) and between bodies themselves. Immersive media bring users close, although to what is distant and difficult to achieve physically.

The most important aspect of these 'experiences of the distance' is the ability of immersive media to visualize something that is distant (like the knowledge) here and now, and to transform heterotopically the real space in which visual augmentation occurs in a space, precisely, increased: this is particularly evident with augmented reality. In these cases, the (cancellation of) physical-topological distance corresponds to that between the device and the confined space prepared to be increased, and has the function of facilitating the access to knowledge by users (let's think of the QR code installed near a historical monument or a bus stop): the emergence of incremental information occurs in the visual

space of the user, on the display of the device as well as on the retina of the eyeball: is close, in the sense of immediate, accessible by click[5].

The third and final type of interpretation that we would like to discuss here concerns the metaphysical distance between the virtual dimension –otherworldly and utopian– and the real life, physically experienced. This is also an interesting example of the question of referentiality. In February 2020 in South Korea, Jang Ji-Sung met her dead daughter thanks to the Meeting You project, which allows her, wearing a virtual reality helmet, to see and interact with the digital representation of the body of the daughter: here the distance is not referential, because the child's body and the place are insubstantial (the meeting takes place in a playground –a real place– that the two used to attend, but the illusion of presence of the living daughter leads to interpret this place as metaphysical); but it is neither traceable to the physical-topological enunciative distance between two subjects existing in the real world whose communication is mediated and whose presence is simulated technically (as the daughter is dead in the here and now). What is at stake is still a distance that, although it can be understood as a topological, is to be interpreted as a metaphysical one, liminal between life and death, which in interaction decays. The deceased, ghettoized in cemeteries at a distance from the world of the living, return to symbolically circulate among the living, proving to be full partners again worthy of exchange. They move suddenly from the periphery of the real world to the center of the virtual one [my translation from Italian] (Sisto, 2018, p. 72).

To conclude, it is clear that the cancellation of the enunciative and referential distance in immersive media pushes towards an extreme recovery of the idea of secondary orality and does not only lead to a positive overcoming of the 'isolated' condition of the social media user, but, positively, to an update of the sense of space itself, real, digitally increased, and shared, as well as of the categories of proximity and distance that articulate the processes of signification that occur within it.

DISTANT VISION, DISTANT READING AND AESTHETIC DISTANCE

By promoting an affective and informational increasing of the natural experience, antithetical to the cognitive isolation, immersive media can be interpreted as a prosthesis of sensibility (Montani, 2014) which, through cancellations of the enunciative distance, increases –and not alienates– the experience of the individual.

The concept of prosthesis can be referred, in this sense, to that of apparatus (Foucault, 1975): it is therefore possible to consider the device of an immersive experience a factor that deeply affects the 'formations of the self'. In particular, this affection promotes the development of a meta-experiential competence in the individual, which concerns the understanding and organization of trans-textual relations between elements detected within a media environment (Montani, Cecchi, & Feyles, 2018) and which constitute, as a whole, the object of the users' augmented experience.

It is important to underline that, this time, it is not the cancellation of a distance to be decisive; on the contrary, to be decisive is its affirmation through the establishment of an interstitial technological device able to support the users, by providing them with an operational interface to organize the contents of the experience.

Firstly, we would like to give our own interpretation of the *Panopticon* technology, based on the theory of Foucault. It may represent the technology, or technique, characterized by the interposition of a distance between the observer and the observed subject, and that it is a necessary condition for the informational increasing of the observer. In the *Panopticon* of Bentham, the interposition of a wall, although adequately perforated to allow the guards to surveille prisoners, coincides with the establishment of a distance, realized concretely in the dividing and strategic apparatus: its peculiarity lies in the ability to provide the guards with a vision 'at distance' that allows to supervise several prisoners at the same time.

With digital technologies the same process occurs: by using surveillance cameras, the monitor is disconnected from the real world framed by the devices, and must be located within a control center in order to obtain a multi perspective vision of observable space.

We can affirm that the languages of the digital interfaces lead to the development of a meta-experiential competence which concerns the strategic organization of the media environment and the formation of the self on the basis of the functioning of certain perceptual models.

In the *Panopticon*, the interposition of a wall, despite it increases the operational capacity of the observer, decreases the amount of details of the observed subject perceptible. Besides, a reason for the theoretical success of *Panopticon* could therefore be attributed to the fact that this apparatus reduces the expenditure of energies necessary for the observation of a large portion of the world, and by the social sense (in this case of power and oppression) that emerges from the structural organization of space.

Therefore, combining the sense of hermeticism and isolation arising from the cancellation of the enunciative, topological and referential distance, with the process of informational augmentation and incremental perceptions, is not a simple task: in this regard we would like to recall the distant reading paradigm, developed by Franco Moretti (2005), in the field of literary criticism: this expression denotes a method of computational analysis of written texts belonging to a single literary current or referable to a single author (but the same can be done with visual texts). This method is able to bring out trans-textual isotopies and recurrent stylistic elements into a corpus of texts: "distant reading: where distance, is a condition of knowledge: it allows you to focus on units that are much smaller or much larger than the text: devices, themes, tropes or genres and systems" (Moretti, 2005, pp. 48-49).

Understanding in what sense a meta-textual analysis of this type can lead to an informal increment of the close

reading experience (which assumes a certain degree of immersion) can be useful to define better the augmentation process and to understand how the process of developing meta-operational skills that occurs, for example, in augmented reality experiences.

The informational increment of augmented reality can be interpreted as an embrayage within the text, which brings an amount of information belonging to the extra-textual dimension to appear intra-textually, but that is necessarily semantically referred to the semiotic elements detected in physical space.

The vision 'at distance', which has been obtained computationally, allows to 'walk' within the network of trans-textual relations, by helping to define better and to understand in a critical way the single textual unit with which the reader interfaces here and now.

Although this paradigm seems at first to follow the organizational structure of the *Panopticon*, as it puts in place an overcoming of the focus over the single object and the adoption of a vision 'at distance' that captures the whole of a situation, it is detached from it for one reason: differently from the *Panopticon*, the distant reading paradigm provides, alongside the perceptual processes of the user, a second observant instance, the computational one, whose role is to observe the quantitative qualities of a corpus (faster and better than the human being would), to organize its units, to meta-contextualize them, and finally to return to the users an abstract representation of them, so that they could take advantage of an enhanced and enriched look over the single textual object. Computational analysis sets up a multi-focal view, at the same time oriented to the detail and the universal, by allowing the access to the single element only through an intermediate step, the interface, through which the internal organization and logical explanation of the contents appears. This in-between step corresponds exactly to the installation of an interstitial and distancing device. By adopting a vision 'at distance', the interface represents an environmental en-

tity that allows the users to grasp the relationships that exist between the various textual units: the interface is still something that has been produced, that has been enunciated we could say (for example from the production company) but, first of all, it is an interactive and user-oriented entity, which provides a set of tools to manage the contents, to understand and organize them into the actual mediated experience. Now, in all computational media experiences there is an interface that works in this way: but what about multitasking interfaces through which it is possible to control running applications, to choose those with which to operate, and those immediately accessible through a shortcut? In the latter case, the meta-operative and meta-experiential skills are decisive to understand and organize, at distance, the process of interactivity with the computational instance.

In this perspective a hermetic (and therefore isolating) immersive experience model can be theoretically imagined, that activates both a sense of presence and, at the same time, 'increased' visions of the real world and augmented by information calculated by artificial intelligence.

CONCLUSIONS

The affirmation of secondary orality paradigm within the media landscape has already occurred (for example in social media platforms) and has led both to an enrichment of communication possibilities and to users' social isolation, that has been aggravated by the spread of so-called echo-chambers.

In the context of this contribution, it has been decided to consider specific issues concerning the impact of immersive technologies on the cognitive perception of the real world, in order to outline the general characteristics of apocalyptic discourses that insist on the theme of distance. Secondarily, it has been decided to take into account also positive and persuasive interpretations of the immersive experience that the technologies of virtual and augmented reality enable.

On the one hand, the remediated forms of orality in the communication of social networks (which provides for the cancellation of the enunciative distance) leads to the reactivation of skills, rules and schemes typical of oral language (and this is a reason for users' persuasion). On the other hand, in the case of computational platforms, and by referring specifically both to phenomena of interpersonal communication mediated digitally and to immersive experiences in solitary, the sense of isolation can be problematic to the extent that it risks to lead to a cognitive loss of the user into the virtual world. However, the sense of isolation emerges just in front of the ascertainment of the mediation, of the identification of the computational interlocutor and of the algorithmic process that generates the hierarchical visualization of the contents: the users can therefore be thought as isolated cognitively not because they enjoy an image of the world that does not correspond to the real –referential problem– but because they enjoy an image of the world built *ad hoc* and 'caused' by directly its 'profile'.

This isolation, increasingly conscious and problematized by critical media studies, features the risks related to the habit of being constantly at the center of a virtual *Panopticon* (as in the case of social networks), able to observe and continuously to be observed (although the relationship does not need to be proportional) the surrounding environment; these risks are, on the other hand, readily concealed by sensational marketing strategies that leverage technological innovation, especially on the participation of users in public debate and the expression of individual creativity.

A possible future model of scopic regime in immersive experiences must therefore be able to combine the effect of the cancellation of distance enabled by immersive media, which risks isolating the user in a filter-bubble, with the adoption of a 'vision at distance', through the establishment of an interface able to trace the enunciative entity and the referential distance, and thus to allows to user to critically evaluate the object of observation, to detach from it and at the same time to be able to immerse in it with a renewed awareness.

The focal point is to encourage the creation and dissemination of media interfaces and architectures that could promote the development of new meta-experiential skills in the user: not only with regard to the biunivocal relationship, that which exists between the user and the computational system, but also for the ones that exists between social and computational subjects, in which it is not easy to distinguish a simulation from an enunciation in presence (at least in the now).

NOTES

1 It should be noted that the writing technology to which Ong refers is purely that which operates by means of material and paper, not digital.
2 This is the case with *Pokémon* strategically placed near businesses.
3 Iñárritu, A. G. (Director). (2017). *Carne y Arena* [Film]. Legendary Pictures.
4 IDIA Lab. (2017). *Apollo 11 (Switch version)* [Video game]. Waterford City, IE: Immersive VR Education.
5 It is interesting to note, from a socio-semiotic perspective, how the remedy of the topological distance in the digital archive or in the database, by definition topoi of the custody of knowledge, does not coincide with a circumvention of the instances of mediation, but with a re-focusing of the services that they are able to offer.

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CLOSE-UP-NESS
MASKS, SCREENS, AND CELLS

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SCREEN
MASK
MEDIA
SPACE
PANDEMICS

The pandemic reshapes not only our habits, but also our environment. It does so by supporting the creation of existential bubbles –often in the form of restrained cells– in which we shrink our range of action, but also in which we can feel safe. And it does so mostly thanks to two media that the pandemic brings to the fore and that deeply affect their users' spatial perception: the mask and the screen. I will start from these media and their ability to remediate our usual spatial coordinates, and then conclude with the bubble and the cell as an increasingly mediated form of spatiality.

THE MASK AND THE SCREEN

We cannot think of the pandemic without thinking of the *mask*. It is no longer the beak-like mask filled with aromatic items that doctors wore during the historical plagues; it is a surgical mask, a N-95 model, a scarf on the nose and mouth, or a personalized facial cover. Aimed at reducing both our exposure to the virus and the possibility of spreading it, the mask is a further layer between us and the surrounding world. It works as a filter and a protection: it holds the dangerous droplets, and, in this way, it purifies the air that we breathe. While crossing a dangerous space, we create a safe zone around us that keeps the disease away from us and people close to us. On the other hand, the mask also works as a signal: while hiding our face, it displays our care for ourselves and for others –not to mention, particularly in the USA, our political affiliation. It speaks on our behalf, to say so.

The pandemic is equally epitomized by the *screen*. The screen is the surface that allows us to stay in touch with whom and what we would otherwise have lost. We no longer go into a classroom: we attend a seminar on our computers. We no longer support our team from the stands of a stadium: we watch the game on our TV set. And we no longer take part in our usual meetings in-person: we attend them on video chat. When the pandemic began, our lives moved on to the screen: it is there that now we can enjoy contact with others and the world. Like the mask, the screen is a display: it puts in sight the impermanent images that act as a proxy for what we no longer experience in person. And, like the mask, the screen is also a filter and a protection: not by chance, prior to its visual connotation that emerged only at the end of the 18th century[1], the word 'screen' designated "A contrivance for warding off the heath of a fire or a draught of air […] A partition of wood or stone […] dividing a room or building in two parts" and "An apparatus used in the sifting grain, coal, etc." (Murray, Bradley, Craigie, & Onions, 1914, p. 272). The screen of our optical devices, from the TV set to the computer, preserves this idea of filter and protection: what appears on the

surface is just an image that selects only few traits from reality and does not expose us to a direct engagement with it. Through the screen, we breathe a 'purified' world.

The mask and screen do not only share crucial features, but they also provide mutual compensations. Thanks to the mask, we can safely move around and experience in person what on screen we experience by proxy. And thanks to the screen, especially in online conversations, we can drop the mask and look at each other's faces naked. Each medium can take on one part of the work from the other and exempt it from its duties, with mutual relief. The most significant consequence is that the surcharge of mediation with reality required by the pandemic can stop at some point. From this point of view, the mask and screen are swappable.

Their intimate complicity becomes even clearer if we look at the ways in which they elicit a deep redefinition of the space around us. Indeed, the mask and the screen 'remediate' the sense of 'closeness' and 'distance' in our social interactions: while reframing the ways we cope with whatever or whomever we encounter, they reshape the setting in which we perform our actions –in a word, they reshape our 'environment'.

CLOSENESS AND DISTANCE

Four simple examples can help us to grasp this process. During the pandemic, we can still meet other people in-person, yet we are recommended, and sometimes required, to do this under two conditions: to wear a face covering, and to keep a social distance of six feet. These two rules, which ultimately respond to common sense, nevertheless spoil the idea of 'being together': we are close to someone else, but not as close as we could, or even should, be. The mask and six feet of distance are a barrier that the muffling of the sound of the face covering further enhances: we are together but split. Hence a contradictory situation: while approaching somebody, we feel a gap that we are unable to fill. In a word: we

experience 'a distance within a closeness'. The reiterated protests against face covering and the recurring claims that the pandemic brings with it a loss of freedom (Agamben, 2020)[2] uncover the difficulty to cope with a spatial contradiction more than a real political question. Masks imply a conundrum: when wearing them, proximity also means separation.

Second example. Despite the pandemic, we can decide to meet people without wearing a mask, in an attempt to restore an intimacy otherwise lost. We get rid of a barrier –and we get rid of a spatial contradiction. Proximity not only returns to being what it was, but it even radicalizes itself: now it relies on an act of removal –we dropped the mask– and therefore it conveys the sense of a 'closeness within a closeness'.
Third example. If we practice a self-isolation, our contact with the outside world depends on our internet connection –be it provided by a router, a cable, or a hotspot. What happens when this connection is lost? Literally, we are disconnected: we can't reach what or whom we want, and this condition puts us in a state of distress, if not of discomfort. Whom or what we are looking for may not be too far from us, but the limitations in mobility bolstered by the pandemic make almost impossible to find a remedy for this persistent separation. We experience 'a distance within a distance'. The blank screen of our computers or the blank display of our smartphones bear witness to this situation: they denote a radical severance in space and cyberspace (Rancière, 2008)[3].
Finally, we can encounter our colleagues, friends, teachers, bosses, and so on, thanks to platforms like *Zoom* or Microsoft Teams. These platforms allow conveners to be physically distant yet visually close. On our screens, we can address interlocutors that, while not actually present, nevertheless are fully within view and react to our presence. Karin Knorr Cetina (2009) calls these encounters "synthetic situations" because, unlike face-to-face encounters analyzed at length by Goffman, they include both real and virtual elements. I am less interested in the comparison with live encounters, and more in the arrangement of settings. Indeed, in these situations we deal with the merging of two different spaces. The space of the other, to which we do not belong, comes

to us, and pops up on the screen in front of us; once on the screen, this space is subsumed by our own space, eliciting what Shaun Moores (2004) appropriately calls the "doubling of the place". When this imbrication of spaces is perfected, we can address somebody who is not here and yet is here, at least virtually; with the consequence to ultimately experience 'a closeness within a distance'. Such a remediation of the distance reverses the logic of our first case: if the mask was an obstacle in a potentially intimate situation, inserting a barrier between two entities ready to meet, here the screen is a bridge towards somebody or something that is not –and will never be– at hands, but becomes in some way attainable.

In these synthetic situations, the 'closeness' that we experience 'within a distance' depends more on the configuration of the image on the screen than on the image's mere content. In an online conversation, in most cases, a large section of the screen's surface is occupied by the face of my interlocutor. Indeed, it is the scale of this face that ultimately creates the strong sense of intimacy that sustains my conversation (Doane, 2003; 2009). Relocated on screen, and stripped of its mask, a face must be big, if it wants to be near to me. In other words, to defeat distance in a synthetic situation, we need close-ups. As consequence, closeness becomes 'close-up-ness'.

CLOSE-UPS

Film theorists frequently discussed the very nature of close-up –a typology that found its apex in shots in which a face or an object filled the entire frame, but that applied to all shots in which the represented reality was offered in a relevant scale, consequently including also wide clos-ups and medium close shots. Among these theorists, Jean Epstein offered a suggestive first-person depiction of the impact that close-ups had on spectators in his 1921 essay *Magnification* (Epstein, 1921/1988). The opening of the essay is stunning: "I will never find the way to say how I love American close-ups. Point blank. A head suddenly appears on screen and drama,

now face to face, seems me personally and swells with an extraordinary intensity. I am hypnotized" (Epstein, 1988, p. 235). Such an intense implication of spectators is elicited by the apparent abolition of any distance: "The close-up modifies the drama by the impact of proximity. Pain is within reach. If I stretch out my arm, I touch you, and that is intimacy" (Epstein, 1921/1988, p. 239). A particularly intense relationship is established between the screen and the auditorium: "The close-up is an intensifying agent because of its size alone" (Epstein, 1921/1988, p. 239). What emerges, is a sort of a communion with what is represented on the screen: "Never before has a face turned to mine in that way. […] It is in me like a sacrament" (Epstein, 1921/1988, p. 239). Yet, while filling the gap between the screen and spectators, close-ups also put spectators in a state of isolation. "Wrapped in darkness, ranged in the cell-like seats, directed toward the source of emotion by their softer side, the sensibilities of the entire auditorium converge, as if in a funnel, toward the film. Everything else is barred, excluded, no longer valid" (Epstein, 1988, pp. 239-240). Spectators are at once fused with the images –which work as a proxy for objects still distant– and severed from the world –which retreats from spectators' attention.

Epstein offers a helpful description of the dynamics that close-ups activate. On the one hand, he confirms what we already found in synthetic situations: close-ups bring our interlocutors on screen near to us, despite the fact that they are not –and will never be– physically present. This is why we experience a closeness in the distance. On the other hand, Epstein adds a crucial note: while absorbed by the images on the screen, we are also cut off from the world around. This creates a second distance: the immediate reality retreats, and it is no longer present to us. Synthetic situations practice also this second distance. When we are at the computer the setting is largely accessible, yet during online conversations this availability becomes partial. We immerse ourselves into our exchange, restricting our primary environment to the screen, and we put the remaining space 'on reserve', allow-

ing it to intervene only when the interaction with the screen requires it. Hence the creation of some sort of distance from our surroundings, which do not disappear, but withdraw[4]. This separation from the physical context –common both to cinema and to synthetic situations– brings to the fore a new crucial aspect: the emergence of a 'bubble' in which we can be at once in intimacy with an image and momentarily disengaged from the world. The bubble, as we will see, is a quite common spatial arrangement; 'this' bubble –the one that close-up creates– in some way is more peculiar. It has the characters of a 'cell', and as such it raises further questions.

BUBBLES AND CELLS

The idea of bubble is not new in Media Studies: it suffices to recall Michael Bull's analysis of the "mobile and privatized sphere of communication" that users of "mobile sound system, mobile phones, and personal stereo" build around them, while crossing the city (Bull, 2004). Peter Sloterdijk (2011; 2014, 2016)expanded this idea of sphere to all the spaces in which we live –and praised the current emergence of an aggregation of small spheres like foam instead of the all-inclusive globes represented by State, Nation, Humanity, and God[5]. More modestly, we can consider a 'bubble' as an enclosed sphere of experience that includes one or more elements engaged in a specific action and excludes the surrounding elements that do not directly affect this action. Consequently, a bubble relies at once on an inside and an outside, marked respectively by a closeness –the elements inside are in some way fused together– and a distance –the elements outside are suspended and no longer at hand.

The convergence of proximity and separation is crucial for the creation of a bubble. As we have seen, this is what we experience when, in front of a screen, we feel near to something that is absent at the expense of our immediate context. But we experience this convergence also when, wearing a mask,

we feel split from what or whom we are approaching. In both cases, closeness and distance work in concert, with the effect of creating a space of familiarity as opposed to a space that remains detached. Bubbles take shape precisely when these two spaces convene, just separated by an invisible border. Proximity and distance intersect –thanks to the presence of tools or media like the screen and the mask– and by doing so they create a peculiar spatial configuration.

I add that the infiltration of one element into the other makes this intersection even more iconic. A screen allows a closeness to creep into a distance, and in turn creates a split with the surroundings; wearing a mask allows a distance to creep into a closeness and shows that surroundings are not at hand. Such an insinuation is a sort of blow that literally inflates the bubble. We see a space of intimacy arising from a space of exclusion, and vice versa. In this sense, screen and mask are bubble-makers precisely because they put in conflict proximity and separation, instead of simply enhancing them. By letting one element infiltrate into the other, they give way to micro-situations in which we feel either a sense of commonality despite a detachment, or a detachment in a moment of possible fusion. Suspended between an interior and an exterior, in both cases we end up living in a bubble.

Yet, there is another, more specific aspect that we must take in account. Let's go back to Jean Epstein: in order to underscore spectators' separation from the physical context, he speaks of "cell-like seats" in which they sit. 'Cell' is the right word: the bubble experienced by those who are in front of a screen or who wear a mask has all the features of a cell. Its space is minimal: it tends to include individuals and what immediately surrounds their bodies. It is a space of confinement: movements are limited, either because of the need to stay onscreen, or because of the need to respect social distancing. It is a modular space: its configuration is continuously reiterated, thus connecting the different cases. And it is a vital space: despite limitation, it allows us to pursue goals, to perform deeds, to accomplish tasks, and to express ourselves (Sloderdijk, 2016)[6].

We can get a good idea of a cell-like space by attending a meeting on *Zoom*. All of the participants are portrayed in small vignettes next to each other like as in a beehive –except for the rectangular rather than hexagonal shape. These vignettes reveal only the face of the participants and a reduced part of the place from where they are speaking –a part that can be further concealed by artificial backgrounds added to the image. Such a reduction of the space reflects the rules of the game: in order to demonstrate engagement with the conversation, participants must minimize the elements in sight and at the same time align themselves with others. In a word, they must occupy, and become, cells. Sometimes, the narrowing of the space is unbearable: in this case, participants replace their face with their name and take a break. And yet, everyday existence persistently infiltrates the twofold cell in which participants are depicted and in which they work. In the vignette, participants often accept to appear as they are in a time of seclusion –imperfectly dressed and not well combed. In the real space, they often allow the everyday activity to contaminate their online interaction –while discussing, they eat, pat puppies, instruct kids, let partner appear, and so on. Cells frame, but also bear witness of the dynamic of life.

What is true for the screen, it is also true for the mask. Anyone wearing a mask moves around in tight spaces: gestures must be careful and restrained, distances must be appropriate, movement must be limited. In exchange, she can look at herself, and even dialogue with herself, as she rarely can. The space of isolation is also a space of introspection.

This coincidence of limitation and vitality echoes the two connotations implied in the idea of cell. On the one hand, the cell evokes disciplinary practices. In Foucault, it is one of the constitutive elements of the Panopticon, and more in general, it is one of the outcomes of the spatial distribution that discipline promotes (Foucault, 1995, p. 167). On the other hand, a cell is the basic biological unit of all organism, and in this respect is the smallest unit of life. This twofold reference

is wholly pertinent when we speak of the pandemic, in which disciplinary and biological aspects inextricably merge. By calling the bubbles created by screens and masks 'cells,' we foreground the disciplinary and organic resonances that the health crisis has so dramatically uncovered.

MEDIA AND ENVIRONMENTS

To build bubbles is quite a common activity. I already recalled the sonic bubble that headphones, i-phones, boomboxes, or loudspeakers can create in apparently open spaces. Bubbles equally emerge when we isolate ourselves from our immediate context and we focus on a book or a newspaper –indeed, here the page plays the same role as the screen. Or when we deny attention to what is happening around us, and turn our head elsewhere– this time, it is this body gesture that plays the same role as the mask. Sloterdijk reads the city as composed of myriad bubbles, with buildings, streets, and squares shaping the urban space as if it were a foam (Sloderdijk, 2016, pp. 564-626). Social networks and videogames, GPS and wearable media create another multitude of bubbles for our everyday lives. We largely spend our existence into bubbles.

Such a ubiquity does not diminish the significance of the bubbles, especially of the bubbles we have examined. First, bubbles are peculiar spatial arrangements. Especially when the separation from the exterior becomes thin, this arrangement looks quite different from what we are used to call a 'place': it creates a more flexible entity that is neither necessarily defined once forever, nor dependent on recognizable external landmarks. This is the case of the fragile cells tied to the mask and screen: they elicit a 'modulation' of space more than a rigid localization (Deleuze, 1992)[7].

Second, bubbles largely rely on media, including unconventional media like the mask. Indeed, in order to modulate the physical space, bubbles employ physical tools that mold

and re-mold the surrounding reality, and by doing this they directly intervene in our interaction with the world and others (Siegert, 2015)[8]. This capacity to mold reality and promote mediation makes these tools become media, and consequently provides the bubbles with a series of techniques and technologies that support their action.

By working at once on space and with media, bubbles express the logic of what I elsewhere called 'mediascapes', i.e. spaces affected or appropriated by a medium (Casetti, 2018). Invisible spheres, they participate in the visible process that gives a new shape to our milieu, and progressively transforms it in a technically-oriented site of mediation. At the same time, these bubbles testify how the interaction of media and space sometimes leads to apparently paradoxical solutions. We saw how, in an emergency, a screen can remediate a distance into a closeness-within-a-distance, giving way to a 'close-up-ness'. The bubbles of the pandemic genetically reflect the bending of space created by media in a situation of general stress. In this sense, these bubbles not only cast light on the progressive mediatization of our territory –a process that has always accompanied us– but also uncover some of the collateral spatial-media effects that a crisis and its trauma can elicit.

NOTES

1 A good example of the emergence of the visual connotation of the word "screen" are two notices, respectively in *Cobbett's Political Register* (Vol. 2, London, Cox and Baylis, 1802, p. 1053) and in *The Monthly Magazine* (87, June 1802, p. 488): referring to the patent granted to Paul De Philipsthal on January 26, 1802, the two notes speak of a "transparent screen," while, quite curiously, the text of the patent published few months before in *The Repertory of Arts and Manufactures* (vol. 16, London, Nichols and son, 1802, p. 303-305) reads "transparent body".

2 The recurring theoretical framework in which the pandemic has been discussed is its complicity with a state of exception: see the controversial contribution by Giorgio Agamben, "L'invenzione di una epidemia", *Il Manifesto*, February 26, 2020. In this framework, the re-definition of the spatial-temporal coordinates of our settings did not get the attention it deserved.

3 The severance is never irremediable: as Rancière brilliantly demonstrated, it is often the premise of a sense of community to which we, nevertheless, belong. See Jacques Rancière (2008), Aesthetic separation, aesthetic community: Scenes from the aesthetic regime of art. *Art & Research*, *2*(1), 1-15.

4 This process is probably intensified by the popular use of artificial backgrounds: in front of the screen, we "project" ourselves into a different environment, with the effect of enhancing the separation from our context. I thank Carolyn Jacobs for bringing this component to my attention.

5 See Peter Sloterdijk's thrilogy *Spheres*, respectively *Bubbles*, *Globes*, and *Foam*, translated by Wieland Hoban. (South Pasadena: Semiotext(e), 2011, 2014, 2016). Original: Peter Sloterdijk, *Sphären:* Bd. 1; *Blasen* - Bd. 2. *Globen* – Bd. 3. *Schäume*. (Frankfurt am Main: Suhrkamp, 1998-2004). The praise of small spheres like foam is developed in the third volume of the trilogy.

6 Peter Sloderdijk offers a characterization of the cell-like space in his description of the one-room apartment. *Spheres. Vol. 3. Foam*, pp. 529-542

7 On modulation of spaces, see Gilles Deleuze, "Postscript on the Societies of Control," *October*, Vol. 59. (Winter, 1992), pp. 3-7

8 From this point of view, screen and mask are the bearers of a set of *cultural techniques* aimed at categorizing, activating, and transforming space. On cultural techniques as embodied in tools and as agents of categorization of real, see Bernhard Siegert, *Cultural Techniques: Grids, Filters, Doors, and Other Articulations of the Real*, translated by Geoffrey Winthrop-Young, 1-18. New York: Fordham University Press, 2015.

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THE DISTANCES OF PRESENCE

WHAT DOES IT MEAN TO BE ONLINE AND OFFLINE WITH OTHERS?

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DISTANCE
ON LINE
PRESENCE
CHAT
DIGITAL SPACE

The experience of confinement and the current distancing measures keep showing up the paradoxes of distance, its constraints and its resources. Social distancing mobilises a number of technological, physical and semiotic mediations. In this way social distancing makes us see how presence is constructed, thus revealing the paradox that presence is only the effect of the organisation of several distances. Presence is always an effect of distance. Presence is the effect of differences, mediations, distances, which as a whole constitute what I call 'play' (or *jeu*), in the French sense of the word *il y a du jeu*, or the notion of play in terms of having slack or space to play with, meaning that there is a gap, an interstice, a delay. In order to have presence, you have to be able to create the conditions for this being 'in between', and this is exactly what the social uses of digital technology do. There is play, and presence consists in the harmonisation –always laborious and never finished– of these spatio-temporal disjunctions.

INTRODUCTION

The Latin prefix *dis* always indicates a dispersion, a disjunction, a separation: in space as well as in time. The word difference shares the same prefix (the distance seems to imply a difference), and the word distraction also shares this same prefix; additionally, distraction itself consists in the fact of thinking about something else, of not being completely present in terms of our attention when we are physically present. Staying with Latin, the verb *sto* means to stand up, to remain in place, to remain motionless, to be situated somewhere. The word distance thus evokes a particular spatiality, i.e. a relationship. To be able to say that we are distant, we must conceive of a relationship with someone or something that is elsewhere, someone or something else, that which we are not. Another body than ours, another place in relation to where we are, another object than the one we hold in our hands. Any distance seems to imply a relationship with an otherness and an elsewhere. If I am here, I am not there, and, in that case, I will thus be distant. When I feel distant, it is because I am not exactly where I would like to be. When I am distant, I am, so to speak, in the wrong place. Distance is not only spatial, it can be misused in time, too, in the past as well as in the future. Each passing second becomes distant, because it never overlaps with the next second, it is already elsewhere.

The day tomorrow is not yet *hic et nunc*, I measure this distance in time as a wait. If distraction can be considered as a psychologization of distance, waiting can be considered as the temporisation of the future. However this may be, it is clear that the very idea of distance is accompanied by difficulties, by uncomfortable and unpleasant situations. According to the traditional conception of presence, we are not really 'with' people who are distant, in space and time; therefore they are not present, if presence requires being *hic et nunc*.

It would be tempting to say that distance disturbs presence, to the point of making it evaporate. But it is not so. The experience of confinement and the current distancing measures keep showing up the paradoxes of distance, its constraints and its resources. Social distancing mobilises a number of technological, physical and semiotic mediations: masks and transparent panels, markings on the ground, queues, recommendations broadcast through loudspeakers, management via time slots, etc. Taken together, these mediations lead me to make a preliminary reflection, which here forms my working hypothesis. Paul Auslander (2012) demonstrates that it is thanks to record technology that we have discovered, by comparing the two in terms of a binary opposition, what the characteristics of live broadcasting are. Greek theatre was not seen as a live performance, as there were no other forms of performance or reception of a performance. Similarly, the performance of any kind of music, prior to recording technology, could not be distinguished from other forms of reception and listening. The feeling of being live is produced by the socialisation of recording technology. My hypothesis here is that, in the same way, social distancing due to the spread of the Coronavirus 2019 –acting as a kind of revelatory indicator– makes us see how presence is constructed, thus revealing the paradox that presence is only the effect of the organisation of several distances.

TO BE ONLINE AND OFFLINE

The child who plays hide and seek, believes he becomes invisible when he hides, closing and covering his eyes. There is no need to go far away, to go elsewhere. 'If I can't see, the others can't see me', he thinks. When he opens and discovers his eyes, others are allowed to see him. Being online with someone may involve a similar experience. Similarly, in several instant messaging ap-

plications (for example, *Messenger*, *Snapchat*, *WhatsApp*) if I'm not online, I can't know who is online: without seeing who is online, no one can see me online. The others see me if I see them. The real time of instant messaging is the convergence of two or more glances, a perceptive intersection in which the action becomes common to the interlocutors, reciprocal and therefore real. This perceptive crossing requires a certain attention, the attention that the situation itself produces. I have to pay attention to what the other does, he too, attention. We pay attention to each other's attention.

In this case being online with someone is a synchronous experience, also because we share the same information about the ongoing process. We participate and witness the technological mediation that unites us, we make it possible, we see it at work. Thanks to the notifications of reading the messages that we have sent and that we are writing, we find ourselves in the situation 'I know that you know that I know, and you know that I know that you know'. We are seeing each other, even without a camera, we are together. While I am writing I know that the other person sees it. And vice versa, I see if the other person is writing and if they have read my message. In this way the chat proceeds: we are on line, thanks to each other. The synchrony of being online is a tactile experience, which seems to be direct, but it takes place thanks to a mediation: when I touch someone, I am touched, and always indirectly.

Touch has a reflective structure, to feel that I am touching, to feel my skin I need an object. Through the object I touch myself (Lenay, 2015). However, there are different ways of being online with someone, more or less synchronous experiences based on the functioning of protocols, algorithms and their respective graphic implementations. Since 2004, the *Internet Protocol Standardization Task Force* (IETF) has been standardizing an instant messaging protocol, *Jabber*, which is a standard and open

system that, among its many extensions, has developed one in particular: *Jingle*, the application that allows the exchange of audio and video messages. Jabber is also a network of decentralised servers that work with XMPP (*Extensible Messaging and Presence Protocol*), or even with a set of standard and open protocols, which –in addition to disciplining instant messaging traffic– can detect when a client logs out of their account and disconnects from their server. The information relating to the start-up, progress and conclusion of our online sessions, transformed into a series of symbols and particular signs according to the graphic set-up of each interface, is public: our friends or contacts visualise our connection status. This information is becoming more and more socially influential in several areas of our daily life, both professional and personal.

The effect of this information is obvious: it is the presence of the other person. If the other person is active, they are acting, so we can contact them, because they are there (on *WhatsApp* or *Messenger*) and now (at the same time). The conditions of the *hic et nunc* are absolutely satisfied. It would appear to us that this status should always be linked to a voluntary and synchronous action, to acts of writing, reading or viewing. However, the evidence of the situation, the evidence of experiments that can easily be made, shows us that this is not the case. We are, very often, present 'despite' ourselves. The information broadcast, through graphic set-ups, can easily be inaccurate, whilst at the same time, the impact of these statuses is becoming more and more influential. On the one hand, with the growing social appropriation of certain platforms and applications, which now participate in a sphere of ease and familiarity, information about our status appears more and more credible, entailing many consequences for our private as well as our professional lives. On the other hand, huge commercial and economic interests are at stake: companies that own sites and applications are attempting all kinds of strategies to extend

the length of our browsing sessions, linking up action and reaction, with the ultimate aim of selling their advertising space at the best price. Being permanently connected is thus transformed into the fact that we almost always appear to be online. In the ecology of multi-windowing, we can very easily leave a window open in the background, acting (being active) and being elsewhere, and therefore not feel that we are active on the platform or the application which this window gives us access to. Yet the simple fact of not having closed the window can be enough for the application to detect us and categorise us as being online and active.

The reliability of the presence protocols and algorithms involved in the detection of our activity still seems to be fairly random, with variations and malfunctions that are rather sensitive. These presence protocols and witnesses of our activity represent a digital, and therefore social, systematisation of the conventions and social rites that have always disciplined our dialogues, our encounters, and our being with others.

The socialisation of messaging applications that work with these protocols, far from being neutral, involves a specific perception of presence, and as such, another idea of presence. This perception and this idea are increasingly imposing themselves as a new model. The parameters with which our activity is monitored and –even more importantly in terms of perception– the way it is communicated to our contacts, can vary more or less significantly from one software to another, from one application to another, and can be unstable and discontinuous. The digital socio-technological system produces the experience of being online with someone as being synchronous: being online with someone is meant to be simultaneous, and yet this simultaneity is based on significant disjunctions. Real time is real if it is the same for all participants. The real time of messaging applications is still not real. Each application declines an idea of, and establishes a form of

online presence, a form that can later be socialised and domesticated to a greater or lesser extent. There are many online forums where users show that they are paying a lot of attention to the way their activity is communicated to their network contacts, and the press is beginning to encourage us to reflect on the social impact that this system of notifications and status can have.

Users' concerns are mainly due to the risk of being watched by those they are close to, or their superiors (at work), and being seen, for example, as staying up all night, or being in the middle of a conversation with someone, when this is not in fact the case. The behaviour of certain applications eludes us when it comes to what concerns us most directly: the proof of our being present and/or active, in the eyes of our relatives, friends and colleagues. One aspect that influences the results of measuring our presence, and which is not necessarily known by most users, is that of major groups' financial strategies, which tend to centralise the ownership of the most important online communication services and thus also centralise the processing of connection data.

These are pooled from the various different applications or platforms with and on which we act, while we, at the same time, feel that we are, through our actions, only acting on one platform at a time.

In this way, what, in terms of the user's experience, takes place across a variety of different, distinct digital environments, is reduced to the production of seemingly unambiguous connection data. As soon as *WhatsApp* was acquired by *Facebook*, for example, *WhatsApp* login data became available to *Facebook*, which therefore now has access to our (*WhatsApp*) activity status, despite it taking place on 'another' application. In addition, whenever you use your *Facebook* or *Google* account to register on any platform, your login information is received and processed by the corresponding account servers. *Skype* offers us a range of different statuses.

We may appear to be *Online* or *Offline*, *Away*, *Invisible*, or in a *Do Not Disturb* mode. These statuses correspond to as many forms of presence, which vary according to our availability to be contactable and thus to be contacted by others, and our distance from our computer(s). The importance of these statuses is not limited to the platform, as they actually constitute a valid dramatization for distinguishing the numerous ways in which we can be present, or not, to different degrees: more or less available, more or less attentive, and more or less indifferent. The delicacy of this variety of statuses provides a model for us to compare the statuses of other instant messaging applications against.

Compared to *Skype*, *Messenger* imposes a polarisation of options: we can only be 'active' or 'inactive'. In *Messenger*, as in instant messaging on *Facebook*, in order not to appear as active, it is not enough not to not be acting on the application, if the window is running in the background or if the computer is simply left on, with a *Facebook* window open in the browser bar. In both *Messenger* and *WhatsApp*, to not appear to be 'active', it is not simply a matter of not acting on the application, as one still appears as 'active' if the window is running in the background. On *Messenger*, 'normally speaking', the delay between the moment we no longer touch the application and the moment when our status changes from 'active' to 'inactive' is close to ten minutes. After these ten minutes have passed, an individual is classified as 'active five minutes ago', half of the time that has actually passed. When we close the window, it is only after three minutes that the application will report us as inactive and show our friends that we were active 'a minute ago' (when in reality at least four minutes have passed).

We may be far away from our laptop and be considered present on an application we have already left: the presence of absence, one might say. The timing indicating our last connection continues to be calculated minute

by minute, then, after 60 minutes, the values are rounded off to the nearest hour, before, after a day without connection, *Messenger* no longer displays this information.

Messenger creates an idea of real time while at the same time producing delayed times. We might be tempted to think that the difference due to time shifts is unrelated to our presence, and that, as a whole, all these inconveniences produce non-presence: the appropriation of the use of *Messenger*, an act or appropriation that is emotionally very intense, leads us to consider that these disturbances are symptomatic and emblematic of the presence effects of *Messenger*. On *WhatsApp*, you need only to have just clicked on the icon and you are almost instantaneously online. In fact, there are no settings available in order to not appear online on *WhatsApp* while viewing our contact list or rereading a message. Just like in *Messenger*, having the window open in the background is enough for us to be declared as 'online'.

In this case, our perception, the perception we have of what we are doing, and of being somewhere, differs significantly from the information that is transmitted to our contacts, which in fact establishes a different version of the facts. We think we are present in one way, while we are present in another. We believe we are present in a certain 'here', whereas we are perceived to be present elsewhere. The application provides time markers and read notifications to reassure us that our contact has received and read our message.

The double blue check mark is always supposed to appear when our contact has read our message, but communication between someone who has disabled this notification and someone who continues to use it is of course slippery. Only in this difference, in this distance, presence is produced as an effort, a doubt, a possibility. The possibility of concomitance. In reality, delay, lags, equivocations, misunderstandings create the space of presence. Presence needs a gap.

THE EXPERIENCE OF A HYBRID COURSE: WHERE SHOULD I LOOK?

The University of Technology of Compiègne rigorously applies safety distance measures. For the academic year 2020-2021, the Department of Technology and Human Sciences has devised a hybrid teaching model. I teach *Industries culturelles et médias numériques*. The lectures are not held at university. For my lecture, I record a podcast, which I publish every week on the University *Moodle*. I also publish a PDF support. The contents are partially different, students have to integrate them. I record the podcast live, without cuts, without pauses: in this way I hope to make listening more stimulating and keep my concentration, for me it's as if the students are listening to me at that precise moment. I think it could be the same for them. The concept of 'recorded live' is also one of the topics dealt with during the course, in an authentic meta-discussion. I publish the podcast and pdf just before the usual start of the course, at 1:00 pm. Students then have one hour to listen to the podcast before participating in the tutorials.

The first dissociation to be recomposed is just that, when the students find me after listening to the podcast. For me too it is an enigmatic moment, a surprise. Actually, I don't know who has already listened to it. The podcast comes first, of course, if the student has listened to it first. Otherwise, it will come later. So I don't know if I'm talking before or after, I don't know if the students already know what I said or if they still don't know what I'm going to say in the course I've recorded. We are all between before and after, someone knows someone else doesn't: we are not in real time, we don't share the same information, we are not on *WhatsApp*. In the show *La Gioia*, Pippo Delbono only takes the floor when he is off stage. When he's on stage he always has the microphone in his hand but the voice that you hear is recorded, he doesn't even

play back, he just listens. The audience listens to him listen, as Szendy would say (Szendy, 2001). The voice of the moment, the present voice, is elsewhere, in space and time. The voice of the moment, of the live broadcast, is invisible, it is obscene. As Paul Auslander writes: "Live performance now often incorporates mediatization to the degree that the live event itself is a product of media technologies. This has been the case to some degree for a long time, of course: as soon an electric amplification is used, one might say that an event is mediatized" (Auslander, 2008, p. 25).

In the tutorials, students work in pairs to create a monothematic dossier on a theme of their choice. Each week, two groups of students are divided into sub-groups of 12 people: one half comes to the university, while the other is online. The turn-over system allows this difference, this distance, to be equally distributed. I can describe here the experience of a week ago, early afternoon tutorials. I will not make pedagogical considerations, but a simple phenomenological analysis.

For your live, I use *Jitsi*. A few days before I sent the link of the meeting to the students. I asked them to come to the university with the pc to connect to *Jitsi* too. Why? Because I don't want the students not in the hall to be spectators of the course taking place in Compiègne: I want everyone to be able to participate in the same course. Jitsi therefore functions as a connecting space which allows me to combine the room in which I am also in with the rooms in which the students are located. This junction space has its own semiotic rules, as every *Jitsi* space requires you to follow certain rules. For students who are not in the classroom it is easy, for others it is much more complicated. Some students enter the classroom, following the spacing instructions on their desks. They are sitting about two metres apart, 12 students in a room that may contain about 70 students. At the same time, other students arrive on *Jitsi*.

I ask the students in the classroom to enter the *Jitsi* meeting, as their colleagues are doing.

The mask inhibits communication, moves the gaze. I have to speak louder than usual, the mask forces me to make lip and vocal effort. I have to get used to it. All the students are on *Jitsi*. I talk into my pc microphone and try to look into the room. The feedback of the camera attracts and distracts me: I look at myself while I am talking, so I do not look at those in front of me in the classroom or the others. We are in front of each other but we don't see each other. Looking at myself in the back of the camera ensures that everything works: if the image slows down, then it means that there is a connection problem. My reflected body guarantees me that others see and hear me. I see myself as others see me, that is, those who are not in the classroom, because those in the classroom see something else, they see everything. I cling to my image, when I lose the return of the room, to share the screen, I am afraid that I am no longer there.

Students cut out their microphones.

I speak. "Can you hear yourself? Yes, it works!".

Someone in class didn't cut out the microphone, the return of my voice makes us smile, behind the masks. On the screen, I see black rectangles with the students' initials. I don't really know where to look: I would like to look only in my room, to respect the protocol that I propose to the students myself, but every now and then I raise my eyes and look at the class. So I notice that some students are looking at the screen, while others are not and act as if Jitsi wasn't there.

Their computer is connected, but they prefer to be only in the classroom, without *Jitsi*. When I look back 100% at *Jitsi*, I feel like I am walking away from the class. We are all on *Jitsi* in reality. Finally I invite the students to take the floor: I close the microphone. The interventions of the students who are not in the classroom are fluid, following the custom of this kind of communication.

The students in class, on the other hand, are awkward: they look at me, they don't know whether to raise their arm to ask for the floor or to click on the raised hand icon. These are two different socio-semiotic registers, but they mean the same thing in two different spaces. They forget to open the microphone and so the others, those from home, cannot hear. I should cut the sound of my pc when the students speak in the room, but I forget to do it, once, twice. I embark, I participate and witness a series of hesitations. We are hindered, slowed down, in difficulty. The connection to *Jitsi* complicates things for us who are together here in the same class. Our physical proximity is disturbed, distracted. It seems we are not in the same class, we are far away. These are two different socio-semiotic registers, these are two different social gestures, but they mean the same thing in two different spaces. I take the floor, but forget to open the microphone. My movements are interpreted as those of a person who wants to speak: *Jitsi* then asks me "Do you want to speak? The microphone is cut off". A student writes to me: "Monsieur, your microphone please".

Someone writes to me in chat to ask me a question: I immediately think it's a student not in the classroom, I don't associate chat with the physical proximity. I am wrong. And a student sitting in the second row writing so that everyone can read her question. These moments create a bit of embarrassment, the embarrassment of not knowing what to do to be present. These moments of emptiness, of emptiness, of uncertainty, make us see how complicated it is to be present. The transparency in this case, the transparency of physical proximity, obscures things, while the opacity of technological mediation reveals them. We are at the carrefour of multiple mediations, material, semiotic, symbolic.

Every action seems to be always frayed, incomplete. We are in a "mediating conjuncture" (Larrue & Vitali-Rosati, 2019, p. 52).

The lesson continues, the students' participation becomes more active step by step, everyone finds his or her point unstable, in the classroom or on *Jtisi*. I look a little bit and a little bit there. I have to get used to a new space.

PRESENCE IS AN EFFECT OF DISTANCE

With Michel Lussault (2017), I consider human space, that is, social space, as a construction of distances. Human beings have had to develop several technologies of distance to overcome this major inconvenience, which the geographer calls 'the separation principle' which is, at the same time, a resource. Space, in this perspective, is the system of relationships that individuals and organisations have with distance, with the aim of organising what they have at their disposal according to proximities that are more or less efficient and desirable. The arrangement of distances creates spaces: the many spaces, material and symbolic, urban and political, private and public, in which we live. These distances can be online and offline. Digital technology does not erase distances. By connecting to the Internet, the web and everything we can access through it (things, people, information), new distances are being created, while the distances of the past are being rearranged and transformed, but never really obliterated. A new spatialization encompasses our social spaces, of which it constitutes the connection and articulation space.

What digital uses bring to our experience of space is not a dematerialisation or a removal of spatial constraints because, although they lighten burdens and charges linked to previously known spatial limits, they format and standardise other measures of distance, which are both resources and constraints at the same time, requiring know-how, a certain dexterity, basic equipment that requires a certain maintenance. Certain spatial struc-

tures seem to have partially slipped into time (connection time), other distances are reflected in presence protocols, in the given number of clicks, in a list of shared friends (as on *Facebook*), in the hierarchisation (which itself amounts to a form of spatialization) of content provided by any search engine.

With social networks, instant messaging and mapping applications, spatial asperities, lumps and bumps, do not disappear: distance is a structural and irreducible element of our being in the world and of our being online, because today we are in the world according to the forms of being online and, therefore, offline. By trying to conjure up distance in order to enjoy immediate presence, we create new distances, which are not always more flexible and more pleasant than those of the past, because they often involve major and increasingly anxiety-inducing expectations. But no relationship with objects is truly direct, every experience is the result of mediation: as Fritz Heider writes (Heider 1926), everything is a medium, and whatever we do we have already carried elsewhere; we are always further away than where we are: we are elsewhere, we are distant, we are in-between. Vilém Flüsser maintains that when we make gestures, and we live by making gestures, we are already at a distance: the reflexive distance in which and through which we see ourselves as making this or that gesture.

Dominique Cardon (2019) points out that digital practices are eminently reflexive because they consist of a structurally reflexive activity such as writing, and that the visual-tactile and frontal use of the screen puts us first in relation to ourselves. In addition, I can add, being online means being online in relation to something (modem, server, browser) and to someone (the person with whom we are interacting). We are seen, and the gaze of the other, as Sartre said, sends us back to ourselves. When I am in front of others, I think about what I am doing. So if I am, in this sense, distant, I am situated at a self-scopic dis-

tance from the gaze that I cast upon myself. I am between myself and myself, I am this 'between' myself.

The irreducible distances that we inhabit, this 'in-between', is one of the objects of study of the theory of intermediality, which is concerned with studying what is in-between, namely, media. What is between media? A medium that media produce, whilst being itself produced by this medium. The theory of intermediality argues that media form the medium from which they are born. This mid-place, this place that is 'in between', produces presence. This presence is the effect of differences, mediations, distances, which as a whole constitute what I call 'play' (or *jeu*), in the French sense of the word *il y a du jeu*, or the notion of play in terms of having slack or space to play with, meaning that there is a gap, an interstice, a delay. In order to have presence, you have to be able to create the conditions for this being 'in between', and this is exactly what the social uses of digital technology do. We are 'between': between being online and offline, above all, between being on the street and on Instagram, between several screens, between one application and another, between our email addresses, between the different statuses that attest to or prove our activity, between our various social media accounts, between the people next to us and those with whom we are online. There is play, and presence consists in the harmonisation –always laborious and never finished– of these spatio-temporal disjunctions.

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SO NEAR, YET SO FAR
MIGRATION, THE MEDITERRANEAN, AND A MURDEROUS MODERNITY

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DEMOCRACY
EPISTEMOLOGICAL VIOLENCE
MEDITERRANEAN
MIGRATION
VISUAL ART

This article examines the interplay between distance and proximity through the maritime medium of the Mediterranean, today rendered immediate by the 'foreign' body of the migrant. What until recently was maintained at a physical and metaphysical distance colonialism, racial hierarchies and historical-amnesia, has suddenly acquired a dramatic presence with an alarming proximity. This postcolonial return operates a cut in the existing epistemological fabric. Understandings of space and time are radically reconfigured. Refused archives emerge. Other genealogies of the present enter the frame. The legal and political premises of Occidental modernity, together with the very idea of liberal democracy and rights, are violently exposed in their brutal limits. In this scenario distance and proximities are measured through mediations drawn from the area of contemporary art and visual culture; these evoke critical considerations on the limits of representation and the politics of registration.

Feared proximities and controlled distance: such are our response to the threat of a virus and the modern migrant. We seek immunity from both. Here it would be suggestive to purse the ongoing shift from a liberal, humanitarian regime concerned with the protection of others, to an immune system and the neoliberal imperative to privilege and protect the self. The connection of viruses to migration is a superficial analogy, but it touches and exposes the complex mechanisms of the bio-political regimes of modern government. In both cases they can lead to death: our body invaded by a foreign force, the migrant subjected to the arbitrary violence of a foreign state and law and left to die. Neither the pandemic nor the migrant are natural or spontaneous. They require conditions of production and reproduction. The genesis of both lies in a cultural and political ecology that nurtures, constructs and seeks to control them. No one is born a migrant, viruses do not just happen. Both emerge from historical structures and processes that are lengthy and profound. This suggests that an eventual 'cure' requires a response that is not limited to a vaccine or a law.

Tracing some of the steps to an ecology of the present means to acknowledge the crucial voices of Donna Haraway, Afro-Futurism and future feminisms where 'the encounter with alterity expresses itself in the aesthetics of discontinuity and the interruption' (Haraway, 2016; Curti, 2019). It can even take us to the prospect of a 'future without us' (Chakrabarty, 2009). In this short piece, while listening to those voices, I will restrict my gaze to the migrant and the sea. The migrant has resurrected the unsuspected centrality of the latter: both as a multifarious border zone, and as an ontological challenge to our habitual terrestrial coordinates. The sea both divides and unites, it establishes distance while permitting proximities. It is here, as though written on water, that I wish to press the case of exiting from the distancing politics of representation (the act of darstellung, standing in for something else) and

reaching for the immediacy and altogether less controlled prospect of registration. This is to suggest less the idea of images testimonying a history and more of images as history.

In the challenge of the sea, in particular that posed by the Mediterranean in this particular conjuncture, beneath the surface of illicit sea passages and unauthorised migrations there exist altogether more fluid and irrepressible connections. For the sea renders diverse shores intersectional. It mixes and dilutes the separated-ness that a strictly local, terrestrial accommodation proposes. Here, life forms that are composed, decomposed and recomposed live on irrespective of the law, the state and the security apparatuses that seek to confine, capture and control. Distance is annihilated in molecular compositions, in material flows inhabited by past and future lives. This altogether deeper history, with its fluid archives sustained in the mari-time of stretched temporalities and deep rhythms, is loaded with political immediacies. Coordinated in the passage from the minutia of the microscopic to the sweep of the social, migration challenges the present state of political ontology. The premises, procedures and protocols of the latter are unable to accommodate the question and therefore refuse to contemplate the challenge. All the while, the sea mixes and dilutes the separated-ness that a strictly local, terrestrial accommodation proposes.

So history, for example that of art, is crossed again and loosened from its authorised moorings. The global political economy that secures its continuing appropriation of the world is unwound. The unacknowledged violence of the archive that has consigned the planet to a particular order of knowledge is challenged and disputed. The chained leg of a black slave, destined to slip beneath the waves forever, takes us into another narration of time and space. It literally sucks us out of the frame to confront other coordinates. This detail is drawn from the bottom right-hand corner of Joseph Mallord William Turner's *Slave Ship* (*Slavers Throwing Overboard the Dead and the Dying, Typhoon Coming On*) (1840). Similarly, Paul Gilroy's commentary on the picture casts us loose of the

Fig. 1 J.M.W. Turner, *The Slave Ship*, originally titled *Slavers Throwing overboard the Dead and Dying - Typhoon coming on*, 1840, Oil on canvas, 91 cm x 1.23 m, Museum of Fine Arts, Boston, USA. Retrieved 5 August, 2020, from: https://upload.wikimedia.org/wikipedia/commons/2/26/Slave-ship.jpg

complacent view that the Atlantic slave trade and the racial hierarchisation of the world that justified its exercise are now merely matters of the past (Gilroy, 1993). Against the closure of academic documentation, and being catalogued, classified and confined to the archive, they continue to constitute the present global order. The history and affects of that painting persist in promoting a very different perspective on the formation of modernity and the present.

Decomposed and recomposed in Kara Walker's watercolour *Terrible Vacation* (2014), the Turner original is ironically repeated and relayed to skew the chronology and render it contemporary.

The archive and its documents are set adrift, the 'imperial technology' of their colonial regime –confirming my history

and my self– snarls up in what it fails to digest and incorporate. For "scholars are caught in the circularity of the archive and continue not only to operate within it but to operate it. The documents they find were produced, classified, and preserved according to an imperial temporality, spatiality and body politic, but they are led to believe that these documents represent the missing pieces of incomplete puzzles, telling the true story of imperial regimes which only they can assemble after mastering the archive itself" (Azoulay, 2019, p. 556). Foreclosed in the coloniality of power we are unable to acknowledge those who refuse to be objects of our history. In this sense, history itself –as a discipline and modality of knowledge– turns out to be a colonial enterprise.

In the Italian-Ethiopian Dagmawi Yimer's video *Asmat*, the Tigrinya for names, we hear the steady intonation of the list of the dead; of those who were unsuccessful in their attempted crossing of the contemporary Mediterranean (Yimer, 2013). They are here rescued from anonymity. The names are etched in water. They are suspended, and float as a series of question marks. Why this death, why this destiny for lost lives? The work offers no explanation. It is not a documentary. Its testimony lies more in the aesthetics of the abject. We are drawn to listen and to look, but we can never completely understand or grasp the cruel materiality of the event. It evades reduction to a single point of view. Wider vistas of possible understanding, involving other histories, cultures, languages and lives, float into view. What is projected and portrayed are cyphers, names from a world registered in the statistics of death and drowning at sea: the mute objects of European policy and legislation. One can object that the initial 'push' to migrate and subsequently be caught in the dangerous meshes of European border control and legislation lies elsewhere (as though it is not the Occident that largely creates and cultivates these conditions). It is not our responsibility. But the violence, repression and blocked futures of North and sub-Saharan Africa, as in Syria, Afghanistan and Latin America, draw us into deeper historical time.

Fig. 2 Kara Walker, *Terrible Vacation*, 2014, Gouache on paper, 184,2 x 405,1 cm. Retrieved 5 August, 2020 from: https://www.facebook.com/

Here we confront the political economy in which our responsibility for the colonial making of the present reemerges in a dramatic immediacy. The dead bodies speak and relay another history. The entanglement of political, cultural and economic narratives exceeds the frame and the concepts that sustain our explanations. The abstract categories of the 'illegal' and the linear legislation of time –what we call history and progress– unwind, stripped of their authority in a planetary challenge that exceeds their claims. In the 'liquid violence' of the Mediterranean crossing or death the hypocrisies of Occidental humanism go adrift (Forensic Oceanography, 2011).

The ethical/aesthetic affect of Dagmawi Yimer's video is to disturb our understanding of the archive –our understanding of the past, present and possible futures– with unsolicited horizons and unwelcome questions. His work refuses to bear the burden of representing the migrant as simply a nameless, subaltern body, an authentic 'other', an excluded victim of the not yet modern world. Its terrible beauty requires us to listen to what has been silenced and removed from the accounting of time and place. For the migrant, with her or his name and history, is the modern world in all of its dreaded

consequences. It is this undoing and redoing of time, its doubling and dispersal with respect to a unique measure and explanation, that ensures the emergence of a new and amplified critical space. The dynamics of the archive shift from a conservation and linear accumulation that benchmarks progress to redistribution, reparation and reconfiguration in emerging repertoires of belonging and becoming. Here I inevitably encounter languages that do not necessarily respect and respond to my needs. Against the abstract violence of representing a unique past and consensual present –the national narrative, the museum display, the approved textbook– the archive breaks down. Other rights cross, contest and cut up legitimised explanations. Here the archive no longer contains the past, but rather distributes an excess that propels us beyond the categories have been prepared for us (Chambers, 2017, pp.125-126).

Considerations of death at sea, the corpses left to decompose in marine cemeteries –those of the slaves thrown overboard in the Atlantic, and those of today's migrants left to drown after being rebuffed and rendered non-persons by European law– has brought Christina Sharpe to write: "What happened to the bodies? By which I mean, what happened to the components of their bodies in salt water? Anne Gardulski tells me that because nutrients cycle through the ocean (the process of organisms eating organisms is the cycling of nutrients through the ocean), the atoms of those people who were thrown overboard are out there in the ocean even today. They were eaten, organisms processed them, and those organisms were in turn eaten and processed, and the cycle continues. Around 90 to 95 percent of the tissues of things that are eaten in the water column get recycled. As Anne told me, "Nobody dies of old age in the ocean." The amount of time it takes for a substance to enter the ocean and then leave the ocean is called residence time. Human blood is salty, and sodium, Gardulski tells me, has a residence time of 260 million years. And what happens to the energy that is produced in the waters? It continues cycling like atoms in residence time.

Fig. 3 Dagmawi Yimer, *Asmat-Names in memory of all victims of the sea*, 2013. Retrieved 16 November, 2020 from https://vimeo.com/114343040

We, Black people, exist in the residence time of the wake, a time in which 'everything is now. It is all now" (Sharpe 2016, p.21; Morrison, 1987, p.198).

In this molecular reactivation of the Atlantic slave trade within the contemporary necro politics of modern Mediterranean migration, the historical weight of the adjective black stretches back and forth across time and diverse bodies of water and we catch the sharp sense of a temporality that refuses to pass (Mbembe, 2019). As Avery Gordon has put it: "How do we reckon with what modern history has rendered ghostly?" (Gordon, 2008, p.18). Here the contemporary market economy and its dependence on subordinate labour, most dramatically rendered explicit in modern slavery (from Eighteenth century plantations in the Americas, to tomato pickers in southern Italy today), touches altogether deeper tempos and connections. The simultaneous decomposition of bodies and rights invite us to register the decay and decomposition of the modern liberal state. The latter is now increasing substituted, both juridically and politically, by aggressive agencies –contracted surveillance data, paramilitary

border policing, third party migrant mangement (Turkey, Libya)– that are increasingly autonmousm and unaccountable. Rights and democracy are here very much put on the back burner, or else serve as moral window dressing.

The present ubiquity of the 'migration crisis' reveals the ubiquity of the crisis of politics. The retreat to sovereignty and populism, is only the most obvious symptom. Further down in the tissues of the body politic we encounter structural contradictions and the stripping away of rhetorical hypocrisies that reveal the exhaustion of the liberal state. The migrant has become the critical cypher of our time. As put by Donatella De Cesare: "It is a destiny not dissimilar to that of the foreigner, always relegated to the margins, confined to the bidonville of metaphysics. The migrant is also atopos, without a place, an outsider like the foreigner. For the migrant is on the frontier, seeking to cross. She is neither a citizen nor a foreigner. Always too much, she is an intruder who explodes the barriers, cancels the confines, produces embarrassment. Here lies the difficulty in thinking the migrant without putting in question the conventional limits of the world, reviewing the long-established foundations of the city and citizenship, and without amending the consolidated pillars of the state and the sovereignty of the nation" (De Cesare, 2017).

This breaking of the order of discourse, both in philosophical and political terms, has extensive implications for our understanding of the images and representations that circulate in our everyday life. It also implicitly leads to a profound reconfiguration of the protocols and practices of the social and human sciences.

In the present moment, the break-up of distance and the insistence on proximity –of the repressed past, of negated bodies and histories– is most persistently pursued by postcolonial art. Here there is a continual mediation on uprooted cartographies, displaced objects and broken archives, as in the works of the Palestinian artists Mona Hatoum and Emily Jacir (Ianniciello, 2018). Elsewhere, imperial heritages are unwound and European certainties set adrift in the audio-visual

maelstrom of the Ghanian-British John Akomfrah's *Vertigo Sea*. In all cases the proximity and promise of other worlds breach the premises of our vision and annul our aesthetic grammar. Cutting time and refusing established chronologies, this art 'narrates' again the histories we consider past and concluded. It insists on their contemporary constitution of the present. These are the colonial ghosts that refuse to fade away. They haunt the establishment of a modernity that has violently incorporated the structural centrality of the colonised world to its formation through negation. In Ariella Aïsha Azoulay's language, this is a 'potential history' which "rejects endorsing the archive's mission of sanctioning people's actions as now records of past achievements that cannot be rewound". On the contrary: "Potential history is not the account of radical thinking, of explicit ideological struggles against imperialism, but a rejection of imperialism's conceptual apparatus altogether. The imperial apparatus presumes that such struggles exist only in the past, only as dusty records in the archive" (Azoulay, 2019, p.43).

To rewind the tape of history is therefore not merely to revisit the past, perhaps to uncover further evidence and fill in the holes of the existing account. Like recording tape, the past can also be cut and spliced into another mode of telling where precisely what has been excluded and negated in justifying the existing state of affairs can be further accented to insist in its persistence. Applying the scissors of the present to this tape, images can be isolated, taken out of place and reassembled to produce further connections and a critical montage in which anachronism promotes the modality of meaning. Matter seemingly out of place invites us to look and think again; another horizon comes into view: one not authorised by Occidental institutions, perhaps less stable but simultaneously more open in its prospects. This unspooling of the present leads to another mix where hybridity and creolisation supplant previous unities of belonging secured in segregated cultural, ethnic and racial categories (Lloyd, 2018). This means snapping the chains of existing explana-

tion. It involves stepping outside the cage of our presumed freedom to measure it against the unfreedom of others.

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TAKIS ZENETOS'S CONCEPTION OF REMOTENESS

TELE-OPERATIONS AS SOCIO-TECHNOLOGICAL TRANSFORMATIONS

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ELECTRONIC URBANISM
TAKIS ZENETOS
TELE-COMMUNICATION
TELE-EDUCATION
TELE-WORK

The article explores how Greek architect Takis Zenetos conceptualized the reinvention of the relationship between the living units and home-office conditions. Zenetos, like Yona Friedman was interested in the reinvention of the home-office conditions and in how architecture and urban design strategies could respond to distance working. It also examines how architecture and urban design methods could incorporate the impact of the new conceptions of 'tele-work', 'tele-communication', and 'tele-education' on the relationships between the different social classes. Special attention is paid to how Zenetos envisioned a new mode of thinking urbanism able to be adapted to the continuous mutations in both social and technological domains. Additionally, the article sheds light on Zenetos's critique of low density living, as well as his conception of circular economy, and his intention to provide environments for heterogeneous patterns of domesticity. It also investigates which were the interdisciplinary references in Zenetos's writings. Central for the paper is *The City and the House of the Future* by Zenetos, which aimed at the design of flexible systems for both buildings and infrastructures, and was based on his intention to take into consideration the accelerating mutation of the living units in the cities of the future. Zenetos and Friedman's intention to provide comfortable, flexible and independent home-office conditions through the design of 'individual living units' using advanced technological achievements could be helpful for better understanding how architecture and urban design could respond to the challenge of providing contemporary home-office conditions.

INTRODUCTION

Within the context of the COVID-19 pandemic breakout, an ensemble of approaches that emerged during the 1960s and concerned the reinvention of living units in relation to the possibilities of advanced technologies have gained a renewed interest. An architect who is understudied in the existing scholarship, but worked extensively during his short life on the role of tele-work, tele-communication, and tele-education in architecture and urban planning is Greek visionary architect Takis Zenetos (1926-1977). His ideas about the autonomous living units and their place within the framework of his endeavour to reinvent the practice of urban planning are of great significance, especially for understanding what is at stake within the current situation. Their importance lies in the fact that they provide a fertile terrain for reflecting upon the role of architecture and urban planning in accommodating the needs that emerge within an emergency situation such as a pandemic breakout. More specifically, his project entitled "Electronic Urbanism" could enrich the present-day debates around the efforts to provide architecture and urban planning solutions that enhance work from home or the 'home-office', to borrow an expression that now dominates discussions on work and space. In the first issue of *Architecture in Greece*, Zenetos published an article entitled "Problems of Construction in Greece: The City of the Future" (1967a). During the following years, he also published a series of four articles under the title "City Planning and Electronics" in the same annual review, in 1969a, 1970, 1973a and 1974. All these articles were elements of one broad study. In his article of 1973, Zenetos shed light on the increase of the "remoteness between living and working areas" (1973a, p. 112).

ZENETOS'S CRITIQUE OF LOW DENSITY LIVING

During the early seventies, Zenetos was actively participating in ongoing debates within a transnational con-

text, as is evidenced not only by the references in his own writings, which include figures such as American mathematician Norbert Wiener, South African-American geophysicist and oceanographer Athelstan Spilhaus, Greek American architect Nicholas Negroponte, American urban sociologist Gerald Dale Suttles, and American architect Richard Saul Wurman among other, but also by the publication of his work in *Archigram*, published by the homonymous British group, and in *Architectural Design*. Among the references used by Zenetos in the article "Town Planning and Electronics" published in the eighth issue of *Architecture in Greece* in 1974 devoted to the theme "Leisure Time, Recreation, Tourism" (1973), are Wiener's *Cybernetics, or the Control and Communication in the Animal and the Machine* (1965), and Spilhaus' "Ecolibrium" published in *Science* (1972), Negroponte's *Architecture Machine: Toward a More Human Environment* (1973). A text that had an important impact on Zenetos's work was a one-page report entitled "Mobile Home Report" published in *Architectural Design* in 1972. Zenetos refers to this short report in the article "Town Planning and Electronics" published in the eighth issue of *Architecture in Greece* in 1974 devoted to the theme "Leisure time, recreation, tourism". The aforementioned report highlighted the cost-efficiency of mobile-home solutions, underscoring that "[f]abricating dwellings via assembly line techniques is less costly than using conventional construction methods" (1972, p. 6).

The same year he published the third of his series of articles entitled "Town Planning and Electronics" in *Architecture in Greece* Zenetos also penned an article entitled "Myths of Low Density Living" for *Architectural Design* (1973b). In this text, he placed particular emphasis on the issue of mobile housing. In parallel, he claimed that "social life cannot develop" in a "non-urban environment" (1973b, p. 247). In "Myths of Low Density Living", Zenetos criticised the "autonomous 'subcultures', which, according to him, fail to satisfactorily accommodate the social need of citizens. He

believed that the so-called "autonomous 'subcultures'" were created by two types of specialists: "ideologists" and "technocratic specialists" (1973b, p. 247). He claimed that the limited success of the social structures encountered in the "autonomous 'subcultures' lies in the fact that they depend on "the aspirations of the planner" (p. 247). Zenetos suggests as a solution the "semi-urban garden housing" (p. 247). To historically contextualize citizens's need for access to their own garden-house, he refers to the fact that "the garden cities are merely an after-thought that resulted from the general deterioration of the quality of urban life" (p. 247). His main point, in this text, is that "technological man needs to be in proximity to virgin nature" (p. 247). He also underscores that this view lay at the heart of his conception of the project entitled "The suspended city" (*La ville suspendue*) (Figure 1). This project was based on the combination of "a dense urban environment" with the existence of "a natural landscape". Each living unit had an individual garden, a backyard playground, and access to "virgin nature within walking distance (impossible in horizontal garden cities)" (p. 247).

In his article in *Architectural Design*, Zenetos included a graph showing expenditure and soil pollution, comparing the "conventional city", a "'garbage housing' city", a "suspended 'electronic' city" and "underdeveloped countries". This graph illustrated his predictions in a comparative perspective, and functioned as an argument regarding the efficiency of the "suspended 'electronic' city" (p. 248). Among the advantages of "The suspended city", he refers to "the avoidance of expensive transportation of the working population [and to the elimination of] […] the need to acquire the land for the establishment of such a city, since the airspace is not private property" (p. 247). However, the most significant characteristic of Zenetos's suspended city was its capacity to adapt to the mutations of the "urban-social structure" thanks to its great flexibility.

Zenetos criticized the "[s]helter systems for very low income groups (a large percentage of AD's contents)

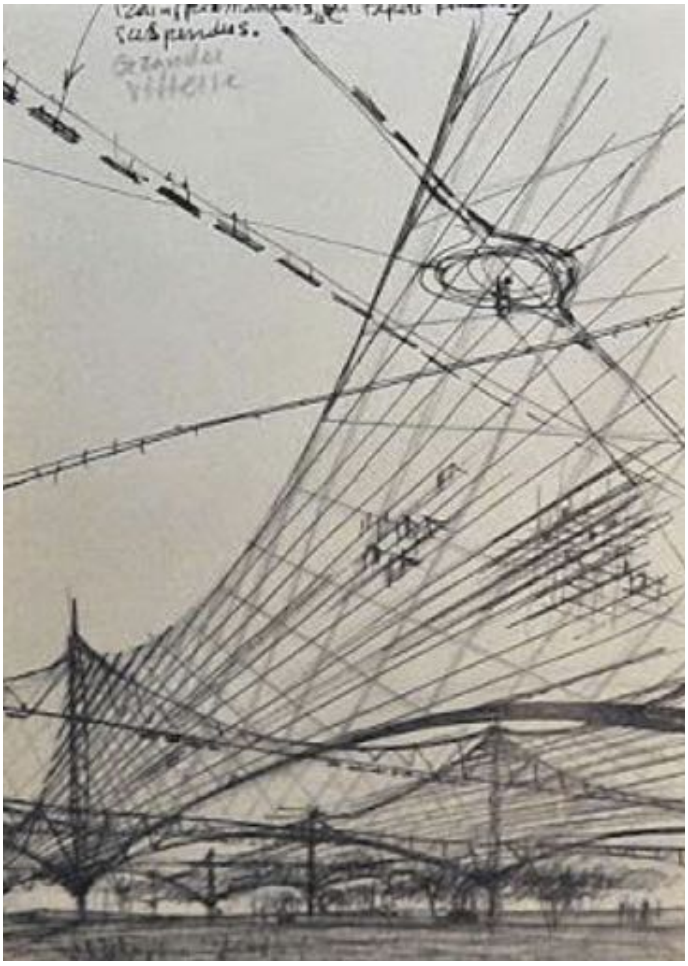

Fig. 1 Takis Zenetos, *Cable City*. Project for a suspended city, designed in 1961. Credits: Personal archives of Zenetos family; Archive T. CH. Zenetos.

[which] should not be considered as a suitable standard for the housing industry to aim at. There must be provision for a higher quality of life than the shelter + food + 'emergency' syndrome" (p. 247). Zenetos and Yona Friedman shared their scepticism *vis-à-vis* the idealistic view of low-density housing. Friedman was also supportive of high-density housing, as it becomes evident, in "Towards a Mobile Architecture", where he remarks his "Paris Spatial" proposed "to triple the density of dwellings in the town itself" (1963, p. 510), constructing a grid structure above the existing city.

BETWEEN INVISIBLE CITY AND IMMATERIAL ARCHITECTURE

A year after Zenetos published "Myths of Low Density Living", in *Architectural Design*, his article "Town Planning and Electronics" appeared in the eighth issue of *Architecture in Greece*. A reference in this article was Horst Rittel's article "Democratic Decision Making" in *Architectural Design*. Rittel distinguished between four types of planners: the doctor planner, the egalitarian planner, the needs planner and the decisions planner (1972, pp. 233-234). Some other references in the text "Town Planning and Electronics", published in the eighth issue of *Architecture in Greece*, is an article entitled "The invisible City" focused on American architect and graphic designer Richard Saul Wurman's work published in the March 1972 issue of *Architectural Design*, and Wurman's *Making the City Observable* (1971). Among Zenetos's references in "Myths of Low Density Living", was a short statement concerning Greece under the title "Spatial Urbanism" published in the issue of May 1964 of *Architectural Design* (p. 207). "Spatial Urbanism", which was part of the section entitled "World News", contained the following words: "The international school of 'immaterial architecture' has engendered yet another visionary spirit, the Greek architect Zenetos, to enjoin company with Friedman, Constant, Ruhnau and Schulze-Fielitz. Zenetos proposes a continuous urban structure, covering and extending the surface of the earth in the form of a suspended network. His continuous town utilizes tensile structural systems similar to those exhaustively examined by Lehman in AD, Nov. 1963. The pattern of life in the future, appears to vary according to the temperament of the individual visualiser. Whereas Zenetos foresees solutions encouraging the minimum movement of man, Constant visualises an urbanisation of the earth which will promote continual nomadic activity" (1964, p. 207).

The expression "invisible city" that Wurman often uses in his writings could be juxtaposed to that of "immaterial architecture" that often appears in Zenetos's writings. At the centre

of both Zenetos and Wurman's thought lay the understanding of "the city as an environment for learning" (1972, p. 191) and "as a schoolhouse" (1972, p. 4). As Molly Wright Steenson remarks, in her book entitled *Architectural Intelligence: How Designers and Architects Created the Digital Landscape* (2017), the article "The invisible City" published in *Architectural Design* in 1972 collected some of the ideas that were presented at the 1972 International Design Conference in Aspen (IDCA) chaired by Wurman. This conference was focused on the interaction between government, transportation, schools, and social services. Bringing together both theoreticians and practitioners, the 1972 IDCA emphasized the social and philosophical aspects related to the shifts within educational models. Zenetos was aware of the content of this conference and was particularly interested in the notion of 'invisible city'. Interestingly, Wurman used the following words to describe the theme of the aforementioned conference: "We live in the invisible city. A place where public information is not public; a place where the young are shunted to fenced-in buildings, amidst islands of macadam, under the guise of learning. The architecture of learning, however, rarely is concerned with the building of schools. The architecture of learning instead is the city as a schoolhouse whose ground floor is both bulletin board and library" (p. 4).

Zenetos writes, in "City and House of the Future": "The proposed wired space-frame system, consisted out of cables in tension like the web of a spider, provides a solution for vertical development freeing earth space. It could contain vertical garden cities in combination with dense networks of advanced media of telecommunication and teleactivities" (1972, p. 10). German pioneer of structural morphology Eckhard Schulze-Fielitz and German architect and pioneer of the construction of spacenets (tensile structures) Conrad Roland Lehman's approaches had many affinities with those of Zenetos and Friedman. Zenetos also refers to English science-fiction writer Sir Arthur Charles Clarke, who co-wrote the screenplay for the famous 1968 film *2001: A Space Odyssey*.

Zenetos concluded his article in the eighth issue of *Architecture in Greece* with a critique of Clarke's vision, claiming that "[t]he 'conventional' robots along with the 'intelligent' animals of A. C. Clarke will be completely useless, because technological developments in the immaterial fields will proceed at a much faster pace (and will be more effective) than what we usually expect them to be" (1974, p. 135).

FROM THE NOMAD TO THE FARMER: THE BODY CARRIER AS AN EXTENSION OF MAN

The interest in the nomad was also a meeting point between Zenetos, Friedman, Constant Nieuwenhuys and *Archigram*. For the eighth issue of the magazine Archigram devoted to "For an Instant Moment-Village", published in 1968, Peter Cook wrote an article titled "The Nomad". Archigram, apart from the 'nomad', also envisaged the "Electronic Aborigine" (1970), who could be compared with Zenetos's "farmer". Marshal McLuhan, in *Understanding Media: The Extensions of Man*, cites R. Buckminster Fuller's *Education Automation* (1962). McLuhan also refers to the notion of the nomad. He writes: "Men are suddenly nomadic gatherers of knowledge, nomadic as never before, informed as never before, free from fragmentary specialism as never before –but also involved in the total social process as never before" (McLuhan, 1964, p. 358). McLuhan claimed that "the work of the city is the remaking or translating of man into a more suitable form than his nomadic ancestors achieved". McLuhan believed that the "translation of […] lives into the spiritual form of information seem to make of the entire globe, and of the human family, a single consciousness" (p. 61). Among Zenetos's references in the first of his series of articles "City Planning and Electronics" is Marshall McLuhan's *Understanding Media: The Extensions of Man*.

Zenetos envisioned a society inhabited by two types of citizens: the 'nomads' and the 'farmers'. Each of these types corresponded to a different kind of living unit: the "nomad"

would live in ready-made units and the 'farmer' in "tissue elements that receive (individual) home and garden elements (even vegetable garden)" (1972, p. 10). According to Zenetos, the living units corresponding to the needs of the 'farmer' would prevail in the near future since, thanks to "the perfected means of tele-communication –tele-work– tele-information", "the importance of the place of residence" (p. 10) would progressively disappear. A term that Zenetos often employed in his texts were those of "tele-operation" ("τηλε-ενέργεια") –which, according to its Greek etymology, means operation from a distant location. Zenetos was concerned about providing the inhabitant of his envisioned cities with the "freedom of isolation [combined with the] [...] opportunities for social contacts and events of maximum influence" (p. 10). The bubbles that appear in many of Zenetos's drawings for this project were the "envelop of 'organs' serving the different functions of everyday life" (p. 10) (Figures 2 and 3). Regarding the distinction drawn by Zenetos between the 'farmers' and the 'nomads', it would be useful to recall the first issue of *Street Farmer*, a self-published journal at the Architectural Association edited by Peter Crump and Bruce Haggart and published in 1971. According to Crump's comments in an interview given to Lydia Kallipoliti in Bristol in July 2011 "Archigram did not like [...] [Peter Crump and Bruce Haggart, because] [t]hey thought of [them] [...] as anti-technology"[1].

In 1967, Zenetos, as part of "Electronic Urbanism", conceived the so-called "posture chair", "[a] mobile spinal agent of the body for every use, equipped with a remote control for tele-activities and a control center for optical-acoustic contacts, which will aid in the execution of tele-activities" (1972, p. 11) (Figures 4-5). As Lydia Kallipoliti has underscored, Zenetos's main concern was "how electronic devices and hardware developments would physically affect the urban corporeal body" (2014, p. 679) (Figure 6). Zenetos' Spinal Body Carrier could be compared with Archigram's Cushicle and Suitaloon designed by Michael Webb in 1966-1967, as well as Archigram's Bathamatic designed by Warren Chalk

in 1969, and David Greene's "living pod" (1965). Both the *Cushicle* and *Suitaloon* are featured as separate projects in the eighth issue of *Archigram* published in 1968. Peter Cook described the *Cushicle* and *Suitaloon* as follows: "we get close to something very like man-as-a-bat where the skin of the enclosure is dependent upon a system of vertebrae that respond very directly to the nervous system of the person within" (1970, p. 55). In the case of *Suitaloon*, as Hadas A. Steiner remarks, "biology was not technology's unifying principle as Moholy-Nagy conceived, but rather its primary motivator" (2008, p. 92). Enlightening regarding how each of the architects under study conceived the notion of 'living unit' are the terms used by each of them. For instance, Warren Chalk from *Archigram* started using the term capsule in 1964.

In "City and House of the Future", Zenetos also refers to the "posture chair", describing it as a "mobile vertebrate body of all uses with remote control" (1972, p. 11). Zenetos incorporated in this project his design for an all-purpose furniture, including the design for the so-called "posture chair", which was distinguished in October 1967 with an honourable mention at the *InterDesign 2000* competition, for which he manufactured a 1/1 prototype of the chair. This competition focused on a furniture that one believed would be used in the year 2000. Worth mentioning is the fact that Zenetos had described this chair as "a second human body-support" (p. 11). The "posture chair" was conceived as a multi-purpose furniture serving to work, rest and sleep and its main objective was to supplement "the technological possibilities of extending the average actions of the man of 2000" (p. 10).

Zenetos paid special attention to the accommodation of activities such as "telephone-contacts, telephone-work, telephone-manipulations" (p. 11), to use his own expressions. Zenetos describes it as "an 'orthopedic' seat padded on human limbs and joints [enveloped by a] surface [consisting] […] of a sum of small hemispheres, allowing mini-

mal contact between the lying body and the support" (p. 12). The "posture chair" would be located in a capsule providing the opportunity for several audio-visual operations. In this cell, the individual would be completely isolated and would be able to self-concentrate and relax. In parallel, this same cell would include "any means extending his physical potential" (p. 12). One of these means would have been a "wall-screen TV with the possibility of 'active participation' of the viewer [offering] […] an infinite number of tele-activities" (p. 12). The high-precision colour 3D image of this wall-screen TV would be "supplemented […] with the transmission of smell and touch 'information'", and would offer the possibility to change environments by "tele-traveling" (p. 12). Through the screen, the inhabitant would be able to "watch or participate in spectacles, visit a house of friends (on the other side of the earth), do shopping" (p. 16).

Zenetos claimed that the "free time that will result will give a new dimension to relations between cohabiting individuals, which will be heard by the quiet contemplation of the essence of things" (1974, p. 123). In his texts on "Electronic Urbanism", Zenetos highlighted that the term "transportation" would have a different meaning in the future. He paid special attention "to the need for man's transportation to the very place of tertiary activities which, for the most part, consist of the transmission and processing of information" (1969a, p. 116). Zenetos's social vision concerning the new practices of everyday life was based on the replacement of transportation by communication devices.

TOWARDS A VARIETY OF PATTERNS OF DOMESTICITY

Zenetos envisioned a society whose daily activities would be organized around the following five categories of activities: 'tele-operations' such as 'tele-work'; bodily exercise; needs such as sexual intercourse and rest; consumption of goods and disposal of waste; social activities.

Fig. 2 Takis Zenetos, physical model for "Electronic Urbanism". Credits: Personal archives of Zenetos family; Archive T. CH. Zenetos.

Interestingly enough he did not include nutrition in the category concerning sexual intercourse and rest. There is no exact reference to nutrition, but it is implied that it is included in the category concerning the consumption of goods. The living units of Zenetos's "Electronic Urbanism" included a tele-education unit, which was, to borrow his own expression, an "apparatus for individual learning and memory training" (1974, p. 134). Zenetos tried to design the living units in a way that would provide as many possibilities as possible to the inhabitants to improve their skills without isolating themselves from the exterior world. Additionally, he was really concerned with incorporating into the living units devices and spaces that would respect as much as possible the variety of patterns of domesticity.

Reading Zenetos's texts and observing the detailed drawings and photographs of physical models that accompanied them, one becomes aware that Zenetos respected the fact that the needs of the users are not universal, but

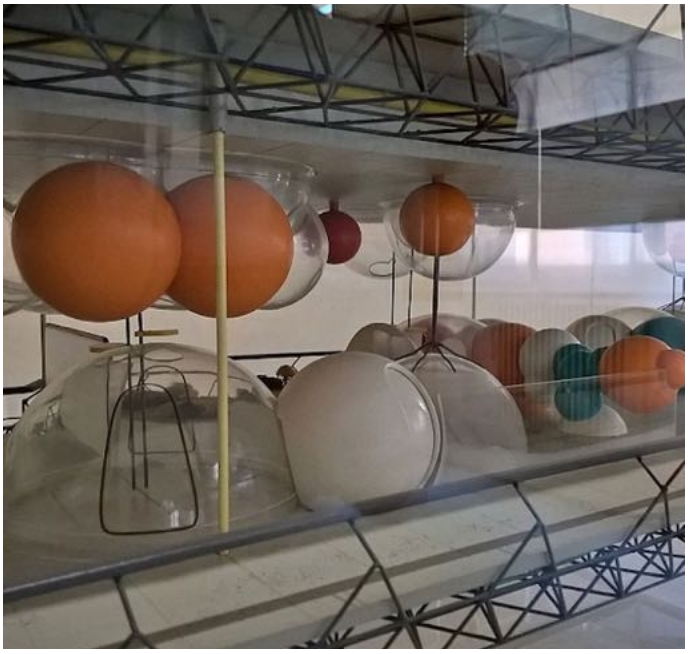

Fig. 3 Takis Zenetos, physical model for "Electronic Urbanism". Credits: Personal archives of Zenetos family; Archive T. CH. Zenetos.

depend on their personality, age, cultural background, etc. One of his remarks that proves his interest in accommodating inhabitants' needs for different degrees of isolation is his note according to which living units would comprise a "mechanism for folding and unfolding the isolation membrane" and "individual tele-activities cell", to offer more private conditions, and a "space for social contacts-meals-groups discussions", for moments of socialization. His concern about providing conditions of privacy if needed is evident when he writes that "[a] switch will at all times guarantee the privacy of the shelter" (1974, p. 124). His conviction that the capabilities of advanced technology could replace physical contact with tele-operations was manifested through the conception of a "[s]creen wall for tele-contacts, (2.25 x 5.00 m) with colour three dimensional picture, touch and smell information reception, two way active participation supplied with recording units" (p. 134).

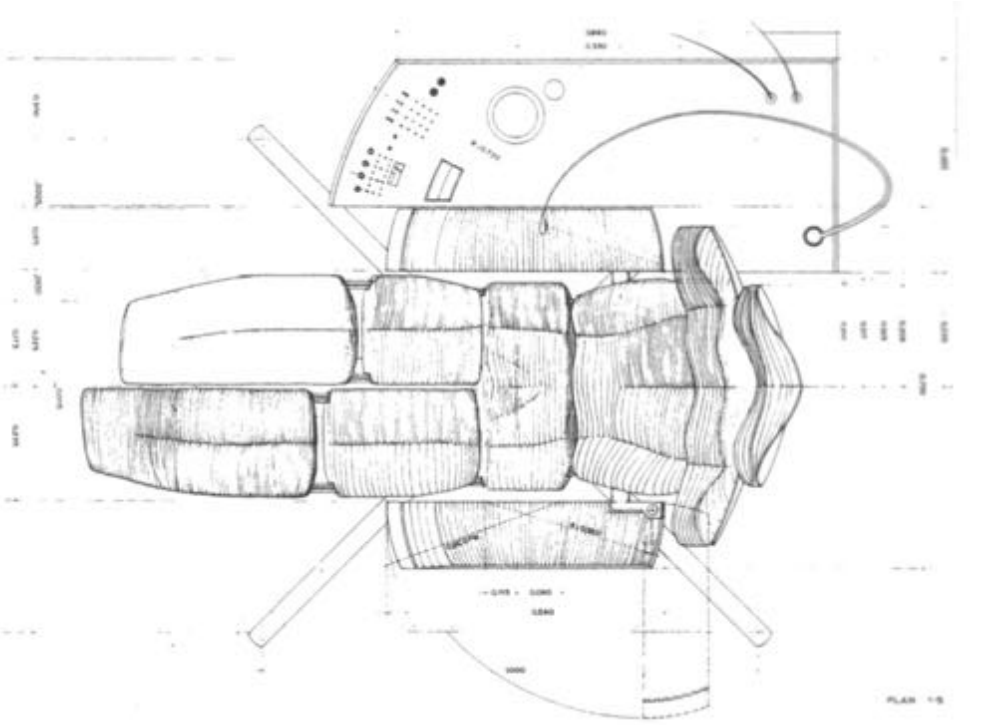

Fig. 4 Takis Zenetos' Spinal Body Carrier. Credtis: Personal archives of Zenetos family.

TAKIS ZENETOS *VIS-À-VIS* ARCHIGRAM

Archigram shared with Zenetos a vision for a renewed system of education. David Greene's "Imagining the Invisible University", published in *Architectural Design* in 1971, regarding the re-invented role of the university (1971/1972). In the fifth issue of the journal Archigram, published in 1964 by *Archigram*, one can see *Plug-in City* by Archigram, *New Babylon* by Nieuwenhuys and a sketch of a floating megastructure by Zenetos. In the page featuring these drawings, one can read under the title "Within the Big Structure": "Within the big structure, almost anything can happen. This is in effect, the brief from which *Plug-in City* develops. In T.C. Zenetos's city project (detail of which is shown bottom left) there is a system of trays slung within a wire network. Constant, in a part of *New Babylon* (bottom right) uses a close-knit diagonal net

Fig. 5 Takis Zenetos's multi-purpose furniture. Credits: Archive T. CH. Zenetos.

to establish platforms and building-objects. The big structure in *Plug-in City* is at the other end of the scale in that it incorporates lifts and services within the structure tubes. It controls the discipline of the whole city, but on a very large scale" (Anon, 1964).

Although these projects have affinities as far as their morphology is concerned, they differ in terms of vision. What distinguishes Zenetos' approach from those of *Archigram* are his social concerns, which become evident in his following statement: "Man desires and has the right to acquire a 'home' in a quiet environment, close to nature and close to his place of work and the various public services" (1973, p. 113). As Simon Sadler remarks, both "New Babylon and Plug-in City were [...] devised to prompt circulation and accelerate the city-in-flux" (2005). In the issue of *Archigram*, which was devoted to "Metropolis", featured drawings by architects

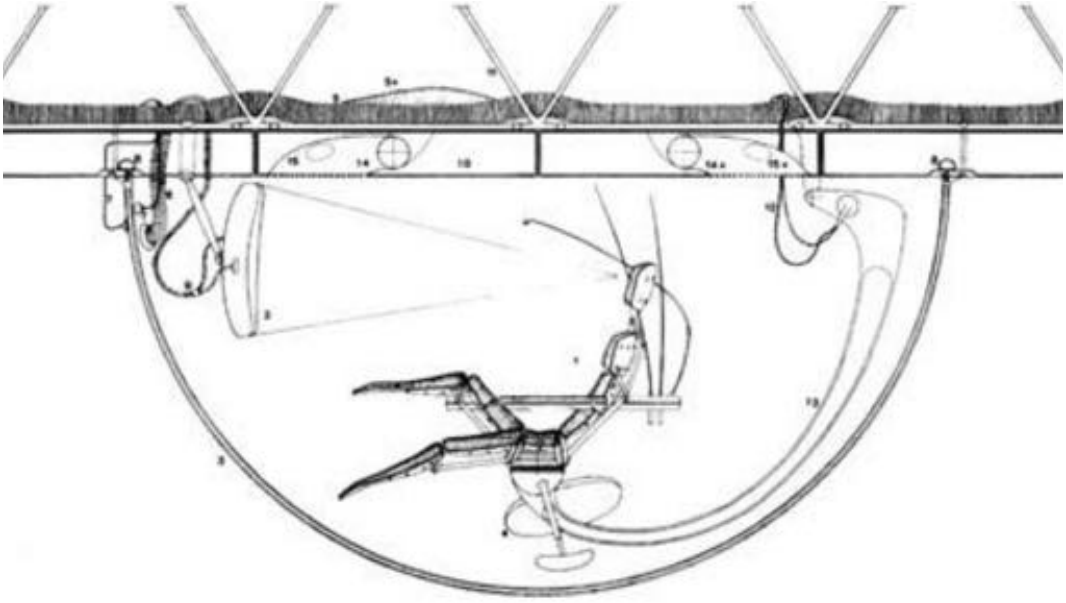

Fig. 6 Takis Zenetos's multi-purpose furniture. Credits: Archive T. CH. Zenetos.

such as Yona Friedman, Hans Hollein, Arata Isozaki, Paul Maymont, Frei Otto, Eckhard Schelze-Fielitz, Paolo Soleri and Kenzo Tange (Steiner 2008, p. 95).

In 1971, a negative review of Peter Cook's *Experimental Architecture* was published in Architectural Design. This review was authored by British medical scientist, parapsychologist and science fiction author Kit Pedler and was quite critical. According to Pedler, "[a]rchitects often seem to me to be one of the most arrogant species at liberty. Having absorbed a sprinkling of philosophy and a crude knowledge of technological concepts, they develop the ability to translate what is largely impudent dogma into concrete and metal reality, and then have the sheer nerve to justify the initial idea by post hoc rationalisation." Pedler concludes his review of *Experimental Architecture* as follows: "I wish, I could believe, that Mr. Cook had written a black comedy, a private in-joke for his colleagues. Sadly, I conclude that he is serious" (1971, p. 250).

Takis Zenetos was supportive of the stance of Archigram, as is evidenced by his response to the review of Peter Cook's *Experimental Architecture in Architectural Design*. In his response, he

claims that the solutions presented in *Experimental Architecture* "will be called in to salvage situations [...] when there will be no more soil to be taken over by buildings, no more soil for ever expanding motorways" (Zenetos, 1971, p. 655). To render explicit how these situations would be, he included, in his letter to *Architectural Design*, the cover of the September 1970 issue of *Science*. In the sixth issue of *Archigram*, published in 1965, can be found an article entitled "Urban Line and Net": "Most of the projects for large-scale urbanism that have been illustrated in this, and the previous issue of Archigram share a definitive feature: the reliance of the organisation upon strong lines of communication".

ZENETOS'S TECHNICAL RATIONALITY: BETWEEN PRAGMATISM AND UTOPIA

Zenetos was a member of the *International Association of Cybernetics* and had attended numerous congresses on the subject, such as the *International Congress of Cybernetics* held in London in 1969 (Rose, 1970). In parallel, he was also an avid reader of the writings of the American mathematician and philosopher Norbert Wiener and of *Science* magazine, often cited in *Urbanisme électronique: Structures parallèles* (1969b). Zenetos's library included several works on cybernetics. He should have been familiar with the writings of English author, inventor, educational theorist, cybernetician and psychologist Gordon Pask, especially with his article "The Architectural Relevance of Cybernetics", which was published in *Architectural Design* in 1969. Pask was in close contact with Cedric Price and Nicholas Negroponte. A year before Pask, Christopher Alexander had also published an article centred on the relationship between architectural design and cybernetics: "Systems Creating Systems" (1968). Zenetos's readings included the work of French philosopher and pioneer of political ecology Bertrand de Jouvenel, who in 1962 had published *L'art de la conjencture*. Another important source of inspiration for Zenetos was the work of American biophysicist Alfred J. Lotka, who in 1924

published *Elements of Mathematical Biology* (1924/1956). Among the references in Zenetos's article "Town Planning and Electronics" published in the seventh issue of *Architecture in Greece* is Jean Fourastié's *Idées majeures* (1966). Fourastié was a French economist, notable for having coined the expression *Trente Glorieuses* to describe the period of prosperity that France experienced from the end of World War II until the 1973 oil crisis (1945-1973).

In the part of his work on "Electronic Urbanism" that was published in the seventh issue of the annual review *Architecture in Greece*, Zenetos's analysis was focused on infrastructure, while the part of the study that was published in the eighth issue of the same annual review was centred on housing and services. Zenetos's vision about socializing through social networks seems particularly timely, as it imagines the possibility for inhabitants to "be everywhere and nowhere". What is worth mentioning is the fact that Zenetos really desired to implement "Electronic Urbanism". This is not evidenced only by his writings but also by the fact that he provided construction details for his design details. Additionally, in 1969, he suggested to implement it in Greece. Zenetos's technical rationality makes it clear that for him the principles of "Electronic Urbanism" were not utopic but pragmatic. His technical rationality is especially visible when he pays attention to the shared vocabulary surrounding patents and inventions, which also characterized the communities of scientific societies and associations of which Zenetos was an active member.

AROUND THE INTENTION TO ELIMINATE TRANSPORT IN THE CITIES

In February 1972, in an editorial of *Science* entitled "Old Cities, New Cities, No Cities" the following question was raised: "Why cannot people live wherever they wish and congregate electronically?" (Seaborg, 1972, p. 709). A year later, Zenetos introduced his article "Town Planning and Electronics" published in the seventh issue of *Architecture in Greece*, devoted to the theme "The

education of the architects", with this same question, paying special attention to the idea that "[m]an desires, and has a right to acquire, a 'home' in a quiet environment close to nature and at proximity to his place for work and the various public services" (1973a, p. 113). Taking as his point of departure the idea that "[t]echnology properly used may be the only short-term answer to the city's problems because it will take time to check population growth" (Seaborg, 1972, p. 709), Zenetos argued that "[t]he remoteness between living and working areas is increasing while the urban texture is gradually being 'disemboweled' for the improvement of the transportation system, which will lead, in the end, to nowhere" (Zenetos, 1973a, p. 112).

His intention to eliminate transportation is also evident in his provocative article entitled "The Metro Does Not Solve any Problem" in the 24 July 1973 issue of *Economy Postman*. In this article, Zenetos argued that "[t[he metro de facto alienates people from the urban environment and the complex processes of complementarity". He also sustained that the metro "eliminates the development of social relations, a basic background of [...] [the] city", claiming that it is considered to be "one of the causes of mental illness of the inhabitants of big cities" (1973, p. 24). Despite his insistence on the replacement of daily transpiration between residence and work place by a variety of teleoperations from home, he envisaged that "walking [would] [...] regain its old importance" (Zenetos, 1974, p. 123). A common point between Zenetos and Friedman's approaches is the conviction that technological and social issues are interlinked. Friedman, in "A Trend in Architecture: Analysis and Prognosis", published in *Architectural Design* in 1965, claimed that due to the technical and social transformations characterizing the situation "the historically established patterns (social organisation) have completely lost their efficiency" (1965, p. 52). As a solution towards the problems provoked because of the loss of significance of the old patterns, Friedman suggested the creation of "a new objective architecture [...], [aiming to] solve the relations implied by the patterns, e.g., the relation between social organisation and transportation" (p. 52).

TAKIS ZENETOS'S VISION OF SUSTAINABILITY AND CIRCULAR ECONOMY

Zenetos was interested in recycling materials and he believed in a circular economy. As part of his endeavour to envision living units as components of a larger project aiming to promote circular economy, he envisaged the existence of the so-called "Organisation for the Distribution of Consumer Goods" (ODCG), as well as the "Organisation for the Restitution of Raw Materials" (ORRM) (Zenetos, 1974, p. 123), and a "Laboratory for Composistion and De-composition of Products" (p. 128). Indicative of his concern about eliminating waste is his remark that "[e]conomy in raw materials and energy and reduction of discarded matter (wastes) are new considered to be an integral part of any design process" (p. 126). His guiding principle was to eliminate waste. Another concern shared by Zenetos, Friedman and Archigram was the intention to create controllable climatic conditions. Characteristically, Friedman writes in "Spatial Urbanisme" (*Urbanisme spatial*), in *L'Architecture d'Aujourd'hui*: "An additional advantage is [...] the possibility of climate control of an entire neighborhood, including public spaces: streets, squares, passages, etc. This 'climatisation' supposes a coating: thin, elastic and transparent membrane, around the construction, as the first thermal barrier. The walls of the houses themselves will only be the second small dam" (1960).

TECHNOLOGICAL INNOVATION AS SOCIO-POLITICAL TRANSFORMATION

Zenetos's chief concern was to allow users to become the most creative possible, and this is reflected in the conditions he sought to create in his living units, on the one hand, and in his efforts to reconcile humans and technological advancements with nature, on the other hand. His flexible superstructures are characterized by an integration of nature in the built environment. In parallel, he understood technological innovation as a

means permitting socio-political changes. The specific question that arises today is whether the core ideas of Zenetos's aforementioned projects could be incorporated within the design of architectural and urban projects aiming to contribute to pandemic preparedness. Examining Zenetos's suggestions for comfortable, flexible and independent home-office conditions relying on advanced technological achievements may allow a better understanding of architecture's potential responses to the emergency conditions created by pandemic breakouts. Besides his interest in the broader aspects of urban planning, Zenetos paid particular attention to the complexity of the psychological and physiological needs of citizens within such conditions, as is evidenced by his 'posture chair' design. Zenetos related humans' self-esteem to their contribution to the preservation of the natural environment, their access to the infinite capacities of technology and the satisfaction they can receive through the arts and socialisation (1974, p. 125).

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‘ISOLATED TOGETHER’ FLOOR SIGNAGE IN THE TIMES OF PANDEMIC AND PARTITIONING OF OUR COMMON SPACES

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FLOOR SIGNAGE
VISUALIZATION
DANCE NOTATION
FENCING
KINESPHERE

The current pandemic has seen the need to adorn public spaces with varied signage, sometimes almost spontaneous or, on the contrary, very elaborate, inviting us to respect distances and spaces specific to each person: what might seem obvious to us, however, refers to a long history of the notation of movement, on the ground or on the page.

By comparing a few elements of current signage with a corpus of fencing and dance manuals, or even military treatises, the aim is to grasp the stakes of the visualization of this grid, intermediate and mediator of our relations, which isolates us together in a progressive process of incorporation of images and signs.

INTRODUCTION

Circles, squares, aligned, staggered; lines, arrows and waymarked paths; soles and footprints, fixed or moving: the floors of train stations, streets, shops, have been adorned for several months with more or less respected signage, seeking to visualize the necessary physical distance in times of pandemic. The apparent obviousness of these signs, which are sometimes compared to industrial floor markings, sometimes to Olivier Mosset's paintings (particularly for the circles on the floor of most French train stations) (Figures 1-2), is however part of an ancient history of the standardization of movements and their notation[1]. From the military treatises of the 16th century to the social dance manuals of the 1920s, taken up by Andy Warhol, from Machiavelli (Figure 3) to the Foxtrot, the iconography of displacement borrows a scientific objectivity that tends to make us forget its lack of neutrality and proceeds from the same desire to visualize a partitioned space and calculated proximities that are so striking today. Can these new signs of public space at the time of Covid-19 be interpreted in the light of a history of the notation of movement and dance? How do physical distancing and online proximity give rise to the observation of a partition of space familiar to dancers and choreographers, and whose modes of representation for several centuries now inform our relationships with each other? If we do not intend here to take up a history of movement notations, contemporary signage linked to the pandemic invites us to think about the visual matrix of our real and virtual behaviors, another form of proximity born of distance, and of the consciousness, through its visualization, of the sharing of a common space.

KINESPHERE AND FRAME EFFECTS

The signage that occupies us and that a certain familiarity now leads us to ignore, gives, without imposing, frames

to our daily relations, like a spatialized score or 'partition'. The physical distancing visualized on the floor offers as much a framework for each person's space as the various virtual meeting supports: a grid that is both chessboard and *mise au carreau*. So many squares, lines, arrows, points and circles that govern our ways of doing things and our ways of being: a grid that will undoubtedly leave a strong imprint on contemporary images and bodies.

However, let us distinguish two different aspects to these framing effects: while the screen that multiplies faces and boxes –and gives one a certain intimacy common to everyone– is a 'picture', and reminds us of the effects of a painting or framing, as the visualization of a partitioned space in the streets or in our common public spaces proceeds from a transposition of a somatic perception to its literal inscription on the ground. It is precisely this translation of the somatic experience, and thus a certain awareness of this experience, that interests us here. What proximity or distance are we talking about? A circle or a square on the ground shows us where to position ourselves in a

Fig. 1 Gare Montparnasse, 2020. ©Sylvain Perichon - www.sylvainperichon.fr.

waiting space, a line shows us the limit not to be exceeded, several lines on the ground impel rhythm and distance to our gait. Each sign materializes the range of our gestures, the invisible limits of our body well beyond the silhouette, up to the range of our own breath. This signage is as much that of stasis as that of movement.

The signage proposed in many French train stations presents this subtlety to which we will return: a vectorial system of movement that takes up the signage of waiting and of zones delimited for each in spaces of circulation, like the traces of a quadrille[2] in the absence of its dancers. It is literally a framework, of which only a fragment would be visible, even tangible, that encourages us to keep our distances and to envisage a problematic proximity. This frame, this 'aura' of the body, is also one with which the dancers are familiar.

During the 1920s, Rudolf Laban theorized the kinesphere (Figure 4) in the form of an icosahedron that corresponds to the maximum deployment of our limbs and the construction of the personal sphere through movement, this "living architecture" (Laban, 2003, p. 77)[3]: "Whether the body stands still or moves, it occupies space and space surrounds it. We must distinguish between general space and the space that the body can reach. To distinguish the latter from the general space, we will call it personal space or the 'kinesphere'. The kinesphere is the sphere around the body whose periphery can be reached by the limbs easily stretched out without the body on one foot moving from the point of support.

We call this point of support 'the reference position'. We can draw the limits of this imaginary sphere with our feet as well as with our hands. In this way any part of the kinesphere can be reached. Beyond the kinesphere lies the rest of the space, which can only be approached by leaving the reference position. When we move outside the limits of our initial kinesphere, we create a new reference position and transport the kinesphere to a new location. Of course

we never leave our sphere of movement, on the contrary we always carry it with us like an aura" (Laban, 2003, pp. 82-83). This signage that partitions the space sometimes functions as a visualization of this aura: the breath itself can be seen since it is also what is important to us.

Remaining out of reach of the other's breath, defining a proximity that preserves the personal space of each one. This awareness, necessary in times of pandemic, is one of the essential learnings of the dancer, whatever the dance. Let us recall that famous, anecdotal, yet accurate scene from *Dirty Dancing* (1987). Johnny (Patrick Swayze) teaches Frances (Jennifer Grey) how to dance by insisting on the need to conserve space, everyone's dance 'frame': "Look, spaghetti arms. This is my dance space. This is your dance space. I don't go into yours, you don't go into mine.

Fig. 2 Gare de Lyon, Paris (photos from the author).

Fig. 3 Nicolas Machiavel, *L'art de la guerre*, édition de 1546. Bibliothèque nationale de France. Source: Gallica/BnF.

You gotta hold the frame". The learning consists in jointly visualizing and incorporating our own space. Now dance, and other bodily practices, will have recourse to the representation of this space, on the page, on the floor: treatises, manuals, even pictorial representations of dance, show a particular attention to the visualization of the kinesphere before and after its theorization by Laban.

VISUALIZATIONS

The return on a few examples of our deployed corporality's inscription in space should allow us to grasp the stakes of such a visualization, a tool for the normalization of gestures and figures, and an instrument for the embodiment of mechanisms of displacement and distancing, mediation of this paradoxical proximity in the sharing of space. Even before the invention of forms of choreographic notation, fencing treaties deployed several strategies of representation of the space of movements, thus contributing to define the frameworks of a discipline by the image[4].

From 1560, Joachim Meyer (1570/2006), German weapon master, worked on the publication of a treatise accompanied by many plates (Figure 5), remarkable in their treatment of the space of the gestures. Contrary to an iconography such as the one presented in the *Three dialogues of the sieur Archangelo Tuccaro in the Art of Jumping and Voltiger en l'air*, slightly later (1599), where the movement is often visualized in its curves and its lines which one will find at Laban's, Meyer uses the floor and the drawings of the paving to represent the frame of each fencer and the lines of force of the movements, without adopting a uniform mode which one finds today on the floor of the fencing rooms. The originality of such a representation lies in the use of a classical perspective motif to associate to the scientific representation of combat a didactic dimension of the lines of movement. If an illustration shows several fights, the pavement will be different for the three couples, which can be seen perfectly well on plate C of the long sword fights. Different colors, textures and lines to indicate the differences in space.Plate A has discs and squares on the floor which seem to indicate to each fencer where he can lean. In addition, Plate K presents directly on the floor the movement guidelines emphasizing the play of false symmetry between each individual[5].

The fencer who seems to dominate the bout has his arm protruding into the space of his partner who has retreated

to the point where he leaves the main square. The lines of the floor thus provide keys to reading while suggesting to the apprentices the possibility of inscribing on the floor the frames of each one or rather to visualize a personal space from the floor, we will come back to this.

For the moment, it should be noted that this use of the floor is not without echoes of certain figure dances of the early 17th century for which the floor sometimes had to include some scenic indications, as described by Flavia Pappacena (2019): "The realization of these figures was not to be very easy. The manuscript *Il Corago o vero alcune osservazioni per mettere bene in scena le composizione drammatiche*, composed between 1628 and 1637 and attributed to Pierfrancesco Rinuccini, advised to trace a sign on the floor of the stage. Angelo Ingegneri, for his part –for the staging of the tragedy *Edipo Tiranno* by Orsatto Giustiniani at the Olympic Theater of Vincenza in 1585– planned a stage floor made of marble of different colors, so that each character would have a precise point of reference in his movements and during breaks" (p. 73). The pavement of the theater of Vincenza is contemporary to Meyer's treatise and provides, in both of them, a "geometry of enunciation" (Damisch, 1987/2012, p. 458)[6].

Real or imagined, the inscription of the kinesphere in space for the purposes of memorization or for strategic purposes in fencing, also says much of this recourse to the sign as a tool for the incorporation of space. The learning of fencing and the movement of the body starting from a point of anchoring require to integrate the range of one's gesture, to control perfectly the calculation of the distances and a proximity thus mediatized by the paving on the ground. The complexity of Meyer's images, however, lies in their very construction. As we mentioned before, Joachim Meyer takes care to distinguish between the floors of the various combatants, thus insisting on the composite, unrealistic, and didactic character of the image. The inscription of distances in the body, passes through the page and the

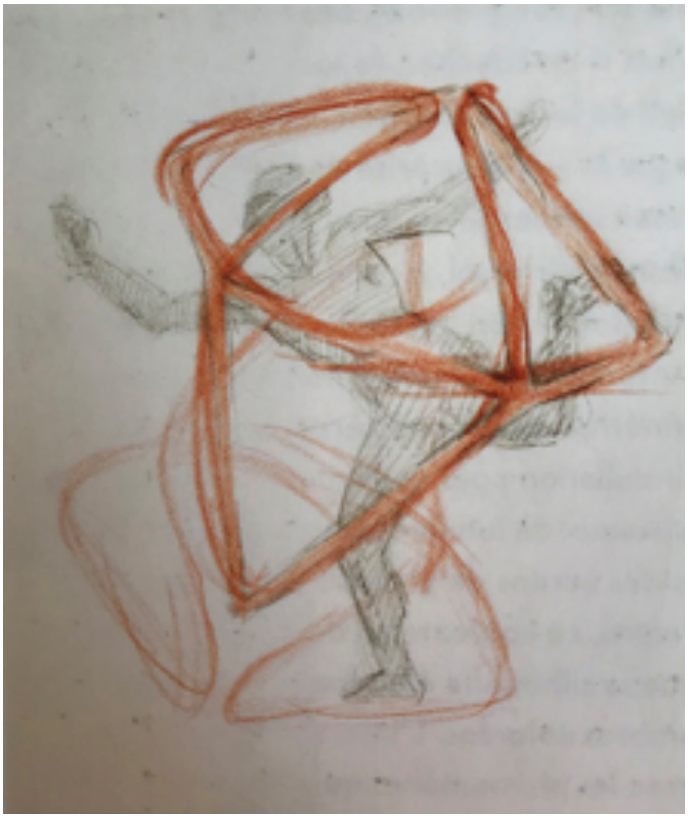

Fig. 4 Rudolph von Laban, *Raum und Körper (espace et corps)*, 1915, Crayon de couleur sur papier, 25,2x20,4cm, Zurich. Kunsthaus Zürich, Graphische Sammlung.

book: a mental process of projection, and back and forth movement between the ground and the page is then imposed. Antonella Fenech Kroke (2018) analyzes the iconography of the sports practices of the first modernity and the "learning process of gestures by the body of the reader-spectator". "They do not only transmit information and knowledge but are efficient because they produce norms relating to corporal and social practices in individual and collective life. [...] The images of these playful techniques play on visuality and establish a communication regime that accompanies and/or replaces that of the text. Thus they are the expression of a normativity that cannot be simply understood as the visual translation of the rules of a game. They do not only transmit information and knowledge, but they are efficient because they produce norms

Fig. 5 Joachim Meyer, *Gründtliche Beschreibung der Kunst des Fechtens*, Strasbourg, 1570. Gravure sur bois colorée, Bibliothèque de l'université de Leipzig.

relating to corporal and social practices in individual and collective life" (Fenech Kroke, 2018, p. 119). The production of these standards is mediatized by the book, the vector of the incorporation of signs and images reproduced in real space. So far we have seen how the lines on the ground, the circles and squares that organize physical distancing, recall historical devices of transmission and normalization of steps, visual expression of the body frame and the kinesphere, subtle mediation of an impossible proximity.

This visualized and then incorporated framework is sometimes complemented by more coercive signage: feet on the ground indicating precisely our anchorage point and not a distance that can be transposed in a vectorial way. Certain fencing manuals of the 16th century precisely had recourse to this representation of the footprints: the body of the fencer requires transfers of weight from one foot to the other and a precise dynamics in the position of the legs which is not always satisfied with the lines of ground.

Meyer once used this type of signs, but it is especially the treatise of Henry de Sainct-Didier (Figure 6) which is the most complete on this point[7].

The woodcut plates show the silhouettes of the feet, the 'soles', with a numbering on the print itself. Sometimes a few lines emphasize the movement followed by the legs of the Lieutenant and the Prevost. The text completes the image by describing the arm and shoulder movements associated with those of the legs. The originality of these plates (the first ten figures) lies not only in the presence of the numbered soles, but also in the representation of the stopped gestures: a leg raised, a foot about to take its place on one of the numbers indicated. How to interpret the mediation of such a sign on the page or on the ground itself?

NORMALIZATION, RATIONALIZATION

The drawing of the steps on ground, as on the page, invites to follow a sequence of movements, a dynamic that does not imply to internalize the distances but to conform to a succession of steps. The mechanism of incorporation or assimilation of an authorized proximity works quite differently. Reading and observing the social dance textbooks of the years 1910-1920 allows us to better understand the functioning and stakes of signage in the time of Covid-19, notably through the analysis of the complexity of a context that seeks to establish a scientificity of notation.

Social dance manuals (Figure 7) were exponentially successful between the two world wars, but make no mistake, their purpose was not to allow everyone to learn to dance from home.

Sophie Jacotot (2013) shows how these books are above all tools for standardizing dances and imposing copyright on dancing practices that are more liberated than those offered in the textbooks. It should be noted that the strategies deployed in the distribution of these works also stem

from a desire to create an object of mass distribution associated with the success of social dance classes.

The analysis of the mechanistic iconography proposed in these textbooks testifies precisely to the development of a dance industry. While it is true that dance diagrams are not easy to read, that the lack of information remains considerable, the intentions are elsewhere: first, quite simply, in controlling dancers' distances and morality, and second, in participating in a broader visual culture, that of the rational organization of gestures and work in American society between the wars.

Danielle Robinson (2010) has endeavored to understand the mechanisms of appropriation of black social dances by a white community, wealthy and curious about novelties, but also about 'moralized' dances. The opposition, also analyzed by Sophie Jacotot, between the dances practiced in the dancing and the description of them in textbooks is striking. "A spirit of invention pervaded ragtime during this period, empowering dancers to make up their own steps and christen them with playful names" (Robinson 2010, p. 180). Invention and play between partners are constitutive of dances such as the Foxtrot. "In contrast, modern dancing valued control, containment, organization, rules and inhibition. Couples danced in a united way, as a single unit and with the rhythmic structure of the music. Together, dancers governed their collaborative bodily movement in service to smooth, graceful lines of the body and through space. Their variations were brief and few and therefore did little to disturb the self-control they exuded. […] Ragtime freed the torso and limbs to express sexual pleasure and desire; while, modern dancing's aesthetic of restraint inhibited the torso and suppressed sexuality" (Robinson, 2010, p. 183).

The author then develops the way in which the normativity of dance manuals expresses a negation of individuality in favor of a conformity of gestures and practices[8].

The teacher watches over and controls this conformity,

Fig. 6 Henry de Sainct-Didier, *Traicté contenant les secrets du premier livre sur l'espée seule…*, Paris, 1573. Bibliothèque nationale de France. Source: Gallica/BnF.

TRAICTE DE

Premier coup & faicte du quatriangle, par le Lieutenant & Prevost.

ET pour le bien faire, est besoin pour le premier coup que le Lieutenant, ayt fait un desdits desgainements demoure sur le pied gauche, qui est sur la semelle cotté en chiffre, 1, & pour executer ce coup faut que cedit Lieutenant advance le pied droit sur la semelle ou est cotté en chiffre, 2, & tirer un roide estoc d'hault, tenant la main qui tient l'espée les ongles en haut, & la main gauche sur son giron droit, comme est monstré cy dessus à sa pourtraicture, cotté en chiffre au derriere du chapeau, 71.

Voila comment il faut que ledit Lieutenant commence à faire ce coup, en maniere de quatriangle, le suyvant ainsi elle en sorte.

as Frank Leslie Clendenen states in his 1914 textbook: "Control is the greatest point to consider in all our new dances" (Clendenen, 1914, p. 8). But if you look at the diagrams, only the steps are represented on the ground.

Some manuals indicate the lines of the shoulders, but the representation of the soles and footprints, accompanied by guidelines and sometimes confusing numbering, say almost nothing about the movements of the bust, hips and a body somewhat rigidified in the moralization of the dances. Visualization of the steps then not only highlights the movement sequences but also controls the proximity, and thus the morality, of the dancers. We return, *mutatis mutandis*, to the 'dance frame' from *Dirty Dancing*, certainly more liberated than the Fox Trot described in Charles Coll's manuals. However, a comparison with current signage requires going further: these dance diagrams seem to us today relatively obvious in their aesthetic and semiotic choices. The mechanistic nature of the images encourages a certain caution in the interpretation of this evidence, which is common to that of today's signage.

Indeed, the development of dance textbooks in the inter-war period also owes much to the emergence of a new iconography relating to the scientific organization of work. Danielle Robinson analyzes the sales strategies of these textbooks in a context of the emergence of mass consumption and Taylorism.

Let's go a little further by pausing for a moment on this visual culture of Taylorism in which certain social dance textbooks participate. The optimization of work passes by the suppression of useless and unsuitable movements and gestures, it is thus necessary to study these movements, to codify, standardize and control them. Visualization then plays a major role in these processes. Sharon Corwin (2003) studied American precisionist painting and its interpretation in the same context of the development of rational work organization. Her analyses shed particular light on these manuals of the 1920s, as well as on the contemporary

Fig. 7 Charles Désiré, *Toutes les danses modernes et leurs théories complètes*, Tome II, 1ère édition avec 37 figures de pas, Paris, Bornemann,1929. Bibliothèque nationale de France. Source: Gallica/BnF.

signs that occupy us in these pages. In studying the 'visual effects of Taylorism', Corwin insists on the sharing of the same visual vocabulary by artists and engineers.

She also notes an imagery that erases any presence of reified bodies, notably in Gilbreth's work on the efficient gesture: "the visualization of efficiency in the Gilbreths' time-motion studies necessitated the erasure of the body

of the worker and the standardization and abstraction of the act of labor" (Corwin, 2003, pp. 139-165)[9]. Frank Bunker Gilbreth[10] observed fencers, golfers, workers and theorizes what he calls "The One Best Way", the efficient gesture resulting from a photographic analysis of movements and technical activities according to practices and trades.

The images shut out the presence of the body as a common negation of the origin of the gesture and individualities. Gilbreth defends visualization –and thus the ability to represent– as the major tool for rational work organization. The principle of visualization is associated with those of reduction and abstraction, while including a hierarchical dimension emphasized by Scott Curtis (2009, pp. 85-100): "Visualization was absolutely crucial to the Gilbreth program, but it also replicated the manager-worker hierarchy. According to the Gilbreths, to visualize is to plan, to imagine a future solution based on observation of present details. But not everyone is equipped to observe and to visualize; only the trained eye could be expected to do both. In fact, the ability to observe and to visualize is precisely what distinguishes a manager from a worker or, more broadly, an expert from a layman". The author then quotes Lilian Gilbreth in *The Psychology of Management* (1914/1973): "The best planner is the one who –other things being equal– is the most ingenious, the most experienced and the best observer. It is an art to observe; it requires persistent attention. The longer and the more the observer observes, the more details, and variables affecting details, he observes. The untrained observer could not expect to compete with one of special natural talent who has also been trained. It is not every man who is fitted by nature to observe closely, hence to plan. To observe is a condition precedent to visualizing. Practice in visualizing makes for increasing the faculty of constructive imagination. He with the best constructive imagination is the master planner" (pp. 76-77).

Bernd Stiegler (2017), who has analyzed Gilbreth's iconographic documentation, clearly states the objectives

of such an analysis: "it is a question of developing automatisms that can be accomplished without any kind of intellectual disturbance ever interrupting them" (pp. 150-165).

If 'visualization' represents the first stage of the process, the 'incorporation' of gestures and movements that have become automatisms constitutes the second fundamental stage. These two aspects legitimize the publication of numerous dance manuals that play with this back and forth between image and gesture. This brings us to the last stage of our analysis. What seems obvious to us today, however, carries within itself a singular history: that of the control of movements and gestures in a context of rationalization and optimization.

The fencing manuals of the first modernity as well as the social dance manuals of the inter-war period share a common will to integrate practices in a scientific and technical context dominated by rationality.

Based on these historical comparisons, how can we envisage the scope of current signage in times of pandemic and the modalities of its incorporation?

COLLECTIVE BODIES AND EMBODIED KNOWLEDGE

On June 8, 2020, the *Journal du Grand Paris*, a professional journal that analyzes and promotes major urban planning and development projects in the Paris metropolis, published a short article on the deconfinement signage designed by AREP design for SNCF railway stations, of which the following is an excerpt: "White marked trails on the ground, unmistakable. Pictograms and signs, stickers and lights, also positioned and cut so that they cannot be ignored, while taking care of their 'friendly', gentle, non-coercive character. These are the main principles of 'augmented signage', designed by Arep design teams for all stations in France and the Ile-de-France region. 'It's about daring to do things you wouldn't have dared to do

before', sums up Isabelle Le Saux, director of Arep design. In this case, the Covid-19 accelerated the process. Before the health crisis, the interdisciplinary architecture firm undertook a vast project for SNCF Gares & connexions, on behalf of SNCF Gares & connexions, to harmonize the signage at the country's 3,000 stations and 380 stations in the Paris region. '[...] We wanted signage that was visible, but non-coercive, almost playful', stress its designers. The idea is to make people want to take the train, not the other way around. And it works. [...] The increased signage makes it possible to lead users to use a staircase hopper that has been neglected until now, because it is a little remote and 'non-intuitive' (Isabelle Saux). In the end, the distribution of passengers on narrow platforms has been improved; maintenance costs are also reduced, by avoiding concentrating passages and wear and tear on the same equipment"[11]. The subtlety of this signage lies in its non-coercive character, and it is precisely here that the comparison between contemporary signage and its formal echoes in previous centuries is fully justified.

The signage of deconfinement, or rather of the current pandemic, implies a remarkable phenomenon of incorporation of the constraints visualized, it literally provides a matrix of our behaviors, for today and certainly for a little longer. Few users are waiting with both feet on one of the circles drawn on the ground and yet the daily perception of these signs permeates our actions and governs our automatisms. Let us certainly not neglect a bundle of other phenomena that encourage us to distance ourselves from one another, first and foremost the conscious fear of contamination, but the diachronic reading of these regularly perceived forms leads us to think more precisely about the mechanisms of incorporation of this new matrix of our movements. Let us note, moreover, that the ambitions evoked by the management of AREP design go far beyond the context of the pandemic: a partition of our daily ballets orchestrated and rationalized. Arrows accompany a series of circles, in waiting areas as well

as in transit zones. The circles on the floor of the traffic corridors question: they certainly do not invite people to wait there, but rather to move, at a distance from each other, like the *corps de ballet*, in lines or in staggered rows. No matter if the shapes drawn on the floor, squares, lines or circles are respected, the distances are visualized in their movement. This occurrence of current signage shows how much it is a question above all of creating automatisms in the movements as well as in the distances: distances thus vectorized and even better internalized. The observation of these matrices inscribed on the ground also reminds us of the diagrams published in Machiavelli's *The Art of War* in 1520: the visualization of military formations reinforces the descriptions of the text and ensures an understanding by the eye –and the body– of the written theories.

The presence of diagrams in such works is still in its infancy and is part of the same culture that prompted Henry de Sainct-Didier or Joachim Meyer to propose "a device necessary to lend the mind the assistance of the eye" (Hale, 1988, pp. 280-298)[12].

Ancient military culture was revisited during the Renaissance, and diagrams made their way into the new editions (those of Aelian and Vegetius)[13]. Machiavelli's vision of military columns remains on the page as a theorization of the coordinated movements of the infantrymen. The comparison with the signage of Parisian train stations raises the question: should one see in them a power of abstraction of individuals coupled with a force of incorporation of distances? The comments collected in the *Journal du Grand Paris* point in this direction and suggest a desire to homogenize the flow of passengers and to control movements without overtly framing them. These signs on the floor then function as these dancers' memory aids, these signs on the pavement and these traces described in the first paragraphs of this paper. The materialization of a kinesphere, especially in traffic spaces, encourages us to be the agents of this homogenization of flows. If our point here is not to question the validity of physical dis-

Fig. 8 Gare de Lyon, Paris (photos from the author).

tancing, on the contrary, it is rather a question of shedding light on the mechanisms of impregnation of such signage on our bodies beyond the pandemic. Negating *flânerie* and *dérive* –this "insubordination to the usual solicitations" (Debord, 1955/2006, p. 205)– new tools of a psycho-geography that is certainly more coercive[14] than it seems, this iconography of deconfinement offers a new echo to Debord's[15] theories, of which paragraphs 165 to 178 of the *Société du spectacle*, devoted to urban planning, resonate particularly well here: "169. [...] Urban planning is this taking of possession of the natural and human environment by capitalism, which, developing logically in absolute domination, can and must now remake the totality of space as its own setting. 172 [...] the general movement of isolation, which is the reality of urbanism, must also contain a controlled reintegration of the workers, according

to the plannable necessities of production and consumption. Integration into the system must reintegrate the isolated individuals as isolated individuals together: factories like the houses of culture, vacation villages like the 'big estates', are specially organized for the purposes of this pseudo-collectivity which also accompanies the isolated individual in the family unit" (Debord, 1955/2006, pp. 837-838). Virtual contexts, like real and physical contexts, have shown in recent months an omnipresence of the framework and material delimitations of our intimate spaces, an intimacy that has become collective, and an isolation together, which the history of forms, images and signs can also invite us to deconstruct, to think and appreciate, not without vigilance.

NOTES

1 The potential comparisons are relatively numerous, one also thinks of church labyrinths whose form and modalities of their performativity share certain characteristics of the group of works that we will analyze here.

2 The quadrille is a particularly popular form of dance under Napoleon I, thanks in particular to the creations of Jean-Etienne Despréaux, ballet master who invented many quadrilles, some with more than thirty dancers and sometimes taking the model of the chess game. The scores of these dances are partly preserved at the Bibliothèque-Musée de l'Opéra in the Fonds André Jean Jacques Deshayes and are the subject of a study by Irène Feste. The quadrille was exported to Great Britain and found posterity in the American 'Square Dances', couple dances in squares and lines which also gave rise to a vast iconography and numerous teaching manuals.

3 "The movement is, so to speak, a living architecture, alive with changes in position and cohesion. This architecture created by human movement is made up of paths tracing shapes in space, and we call these shapes *trace forms*" (Laban, 2003, p. 77).

4 On the history of the treaties of fencing, see Anglo, S. (2011). *L'escrime, la danse et l'art de la guerre. Le livre et la représentation du mouvement*. Paris, FR: Bibliothèque nationale de France.

5 Girard Thibault d'Anvers in the Académie de l'Espèe will use this device of geometrical lines on the ground in an even more precise and detailed way. We are then at the dawn of the developments of the analytical geometry of Descartes who would have also written a treatise of fencing now lost.

6 One also thinks of the use of the pavement in the ball scenes painted by Hieronymus Janssens.

7 Henry de Sainct-Didier, Traicté contenant les secrets du premier livre sur l'espée seule, mère de toutes armes, qui sont espée, dague, cappe,

targue, bouclier, rondelle, l'espée à deux mains et les deux espées (Sainct-Didier, 1573).

8 "Ragtime dancing needed to be radically changed in order to become saleable to more than a few consumers at a time. Moreover, for this experiment to work, its entire ethos had to be altered from one that valued individuality to one that insisted upon conformity" (Robinson, 2010, p.).

9 "By the first decade of the twentieth century, the cult of efficiency had moved beyond laboratories and factories to infiltrate American culture at large, and its rhetoric often took on moral and national overtones" (Corwin, 2003, p.).

10 Gilbreth advocates the use of mechanistic science in all aspects of everyday life, as a paradoxical liberation of our gestures by their efficiency: "Men and women everywhere are realising that the remot science is really the near at hand measurement; that life consists of motions and decisions; that satisfaction and interest, as well as efficiency, come from Thinking in terms of elements of motions; that the great waste of the world lies in the unnecessary fatigue; that 'deadening monotony' is eliminated through interest" chapitre Contrast Between Military and Scientific Management. Gilbreth in the chapter Contrast Between Military and Scientific Management, Applied Motion Study. A Collection of Papers on the Efficient Method to Industrial Preparedness (Gilbreth, 1917, pp. 185-186).

11 Gestion des flux dans les gares et Covid-19: Arep dessine une 'signalétique augmentée', Le Journal du Grand Paris, 8 juin 2020.

12 On the uses of the diagram in Renaissance military treatises, see: Hale, J. R. (1988). A humanistic visual aid. The military diagram in the Renaissance, *Renaissance Studies*, 2(2), 280-298. doi :10.1111/j.1477-4658.1988.tb00157.x.

13 The context is also that of the developments of equestrian ballets and their notation by Jacques Callot or Stefano della Bella: figures in which riders and horses have been replaced by abstract dots and circles highlighting the symmetry and perfection of a social body united under the power of a sovereign. On the political significance of the abstract notation of equestrian ballets, see: Papiro, M. (2016). *Choreographie der Herrschaft: Stefano della Bellas Radierungen zu den Reiterfesten am Florentiner Hof 1637-1661*. Paderborn, DE: Wilhelm Fink.

14 On this, see: Chamayou, G. (2015, September 21). Avant-popos sur les sociétés de ciblage. Une brève histoire des corps schématiques. *Jef Klak*. Retrieved Month Day, 2020 from https://www.jefklak.org/avant-propos-sur-les-societes-de-ciblage/.

15 Debord was a great connoisseur of Machiavelli's theories and of those military treatises which also fed his purpose here.

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HERMANN MAERTENS' *DER OPTISCHE-MAASSSTAB* AND THE PHOTOGRAPHY OF ARCHITECTURE

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ESSAY 51/03

HERMANN MAERTENS
OPTICAL SCALE
EARLY PHOTOGRAPHY OF ARCHITECTURE

The work of the German architect Hermann Eduard Maertens (1823-1898), and in particular his research on the *Optische-Maassstab*, results in a scientific, geometric tool, which was largely considered by urban planners and designers in the 20th century, to link the physiology of vision to the visual harmony of architecture. Based on the concept that distancing is an implicit, unaware consequence of beholder's specific visual intents, the Optical Scale proposes a triad of angles, to be measured on the vertical plane, through which analyzing or designing become a function of sight. The authors conjecture that some of the arbitrary features of his tool may be attributed to a specific interest in early results of photography of architecture as, although Maertens apparently ignored it, both his approach and photographs share a direct derivation from the tradition of architectural representation.

INTRODUCTION

The work of the German architect Hermann Eduard Maertens (1823-1898) in the 1870s and 1880s, and in particular his research on the *Optische-Maassstab* [The Optical Scale], is located in an area shared by different artistic and scientific disciplines which were evolving rapidly. Gottfried Semper, in his *Der Stil* (1860-63), has already linked the three dimensions of aesthetic perception –height, width and depth– to the human body, as synonymous with symmetry, proportion and direction, while Robert Vischer is introducing the concept of *Einfühlung* or Empathy in *Über das optische Formgefühl: ein Beitrag zur Ästhetik* (1873). The research on the physiology of the eye by Hermann Helmholtz (1821-1894), already published in the treatise *Handbuch der Physiologischen Optik* (1856-1867), provides fundamental and innovative information on the mechanism of human vision, underlining that the human eye sees in detail only a small fraction of the general visual field, eventually establishing the optical resolution of the pupil or the ability to distinguish an empty space between two signs. Franciscus Donders (1818-1889), inventor, together with Hermann Snellen (1834-1908), of the optotypes that still hang on opticians' walls today, statistically defines the "sharpness of vision" through the relationship between the result of the subject and the average result of the population. The very notion of the limit of the representable that establishes what to draw and what to exclude at the different scales of architectural representation derives from those observations.

Maertens takes possession of these and other approaches and outcomes and undertakes to define a geometric tool through which one can design and produce artifacts and buildings in relationship with the perceptual conditions imposed by the context and, vice versa, one can design and size the space in order to allow the optimal perceptive conditions of a given work or building. In particular, he establishes a triad of visual angles on the vertical plane from the horizon line upwards, which serve to place elements and walls in space

as a function of a vision of the surroundings, of an overall vision or of a detailed vision, according to a scheme that will have success and influence on the theory and practice of 20th century architects and urban planners. The optical and mathematical derivation of these angles as well as their symbolic intention, briefly presented here, seem to have a direct relationship both with the perspective inherited from academic studies, and with architectural photography, which in those years was spreading as an architectural and urban documentation tool. As a first part of an ongoing research, the authors focus here on the influence early photographs may have exerted on the work of Maertens, postponing the study of the influence that Maertens' ideas may have exerted on photographer themselves to a next occasion.

FROM THE CAMERA OBSCURA TO THE CHEMICAL CAMERA

The first system built in the Middle Ages to capture 'images' of visible reality is the *camera obscura*, a box in which a pinhole is made on one of the faces. What is exposed on the outside is projected inside on the opposite face to the one with the hole. If a dark room is used instead of a box, on the wall opposite the hole one can appreciate the 'projection' of the outside world, even if upside down; to remedy this, it is sufficient to insert a mirror, as can be still today experienced in the 19th device in the Rocca S. Vitale, Fontanellato.

Between the mid-14th and the following century, Optics and Perspective developed as two apparently distant fields of study that slowly contributed to perfecting this instrument. While the *camera obscura* was found to be the best model to explain the principles of perspective, eventually the picture determined by the pinhole was defined but not very bright. Therefore, some scholars of optics (Barbaro, 1569) began to place large converging lens (positive) on the small hole, in order to increase the brightness without losing definition in the projection. A century later, the *camera obscura*,

which had become an optical camera, was an aid to anyone involved in the production of pictures, primarily painters. Two types of camera were developed, with either external or internal projection. The former was the prototype of the classic photographic camera, with frosted glass in place of the surface where the image is formed, thus allowing the image in the 'box' to be viewed from the outside. A 45° mirror facilitated viewing from above, with a black cloth to obscure the external light. The image, which appeared straight (top/bottom) but mirrored right/left, could be recorded with ink, pen, transparent paper –generally a sheet of paper made translucent with wax or oil– and patience.

The internal projection camera was instead composed of a structure with an objective placed vertically on the upper face and an external mirror disposed at 45°. In a more functional way than the former type, the projection took place on a horizontal plane, onto which one could place a notebook and 'transcribe' the rectified image. This practice is exampled by the *scaraboti* made by Van Wittel or Canaletto between the end of the 17th century and the beginning of the 18th. Canaletto's 'manual photographs' reveal also that the painter used several lenses depending on the distance of the urban sector he wanted to capture, with horizontal angles ranging from 20° to 30° and therefore with a greater vertical amplitude (from 30° at 45°). Those were objectives that today one would define medium telephoto and normal.

The construction of first optical camera, capable of imprinting the image automatically on a stable support, required to develop and experiment with light-sensitive substances –first the 'bitumen of Judea' and then the 'nitrate of silver'– laid on a rigid surface inside the camera and exposed to the light through the objective. Between 1820s and 1830s, Joseph Nicéphore Niépce and Louis Daguerre pioneered this form of automatic image recording. But the fundamental concept that generated the impetus for the great development of chemical photography was the technique of the negative and the consequent printing, which implied also the

idea of an unlimited reproducibility. William Henry Fox Talbot fulfilled this goal together with his friend John Hershel, thus defining the procedure of the calotype, which can be appreciated in *The Pencil of Nature*, an illustrated book with real prints glued one by one (Talbot, 1844-1846).

In the 1870s, when Maertens began publishing his studies, photography was already a popular technique that was fully integrated into the mass market. It was still used by painters as a support to their work but was acquiring the dignity of a tool capable of documenting reality, and architecture, in an apparently objective way. The most common cameras were the comfortable and transportable folding cameras, with different sizes and able to perform one image at a time on a glass plate (and, shortly thereafter, also on film). Thanks to the ease of use and flexibility of these devices, until the following century there was no need to expand the range of objectives, even if the technologies allowed to increase the focal length especially towards telephoto lenses, which are easier to build and without drops in quality compared to normal optics. Wide-angle lenses, on the other hand, involved difficult optical schemes that always involved problems of distortion and aberration of the image at the edges.

MAERTENS' *DER OPTISCHE-MAASSSTAB*

In 1877, Maertens published the first edition of *Der Optische-Maassstab or Die Theorie und Praxis des ästhetischen Sehens in den bildenden in the Auf Grund der Lehre der physiologischen Optik*. The book, whose cover shows a curious section-diagram with three men looking at a monument (Figure 1), is addressed to a wide range of professionals: "Architekten, Maler, Bildhauer, Musterzeichner, Modelleure, Stukkateure, Möbelfabrikanten, Landschaftsgärtner und Kunstfreunde" (Maertens, 1877, frontispiece). Indeed, his work had a great influence in the following decades, especially on German town planners, such as Josef Stübben (1893), Albert Erich

Fig. 1 Hermann Maertens, *Der Optische-Maassstab*, Cover of the second edition (Maertens, 1884).

Brinckmann (1914), and Werner Hegemann (Hegemann & Peets, 1922), who had the merit of exporting these ideas to America. In general, he contributed to forming the discipline of 'Visual Planning' (Cepl, 2012). Architects, on the other hand, were educated to Maertens' ideas in an almost subliminal, unconscious way, thanks to the famous Ernst Neufert's *Bau-entwurfslehre*, which, from 1936 onwards, redesigned and re-assembled his most efficient diagrams in the pages dedicated to visual perception.

The book presents an elaborated system of optical proportions as an attempt to provide artists, architects and graphic designers with a scientific, deterministic tool and even to translate the secret formal relationships of archi-

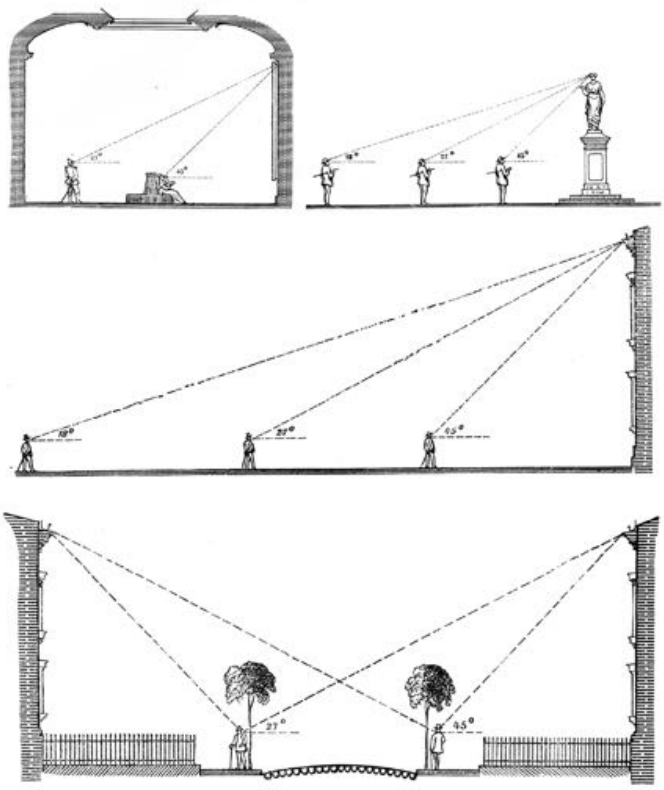

Fig. 2 Hermann Maertens, *Der Optische-Maassstab,* Maertens' diagram of triad of angles. The 18, 27, and 45 degrees visual angles in the contemplation of pictures in a gallery, of a monument in a garden, of the facade of a building, and in designing a street section (Maertens, 1884).

tectural spaces into easy geometric ratios (Colonnese, 2017; Carpiceci & Colonnese, 2017, 2018). Starting from the eye resolution, Maertens individuated some readability parameters –the body should be 1/3450 of the widest distance of reading (Maertens, 1884, p. 4)– which could be used to size correctly both the letters onto a street sign or page of a book, and triglyphs or dentils on the top of a cathedral. Then he explained that the act of distancing from a building or an artwork is strictly connected to the kind of vision pursued by the beholder. Finally, he formalized such a formula in a triad of visual angles that set distances and thresholds for three different ways of contemplating architecture (Figure 2). When seen under an 18° wide angle of field, a building appears to be part of the surrounding context around it as a whole image; under a visual angle of 27°, it appears in its integrity and completeness; under an angle of 45° or more, details conquer

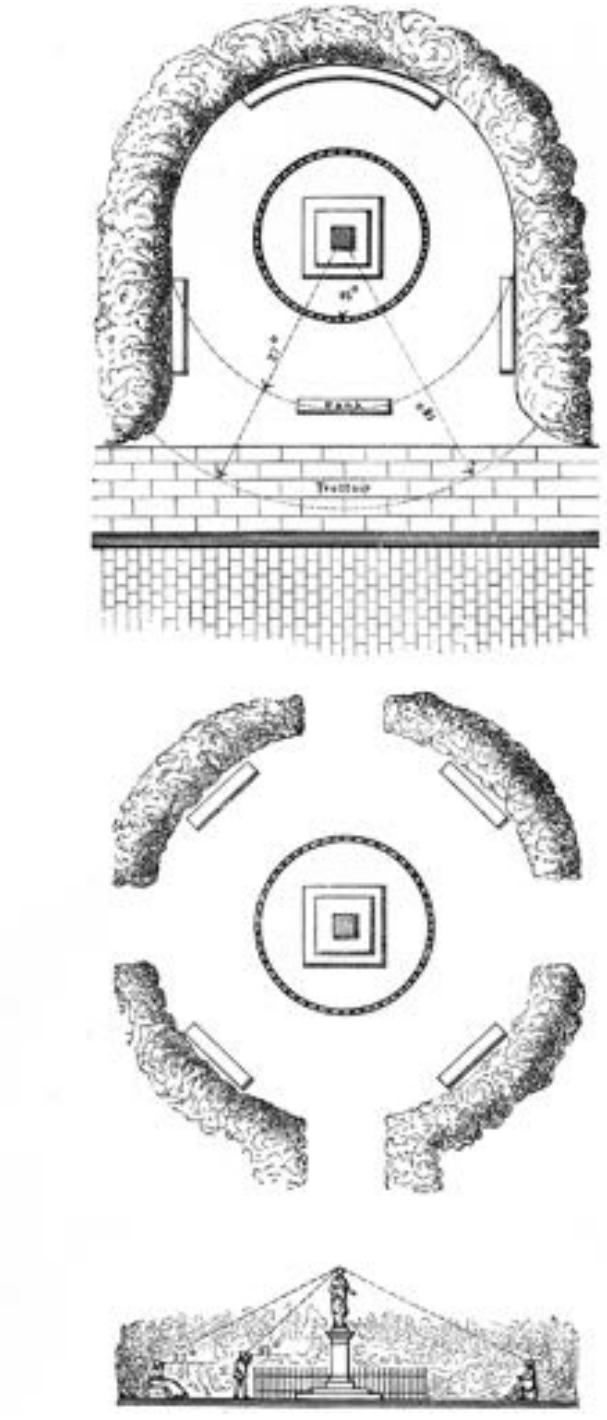

Fig. 3 Hermann Maertens, *Der Optische-Maassstab,* Maertens' design of a garden around a monument through the application of 18, 27 and 45 degrees visual angles (Maertens, 1884).

most of the observer's attention. In this way, the 'correct' vision can be turned into a designing tool to size squares, streets, halls, rooms and even commercial signs.

By way of explanation, Maertens applied this formula to design a small garden and define the different areas starting from a monument placed upon a plinth in the center (Figure 3). The location of the protective fence of the monument is established by the distance corresponding to a vertical visual angle of 45°; the position of the crown of surrounding flower beds is established by the distance corresponding to a vertical visual angle of 27°; the position of the perimeter path is finally established by the distance corresponding to a vertical viewing angle of 18°. In this way, he demonstrates how to apply his Optical Scale to design public space providing people the opportunity to see the monument in contextualized vision from the path, in a general vision from the flower beds and in a vision of detail from the fence around it.

Parallel to this kind of applications to different design fields, he proposed very accurate investigations on ancient and Renaissance monuments and squares, with tables full of numeric data attached at the end of the volume. As a descendant of the Renaissance perspective tradition, he was questioning about the actual impact of proportional rules onto the visual effect. In this way, Maertens moves simultaneously on both the level of historical studies, providing art historians with a scientific tool for an aesthetic judgment, and on that of design and urban planning, providing designers with a tool for dimensioning spaces and buildings according to human visual performance.

Maertens' triad of angles arises from the fundamental ratios of 1:3, 1:2 and 1:1, but the choice to approximate the first two angular results at 18 and 27 degrees is an arbitrarily pondered choice. 45 is the sum of 18 and 27 and the three numbers are in a ratio of 2:3:5 to each other, having 9 as a common denominator. The choice of these specific numbers seems aimed at presenting a formula both of universal value and easy to remember. There is also a fourth ratio, equal to 1:6 or

72°, which marks the threshold of the panoramic vision but is almost never used.

In addition to these small approximations, which can be defined as 'poetic licenses', there are also choices that appear arbitrary and that deserve a further study. First, Maertens almost ignored the width of the buildings –or their extension on the horizontal plane –to focus exclusively on their height; secondly, he considered the ideal visual framework as invariably vertical and the optical axis as horizontal, assuming the ground under the feet is always horizontal and the gaze remains constant; finally, he neglected the opening of the visual field below the horizon, as if it were a variable that cannot affect the final outcome of the application of his optical scale. Photography can help us understand partially these choices.

CONSIDERATIONS

Since the beginning, the early photographers have oriented their primitive cameras towards landscape and architecture. Being inert subjects, these were compatible both with the light conditions necessary to impress the plates, and with the times of the long exposures the cameras required. Fox Talbot himself, already in the summer of 1835, had dedicated himself to picturing his house in the countryside with different light conditions and was the author of splendid photographs of monumental buildings already in the early 40s.

The early photographers, who have in their hands a new tool with which to represent the world, first of all confronted themselves with the existing images, trying to reproduce the results of the artists. While the first architectural subjects were chosen above all on the basis of their accessibility, lighting and the possibility of framing them in the visual field of the machine, the visual models adopted are above all those made available by the visual arts, such as drawings, engravings or paintings (Ackerman, 2001). In this sense, the image of buildings remains rigorously vertical for years, as

suggested by the practice of orthogonal projections and perspective views in design and commercial representations. In the work of the Frenchman Henri Le Secq (1818-1882), active as early as 1848, one can appreciate the closeness between his photographic images and the canonical perspective representation with a vertical picture-plane, almost exclusively central and rarely accidental. Furthermore, such images exhibit the real proportions between the parts and can be easily interrogated to obtain metric data. By the half of 19th century, this type of photography appears suitable for the first documentation of the monumental heritage, a task to which Le Secq and dozens of other photographers are called in countries such as France and England. In this initial comparison with the canons of architectural design (De Rosa, Sgrosso, & Giordano, 2001), photographers often look for elevated points of view in the surrounding buildings in order to preserve the optical axis horizontal.

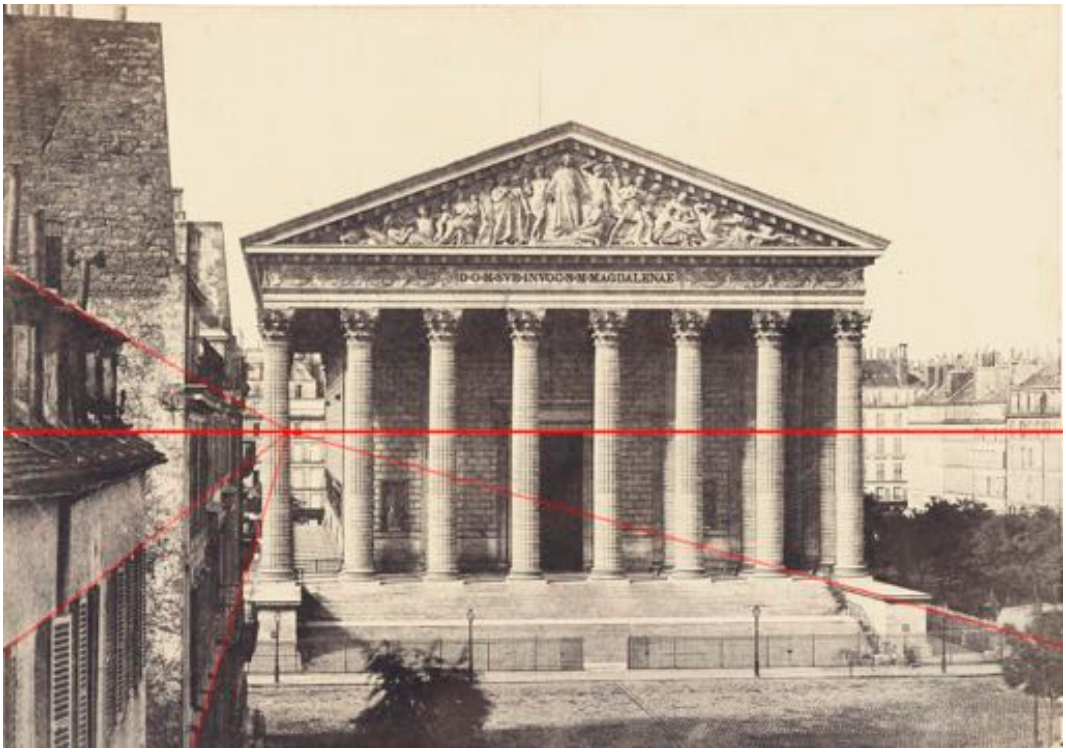

Fig. 4 Henri Le Secq, Louis Désiré Blanquart-Evrard, Church of the Madeleine, 1851-1853. The Getty Center, 38422 (Public domain). The horizon line demonstrates Le Secq was at a window on the third floor trying to keep the objective as parallel as possible to façade (graphic elaboration by F. Colonnese, 2020).

This approach, testified for example by Le Secq's photo of La Madeleine, Paris (Figure 4), responds to the needs not only of the lens and framing but also to the opportunity to avoid obstacles or disturbing elements at the ground floor and to present a clean, intelligible facade, such as those produced by the draftsmen or delineators (who, however, only need a stroke of the rubber to solve the problem). By raising the point of view, photographers are also able to make the most of the camera's field of view, solving a problem that appears evident in a picture of Piazza del Popolo in Rome shot in the late 1860s (Figure 5). Assuming that the anonymous Italian photographer was using a normal objective, with a 47° wide field-of-view, the camera was probably placed under the porch of the church of the S. Maria dei Miracoli, five steps above the level of the square. The axis was slightly inclined (about 2°) to catch the top of the obelisk. The photographer had to go far away to frame the gateway with the buildings on both sides. He sacrificed the entire lower half of the image (about 20° of the whole field), occupied by the pavement of the square and compressed the architecture only in the upper half (about 27°, one of the angles suggested by Maertens), most of buildings covered only by a 12° wide angle. Conversely, by raising the point of view or by cutting the lower part of the photograph, the image would be rebalanced and focused on the architectural subject.

Fig. 5 Italian Anonymous Photographer, Piazza del Popolo, late 1860s (Public domain). On the left, the field-of-view of a supposed normal objective placed on the horizon line with the angles dedicated to the sections of the picture (graphic elaboration by F. Colonnese, 2020).

This problem seems strongly felt by Maertens, who constrains his vertical angles of 45°, 27° and 18° to the horizontal axis. First of all, one can deduce that the horizontal angle of view, which is physiologically wider, is less interesting because it is the vertical one that conditions the beholder's distance from the architectural subject. Added to this, one can deduce that the other half-angle not explicitly marked would be the other part of the visual field which, however, would include mostly the ground. Therefore, if one was to measure the complete angular amplitude of the three positions reported by Maertens, would have the corresponding angles of 90°, 54° and 36°. The angle corresponding to the 'normal' focal length is supposed to be identified in a size equal to the diagonal of the frame, that is the angular amplitude sufficient to 'cover' the entire sensitive surface (Carpiceci & Terrana, 2005; Carpiceci, 2012 pp. 56-60). This size is about 53°, corresponding to an area of the retina in which a beholder tends to place a target to be observed in its entirety. In practice, normal objectives are defined by an angle between 47° and 63°. For smaller angles, one has telephoto lenses, which allow to analyze an increasingly restricted part of the subject. The larger angles, typical of wide-angle lenses, instead broaden the immersive effect by embracing the context. Thus, somehow, the very formulation of the Optical Scale in three viewing angles suggests a direct parallel with the normal, telescopic and wide-angle vision induced by photography.

DISCUSSION

Hermann Maertens' *Optische-Maassstab* constitutes one of the first scientific-based tools capable of linking human visual perception and the geometric characteristics of space and, consequently, to analyse human behaviour, in particular the instinctive distancing and aesthetic judgment in an innovative way. Maertens was persuaded that the first impression

of a work determines its aesthetic judgment and that this is the result of a basically fixed gaze, in which the role of normal or direct vision, which is extremely limited compared to the general visual field, is fundamental. In particular, he was seeking for a formula able to link the physiology of vision to the visual harmony and beauty of architecture and the choice of a simple triad of angles, addressed to both historians and designers, is the main reason of his long-lasting success.

The concepts expressed in his book stigmatize concepts of visual perception taken from Optics and Perspective but certainly does not ignore the results of the growing practice of Photography. Although Maertens apparently neglected the potential role of photography in proportioning and documenting urban spaces, both his approach and photography imply an observer standing still, are unable to describe the growing movement taking place in the cities and take into no account the role of colors. More analogies emerge when observing the early results of photography of architecture as well as the technology of early cameras and relating them with the geometric features of Maertens' Optical Scale.

The iconographic, geometric and perceptive observations here presented about the early photographs suggest that Maertens was at least stimulated by the observation of architectural photographs taken with points of view at different heights and different angles of view, which gave different sensations to the beholder precisely because the (architectural) subject possessed those perspective characteristics that allowed it to relocate space in a certain dimension. In particular, the choices of photographers, especially those engaged in a 'documentary' activity, to follow certain canons of architectural drawing, seem to encourage some of the arbitrary choices made in the formulation of his Optical Scale, such as the optical axis kept horizontal, a frontal relationship with the building, and the determining vertical angle starting upon the horizon plane. Somehow, in a sort of didactical approach, he seems intended to preserve the conditions that guarantee a result that can be comparable to traditional central perspective view, the architectural subject filling the whole sheet.

CONCLUSION

Photography, and its diffusion and application to architectural and urban subjects, offered artists and scientists the opportunity for a general reflection on human vision, which promoted the Impressionism as well as the Optical Scale. In this sense, centuries after the construction of the early *camera obscura*, the vision of photographers moving their cameras and tripods to find the best point of view to frame a gorgeous façade worked as a disruptive catalyst capable of suggesting the idea the human eye works as a machine and has a fundamental role in assuming positions and distances. In this sense, Maertens proposed a key to remediate the visual experience of famous buildings and squares according to vantage points and distances induced by his Optical Scale as well as to consider every single distance in an exclusive, optical key.

Today, the experience of moving, distancing and remediating the urban image while looking for a proficient framing is a daily –even hazardous, sometimes– experience shared by billions of people equipped with digital cameras and smart-phones. When somebody's life is reduced to a sequence of selfies to post on a social network as soon as possible, the urban space may be considered as just a collection of vantage points for photogenic pictures. Besides the excesses of the medialization and virtualization, this practice, which is increasingly felt as an inviolable expression of freedom, clatters against not only the intrinsic limits of objectives and physical obstacles but also cultural habits, as evidenced by Edward T. Hall's (1966) studies on proxemics, and behavioral rules, like privacy, private property or the social distancing currently needed to prevent the diffusion of Covid-19 plague. Thus, like the early photographers, bound to the mechanical limitations of their primitive cameras, today we happen to move along the lines of an invisible network of allowed positions, continually remediating distances we were accustomed to but unable to find the right distance to remediate our present in a single, clear picture.

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REUNITED?
ON THE AESTHETICS AND RHETORIC OF MEETING THE DEAD THROUGH VIRTUAL REALITY

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DEATH
DISTANCE
VIRTUAL REALITY
NON-MEDIATENESS
UNFRAMEDNESS

Even though death creates irremediable distance between the living and the departed, human beings have been struggling since ages to bring the absent once again present through any form of available media. In all of the multifarious attempts at making the dead seem as if alive, a distance of the living from the departed was nevertheless retained in that the deceased was not really present, but only 'presentified' through a clearly perceivable medium. Yet nowadays, virtual reality promises to finally bridge the gap and make the living cross the border of the afterworld. By focusing on the paradigmatic case study of a South Korean mother who in February 2020 'met' her dead daughter through a VR simulation, this essay takes into account both the visual and the linguistic strategies used to convey the idea of a direct, non-mediated 'encounter' or 'reunion' between the two. The overall objective of the article is to show that in immersive virtual environments, despite all rhetoric, the dialectic between proximity and distance which is common to the traditional notions of both the dead and the image is not only still present, but also greater than ever before.

Not only can death be conceived of as the creator of distance par excellence, but it also brings about a very specific form of distance: the irremediable distance between the living and the departed. Yet notwithstanding the fact that "there is a remedy for all things except death", as a saying dating back to mid 15th century goes, human beings have always been struggling to counteract this most unsolvable of problems by bringing the absent once again present via every kind of available media. Indeed, 'mediology' itself (a term coined by Régis Debray to describe a scientific discipline of its own) has been put since the outset under the aegis of death, according to the thesis that *homo pictor* was only born when the disappearing of the first medium –namely, the living body– started being 'remediated' through ever-changing forms of technical and technological apparatuses (Debray, 1991). In this sense, image-making *tout court* would arise from the demand for a medium to re-establish the presence of the deceased and thus bridge the seemingly unbridgeable caesura established by death.

It is not by chance that one of the first and most famous foundational myths concerning the origin of art (Pliny the Elder, 1st century A.D./1938, XXXV, 151) claims that painting had been invented by a Corinthian girl who traced the outline of her lover's shadow on the wall before he left on a long journey (and as is well known, "leaving is a bit like dying"). Upon seeing this, her father Butades filled in the outline by compressing clay upon the surface, and so made a face in relief, which he eventually hardened by fire; and this is how plastic arts in general came about. Much like the lover's outline, the visual arts were generated by the desire to give a body to the incorporeal and so close the distance between the visible and what is not visible (anymore). The myth thus assigned a peculiar function to the image: far from being aimed at merely a more or less faithful replica of the human semblance, it is meant "to fill the emptiness left behind by someone who is no longer there, serving as an actual substitute for that absent person" (Bettini, 1999, p. 40).

Besides mythological narratives, archaeological evidence as well as material culture studies also bear witness to the intrinsic, cross-cultural link of picture-making with death (or, more precisely, with the dead) and to the strongly substitutive function of the image. From the well-known plastered skulls of Jericho to the many different practices of mummification and taxidermy, from Fayum mummy portraits to the death masks of the famous and the infamous, from post-mortem photography to the most recent uses of social networks to achieve what has been labelled 'digital immortality', countless attempts have been made to fulfil the dream of making the dead seem (almost) alive. Nevertheless, in all of the just-mentioned cases –including those where the function of the images as stand-ins for the absent bodies relies on hyper-mimetic resemblance to the physical traits of the dead persons– the distance between the living and the departed is retained, for the deceased are not actually present, but rather 'made present' or 'presentified' (Fink, 1930) through a medium. They are at the very same time present and absent, present while absent, ambiguously close and yet so far away. It is as if they were there, but only 'as if', for their presence is just a mediated presence –namely, a presence provided by means of specific media.

From this perspective, the founder of historical anthropology of images Jean-Pierre Vernant, while repeatedly calling attention to the crucial role played by the experience of death in the genesis of image-production and to the essentially human act of seeking to extend life through (mostly visual) representations, explicitly laid stress on the "distance and immeasurable difference" between the sacred agency of the dead and its visible manifestation. In its operative and effective function, the *eidolon* of the departed is aimed "to establish real contact with the beyond and to bring about its presence in this earthly world. Yet in the very attempt to do this it emphasises all the elements of the inaccessible, the mysterious, and the fundamentally foreign that the world beyond death holds for the living" (Vernant, 2006, p. 332; see also Vernant, 1990).

This tension found at the very heart of image production and consumption between proximity and distance, between similarity and otherness, is shared by the corpse, which, not coincidentally, has been interpreted by prominent visual culture scholars and techno-aesthetics theorists such as Thomas Macho (1987), Hans Belting (2011) and Christoph Wulf (1997) as the very first image, given that it possesses all the elements of the living body, except "that ungraspable 'something'" (Agamben,1999, p. 42) that makes it a living being. Death lurks under the mask of life exactly like absence manifests itself in the disguise of presence.

The paradoxical aspiration of the image of the dead to inscribe absence in presence and to take the place of the body in order that communication with the living might resume is an idea probably as old as death, and it has continued to thrive over the centuries in a myriad of myths, stories, novels, theatrical pieces, movies and television series. However, a formidable and seemingly insurmountable obstacle has remained to actually re-uniting the living with the departed: the interposition of a clearly perceivable medium, which makes the reunion appear as a necessarily mediated, and hence non-direct, experience. Adding movement –a key feature of living beings– to previously motionless images was made possible by the invention of cinema, but this did not solve the issue, on the contrary: "Howsoever many single frames the film used to produce its illusion of life, it never accomplished its goal of freeing the image from the frame and allowing it to break out into life" (Belting, 2011, 122).

Yet nowadays the medium of virtual reality promises to eventually close the gap by allowing the living to cross the threshold of the afterworld. Plunging the user into an immersive environment in which the traditional separation of the real world from the image world seems to vanish, virtual reality challenges the endless dialectic between proximity and distance that is common to both the dead and the image, since it elicits in the perceiver a strong feeling of being incorporated into alternative realities characterised by

almost the same 'immediateness', 'presentness', and 'frame-lessness' heretofore regarded as the exclusive prerogative of flesh-bound reality (Pinotti, 2017; Conte, 2020).

As unsettling as it may appear, meeting the dead is becoming less and less a matter of just fantasy and dystopian sci-fi narratives. Innovative start-ups, young tech enterprises, and an entire cottage industry are already attracting the attention of big companies by developing cutting-edge technologies to remain somehow connected to a late loved one. The most popular tactic appears to be collecting all existing data of the person –pictures, video, audio– and then using machine-learning algorithms to construct a digital simulacrum endowed with a virtual reality 'self' which can live on forever. A recent event can be used as a suitable case in point to provide a glimpse into the state-of-the-art of technology (as well as into its current limitations).

On 6 February 2020, Korean television show *Meeting You* aired a segment about the tearful 'reunion' between a mother, Jang Ji-sung, and a virtual recreation of her daughter Nayeon, who passed away at the age of seven in 2016. The documentary production team spent more than eight months crafting a faithful model of the child. The digital avatar was generated using real photographs of Nayeon and paying particular attention to recreating her voice. In order to achieve maximum simulation accuracy and enrich the movements with believable expressions of emotions, an actor was recruited for motion capture. An elaborate park scene –Nayeon's favourite playground until she died– was added as the backdrop of the 'meeting'.

At the beginning of the documentary, Jang Ji-sung is shown wearing a virtual reality headset and specially designed touch-sensitive gloves which give her a sense of touch. Shortly after the experience started, an illuminated white butterfly appears fluttering close by Ms Jang, preparing her for the advent of Nayeon. Racked with emotion, the mother bursts into tears as soon as her 'daughter' emerges from behind piles of wood asking: "Mum, where have you

been? Did you think about me?". When Nayeon says she missed her mom, Ms Jang replies "I missed you too". Then the video shows the two picking flowers together, taking pictures, and celebrating Nayeon's birthday, the mother sitting on a virtual bench overlaid onto a physical bench in what is called a mixed- or cross-reality environment. After making a few wishes (namely, that dad would stop smoking and mom would not cry anymore), the virtual child asks Jang Ji-sung to stay with her beside the bed, until towards the end of the simulation she falls asleep, turns back into a shining butterfly and floats away.

A nine-minute clip of the documentary clocked up more than 13 million views in a week on YouTube, bringing an outpouring of emotional reactions and sparking fierce debate about the appropriateness of taking advantage of virtual reality to deal with such an unbearable and private thing like the loss of a child. Whilst some argued that the experience was designed to help people cope with the grief of death and to give relatives the chance to say goodbye to a virtual version of their lost family member, thus opening new possibilities for treating chronic depression resulting from a crisis event of sudden bereavement, others claimed that the show amounted to mere exploitation of both individual pain and social voyeurism, and that it did not foster, but rather complicated or even impeded the closure portion of the mourning process.

Besides these often mentioned but overall downplayed ethical issues, what is most striking about the whole thing is how the virtual reality experience has been described in terms of a long-dreamed dream that finally came true. The analysis of the terminology used in newspapers, specialised magazines, websites and blogs shows that a few terms recur over and over again: the Korean mother would have once more 'seen', 'met', or 'visited' her daughter, and thanks to virtual reality the two would have been 'reunited', if only for a while.

On closer inspection, however, these verbs turn out to be misleading, especially when they are not put in inverted commas so as to highlight their merely metaphorical signifi-

cance; for, to be sure, the power of immersive hardware did not make the grieving mother's dream a reality. For evidence, one need only look at how the lack of genuine eye movement imparts an artificial, lifeless, and therefore uncanny appearance to the little girl's avatar, which, moreover, could not honestly react to the mother's grief or answer any of her questions. Even if recordings of the deceased daughter's voice were used, still it was not the child speaking into the headset, nor it was someone else who could actually interact in real time with Ms Jang (as happens, for instance, in the case of so-called avatar therapy, where it is the psychiatrist who lends her voice to the avatar while also speaking as herself).

Furthermore, genuine interaction between the mother and the virtual replica of her daughter was hindered, if not fully inhibited, by the technical constraints peculiar to all the existing versions of haptic gloves. In spite of the rapid intensification of development efforts in this technology, processing instructions for outputting a plausible haptic signal to the device still proves to be among the most challenging issues in the agenda for augmented, virtual, and cross reality. At one point in the video, Jang Ji-sung looks visibly distressed as she can see the illusion of her 'daughter' but cannot touch or hug her. Stretching out both of her gloved hands, she grasps desperately toward, around, and through the space where the child appears to stand before her; but it simply does not work (Figure 1).

Fig. 1 Image from the MBC documentary *Meeting You* (2020).

She reaches out and tries to stroke her hair, again and again, but in vain. "I want to hug you", "I want to touch you, just once" she insists, but to no avail.

Then the computer-generated daughter asks Ms Jang to put herself in a specific position, so as to give her the impression of them really joining their hands (Figure 2). "You like holding my hand, right?" asks Nayeon's avatar, to which the mother cannot help but resignedly answer: "I would like to".

Fig. 2 Image from the MBC documentary *Meeting You* (2020).

All of these limitations make more than clear that the developers of *Meeting You* focused primarily, if not solely, on achieving visual and sonic realism, without taking enough into account the fundamental role of interaction in enhancing virtual embodiment and the user's sense of presence (Welch et al., 1996; Cummings & Bailenson, 2015; Sanz et al., 2016). Much to her chagrin, and despite the positive feedback she gave regarding the whole experience, Jang Ji-sung had to face the inconvenient truth that all during the meeting with her 'daughter', chatting was not really chatting, touching was not really touching, and even seeing was not really seeing.

Last but most importantly, these considerations do not apply only to the particular experience of *Meeting You*, but to virtual reality in general. The concurrence of, or oscillation between, proximity and distance, immersion and emersion,

which has been found out to be so characteristic of the 'reunion' between Jang Ji-sung and the digitised version of her daughter, proves to be much more a feature essential to the medium of virtual reality than a just temporary obstacle to be overcome in the future. Now, this is precisely what so many narratives about immersive virtual environments aim to conceal. "Magical thinking" (Murray, 2020) has spread rapidly from popular to academic discourses according to which virtual reality would be a technology that will someday completely override the sensorium, thus producing experiences indistinguishable from physical reality. The whole arsenal of rhetorical topoi that has been used to overemphasise the immersive quality of *Meeting You* is often also exploited to celebrate the alleged ability of the new medium not to simply 'reduce' the distance between the world of the image and the real world, but to 'erase' it. Virtual reality is enthusiastically hailed as being capable of overcoming the technical constraints of older media such as photography, television and cinema by providing fully transparent, non-mediated experiences. More specifically, the traditional framing devices that keep the image separated from reality in the flesh would be gone, and an all-encompassing experience would be achieved. The rhetoric of absolute presence, non-mediateness, and unframedness is recognisable not only in science-fiction novels, dystopian movies and TV series but also in scientific literature, where theories are becoming increasingly popular which claim that virtual reality makes it possible for the experiencers to step beyond the frame and be freed from the traditional limits (and limitations) of the image world.

The critical process of unveiling the rhetorical nature of this discourse has already begun (Kubiński, 2014; Zucconi, 2018, pp. 149-181; D'Aloia, 2018; Dalmasso, 2019; Conte, 2020). To debunk the metaphysics of presence and complete annihilation of distance is to recognise virtual reality not as a magical tool capable of placing the experiencer right in the midst of the events, but rather as "a medium of representation that the brain will process in its appropriate cultural context, just

as it has learned to process speech, writing, photography, or moving images, without losing its grip on what is commonly accepted as reality" (Murray, 2020). Stepping into immersive digital environments does not imply transcending the distance of the image-world from actual reality, no matter how more and more blurred the threshold between the two domains may be. The peculiar dialectic of transparency and opacity, non-mediateness and hyper-mediateness, should be regarded not as a weakness but as the hallmark of virtual reality experiences, as well as what makes them so enthralling. After all, Jang Ji-sung did not mistake the digital avatar for her real daughter, not even for a moment; but this did not prevent her from sobbing and weeping. Thus, if on the one side electronic images "rob us of more than the analogy with the body", since "they also exchange the mortal body for the invulnerable body of simulation, which conveys immortality upon us", on the other side one should be reminded that this immortality "is only a new fiction with which we conceal death" (Belting 2011, p. 122). At the end of the experience, while saying goodbye to (the virtual replica of) her daughter, Ms Jang's words unintentionally bore witness to the unbridgeable gap which continued to keep her essentially, immeasurably away from the child: "No matter where you are, I will look for you Nayeon. I still have things to do… But when I'm done, I will be with you. Then we will be fine together". "Then" –but only "then"– every distance between the living and the dead would be actually crossed.

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REMEDIATING THE DISTANCE FROM THE DIVINE: AN ARCHAEOLOGICAL ESSAY

DOCTORED PHOTOGRAPHS– EXHIBITION DEVICES– CINEMATOGRAPHIC EFFECT

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ESSAY 53/03

NINETEENTH-CENTURY
RELIGIOUS BELIEFS
SPECTATORS
MEDIA ARCHAEOLOGY
EARLY-CINEMA

Catholicism has always maintained a deep, even ontological, relationship with images and their mediations on account and by virtue of its particular interpretation of the dogma of the Incarnation. And yet, in the second half of nineteenth century –especially 'after Lourdes', that is, after the mediatic and popular fortune of the supernatural apparitions to Bernadette Soubirous– the Christian 'scopic' drive spread and grew stronger in France, being redefined in new 'spectacular' modalities and forms. These aimed to bring the divine closer to the spectator's physical and subjective experience, in accordance with the broadest process of subjectivation undergone at this time by the experience of seeing –the 'gaze'– in its whole. My paper will focus, from an archaeological perspective, on three case studies within this remediation turning point: the attempts to photograph a Marian apparition in the small, peripheral village of Tilly-sur-Seulles between 1896 and 1897; the *trompe-l'œil* devices employed by the artist Munkácsy and the gallerist-art dealer Sedelmeyer for the exhibition of life-sized Christological paintings during the 1880s and 1890s that engendered empathic 'spectatorial' reactions; and the emergence of the cinematographic apparatus –and of its phenomenological "train effect"– in conjunction with religious imaginaries, persons, uses and places.

INTRODUCTION

On account of its particular interpretation of the doctrine of Incarnation –and by virtue of it– Catholicism has always maintained a deep, even ontological, relationship with images and their mediations (Didi-Huberman & Repensek, 1984; Freedberg, 1989; Menozzi, 1995). Starting as early as the Baroque times, the use of architectures as vast scenic apparati, along with a new conception of the frame and of the pictorial form itself (Careri, 2017; Stoichita, 1995), led to a fundamental reconfiguration in this relationship; a 'modulation' –and specifically a 'reduction'– in the perceptual, and thus mental, distance from the divine.

However, from the second half of the nineteenth century onwards, this Christian 'haptic-scopic drive' (Pinotti, 2005) underwent considerable growth and reinforcement and was redefined in new, purely spectacular modalities, with the advent of new technologies and of popular culture's mass-produced forms.

Here, we will discuss three of these modalities, which we deem particularly significant. Of course, many other cases exist and could be integrated in our 'Christian-media archaeological' analysis –stereoscopic pictures, panorama and diorama shows, magic lantern projections, and so on: all sorts of 'optical devices' (or "*machines à voir*", to employ a well-suited polysemic definition by Gleizes & Reynaud, 2017). We could basically have integrated all of the devices upon which Jonathan Crary (1991) built his seminal argument describing a phenomenological change of the spectatorial paradigm, away from the *camera obscura* model, throughout the nineteenth century: the argument of the bodily subjectivation of the observer's act and moment, that is, of the experience of seeing –the 'gaze'– as a whole. We recognize that the specific forms we have chosen to study cooperate and coexist in such a technological and mediatic ecosystem, and that they manifest some fundamental aspect of it.

From a theoretical point of view, their mediatechnic difference could be understood and conceived of according to a

"gradient model" –as Andrea Pinotti (2017) proposes to do in his 'an-iconological' project– and this model does, in fact, inform the order in which we will present them, "on a scale from a minimum to a maximum" (p. 4) immersive power on the viewer. However, their contemporaneity or quasi-contemporaneity tells us that, historically, they do indeed co-participate in a complex way in the "*dense maillage intermedial*" [dense intermedial network] of the *fin-de-siècle*'s social, cultural and visual Western context (Gaudreault, 2008, p. 113). In this respect, they constitute an "*allure inédite*" [unprecedented appearance] which reveals a "*régime singulier de l'image*" [a peculiar regimen of the image], as Michel Poivert points out (2014, p. 215).

By interpreting a modern scopic desire (or need?) and taking advantage of the Catholic Church's particularly tolerant attitude towards them at that time, these forms remediated the distance between the spectator and the divine, bringing it closer to their subjective psychological and physical experience. Whether they did so for entirely playful or serious reasons is not really the issue, as they have constantly oscillated –in their uses and in their extremely various reception modes, if not in their creators' primary intentions– between the regimens of the spectacular and that of the 'devotional', between their 'public' manifestations and their 'private', intimate appropriations. More importantly, they all produce an "*effondrement et refondation*" [collapse and refounding] of the 'symbolic' in the 'indexical' (Rykner, 2013, p. 11), thus adding a phenomenological layer to the psycho-perceptive mechanism of 'belief' in the image's 'reality' (i.e. in its 'realism') and making it dual instead of strictly religious.

A DOCTORED PHOTOGRAPH OF A MARIAN APPARITION – TILLY-SUR-SEULLES (NORTH-WESTERN FRANCE), 1896

In early 1896, using a technique that was widespread at that time, especially but not exclusively in the field of Spirit photography (Chéroux et al., 2005), Caen-based

photographer and postcards publisher Jules Bréchet, a specialist in "views and instant group portraits", superimposed the image of a small plaster statue of the Virgin Mary surrounded by cotton wool and muslin to form a cloud, onto a photograph, taken from a certain distance, of a field with a tree, crowded with pilgrims and onlookers (Figure 1).

This picture would be published –along with three more documentary ones– in the May 16 1896 weekly issue of *Le Monde illustré*'s report on the supernatural events that had been occurring in the small and picturesque French village of Tilly-sur-Seulles in Calvados, halfway between Bayeux and Caen, since March of that year (A.B., 1896, p. 344). Mary had allegedly appeared –it should be mentioned in passing that authorities in the Vatican never recognized these apparitions– to about sixty young schoolgirls and their teachers, initially, then to some nuns, and later to many other viewers of all ages, genders, and social classes and backgrounds (among whom were two young working-class girls, Louise Polinière and Marie Martel, who would soon emerge and compete for the role of "official seer of Tilly") (Bertin, 2010; Chiron, 1995; L'Espinasse-Langeac, 1901). It is also known that other similar images were circulating at the same time in that region. Photographer Jules Leprunier, for example, seems to have done something similar, judging by the engraved likeness of his (lost) photographs that Parisian radical right-wing journalist Gaston Méry used to illustrate his short essay on the apparitions of Tilly (Méry, 1896, p. 225) (Figure 2).

Fig. 1 Jules Bréchet, *The apparition of the Virgin*, 1896. From *Le Monde Illustré* (1896, May 16), p. 344.

This kind of (presumed) supernatural-Christian event was in no way exceptional or rare. Throughout the nineteenth century, and especially since the rue du Bac apparition of 1830, Marian epiphanies spread in the whole Catholic world (and particularly in France). They grew so frequent and so broad in their scale, met such success in the media and were so popular that the historian of Christianity Claude Langlois has proposed to dub the entire nineteenth century the "siècle des apparitions mariales" (1991, p. 295). Their relevance mostly pertains to the fact that they profoundly changed the

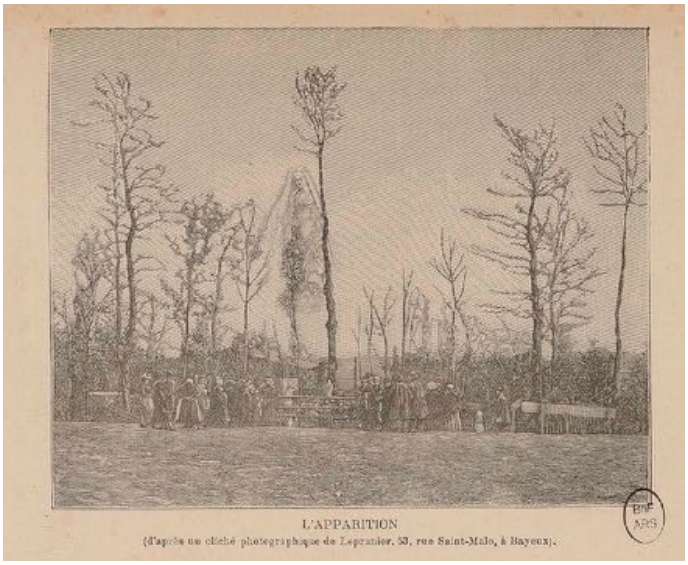

Fig. 2 *The apparition* (engraving from a photograph of Jules Leprunier), 1896. From Gaston Méry, *La voyante de la rue de Paradis et les apparitions de Tilly-sur-Seulles - quatrième fascicule*, 1896, p. 225 - Bibliothèque nationale de France (Arsenal), Paris.

traditional (and orthodox, from a doctrinarian-catholic perspective) 'visionary paradigm' –one that was based on the Augustinian progressive tripartition of "corporeal/intellectual/spiritual vision" and on the idea of the apparition as a particular private revelation– and thus determined a whole new relationship with the supernatural for Catholics (Albert-Llorca, 2001; Bouflet & Boutry, 1997). 'Modern' apparitions, and in particular those to Bernadette Soubirous in Lourdes in 1858, pushed a new social subject, the 'crowd', to go to the place of the miracle with the desire 'to feel' it in all its physical and temporal proximity, to see it with its own eyes (or at least, 'to see the seer' having a vision). Thus, this crowd constituted itself as a real audience and transformed the supernatural into a public, spectacular and mediatic event entirely based on bodily, visible, and recognisable reactions (Christian, 1996; Harris, 1999; Kaufman, 2004).

And in fact, much like all the other traditional miraculous and visionary sites, Tilly-sur-Seulles, too, soon turned into yet another "fair of the supernatural" (Bouflet & Boutry 1997, p. 170), filled with "*tilloiseries*" hawkers' shacks and attractions, where the borders between 'belief' and 'entertainment' became more and more labile.

However, no one had ever dared to present the photograph of a miraculous Marian apparition before. It should be pointed out that discussions about the limits and possibilities of the photographic medium as a 'revealing device', rather than simply as a documentation and description tool, were unfolding in various contexts at the time. Spiritualists, who, in France, gathered around the revue *Annales des Sciences Psychiques* (Lachapelle, 2011; Alvarado & Evrard, 2012), supported this conversation, while the official Christian religion had also been led into it by experiments related to the revelation of the Shroud of Turin (Celier, 1992; Geimer, 1999; Grojnowski, 2012; Kaenel, 2008).

However, as Claude Langlois (1994, 1998) and Antoinette Guise-Castelnuovo (2013) have demonstrated, the relationship of the 'photographic' with mystical or visionary Christian events remained strictly aimed at recording their physical and physiognomic aspects (the photographs of saints, seers and miraculously-healed persons proposed as "*portraits authentiques*" [real portraits] are their main visual model in this sense) or their domestic, social and material contexts (the places where the seers or saints lived, the people they knew and met, the objects they used, etc.) (Figure 3).

In Tilly-sur-Seulles, on the other hand, the time was ripe for local photographers to start producing and selling images as authentic and direct 'traces' of the miraculous event itself. The authors of this type of images, which were obtained through a "trick" (one that was recognized and explicitly denounced at least once by someone as being "a sham by sellers looking for big profits" –Cervia, 1896, p. 36), actually never denied their artificial, inauthentic, and "fabricated" nature. When questioned by a reporter for *Gil Blas* (Gaillard, 1897), Bréchet proudly claimed: "It is I, sir, who first made the apparition"; and when the journalist, a little amazed by such a frank admission, urged him: "You made it, you say –that is to say, you saw it?", the photographer insists: "No, I made it! […] It's a matter of work, of execution" (p. 2). Bréchet even proposed other versions of the "miraculous" image to the jour-

nalist, with the superimposed Virgin more or less accentuated, according to customers' tastes. This is why *Gil Blas* could truly present the photographer as "an expert man who possesses the science of apparitions" (p. 2).

Culturally, this pictures thus fits perfectly into the tradition of "genuine" or "authentic fakes" (Chidester, 2005) that has followed every religious tradition, and Christianity's and Catholicism's in particular.

But phenomenologically, in the context of the late nineteenth century's technological and media landscape, this trick, this manufactured visualization of a visionary event that was presumed real, can and must be conceived of as a pivotal moment, when the divine was brought "spatially and humanly closer". It operated on the basis of the 'desire' of believers (that is, those who 'already' believe and 'want' to believe) to 'see' something supernatural with their own eyes, just like the "official" visionaries, and their wish to bring home a souvenir, a relic, a piece of that mystery. Gil Blas' reporter called these people a "madly mystical clientele" (Gaillard, 1897, p. 2): believers turned into spectators, consumers and purchasers of an apparition transformed into a visual commodity. With the 'photographic' implicitly and unconsciously recognized as an objective image, or as a direct index of an external reality (Daston & Galison, 1992; Snyder, 2016), the photographer could propose his picture as a "very nice proof of the apparition", and many believed in its truth ("Some did not believe in the photograph of the tree, many believed in that of the Virgin" – Cervia, 1896, p. 36): in a few months, it sold four thousand copies. And even on the other end of the mediatechnic passage through which the photograph was represented in engravings –that is, when it was further 'remediated'– as in the Leprunier-Méry case, this kind of doctored images of a miracle did not lose any of its value as a 'document' or trustworthy medium, as nineteenth century society was used to perceive current events in illustrated form. Engravings found in newspapers and magazines were considered as faithful reconstructions or records of topical events (Bottomore, 2007; Hill & Schwartz, 2015).

Fig. 3 J.-B. C., *Lourdes – Bernadette (real portrait)*, 1900 ca. Bibliothèque nationale de France, Paris/Archives et bibliothèques Pau Béarn Pyrénées.

Thus, as a remediation act that brought immediacy, accuracy, and objectivity to the representation of a Marian apparition, these photographs truly represent an attempt to bridge the distance between two remote subjects (which could not be any further apart: the human terrestrial world and the divine, supernatural one), and to satisfy a social and visual desire to, quite literally, experience an absent.

However, as much as the 'photographic' renders "immersive power" and determines "unstable, even uncanny, viewing experiences" (Jarenski, 2015, p. 18), that are open to virtuality, compel viewers to participate directly and eventually function as "fantastic spaces of imaginative possibilities" (p. 31), "an image is an image", as Sabine Lenk and Frank Kessler remind their readers (2018, p. 234), even when it is perceived and received as 'real': the gap between 'here' and 'elsewhere' in Tilly's miraculous photographs remained therefore embedded in a fundamentally iconological relationship.

EXHIBITING CHRISTOLOGICAL PAINTINGS THROUGH *TROMPE-L'OEIL* DEVICES – PARIS (GALERIE SEDELMEYER), 1880S-1890S

At the dawn of the 1880s, some years before the events in Tilly, Hungarian artist Mihaly Munkácsy and his gallerist and art-dealer, Wien-born Charles Sedelmeyer –both of whom had established in Paris in the previous decade– inaugurated the exhibition of the first of a cycle of three life-sized canvases on the Passion of Christ, *Christ in front of Pilate* (1881) (Huemer, 2004) (Figure 4).

In an effort to renew the trite traditional exhibiting practices inherited from the model of the Salon, where paintings were disorderly and seamlessly aggregated on walls (Mainardi, 1993), and in an attempt to escape the 'crisis' that academic art was going through in those years (Bernard, 2000; Sérié, 2014), the two men devised a new exhibition mode that redefined the space of the art gallery and introduced a new viewing apparatus.

They decided to present the Christological monumental painting in a solo show, making the exhibition an 'event', an attraction, a spectacle. After paying a two-franc admission ticket, each visitor could enter the Galerie Sedelmeyer on Rue de la Rochefoucauld, which had been specially arranged for the occasion, and walk through its various rooms –as a sort of preliminary initiatory journey– until they suddenly found themselves before the "Holy of Holies" (U.B., 1881): facing Munkácsy's life-sized painting, which, by a highly expressive play of electric lights, was the only lit object in the room. In addition, an architectural scenography erased the painting's frame and blended it in with the pictorial elements, triggering and increasing the viewer's impression of a true three-dimensional *trompe-l'oeil* vision (Figure 5).

They would also employ this kind of complex theatrical exhibiting apparatus for the second painting of the trilogy, *Golgotha* or *Christ on the Calvary* in 1884, and again about ten years later, in 1896, for the third and last one, *Ecce Homo*, this

Fig. 4 Mihály Munkácsy, *Christ in front of Pilate*, 1881, 4,17m x 6,36m, Déri Museum, Debrecen, HU.

time arranged by the artist alone, as his collaboration with Sedelmeyer had officially reached its end in the late 1880s (Kovács, 2004).

It was explicitly recognised that these new displaying modalities were closely related to the attractions and the immersive technologies of the time. They were compared, in particular, to dioramas, panoramas, and wax museums. In fact, as they employed the same kind of expedients as contemporary spectacular forms to create a complete illusion of reality while simultaneously curbing spectators' haptic reactions, the exhibitions of Munkacsy's Christological works seemed to bear the same promise as them: that of cancelling any distance between the object of the representation and the observer, giving 'power' to the painting in such a way as to bring it out of its frame. In this case, with the object of the representation being one of the most important characters and moments in the Christian religion, the illusionistic force of the painting and the adherence it aroused in viewers ended up being conflated with true devotional feelings and with faith.

And there were a great many accounts of the empathic reactions that this so vivid, realistic, 'close' vision of the evangelical events aroused in spectators at the time. One of the most common reports is of a child who went to see the painting with his mother, and who, being mistaken about the representational status of what stood before him, did not understand why he couldn't also hear it speak (TOUT-PARIS, 1886). Other spectators fell silently at the sight of the painting, or took off their hats, kneeled or crossed themselves –as if they were entering a church or chapel (Carjat, 1881; Comte, 1884).

With the work of art thus transformed into an event that takes place *hic et nunc*, in the very space-time of the spectator, its 'reality' imposed itself. Catholic critic Robert de La Sizeranne (1890), who advocated for a revival of religious art in France and thus became one of Munkácsy's most fervent defenders, described this feeling of an emergence of reality as follows: "Those who saw *Christ before Pilate* a few years ago at the Sedelmeyer Gallery, exhibited not in a frame but

Fig. 5 *Christ in front of Pilate* at Lindenhurst (residence of John Wanamaker), 1900 ca. From E. C. Siter, *Catalogue of the Collection of Pictures by the Old Masters & of the Early English Schools & Mihály Munkácsy*, Philadelphia, Times Printing House, 1904, plate 185.

between two columns that seemed to belong to the praetorium, will never forget the gripping experience they had. […] The eighteen centuries gap that has darkened this fateful day for our imagination had vanished, like tearing a veil of vapours to let us peak into abyss […] with greed we plunged our eyes into it; we questioned this brutal vision with the fear that it would vanish" (pp. 36-37) –and about *Christ on Calvary*, he recalled above all the sensation of the "Wandering Jew who is about to leave the painting and begin his wandering course" (p. 40).

Critics did not fail to notice and point out these exhibition devices' immersive nature, their ability to overcome physical and temporal distance alike: one of them spoke of the "impression of entering into evangelical subjects" (Buisson, 1887), and Émile Bergerat (1881), a journalist for the republican newspaper *Le Voltaire*, delved in deeper: "When I am in front of *Christ in the praetorium* (*sic*), I suddenly come out of myself to enter an unknown and absolute centre, of which I have everything to explore, to question, to penetrate, and the very notion of which no one had yet suggested to me".

On the other hand, chronicles of the time reported that the immersive power of Munkácsy-Sedelmeyer images was mostly experienced by women. For instance, a reporter for the *Figaro* observed "Oh de jolies larmes on aurait vu couler si les ténèbres ambiantes l'avaient permis […] les belles invitées

du peintre, toutes pâles, avaient l'air de sortir d'un rêve à la fois délicieux et poignant" [Oh, we would have seen beautiful tears flow weren't it for the surrounding darkness […] these women, beautiful guests of the painter, all pale, seemed to emerge from a dream at once delicious and poignant] (Parisis, 1886, p. 2). And Pierre Veron, in the *Monde illustré*, pointed out that the display devices had an effect "sur les nerfs des spectateurs et surtout des spectatrices" [on the nerves of the spectators, and especially women] (1886, p. 98). Even Guy de Maupassant, who revisited the events of the Parisian exhibitions of Munkácsy's Christological cycle under fictional names in his novel *Bel Ami* (1885), imagined a female character, Madame Walter, letting herself be totally subjugated by the illusionism of representation and transported to the 'elsewhere' towards which it pointed, until literally throwing herself towards the canvas one night, with the delirious desire to enter it and live there (2nd part - chap. VII and IX) (Figure 6).

This is no coincidence. At the end of the nineteenth century, the 'feminine' emerged as the notion and category *par excellence* where the 'devotional' and the 'spectatorial' intersect, for it defined the subject considered and treated as the least rational by nature, or even the most naturally inclined to abandon oneself to emotions, sensations and feelings; the most sensitive, and even hyper-sensitive, being, on whom new spectacular forms that relied on perceptual shock (as well as religious devotion and beliefs) had or could have the strongest grip (Berton, 2015; Violi, 2004).

And yet, after years of critical and popular successes, of world tours filled with devotee-spectators (Morgan, 2006) –a spectacular and promotional practice they had in common with the other immersive attractions of the time (Huemer, 2009; Huhtamo, 2013)– Munkácsy's canvases stopped arousing interest, and even pleasure, and rapidly fell into oblivion.

This was not sheerly a matter of general transformations in taste and of the emergence of new artistic and critical sensibilities (symbolism, idealism, etc.) that made the 'theatricality' of Sedelmeyer-Munkácsy's exhibition choices

appear excessive, intrusive, insincere, as a pure commercial operation in search of an 'easy' effect. Beyond these changes, crucially, these choices lost their 'aura' because of their reproducible status and their systematic repetition: the public soon grew used to the means employed, which therefore became boring to them.

And, in any case, late nineteenth century attempts at cancelling physical and temporal distance and making the pictorial divine closer to exhibition goers could not have withstood the "remediation force" of the new devices, technologies and media that were emerging at the turn of the twentieth century, with the ability to bring religious imagery –that is, the objects and characters of traditional devotion– even more convincingly and realistically "spatially and humanly closer".

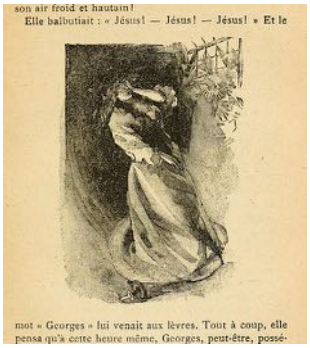
son air froid et hautain!
Elle balbutiait : « Jésus! — Jésus! — Jésus! » Et le
mot « Georges » lui venait aux lèvres. Tout à coup, elle
pensa qu'à cette heure même, Georges, peut-être, possé-

Fig. 6 Ferdinand Bac, illustration for Guy de Maupassant, *Bel Ami*, ed. Paul Ollendorff, 1895, p. 425

CINEMATOGRAPHING POPE LEO XIII AS A "TRAIN RUSHING TOWARD THE AUDIENCE" – VATICAN CITY (ROME), 1898-1900

In 1898, for the first time ever, a film operator entered the Vatican Palace and took moving pictures of Pope Leo XIII. It was the American William K. L. Dickson, who was sent by Thomas Edison with a Mutograph camera on behalf of the company he had founded, the American Mutoscope & Biograph Company (Musser, 1990, pp. 218-221) (Figure 7). This happened again on the occasion of the jubilee year, 1900, on the initiative of Italian operator Giuseppe Filippi –assisted by the Vatican's photographer Francesco de Federicis– who had negotiated with the Lumière brothers and obtained a licence from them to use their *Cinématographe* (Bernardini, 2002, pp. 46-49).

Although the series of documentary *vues* that the two films propose differ in several ways (movement, for instance, follows a mostly horizontal development in the former and a more explicitly perpendicular or almost-perpendicular axis in the latter), both of them show the Pope in a succession of situations which, while they may appear completely

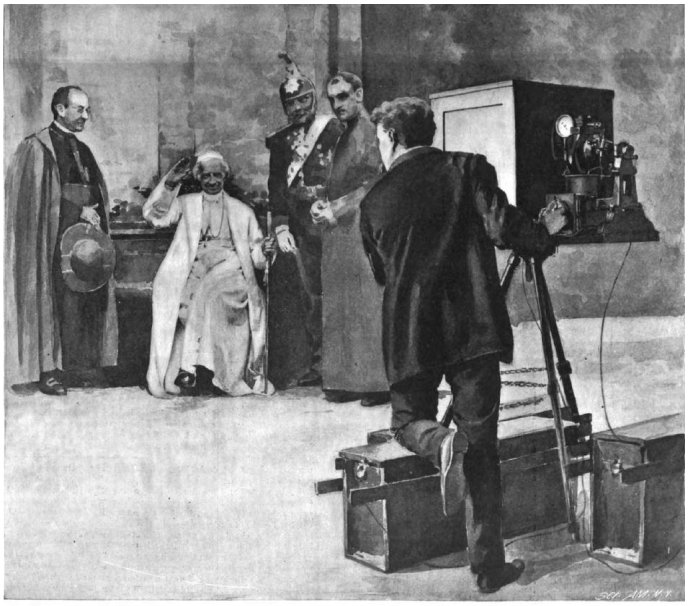

Fig. 7 Photographing his Holiness Pope Leo XIII, in the gardens of the Vatican with the Biograph Camera, *Scientific American*, 1899, January 14, p. 24.

common and trivial to us today, were actually received as 'exceptional' at the time of their production because of the extraordinary 'closeness', the sense of intimacy imparted by the new medium.

The cinematographic image in fact communicated and conveyed the impression of a real, intimate, direct encounter, whose effect Brunetta (1999) did not hesitate to compare to Lumière's *cinématographe*'s famous "shock of the train". Admittedly, the image of the locomotive rushing at full speed toward the crowd of (supposedly) 'primitive' and 'defenceless' spectators (Bottomore, 1999; Loiperdinger, 2004; Sirois-Trahan, 2004) was certainly more "traumatizing than the first appearance of the pope on the screen […], with his entry on the stage in the carriage and his subsequent apostolic blessing", which "precisely, seemed designed to soothe". Yet it would not have been any less 'exciting', as it carried a sense of a 'real event': "The Pope emerges from the darkness of the Vatican interior with his white robe and smiling face, and is so close to the eye of the camera […] that it almost makes one want to reach out and touch him" (Brunetta, 1999, p. 552).

Thus, turn-of-the-century audiences were in fact astonished and deeply moved when they saw the person of the Pontiff, whom they had only heard about or, at most, seen represented on postcards or in newspapers, projected "so closely", "almost in the flesh". Chronicles of the time actually testified in amazement to a widespread feeling of closeness and direct contact with the Pope, such that one had the impression of being suddenly admitted –through the cinematographic apparatus– into the very depths of his humanity and his everyday life. An article in a December 1898 issue of the *Montreal Daily Star*, for example, emphasized that the film presented Leo XIII "in his most personal aspect and in his religious character", and summarized the succession of scenes in a series of actions as ordinary in their essence as the tones with which they are described were exceptional: "The moving pictures depict His Holiness walking in the gardens of the Vatican, receiving Pilgrims, talking to his intimates, driving in his landau, smiling, exhibiting interest in those about him, sitting in his favourite seat and bestowing the Papal benediction". And among the "most interesting [moments] of the series", the reporter chose to reproduce the one in which the Pope, ending his walk in the Vatican gardens, "hands his hat to his secretary; he approaches his favourite seat in the garden; he takes off his spectacles; he sits down; he wipes his forehead and says 'It's a warm morning!'" (Anonymous, 1898, December 10).

However, the most important moment, the climax of the film –or rather the climax of almost every single scene of which the film is composed– is when "His Holiness blessed the instrument which had recorded his movements, and through it […] those who would see the pictures afterwards" (Anonymous, 1898, December 15) (Figure 8).

According to Dickson's own account of the events, it was precisely the indirect, mediated and mediatic possibility of imparting and transmitting his blessing to the many thousands of faithful who would attend the screening –thus, cancelling any distance– that convinced the Pope, after four long

months of negotiations and reflection, to pose for the film in the Vatican gardens (Anonymous, 1898, December 4).

And Dickson's memory is fully confirmed by the words that *Ciné-Journal* attributed to the Pope himself in an article some years later, in which he insisted on this precise aspect: "The images that this man will make will bring my features and my name to the farthest of my children. Though my worn-out body remains captive, my soul will fly with my word across the seas. Now my unknown children from old and new worlds will no longer imagine that the Pope is an image, an icon at the bottom of the temple. They will see me and my hand will rise before the cameraman to bless him and to bless all the peoples over his head" (Bonnefon, 1913, p. 31).

This conception of the cinematographic image as capable of reaching beyond the merely iconological level and achieving a real effect on the audience of spectators/devotees (thus, as 'not-really-an-image' or 'more-than-merely-an-image'), certainly raised questions and ran into unexpected theological, doctrinaire and practical difficulties, leading to real paradoxes and, in some cases, to contradictions. Following the screening of Dickson's film, for example, a debate broke out in the United States to decide whether the papal blessing contained at the end of each scene should be considered valid for the audience (and for 'each' audience), every time it was seen and shown. The Vatican's delegate dismissed the question by resolutely denying such a possibility ("the ability of a moving picture to bestow a blessing is certainly an absurdity" – Anonymous, 1898, December 24), and establishing that the particular circumstances, places and modalities in which those images were projected and received, rather than just the film itself, would eventually legitimize said blessing and make it 'effective' (Anonymous, 1898, July 9; Anonymous, 1898, December 3; Schwain, 2008).

Soon, however, from the real person of the Pope, the process of cinematic remediation, with its power to reduce (if not cancel) the spatial and temporal distances from the viewer, extended to all of Christian imagery and traditional

Fig. 8 William K. L. Dickson, *Pope Leo XIII* (photoprint), American Mutoscope, 1898, Washington DC, Library of Congress – Prints and Photographs Division.

devotional iconography. In 1899, for example, Georges Méliès made a film on the theme of *Christ walking on water* (which is now considered as lost), in which a filmmaking trick –a double exposure effect– was used for the very first time on the figure of the Christ. Thus, as it unfolded as a *trompe-l'oeil* from viewers' point of view (Sirois-Trahan, 2001), the film transformed the evangelical miracle into a scene that seemed to happen at the exact moment and place of its projection (Gizzi, 2018) (Figure 9).

According to its synopsis featured in the American Star Film catalogue (one of the few traces of the film that still exist to this day), it went as follows: "Showing the rolling sea, upon which gradually appears a cloud of mist. From this evolves the figure of Christ, who proceeds to walk on the waves. The rolling movement of the water and the sudden apparition, certainly give a most startling effect, illustrating the biblical miracle of Christ walking on the water" (Méliès, 1908, pp. 12-13).

There is therefore nothing surprising in the fact that, in the late nineteenth century, an American spectator wrote the following –a most explicit testimony to the 'remediating force' over physical and temporal distance that was then at-

tributed to the new cinematic apparatus and to the ways in which it was intertwined with religious belief– about another Christological film, presented as an actual documentary record of a theatrical representation of *Horitz's Passion Play*: "The thought that one is gazing at a mere pictorial representation seems to pass away and in its place comes, somehow or other, the notion that the people seen are real people, and that on the screen there are moving the very men and women who acted the Passion Play last summer in Bohemia forest […]. Then the players begin to depict the birth and life of Christ, and with this change of subject there comes a new change of mental attitude. So absorbing becomes the interest of the pictures than the onlooker, from merely regarding the figures of real, live people who acted the play in Bohemia, begins to forget all about what was done in Bohemia and henceforth is lost in the thought that the faces and forms before him are the real people who lived in Palestine 2000 years ago, and with their own eyes witnesses the crucifixion of Christ" (Anonymous, January 4).

Fig. 9 *Result of double exposure on positive film. Jesus seems to walk on water*, 1922. From Z. Rollin, Dans le champ de l'opérateur (ou les trucs dévoilés). De la surimpression, *Cinémagazine*, 2(1), 1922, January 6, pp. 17-18.

CONCLUSIONS

In short, at the turn of the twentieth century, a whole series of psychological, social and cultural conditions came together and allowed for new technological and media forms to emerge, invest religious visual culture (as well as all the other fields of the time's collective imagination), spectacularize it, and bring it closer to the observer.

While this turning point in remediation had originated with the 'photographic' gesture, because the supernatural reached a hitherto unimaginable plane of visualization through it, these photographs never overreached the bounds of their definition as iconic objects. Then came monumental paintings with a religious subject and a strong theatrical charge, associated with 'new' *trompe-l'oeil* exhibition devices ('new' to painting, as they were actually borrowed from preexisting immersive attractions such as panoramas, dioramas and such). Those framed this act of remediation (of the spectator's physical and mental distance from the divine) more specifically in terms of an empathic experience; the limit of the 'form' remained, because, however realistic, it was still ineluctably pictorial. Therefore, once their means were known and mastered, their effects were all the more weakened as they had been remote from the actual referent all along. The 'cinematic' then seemed to emerge as a synthesis and sublimation of these different technological and media instincts, at the centre of a field of complementary and opposite forces (image/experience; indexical/pictorial, etc.), truly affirming itself as a 'machine' capable of transporting its audience through time and space. A recent exhibition by Antonio Somaini, Eline Grignard and Marie Rebecchi has perfectly illustrated and reconstructed this dynamic (2020).

However, we repeat: if the gradient model we have adopted in this study inevitably, even unintentionally, seems to imply an idea of progression, its usefulness has mainly consisted in functioning as a paradigm and as a tool to think, describe and order our devices according to their "remedial

power"; thus, the deeper reality of them goes beyond any teleology, and the question of their historical relationship remains (and must be reaffirmed as) open to further interpretation and analysis.

The Church's reaction to all this was ambiguous. Faced with the scandal of "pure speculation" and "degradation" to which the image of the Pope was subjected, the Holy See revoked the concession to Dickson and granted all rights on motion pictures of the Pope to the Lumière brothers, with the agreement that they would respect specific projection protocols (Angelucci et al., 2017). The proximity caused by remediation compelled the institution to enforce ever tighter monitoring and control over its image for fear of spontaneous, unorthodox, or illegitimate reactions.

However, those were also the years in which, faced with the challenges of rising positivism, scientism and secularism, authorities in the Vatican tried to win urban populations back through an ever more explicit appeal to the 'heart' –rather than 'reason'– by instituting mostly sentimental devotions and by lending official support to the 'miraculous' in its redefinition as 'marvellous' (Morgan, 2008; Saint-Martin, 2015). This strategic cultural-political agenda to bring the truths of faith psychologically closer to believers through the 'sensitive' and the 'irrational' (or, as other have put it, this "feminisation" of religious devotion –Albert-Llorca, 2002; Langlois, 1984) was particularly driven by Pope Leo XIII (1878-1903), who legitimised and authorised all means to further it.

Thus, while vast swathes of the Church remained suspicious and even hostile towards these practices of mediatic and technological spectacularization (Eugeni & Viganò, 2006), some more 'militant' fringes, such as the French Assumptionist group *Bonne Presse*, used them without restraint because of their capacity to evoke a real presence rather than a representation of their objects. Of particular interest to these groups was the new medium of cinema, which, conceived of as continuing ordinary catoptric practices and remaining faithful to the Christian images tradition, was to

contribute the proximity it created in efforts of propaganda, conviction or conversion (André, 1992; Saint-Martin, 2004). After all, as the Assumptionist review *Le Fascinateur* read in an article recommending the use of moving images for catechetical and pastoral purposes, "*quand dans un film on voit les clous s'enfoncer dans les mains de N.S., personne ne peut retenir ses larmes*" [when the nails are shown being driven into the hands of Our Lord in a film, no one could keep from shedding tears] (Anonymous, 1909, December 1909, p. 388).

Therefore, the new experience of the spectator as it came to be redefined at the turn of the century –which could also be called the 'modern' spectator's experience– intersected and blended ambiguously with the believer's experience, and the latter simultaneously changed into a completely new type of believer. This means Weber's argument of 'disenchantment' can be fully reformulated in terms of a-whole-new-kind of 'enchantment' (Asprem, 2014; Joas, 2017; Josephson-Storm, 2017): one that is generated by the new media and new technologies of vision, technologies of the charmed, enraptured, hallucinated subject (Eugeni, 2002).

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LET'S RESET THE CLOCK
FAMILY FOOTAGE TO REMEDIATE DISTANCE CREATED BY MOURNING

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DISTANCE
GRIEF
HETEROTOPIA
FAMILY FOOTAGE
IMAGINARY

From *Sherlock Jr.* (1924) by Buster Keaton, to *Laura* by Shuji Terayama (1974), or *Videodrome* by David Cronenberg (1983), to more recent to *Leto* by Kirill Serebrennikov (2018), experimental and mainstream cinema has explored crossings through the screen to attempt erasing borders between the viewers and those represented. *Let's Reset the Clock* (from French *On va remettre les pendules à l'heure*), is a two-and-a-half minute colour video that I chose to inscribed in this tradition. In this artwork, split screen visual process is used to remove distances, in order to put two characters –I, the author, and my own grandmother– face to face. As the latter has passed away, *Let's Reset the Clock*, constitutes an attempt to remediate distances created by the mourning. It is also a reflection about the way images can bridge those separated by space and by the time.

TO REMEDIATE DISTANCE CREATED BY THE MOURNING

There is the space of what was and can no longer be, and there is the space of memory. Between the two is a feeling of absence and, sometimes, of loss.

Through the use of family footage included in *Let's Reset the Clock*, I illustrate my feeling of grief and attempt to remediate the distance between the living and the dead. With aim to erase this distance, I filmed myself while watching images of my grandmother that have been shot by my grandfather at the beginning of the 1960s. While watching images of her, I mimic a connection that no longer exists, and create a new relationship that now can only be found through fiction, within the space of an artwork. On this, *Let's Reset the Clock* constitute utopia of a travel through time. Or rather, it recreates what Michel Foucault defined as a "heteropia" (1967): a place which exists in the space where the imagination resides, in the child's playhouse where one can do '*as' if* one's grandmother was still there. By using images to create this imaginary space, *Let's Reset the Clock* recalls

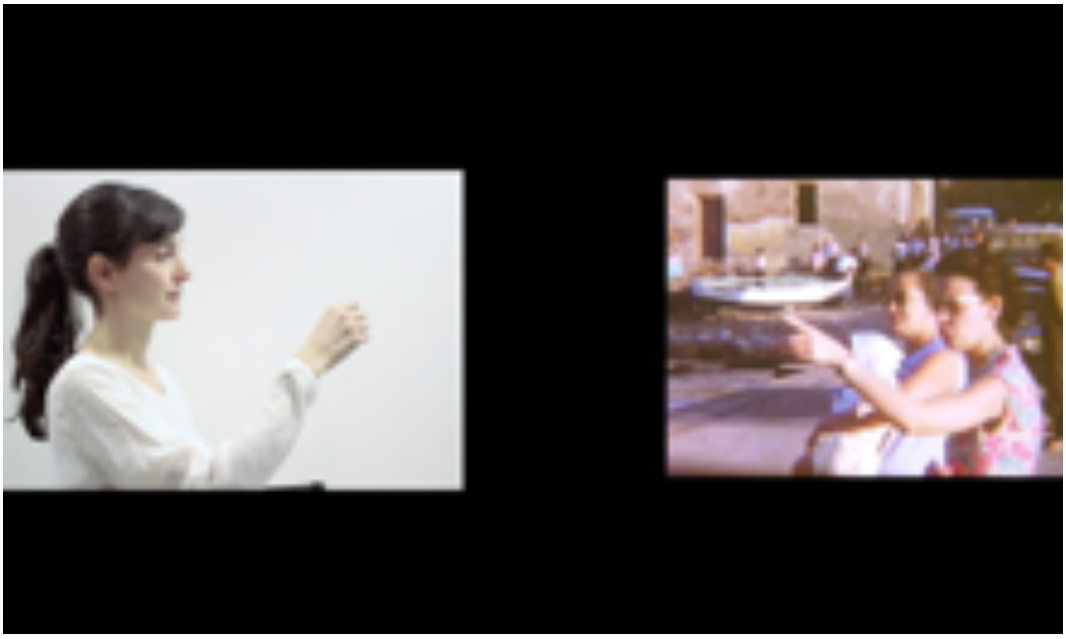

Fig. 1 Screenshot from *Let's Reset the Clock*, 2'37" colour video.

Christian Marclay editing work in *The Clock* (2010). In this film, the American artist challenges corridors of time by assembling various footage of well-known and lesser known films around a clock running for 24 hour in real time. With *Let's Reset the Clock* I suggest that playing with images can remediate distance between temporal and spatial spaces that separates me with my grandmother. Yet even in this game, the interaction does not always work. The video thus suggest following mourning process: to play a broken game, by facing someone who can no longer be found, even through a trick.

TO REMEDIATE THE DISTANCES THANKS TO IMAGES

Let's Reset the Clock also constitutes a reflection about images. It is part of a broader set of artworks in which I question my colonial European identity through the use of my grandfather footage. My family fled Franco's Spain to migrate to Algeria at the time it was a French territory. I only know this

Fig. 2 Screenshot from Let's Reset the Clock, 2'37" colour video.

country and the story of migration which for me accompanies it, through old films footage shot by my grandfather. I have digitalised these images which constitute a time-window towards a bygone era of French history and towards a knowledge on my family past. The *mise en abyme* arranged when filming myself looking at these archives is a way to consider this footage as part of my own imaginary. Through this act of family archaeology, I stage my identity and, in the same movement, when facing the camera in the end, I break the mise en scène and take distance from this identity. On this, remediation proposed by *Let's Reset the Clock* is close to Woody Allen's *Purple Rose of Cairo* (1985). In this 1985 film, main protagonist tries to escape gloom of her existence by watching ceaselessly same film until being part of it.

Distance provided through the mediation of images would thus saves us from such a bleak reality and would allow us to explore hitherto unnoticed spatial and temporal paths.

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APOLOGY FOR TECHNICAL DISTANCE
BUT BEWARE THE FEEDBACK!

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TRANSCENDENCE
TECHNICAL MEDIATION
META-OPERATION
PLASTICITY
SELF-REFERENCE

Philosophy boasts an ancient familiarity with the practice of taking distance, which it tendentially conceives as a human condition (in transcendental or anthropological sense): the human being is par excellence an ek-static being. Arguably, this issue is rooted in the fundamental mode of being of the human body (but not only human), and has also a structural and not adventitious relationship to technology. A classic neuroscientific experiment shows that technical distancing can produce unpredictable neuro-plastic effects, as well as a general reorganization of behavior based on the emergence of a meta-operative agency. The agency thus enhanced, however, may in turn give rise to a genuine dialectical opposition between plastic expansion and self-referential contraction of behavior. Some examples will help shed light on this dialectic and eventually highlights some requirements that are necessary, though not sufficient, to adequately cope with the social distancing imposed by the anti-Covid measures managed by digital technologies, transforming the emergency into opportunities for the future.

ON THE PHILOSOPHICAL NOBILITY OF DISTANCE

Philosophy boasts an ancient familiarity with the practice of taking distance, which it tendentially conceives as a human 'condition' (in transcendental or anthropological sense): the human being is par excellence an 'ek-static' being. By the way, the very philosophical thought spreads from taking distance from the facticity of existence, which thus points out to the possibility of being re-assumed, and potentially requalified also at the stage of praxis, thanks to a reflective comprehension. In order to adequately describe the paradox of 'being-merged-in', which is 'at the same time' a 'taking-distance-from', Emilio Garroni (1986; 2020) elaborated Ludwig Wittgenstein's notion of *durchschauen* into the theoretical figure of 'seeing-through'. According to this elaboration, although we are inside a contingent world, we would be able to wonder what could ever be a 'contingent' world in general –a world that 'touches' us[1]. This is possible thanks to a *durchschauen* favored by particular situations, e.g. art. Friedrich Nietzsche had also used quite a likely expression about art, which he intended as the 'most transparent' (*durchsichtigste*) form of the will to power, i.e. the metaphysical essence of the living being in general. A whole family of concepts of primary importance for modern philosophy can be reduced to this preliminary reflective statement. As we shall see, we can advance the suspicion that this is rooted in the essential mode of being of the human (but not only the human) body.

For instance, the phenomenological tradition remarked that we can feel to 'be' our bodies and, at the same time, having taken a distance from it, to 'have' one. Furthermore, without a preliminary evaluation of the philosophical nobility of distance, we could understand neither the "Copernican turn" Immanuel Kant recognized to his way of thinking, nor the different versions of a thought of the reflective distancing depending, in a way or another, on that turn: from Georg Wilhelm Friedrich Hegel's *Aufhebung* up to the Jacques Derrida's *différance*, maybe passing through Walter Benjamin's *aura*

and Martin Heidegger's discredit of the "detachedlessness" (*das Abstandlose*) as perverted outcome of modern technics. The power of the paradox according to which we can perceive to be 'in touch' with contingence only at the condition of being contextually distanced from it can be extended with no effort also to the concepts of modern philosophy, which have contended against any super-sensible declination of the classical idea of transcendence by reallocating its topological device, that is, the *débrayage* from the *hic et nunc*, as argues semiotics (Greimas & Courtès, 1993) –into the very heart of the sensible and the somatic: from Friedrich Nietzsche's aforementioned "will to power" to Maurice Merleau-Ponty's "flesh", up to Gilles Deleuze's "level of immanence", together with the different forms of "embodied cognition" handled today at the intersection between philosophy and neuroscience (Gallese, 2009).

This being the state of affairs, an apology of distance would be, for a philosopher, the most futile of the exercises if the measure of a 'social distancing', which the pandemic of Covid-19 induced us to introject as an automatized somatic norm (even in the complementary forms of a compulsive refusal), would not invite us to reconsider the phenomenon in new perspectives. First of all, we find the perspective of the 'technological mediations' to which we asked to govern this phenomenon according to the modes of the so-called 'smart working', together with the different forms of meeting at distance of which our experience was made during the last months –and with an animated debate around them.

However, we should firstly ask what we would find between the dominion of technics and the dynamics of distancing. Is this a purely fortuitous relation or rather a much tighter and more significant bond?

In order to start answering these questions, let me begin with a classical neuroscientific experiment, in a clear synthesis provided by Maravita & Iriki (2004): this will allow me to clarify a decisive point.

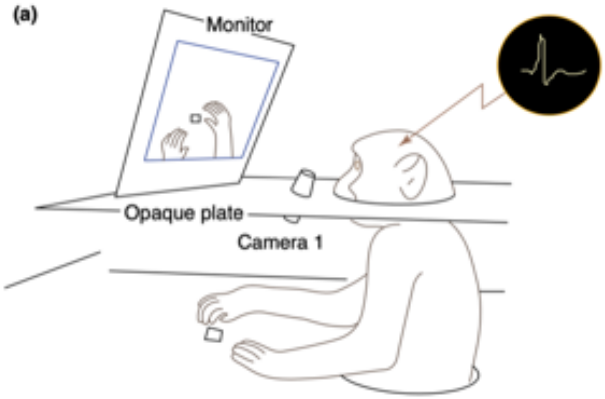

Fig. 1 Figure from Maravita, A., & Iriki, A. (2004). Tools for the Body (Schema). Trends in Cognitive Sciences. 8 (2). Neural responses are recorded (inset) while monkeys retrieve items of food and observe their actions on a video monitor, as captured by a video camera (Camera 1).

TECHNICAL DISTANCING AND METAOPERATION: THE POWER OF FEEDBACK

The aforementioned experience aims "to observe changes in the behaviour and/or the neural activity of monkeys and humans following the use of simple tools (for example a rake) to extend reaching space". In practice, some Japanese macaques are trained in such a way that "after two weeks of training, when a food pellet was dispensed beyond the reach of the hands, monkeys skillfully used a rake to pull the food closer, where they could reach it with their unaided hand".

During one of these trainings, researchers put the macaques in a post (Figure 1), so that the animal's arms and hands would not be directly visible to itself, but appear on a screen in front of it. After an adequate period of training, not without difficulties, macaques started operating with the representation of their limbs in a fluent and spontaneous way, while the surveys the researchers did on the animals' brains "suggested that the visual image of the hand (and even its 'virtual' equivalent, such as a spot of light) in the monitor was treated by the monkeys as an extension of their own body".

However, this quite notable outcome was not the only one, not even the most important, at least from the

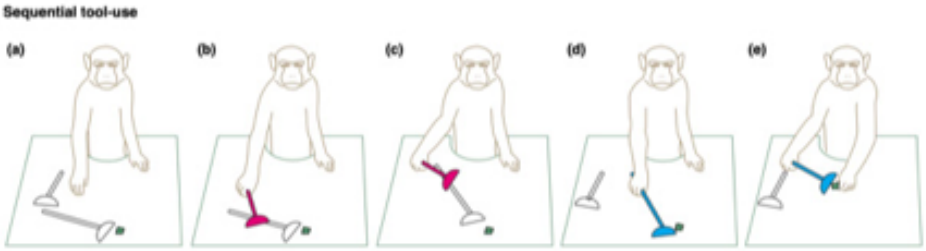

Fig. 2 Figure from Maravita, A., & Iriki, A. (2004). Tools for the Body (Schema). Trends in Cognitive Sciences. 8 (2). Experimental setting for the double-rake reaching study in monkeys.

point of view I adopt in the present article. Indeed, the researchers could then note that the macaques trained to operate through a technological mediation –in other words, proceed to a disembodiment of the direct relationship to arms and hands, after which followed a re-embodiment mediated by a technical device– were able to exercise real 'metaoperations' (Garroni, 1977; 2005) like that described in Figure 2. In this Figure the macaque shows to be able to use a short rake, which is insufficient to reach the food, in order to get a longer one, by which the food becomes reachable. The decisive point is not really in the fact that great apes show the ability of operating on operations is doubtlessly ascertained: namely, the ability of conceiving a sequential design in which appears at least one operation not immediately referable to the final goal of the project. Nor is it in the fact that, under certain circumstances, it is possible to train apes to perform this kind of interconnected actions. The decisive point is in the fact that, after having passed through a process of disembodiment and subsequent re-embodiment technically mediated, the macaque was put in the condition of designing a complex operation 'by itself'. A metaoperative element is present, and 'determining', in this operation. In other words, the feedback exercised by the body's technical extension on the animal's behavior had the effect of not only reorganizing its body schema, but also 'spontaneously' introducing the possibility of metaoperative processes into its experiential space. The experiment synthetically reported teaches us two remarkable things. The first one is that, thanks

to a technical mediation, the macaque behaved as somebody who has done the experience of 'having' a body, beside that of 'being' a body. Arguably, in its overall agency, a 'Copernican turn' took place: a technically mediated disembodiment was followed by a re-embodiment, a feedback foreshadowing a very remarkable reorganization of this very agency as a whole.

The second thing we learn is that, by virtue of this feedback, the macaque finds itself in an environment that is radically different from its previous one: in fact, its body can now recognize in it a virtuality before unknown. In this case, the (metaoperative or recursive) opportunity of using the short rake as a tool apt to get another tool, the long rake, which is in turn apt to get the food. This means that, thanks to the complex experience of technical distancing described above, the life environment of the macaque is 'enriched' of new components and virtualities: it eventually becomes a more complex but also more advantageous environment. A new way of being of 'contingency' or 'to be in touch with'.

The moral of the story: if the feedback appeared advantageous, it is because it opened a richer world to the macaque and put the latter in the condition of dwelling in this world with success –and with great 'naturality', as note the researchers who worked at the experiment. "This behaviour was attained very quickly, in remarkable contrast with the initial basic training in using tools, which took at least two weeks". To conclude this section, one could observe that the "more complex world" evoked here is of course the same as before. What changed, however, is the way the macaque perceives its contingencies and interacts with them. And it is a way that increased its 'gradient of plasticity' to a measure that it introduced recursive or metaoperative abilities. It is indeed a sort of 'Copernican revolution'.

But do things always go in this way? To be more precise, does metaoperativity, this refined effect of distancing, always result in an enrichment of the environment-world's contingency?

PLASTICITY, AUTOMATISM, SELF-REFERENCE: ENVELOPE AND ENVIRONMENT

The unveiling character of the experiment to which I have just referred is surprising in many aspects. Beside its radical *artificiality*, what strucks the more is in fact the 'naturality' of its most spectacular outcome, the metaoperative behavior on which I insisted. Much could be said on this point, making room to an imaginative though fully legitimate storytelling. For instance, the disembodiment experimented by the macaques should have put them on the way toward the emergence of a denotative proto-language (Montani, 2018; 2019; 2020) if the pragmatic conditions were only created to induce a group of them to cooperation. I contain this development and restrict myself to remark its counterfactual nature as for two aspects. First one, what the macaque 'learnt' to do, as well as the extraordinary consequence it drew, is a performance that the embodied imagination of homo genus 'selected' during several hundreds of thousands of years, bringing it to a very significant degree of adaptive efficacy within the species homo sapiens. Second one, this rather peculiar adaptive development, by the way involved in the emergence of language, is not at all "brain-centric" as argues Noam Chomsky's influential theory of language among others. As a matter of fact, it is not only inseparable from the fact of coevolving with a world-environment that, as we have just seen, shows to be as much contingent, plastic and reorganizable as the former; it is also made in such a way to very closely integrate with the marked 'cooperative attitude' of the living being that has drawn the most spectacular adaptive consequences from it (Arbib, 2005; Corballis, 2011; Ferretti, 2010; Gallese & Lakoff, 2005; Liebermann, 2006; Mithen, 2006; Tattersal, 2008; 2016; Tomasello, 2008) : however, their position cannot be always unified. In other words, the phenomenon of technical distancing must be assumed in a perspective that is decisively characterized by its pragmatic feature. By the latter determination, it must be intended that the

metaoperative practices on which I lastly focused would have no value if they were dissociated from their diffused embodiment, as well as from their happening in cooperation with other individuals in a world-environment that is so reorganized and enriched. I would like to rapidly exemplify the last aspect with a reference to artificial intelligence and the machines capable of deep learning.

We must in particular outline that, once the basic inputs received by an operator are instantiated, these machines are able to learn autonomously, thanks to processes that survey the respective universes of reference, e.g. photographic images as objects of recognition. They resort to procedures of sampling and classification, which have nothing in common with those spontaneously implemented by human beings. As showed Melanie Mitchell (2019) with extreme clarity, this makes these machines extremely vulnerable, at least so far. In other words, they can be easily cheated if they are not put in the condition of acting in particularly stable environments, as much immunized as possible from contingency and unpredictability. Games like chess or Go, being entirely manageable with calculation, serve as an example. Adopting a quite perspicuous distinction (Floridi, 2018), we can say that these machines work better when their world of reference is conformed to the model of the 'envelope', i.e. limited, self-referred and rigidly programed environments, rather than in real environments. In order to have a driverless car that offers the maximum of security guarantees, one should produce them for a web of highways especially designed for their performances. It is an envelope, that is, a tendentially close space, immunized from every contingency as much as possible, saturated of previsional automatisms and therefore deprived of any interactive plasticity. In other words, this space is substantially self-referential. Our future smart cities could be projected on the basis of this principle that brings to the extreme consequences a process of 'anaesthetization' typically connected to the securitarian instances inscribed inside technics, that is, the promise of repair against contingency and unpredictability (Montani, 2007).

At this point, we need to observe that the possibility of a 'self-referential drift' constantly and systematically looms over the metaoperative outcome of technical distancing to which I pointed out in second chapter. As such, indeed, metaoperativity may evolve in the sense of either the reorganization and enrichment of the environment or the automatization and self-referential escalation of the envelope. An 'authentic dialectical opposition' emerges here and concerns the processes of interiorization of technologies in general. An unbiased reflection upon the technical remediation of distances should deal with it at a theoretical level and give confirmation through proper empirical investigations.

DIALECTIC OF THE TECHNICAL REMEDIATION. SOME EXAMPLES

In second chapter I suggested that the most wonderful product of the metaoperative performance our embodied imagination is able to perform was the discovery of the articulated, denotative and componential language, which is capable of recursiveness and reflectivity. I do not aim to come back to this issue, which I discusses elsewhere (Montani, 2018, 2019, 2020a, 2020b). I only want to remark that, amid the most significant properties of articulated language, there is exactly that of 'speaking of itself', that is, assuming its own significations as the object of discourse. It is intuitively evident that this property of language can be constituted in a dialectical opposition. In fact, on the one hand, to assume a signification as the object of discourse allows a more attentive survey of the way linguistic signs refer to the world-environment. It is an exploration and requalification of the very modes of reference (Jakobson, 1985; Ricoeur, 1975; Lakoff & Johnson, 1982). Charles Sanders Peirce (1998) thought exactly of a virtually interminable movement of semantic requalification when he spoke of the sign as "firstness, or the representamen" that refers to "secondness, or the object" in such

a way that "thirdness, or the interpretant" makes the device of signification explicit in a more developed way. Therefore, this is in principle conceived as a re-describable and reorganizable device. On the other hand, however, linguistic semiosis proceeds to contextual disengagement of the order of signification from that of reference while it instantiates this very proceeding of expansion. On the contrary, as pointed out Roman Jakobson (1985), the two orders 'must' be able to dissociate and distance each other if semiosis aims to reorganize. In this way emerges the possibility of a tendential ungluing of language from the world of reference in favor of a play of void cross-references amid the significations. Poetry, as pointed out Paul Ricoeur (1975), is exactly a way of recovering this risk (or desire) of void circularity to sense and reference.

In short and so to speak, an 'autistic' polarity, which is always in the condition of assuming dominance, is in action within the powerful device of metaoperativity. If we assume this point of view, we can sketch a very general partition of the digital devices and distinguish between those which patronize such an autistic drift (envelope-devices) and those which contrast it, either directly or indirectly (environment-devices) (Casetti, 2018; Cecchi, Feyles& Montani, 2018). The most obvious example of the first type of device is that of videogames engendering addiction. Much more interesting is the example that I would like to propose for the second type, also because it presents itself as a successful case of exaptation, at least for certain aspects. I think of the ascertained wellness that a videogame like *Pokémon-go* brought to some autistic kids, who discovered that, thanks to the technically re-mediated distance that derived from it, not only they had no more fear of leaving home, but also desired to do that on autism and digital subsidy (Suskind, 2014). More generally, here emerges the question of social robotics (Dumouchel & Damiano, 2019), as well as the interactive (or even coevolutionary) principles to which it is likely to be able to conform in an increasingly clear way. I do not want at all to generalize

the last frame. I only aim to propose it as an example of the criteria which we should perhaps resolve to adopt, in order to correctly handle the dialectic of metaoperations to which digital technologies induce us to make increasing room. I will bring another two examples.

It seems that it might happen soon that it will be possible to equip human brains with embodied proxy. This proxy will significantly enhance some performances, like the rapidity of calculation. This brain mutation will be naturally acquired only by a very small number of individuals who will be able to afford the extremely high costs of implantation and maintenance. These would so form a close oligarchy of elected, capable not only of challenging a computer in chess match, but also of having access to the ideation of hyper-performant strategies, for instance in the quickness of financial transactions or, more generally, in networking with diversified systems of control –from the survey of 'rich data' to the real-time check of one's own health conditions, up to the disintermediated connection with the internet of things, and so on. For the very fact of being realistic enough, this perspective has the merit of outlining at least two instructive lacks. The first one is its 'neurocentrism': in the way I presented it, indeed, the technical performance at stake overrates by far the power and autonomy of brain, as well as its most immaterial product: calculation. In fact, it dissociates brain from body, the former being actually the "modest tenant" of the latter, as argued the paleontologist André Leroi-Gourhan (1993). Without body, no calculation would have ever been originally available to brain (Malafouris, 2013). On the contrary, we can suppose that, outside the presupposition of 'coevolutionary processes' successfully synchronized with the whole body and the parallel transformations in the human forms of life, the mere implantation of elements of Artificial Intelligence in the synaptic web of a single individual would result into an evolutionary flop, together with the certain madness of the holder of this kind of brain (Pennisi, 2018; Carbone, 2020). It immediately follows the second lack of this perspective, which consists in

'solipsism': the success of technical re-embodiment primarily depends indeed on the fact that it is shared. Elon Musk's chip, in short, would fully be part of the class of envelope-devices, those which lower worldly contingency.

We are likely to say then that we must privilege the three aspects of the diffused re-embodiment, not localized in the brain or elsewhere, the cooperation and the end of the self-referential escalation in any diagnosis of the present state in the (fatal) increase of technical mediations at disposal of our bodies and intersubjective relationships. Here it is the second example: while the experiment of *Google Glass*, the 'smart' glasses designed some years ago, has substantially failed (Montani, 2014; 2017; Carbone, 2020), its simplified version destined to sightless people spread and successfully strengthened itself. I mean the app *Be my Eyes*, thanks to which a volunteer interacts with a sightless person and guides its movements within a space the app downloaded on its smartphone can inspect and share, so assuming the function of a delocalized eye, e.g. individuating an object in a room and giving the sightless person instructions to reach it. Evidently, if, unlike *Google Glass*, this device overcame the Darwinian selection in effect inside the web, it happened because it was spontaneously integrated by both users in a sensorimotor activity and constantly shared. From being an envelope close and hostile, the world where the sightless person moves, with the help of the cooperator who sees together with it, has become an environment. A real environment strengthened by a medial device in its actuality and in its contingency.

CONCLUSIONS

What philosophy assumed, often in an undetermined way, as an ability of distancing that in many aspects would be constitutive of human experience in general can be reformulated in a more rigorous and perspicuous way at the very moment when the government of this 'faculty' received a tech-

nological delegation according to a form, which appeared coactive and degrading to many people. The experiments with Japanese macaques conducted by Atsushi Iriki and his team help us actualize this need of rigor and perspicuity. They are indeed 'rigorous' experiments as far as they let us: i. outline in the phenomenon of distancing the emergence of a 'metaoperative' component inside the agency of a body that had not it before; ii. ascertain that this emergence considerably extends not only the control this body has on space, but also the ability of exerting effective and creative strategies. Furthermore, they are 'perspicuous' experiments as far as they highlight a 'non-extrinsic link' between the behavior of an acting integrated body and the intervention of a technological mediation. In particular, it appears that a technical device is able to mediate a process of disembodiment to which follows a feedback capable of implementing a general reorganization of that body's agency within an environment richer in contingency, with which one can come 'in touch'. The conclusions the apology sketched here can draw are significant.

Firstly, we must suppose that, during the evolution, the human being's 'embodied imagination' spontaneously got the metaoperative and recursive competence the macaque produced –spontaneously too: let us not forget this qualifying point– only thanks to a particularly unnatural mediation, which was coercive for its behavioral standards. In this way, the human being's embodied imagination shows of having got huge adaptive advantages from its intrinsic ability of extending into a technology. Thanks to this process the human body has never stopped taking new distances from itself and from the world. This distancing again and again relaunched, belongs to the very 'nature' of the human body. Articulate language, when it emerged, was only the most spectacular of those procedures of distancing.

Secondly, we must outline how far the specific phenomenon of the technical externalization is determining here. It is indeed a process of which we would fail to grasp the essence if we were to intend it according to Chomsky's

model of a competence that is just performed. It is rather true that attention must focus on the 'feedback' that the level of the externalized performance never stops exerting on the mode of being of the competence itself. In this case, it is highlighted by the fact that this feedback can be realized only through the dialectical opposition described in the third and fourth chapters. Thirdly, this allows us to clarify the object of the present apology. The latter is not concerned with merits and deficiencies of distancing –or transcendence, philosophically speaking– 'as such'. It is rather concerned with the ability of 'reorganizing the world of contingency' –the world we are 'in touch' with –when distancing itself is delegated to a technology in a more intensive or even prescriptive way. From this point of view, I indicated three general criteria which can allows us to prevent our environment from reducing its contingency: 1. The diffused –and not localized, in the brain or elsewhere– re-embodiment; 2. The increase and requalification of cooperativity and its forms; 3. The constant critical vigilance over the self-referential directories the feedbacks of the technological extensions always make viable.

NOTES

1 Remark that in Latin 'contigent' means '*quod mihi contingit*': what touches me, what concerns me.

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NETWORKED SCREENS
TOPOLOGIES
OF DISTANCE
AND MEDIA REGIME
OF IMMUNIZATION

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WINDOW PHOTOGRAPHY
MEDIA OF IMMUNIZATION
SMALL SCREENS
COVID-19

Media theory usually foregrounds transmission, storage, and processing as elementary media operations, neglecting the role media play in protecting living beings. However, the biopolitical and discursive reactions to the spread of Covid-19 have evidenced how protection and establishing safe distances can be implicated in the media process of transmission, which viral infection is, basically. Taking the window photos reacting to the pandemic-induced isolation in early 2020 as a starting point, I propose to examine the dynamics of distance and proximity by focusing on the protective functionalities of small networked screens. Today, networked screens such as laptops, tablets, smartphones, or television dominate our everyday and personal media use. Their omnipresence and our permanent attachment to them became even stronger during the Corona crisis, giving the screens new political significance. Placed between the self and the world, screens are able to co-create protective topologies of distance and, thus, to fulfill immunitary functions in addition to their communicative and connective ones. In order to elaborate on this double operativity, I will draw on etymological, media archaeological, and media theoretical understandings of screens as protective 'shields', 'barriers', and 'filters' and combine them with the philosophical perspectives on immunization developed by Roberto Esposito and Peter Sloterdijk.

INTRODUCTION

Looking directly into the camera, gazing into the distance absorbed in thought, alone or shoulder to shoulder with relatives —Bianca Taube's photo series *Fenstergast* (Window Guest) portrays single persons, couples, and families in domestic confinement during the months of Corona lockdown in early 2020. The Munich photographer records moments and impressions of people located behind the windows of their flats, corridors, kitchens, or living rooms —preferably on the first floor. In these photos, the windows stand out. They are not only marked by wooden or synthetic frames, but also by the reflections on the pane. They function as fragile barriers between the photographer situated outside in front of the houses and the people inside. While most of the pictures are taken in head or shoulder close-ups establishing aesthetic proximity, the windows highlight the in-between space and negotiate the distance between the photographer and her subjects. In these images, the windows fulfill the task of differentiating between inside and outside, while simultaneously collapsing the distinction by means of playful reflections of the photographic off. Hoping to exhibit her photos in a gallery one day, Bianca Taube posts them on her *Instagram* profile *erstesahne_blog* for now. The 'outside-in' aesthetic of her window pictures corresponds to and inverses the 'inside-out' aesthetics of numerous windows pictures taken with smartphones and populating *Instagram* under hashtags such as #viennafrommywindow, #parisfrommywindow, #stuttgartfrommywindow or #parisjetaime. Several European cities initiated comparable photo projects inviting people to record their city in the months of lockdown. While Bianca Taube photographs people inside, the 'from-my-window'-initiatives feature outside views that the city population have from their homes and roofs —mostly in long or medium shots. Although the views offered vary considerably depending on the streets, districts, and cities, the window as a threshold between the domestic photographer and her/his subjects is

again a prominent and recurrent motif in these and related hashtags. Positioned in the middle between inside and outside, at the front or back of the photographic composition, open or closed windows serve as an internal frame in the photos. If the opposite side is a windowed façade, the images unfold a Hitchcock-esque aesthetic, measuring the distance between two window views intertwined in an asymmetrical play of gazes. In his photo series *Covid-19-Isolation* (2020) presented on the *Instagram* page *chrisfernhello*, the London-based photographer Chris Fernandez consequently cultivates this Hitchcock-esque composition and strengthens the cinematic look by taking the pictures at night. Photographing his neighbors and later other people, the photos display dramatically illuminated windows –functioning as cinematic screens–, which show and conceal the inhabitants on the other side and address the viewers once more as (photo-) cinematic voyeurs.

The Corona crisis has produced diverse iconography to date. Circulated on television news, (online) magazines, or social media, the imagery ranges from curves and diagrams to masks, empty city streets, talking heads using video conferencing apps, and, last but not least, windows. The window photos on *Instagram* are just one instance of newly emerged or reemerged window practices, which include not only photographing them but also window talking, making music from a balcony, or using windows as a platform for displaying children's drawings (Vollmuth, 2020). These social and media practices tell of our desire to break out of the isolation during the time of domestic confinement, to reconnect, and to bring the world closer again. While making and sharing window photos on social media is an extension of these practices evolved during the pandemic, the window pics are also meditations on the very screens they appear on. Besides being an old metaphor of the image, windows also offer metaphors for thinking screens, which traditionally emphasize the possibility of unobstructed, direct access to reality and knowledge, but also a mode of distant privileged observation (Casetti,

2015, pp. 157-158; Elsaesser, & Hagener, 2007, pp. 24-26). Especially photos taken inside and showing open windows suggest the possibility of direct access to the world; however, slightly shifting the realistic undertones of the metaphor towards the phatic functions of seeking and establishing social contact in the midst of isolation. When looking at these pictures on our smartphones, laptops, or tablets, we are looking through the eyes of these photographers, through their windows at other windows. Window photos seem to literally turn our digital screens into apertures, collapsing the motifs into the sites of their consumption and –in the case of smartphone shots– also of their production. As such, they not only bear witness to the intensification of networked communication we could observe in the last months. Rather, we can read the window pictures as allegories of our current confinement in the mediated apartment glued to digital screens within.

Today, small networked screens such as laptops, tablets, smartphones, or television especially dominate our everyday and personal media use. Situated within reach of the body or handheld, they afford direct interaction and enable intimate and individualized manipulation –either via tactile surfaces or via their "complementary media" such as remote control, mouse, or keyboard (Engell, 2003, p. 75). Small screens are smart, often portable, responsive, and sustain a relationship not only with the user, but also to each other. They mediate our knowledge and access to the world, connect us with others, represent and display audiovisual material, or help to phatically affirm our very being (Sobchack, 2016, p. 158) –to which the windowed *Instagram* aesthetics, of course, attest. The omnipresence of screens and our permanent attachment to them have become even stronger during the Corona crisis. For many, their private and professional lives took place on screens and still do to a great extent, increasing media consumption and digital communication from safe distances as a result of the politics of distancing. For in many European countries, Corona politics is first and foremost a politics of spatial relations. People are urged to keep a distance

from each other. This applies not only to unknown persons, acquaintances, friends, or colleagues, but at times of lockdown even to family members. The imperative of distancing regulates our movements in public space and also extends to the private sphere: retreat into the private becomes a social strategy of distancing in itself –even at the risk of isolation–, thus delegating the task of bridging the spatial and social distances to digital screens and networked communication. Of course, these media functions are not specific to our current state of affairs. It is one of the basic assumptions of media theory and media history that media overcome space (Abend, Haupts, & Müller, 2012, pp. 9-11; McLuhan, 1994, pp. 3-8). By no means merely a matter of geography, the collapsing of distance is also associated with establishing communicative, social, and/or aesthetic proximity.

However, the window photos also complicate this account, and the metaphorical tradition of screens they refer to, by accentuating the intermediary position of photographed windows, the materiality of their frames, and even their obstructive operativity, all of which re-introduce distance and unfold ambivalent topologies of being together apart. These images remind us that if distance is one of the main issues of media, as Sybille Krämer emphasizes (2015, p. 23), their functionality cannot be reduced unilaterally to overcoming it. As the transparent and at the same time reflective window glasses perfectly illustrate in the photo series, media not only connect but also separate. Not only can they bring closer what is far away, they can also create gaps and intervals in the first place. Accordingly, the status of networked screens during the pandemic would be inadequately described if we were to focus only on their capacity to be digital windows, cancel distances, and facilitate psycho-social bonding, i.e. by turning physical and social distancing into forms of "distant socializing" (Dickel, 2020, pp. 80-83). Inasmuch as 'social distancing' is an immunitary political strategy dedicated to saving life, our media use needs to be addressed within the discourse of protection. By referring to immunity, I do not mean a biological mecha-

nism of one single body, but rather a modern biopolitical power formation that closely intertwines life and politics and medicalizes the latter (Esposito, 2011, pp. 14-16). One of the principle mechanisms of the modern immunization paradigm is to protect by producing atomized individuals and negating community (Haraway, 1991; Esposito, 2006; 2011; 2013; Sloterdijk, 2016). With it, the question arises whether screens contribute to the anti-communitarian politics of immunization and to what extent they might fulfill protective, and thus, distancing tasks themselves. Because protection, so the hypothesis, requires a minimum of distance and detachment.

Taking the window pictures as a starting point, I would therefore like to reflect on the protective functionalities of networked screens and to ask how they regulate proximity and distance by focusing on the specific situation with which many of us are familiar by now –namely, sitting in front of a networked screen (often alone), communicating from a distance, and being located in a mediated apartment. Thus, before coming back to the 'communitarian' (Sloterdijk, 2016, p. 538) capacities of small screens, I propose to examine their 'immunitarian' ones, paying particular attention to the different topologies involved. For this, I will draw on etymological, media archaeological, and media theoretical understandings of screens as protective 'shields', 'barriers', and 'filters' (Huhtamo, 2006, pp. 34-37; Kress, 2006; Strauven, 2012, pp. 162-171) and combine them with the philosophical perspectives on immunization developed by Roberto Esposito (2006; 2010; 2011; 2013) and Peter Sloterdijk (2016).

PROTECTIVE SCREENS

One of the best-known conceptual links between screens and protection probably stems from Siegfried Kracauer's interpretation of the Medusa myth. In the myth, Perseus uses a polished shield made for him by Athena in order to guard himself against the gorgon Medusa, whose unmediated

view would turn everybody into stone. The shield, of course, not only protects but also reflects, serving as a mediating, mirror-like device. In his *Theory of Film*, Kracauer (1960) refers to the myth in order to elaborate on the protective features of the cinema screen, calling it "Athena's polished shield" (p. 305). The mediatization of horrors as 'mirror images' makes real-world threats perceptible without 'petrifying' the viewer in the process. For Kracauer, the shielding function of the screen operates on the representative level and because of what it shows and how. His considerations are associated in particular with literally terrifying images such as war films, documentations of concentration camps, or assassination videos (Avezzù, 2006, p. 37). Here, visual media immunize by controlling stimuli and affects.

Stanley Cavell, on the other hand, touches particularly on topological features that screens display as protective media. In his analyses of the frame in painting, photography, and moving images, Cavell gives an unusual and brief comment on the cinema screen, denying that its primary objective is to be a surface or a support for projection. Instead, he emphasizes its in-between position: "A screen is a barrier. What does the silver screen screen? It screens me from the world it holds –that is, makes me invisible. And it screens that world from me –that is, screens its existence from me" (Cavell, 1979, p. 24). Comparable to the accentuated window glasses in Bianca Taube's work or to visual concealment in Chris Fernandez's photo series, the screens form an obstacle between the spectator and the world and exhibit a distancing and separating operativity. Interestingly, this shielding off works in both directions, relating to both the spectator and the screened world, and implies reciprocity.

Kracauer's and Cavell's reflections, different as they are, refer back to an older meaning of screens. Today, we call projection and display technologies intended to show (audio-) visual material and present information 'screens'. Although this understanding might seem natural, media archeological and etymological studies have recently emphasized that it is

actually quite a late phenomenon: In English, this meaning dates to the early 19th century, used especially for phantasmagoria, later magic lantern projections, and other forms of public display (Huhtamo, 2006, p. 36; Elsaesser, & Hagener, 2007, p. 54). Before, the word screen had a much older meaning of protection, shielding, defense, barrier, or concealment in many European languages (Kress, 2006, p. 203), often implying a topological relationship of being in-between.

Before entering the field of entertainment and spectacle and denoting display and representation surfaces, the English word screen had three broad meanings "sheltering from observation", "providing a partition", and "a coarse rieddle or sieve" (Kress, 2006, p. 200). The first meaning derived from the middle French word *escran*, which referred especially to "a screen to set between one and the fire" (Kress, 2006, p. 200), thus designating an intermediary placed object. In the 16th century, the English word screen usually meant floor-standing fire furniture objects, consisting of a frame and some kind of translucent material, or hand-screens, little decorated objects like fans, which were used for aesthetic pleasure, erotic play, or as fashion items (Huhtamo, 2006, p. 35). In turn, the French *escran* is related to the Old High German *skrank*, which is equivalent to Schranke (barrier, fence, rail, or limit) in today's use (Kress, 2006, p. 200). The aspects of shielding and partitioning are also entailed in the third meaning, which specifies an instrument for separating and filtering coarse elements from fine ones (Kress, 2006, p. 201). In 1900, in the early days of cinema, this use of screen was still very present and especially linked to the coal industry, indicating "screening out the coals by sieves" (Strauven, 2012, p. 170). In Italian, French, and German etymologies, the understanding of protection is also well documented (Casetti, 2015, p. 157; Kress, 2006, pp. 201-202). The contemporary German word *Bildschirm* in particular still clearly provides the sense of protection, shielding, and separation. The word is a compound of image (*Bild*) and shield (*Schirm*) and refers especially to television, computers, and information displays in public space, whereas the

second translation of English screen, namely *Leinwand*, is reserved for cinema and literally signifies the cloth, linen, that the projection surfaces could be made of. The protection implied in the German word is attributed to the early years of radar technology where a *Bildschirm* was meant to shield from dangerous radiation (Elsaesser, & Hagener, 2007, p. 53).

For the most part, screen theory in media studies does not rely on these old meanings and practices. Instead, as Francesco Casetti (2015) has shown, conceptualizations of the screen revolve around metaphors such as window, mirror, frame, or, less frequently, door, which draw attention either to representational transparency, an identificatory relationship, or compositional formalism, respectively (pp. 157-159). Of course, we can find some exceptions, for example Wanda Strauven's (2012) archaeology of early touchable screens arguing for the continuation of older meanings in the early cinema (pp. 162-171), or Giorgio Avezzù's (2016) work on the shared genealogies of the protective and monstrative meanings and traditions of the concept screen. However, it is especially today, in the middle of the Corona crisis, that the protective and shielding functions of the screens become apparent, actualizing the older traditions and meanings. Screens hold a prominent place within our current biopolitically restructured lives and are thus gaining biopolitical purposes themselves. Of course, screens do not lose their capacities to display, to be surfaces for information or images; to act as windows; to provide access, or to establish social or aesthetic proximity; rather, they are gaining additional functionality that brings their protective topology of in-betweenness to the fore.

IN-BETWEENNESS: MEDIATED TOPOLOGIES OF IMMUNIZATION

It is exactly this in-betweenness that is powerfully exhibited in the window pictures by Bianca Taube, Chris Fernandez, and the numerous 'from-my-window'-photographers on

Instagram through carefully positioning the windows within the composition, deploying an aesthetic of internal framing, visual concealment, or literal obstruction by means of curtains, blinds, and overlapping reflections. In this way, these windows, being metaphorical screens, are turned into barriers and shields sheltering people from bodily contact as well as direct looks. Chris Fernandez's photograph 6 from the series *Covid-19-Isolation*, which he posted on *Instagram* in April, is exemplary of such entangling of literal and metaphorical screens, windows, and barriers. The photo shows a flat façade with three windows, subdivided by sashes and thus multiplying the internal framings. In the middle, a half-open window offers an intimate view of a couple lying on a bed in a dark room, illuminated only by a small Macintosh laptop. The screen is situated almost on the same image plane as the window opening, extending its sill and the in-between position. The window frame frames the couple as well as the digital screen, being itself framed by the photographic image and the screen edges of the viewer's displaying device such as a smartphone. The wall, the window frames and sills, together with the depicted and displaying screens, clearly distinguish the inside from the outside while re-connecting both spaces. Being a reflexive image, this photo also superimposes the depicted and actual spaces of private consumption, positioning the *Instagram* user simultaneously on the side of the photographer and the viewing couple, on the inside and outside of the in-between screens –both digital and architectural. More straightforwardly, this window photo of course features an everyday media activity during the imposed domestic confinement –using a networked screen at home.

During the months of lockdown, our networked screen activity took place –and for many still does– mainly in the domestic sphere, unfolding ambivalences of proximity and distance, protection and distant (re-)socializing. If possible, professional interaction and communication shifted to remote work from home, performed mostly via networked screens such as laptops and smartphones. Private communication and

entertainment were relocated into the digital realm, too: video telephony in particular became popular and compensated for personal get-togethers of all kinds, while intensifying well-established routines of writing messages, sharing images, making calls, playing games, watching news, series, or films. Even portable screens such as mobile phones or the laptop in Fernandez's photo, which typically traverse public and private spheres or help to create provisory private bubbles in public spaces (Beugnet, 2013, pp. 199-202; Casetti, 2015, p. 48; McCarthy, 2001, pp.121-122), have become more limited in their mobile use. Together with their users, they have been immobilized in the home. This applies not only to the phases of lockdown, which lasted from mid-March to the beginning of May in Germany, for example, but also afterwards giving way to a progressive relaxing of control[1]. In educational institutions such as schools and universities, home office, distant teaching, and domestic isolation were still in effect months later, and are still valid for many European universities until today.

The dynamics of distance and proximity, which networked screens co-mediate by being in-between, are at the core of the immunitary paradigm and can therefore help us to grasp the ambivalent functionalities of media. Discourses of immunity are organized by topological relationships and boundaries between inside and outside, self and non-self and, thus, negotiate questions of contagious contact and its avoidance. The pandemic virality of Covid-19 can be described in terms of a mediality of closeness. Involving a process of transmission, biological viruses raise basic questions of mediality (Krämer, 2015, p. 96). As Sybille Krämer notes, infection is a genuinely physical process in which the distance between a source of infection and a host is spanned (Krämer, 2015, p. 96). The body is contaminated and infected by close contact. Therefore, infection can be regarded as "transmission through contact", offering a materialist model of mediality (Krämer, 2015, p. 96). In this regard, protection means, among other things, the interruption of transmission and the maintenance of distance. It aims at preventing contact,

contagion, contamination, and mixing, all of which are etymologically and conceptually related to the sense of touch, the sense of proximity par excellence (Derrida, 2005, p. 68; Esposito, 2013, p. 59). Everything that stands in-between and helps to secure the boundary between self and non-self, body and virus may serve as a medium of protection.

Window pictures exhibit and reflect on the mediality of in-betweenness that has started to proliferate and to dominate our everyday activities in many forms. Many European countries currently deploy all kinds of protective intermediary devices materializing the politics of distancing: masks preventing aerosols from spreading; plastic walls placed in supermarkets, libraries, and public institutions; distance markers on the floors; apartment walls, and last but not least networked screens in private spaces. In all of these cases, something is placed between the self and the other and acts as a literal or metaphorical shield: be it an object or simply space. Similar to Cavell's brief observation, these screen-shields exhibit a reciprocity of protection. By putting a digital, plastic, textile, or a glass screen between the me and the world, it is not only the self who is protected, but also the others. Under conditions of mutual endangerment, maintaining distance, avoiding physical contact, using all kinds of protective shields, which might have been experienced as asocial conduct before, can even be regarded as cooperative behavior, a form of relating to each other, and showing consideration (Alkemeyer, & Bröskamp, 2020, p. 75).

However, the reciprocity of screening can only partially be explained as an expression of solidarity and social thoughtfulness, which are of course involved, too. More than that, the need to be protected from each other reveals that sociality is deemed the main source of risk and danger. According to Roberto Esposito, this constitutes the crucial ambivalence of the modern immunization paradigm. Following Foucault's work on biopower (2004), Esposito examines the rise of modern biopolitics and situates immunity at the intersection of life and politics (2006, p. 24). Instead of deploying the mili-

tarized logics of friend and enemy that characterized many immunity discourses of the 20th century (Esposito, 2011, pp. 153-158; Haraway, 1991, p. 211, 224), Esposito foregrounds the dialectic relationship immunity forms with community by interrelating the biological meaning of protection with the juridical meaning of exception. Both terms derive from *munus*, which means "gift", "duty", or "obligation" (Esposito, 2013, pp. 58-59). Esposito draws on these different meanings at the same time, in order to conceptualize community in an anti-identitarian, anti-possessive way. In his account, the common is not what is owned and proper, but actually begins where property and gain end (Esposito, 2010, p. 3). The community derives from the debt, the shared obligation to give the gift, i.e. munus, de-emphasizing taking or the reciprocity of giving as the foundation of the social association (Esposito, 2010, pp. 5-6). Being its negative, immunity is a mechanism releasing the individual from this obligation towards others: "Immune is he or she who breaks the circuit of social circulation by placing himself or herself outside it" (Esposito, 2013, p. 59).

Importantly, the common itself represents the risk to which modern immunity dispositifs respond (Esposito, 2011, p. 5; 2010, p. 12). For the members, this form of community, resting upon alterity and the improper, necessarily includes exposure to an outside, always risking the possibility of self-dissolution and the loss of boundaries (Esposito, 2010, p. 8). Therefore, modern immunization is installed to form a "defense against the expropriating features of *communitas*"; it protects against risky contact, relationality, and being in common (Esposito, 2006, p. 27). The protective mechanism of individualization structurally connects immunity and modernity: "Behind the self-legitimating account of modern immunization, the real biopolitical function that modern individualism perform is made clear. Presented as the discovery and the implementation of the subject's autonomy, individualism in reality functions as the immunitary ideologeme through which modern sovereignty implements the protection of life" (Esposito, 2006, p. 34).

This individualizing, de-socializing function is one of the problematic impacts of immunization, and it is where Esposito's analysis of biopolitics differs significantly from Foucault's conception. This negativity helps to reflect on the implications of current Corona politics and the protective role of the media. The governmental strategies reveal that it is precisely the sociality and togetherness that become the source of danger of infection and contagion, leading to politics of demarcation, individualization, and even the isolation of subjects within public and private spheres. Especially the measures of lockdown and domestic confinement, as aggravated politics of distancing and restricting contact, make the anti-communitary dimensions of protection obvious. The private apartment in particular has become a milieu and a sphere of isolation, privatization, and individualization.

Located in such protective milieus, the networked screens by means of which we communicate with other people visually, verbally, or in writing, therefore fulfill immunitarian functions before communitarian ones, giving their personalized and individualized contemporary use a new political significance: Communicating via video conference tools, sharing images on social media, or chatting via *WhatsApp* during the Corona crisis, at least in the middle of the lockdown, cannot be experienced only as collapsing space. This is because the omnipresent sense of jeopardy, insecurity, boredom, or loneliness deeply affects the communicative and community-building situation, emphasizing the risk of the social, the need to protect the self and the others, as well as the immunitary logic of *pharmakon*: by protecting life, biopolitics end up negating life, sacrificing qualified forms of life, by reducing it to simple survival and bare existence (Esposito, 2013, p. 61). With this, the conditions of social distancing and remoteness become even more marked—as overtly mediated by the window pictures. Placed between us, the screens screen us from each other while (re)connecting us. These strategies, however, remind us that immunity, being an exemption or exception, also implies privileges and their unequal distribution:

Nursing staff, delivery men, or shop assistants, for example, are not able to withdraw from close contact. Homeless people cannot retreat into the protective privacy of the home, while the privilege of interacting with the world from safe mediated distances also deepens the structural inequalities of the digital divide. While for some digital inequalities mean the impossibility of participating and accessing the common, for others it might mean increased exposure to platforms as economic actors, granting those platforms even more access to our "behavioral data" (Zuboff, 2019, p. 70) or letting them enclose us in the algorithmic filter bubbles (Pariser, 2011), which, by filtering out possible symbolic incoherencies and disturbances, alternative opinions and world views, may act as symbolic immunization and ideological insulation.

CO-ISOLATION: BEING TOGETHER APART

In the window images, the sense of individualization and isolation is provided in different ways: In 'from-my-window'-photos, it is evoked by deserted apartments, empty unmade beds, or single persons sitting or standing beside or in front of a window. Many of Chris Fernandez's photos employ the same strategy. Mostly, the windows isolate a single person captured from the outside, singularizing him/her by an enclosing darkness of the night. The window-screens in his pictures partition the social and physical space. Although Bianca Taube's pictures also show many individuals, they seem to de-emphasize isolation and loneliness. By placing the bodies in spatial and aesthetic proximity and by depicting them in close framings separated by glass, they instead reinforce the sense of physical fragility and necessity of mutual protection. Often, the reflections interweaving the outside and inside spaces turn the persons into ghostly, oddly displaced apparitions. Moreover, the window images not only express a socio-topology structured by the logics of protective remoteness, but themselves result from it. They are taken under the

conditions of isolation and by means of in-between screens. Especially the 'from-my-window'-images, shot at home and directed towards the outdoors, deictically highlight the positionality of the photographers, being isolated inside and dependent on small networked screens for recording and sharing their views as well as for communication in general. This way, they not only convey a topology of in-betweenness structured by screens/windows, but also of embeddedness in dwellings that serve as "protective milieus" (Cuntz, 2020) by enclosing and surrounding. Using a networked screen in the domestic sphere, therefore, implies two topologies nested into each other: in-betweenness and environment. It is by analyzing this nesting that we can more fully account for the distant sociality mediated by networked screen media, combining their immunitary and communitary functions.

It is worth noting that both topologies involve different degrees of shielding: Like any protective environment, the home is characterized by the dialectic of refuge and confinement (Cuntz, 2020, p. 176). Protective milieus always run the risk of turning into an unbearable restriction and perverting their effect (Cuntz, 2020, p. 173, 176). The lockout of the potentially threatening world becomes self-imprisonment (Cuntz, 2020, p. 173, 176). Media creating a topology of in-betweenness, such as screens, are more permeable, more flexible, and more punctual and partial in their effects than protective surroundings. Screens do not seal, but rather filter, i.e. hold at a fragile distance or oscillate between shielding off and letting in alterity, thus helping to mitigate the effects of encompassing milieus. Aisthetically, this alleviating modulation can be described by the dynamics between veiling and revealing, deployed in many 'from-my-window'-photos. Such photos hide identities and conceal the bodies by withdrawing them completely from view, emptying the habitation, showing only parts of the body such as hands or by partially obstructing them with objects placed in front. At the same time, they reveal the formerly hidden by showing private interiors, often carefully staged, prolonging the exhi-

bitionistic impulse of social media, or just by opening vistas. Thus, the metaphorical and real screens are both protective shields and windows: they let the world in, while covering it, and bring it closer, while keeping it at a distance at the same time. However, relating the mechanism of distancing only to the outside world would give a rather partial account of the mitigating effects. In addition to insulation and detachment, politics of distancing also result in an unbearable proximity, which, depending on personal circumstances, can take on many forms–from physical violence to claustrophobization of home, to an experience of mediated violation of privacy. Like the open windows in the photos, digital screens perform both distance-bridging tasks towards the outside, reducing the anti-communitary impact of immunization, the experience of isolation, or loneliness, and distance-creating tasks towards the inside, constituting a psycho-social immunization against too much closeness at home. These aporias of immunitary and communitary tasks reveal sociality as a *pharmakon* itself, i.e. being simultaneously poison and cure in physical and mental terms.

Topologically, we can describe this aporetic structure of sociality by drawing on Sloterdijk's term "co-isolation" (2016, pp. 53-58). Co-isolation or "connected isolation" (p. 537) negotiates the simultaneity of insulation in a protected interior and the partial re-mediation of contact. In his trilogy on Spheres as immunitary and protective interiorities, Sloterdijk explicitly addresses sociality and subjectivity in topological terms (2016, p. 499). Similar to Esposito's diagnosis, he analyzes modern immunization as a process of individualization. Co-isolation is basically a mode of distant socializing that takes place under conditions of immunitary individualization. *Foam*, also the title of the last volume of the trilogy, provides the topological metaphor for this form of protected, mediatized being together apart. In foam, each individual bubble represents a small autonomous cell, a self-contained and protected interiority, which is connected to other monadic cells on several sides in an agglomeration

of shared fragility (Sloterdijk, 2016, pp. 46-52). The cell wall perfectly embodies the simultaneity of connection and separateness expressed by the term co-isolation. While being a boundary and dividing two spheres, it nevertheless belongs to both and constitutes a shared interface (p. 53). Social association is, thus, a form of partitioning –another form of screening. Sloterdijk uses the metaphor of the foam in order to conceptualize a characteristically modern form of sociality, in which older ideological, theological, or cosmological monospheres have lost their integrative value (pp. 58-59). It is a pluralized, acentric sociality of co-isolated, yet flexibly connected and neighboring cells –a conception which is openly neo-monodological in orientation (p. 58).

In Sloterdijk's account, the mediated apartment –a nested topology dominating our experience during the Corona pandemic, especially in phases of lockdown– is the prototypical architectural manifestation of modern immunization and its aporetic form of co-isolated sociality. On the one hand, the modern way of habitation caters to flexibilized individuals and their needs for isolation and protection, turning the home into an immune space of "non-cooperation on the joint work", as Sloterdijk remarks, drawing on Esposito's reading of *immunitas* as the negative of *communitas* (2016, p. 500). Immune spaces originate from boundary-drawing practices and "inclusive exclusivity" (p. 502). Being a defense mechanism, it is "an ignoring machine" materializing "the right to ignore the outside world" (p. 504) and to break off communication. On the other hand, in order to prevent this interiority turning into a closed container, the rejection of the world must be complemented by an openness towards it, which is fulfilled by media technologies re-introducing communicative-communitary elements. Media complete the house, ensuring "that the cell, even though it reliably performs its defensive functions as an insulator, an immune system and a supplier of comfort and distance, still remains a space with world-content" (p. 555). A mediatized residence is, therefore, "a perfectly insulated egosphere and an easily ac-

cessible point in a network of manifold online communities. It is an interface for the darkening of the outside world and for admission to reality on demand" (p. 523).

Read philosophically, Sloterdijk's spherology has rightly been criticized for being prone to affirming an ideology of insulation (Cuntz, 2020, p. 173, 187) and one that might unwillingly support reactionary fears of the other and phantasies of the own and the pure (Sutherland, 2019, pp. 209-212). Read mainly diagnostically, however, it is a helpful tool not only to highlight the political risks involved in dealing with the Corona virus by closing borders, cultural othering, referring to ideas of the healthy public body, impeding democratic protest, or strengthening the cocooning power of digital moguls, but also to grasp the precarity and mediated tensions of being in common vis-à-vis the pandemic. Especially, co-isolation quite accurately describes the nested socio-topologies elicited by the in-betweenness of screens within the domestic enclosure. However, networked screens are not only implied by the 'co' in the co-isolation, as Sloterdijk's arguments on the primarily communitary functions of media might imply. Instead, their role is better understood by the shared walls in the foam agglomerate –so perfectly metaphorized by architecturally embedded windows in the Corona photography. Within the socio-topology of immunization, media are such walls simultaneously performing operations of separating and connecting, distancing and approximating. Being a kind of "psychic ventilation", they regulate the degree of communitary openness and immunitary insulation (Sloterdijk, 2016, p. 538), also being able to create insulations and ego-spheres in the first place (which might be regarded one of the outcomes of the personalized content and feeds we consume on small screens). Besides being regulative in this way, the foam walls, like the glass in Bianca Taube's photos, also give both the individual and the common a strong sense of fragility –which, within the topology of co-isolation, might subversively mark the limits of current individualistic as well as monospheric protectionism. While Sloterdijk tends to un-

derstand environment or the outside of the self as mainly toxic, reducing immunity to a defensive mechanism, the co-fragility and shared topologies of foams undermine the notion of an impenetrable micro- or macrospherological self.

CONCLUSION

Every society expresses a need for protection, as Esposito and Sloterdijk both acknowledge. However, they also emphasize that organizing all of societal, political, and cultural life around protection is a quite recent, modern phenomenon giving immunization a paradigmatic and systematic character and leading to historically specific aporias. Both see the loss of a solidary community as well as perverting the protection of life into its destruction as the main risks and paradoxes of excessive and structurally individualizing immunization. During the Corona crisis, the priority of protecting each single life as a political raison d'être becomes apparent and, with it, the mediality involved in the process. The transmission implied by the Covid-19 virus raises questions of both the mediality of closeness on the one side, and protection and mediating distance on the other. Therefore, it invites us to think about the role media play within the modern "immunitary *dispositif*" (Esposio, 2013, p. 59) and to analyze protection as an elementary media operation. By examining the immunitary media functions first, I have shown the broader political implications of our highly individualized and cocooning contemporary small screen media. In doing so, I have offered a mainly topological and screenological examination, highlighting the protective, distancing in-betweenness of screens and their dynamics of co-isolation. Advancing further research on immunitary media regimes, however, might also mean including politics of representation and affective dimensions such as media-induced fear, as well as interrogating newer biological accounts of the immune system that de-emphasize the antagonistic, defense-oriented,

virologic paradigms omnipresent in the current dispositif of immunization and, therefore, might offer new philosophical and political models (Mutsaers, 2016, pp. 48-56).

NOTES

1 While I am writing these sentences, several European countries are imposing a second lockdown.
2 I am grateful to Sven Grampp for drawing my attention to the distinction between reading Sloterdijk's trilogy in philosophical, or, alternatively, in historical/diagnostic terms.

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HUMAN SCREENS
BODIES, MEDIA AND THE MEANING OF VIOLENCE

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HUMAN SCREENS
HUMAN SHIELDS
BODIES
MEDIA
VIOLENCE

From phalanx-fighting, through the use of multiple distance weapons, to the development of airpower and drone warfare in the last century, the history of armed conflicts is one of increasing distance from which people are killed, but also one of increasing weaponization of the human body. Starting from World War I, innocent civilians who were used as human shields to protect military targets in violation of the laws of war were often defined as 'human screens'.

The notion of human screen, I argue in this article, is not merely a synonym for human shield. In fact, the human screen is not only a human weapon. As I show in this archaeological exploration, the process of transformation of the human body into a screen translates also into the development of a new media technology that both allows to modulate the use of lethal force and shape the perception and political meaning of violence in the battlefield.

There is no war, then, without representation,
no sophisticated weaponry without psychological mystification.
P. Virilio, 1989

The battlespace is a space of struggle where different forms of mediation take place. This is because war is also the art of organising and managing various constitutive components of the battlespace (humans, nature, weapons, optical and sensing devices, etc.) in order to regulate the use of lethal force, and its perception. We could say, then, to paraphrase Paul Virilio, that there is no war and no space of war without mediation. Modulating distance and proximity among the different actors and components that populate the battlefield is one of the crucial acts of mediation in war. It shapes the way in which we see and make sense of violence. Usually human beings are in control of the technologies which configure these processes of modulation and mediation. But there are instances in which humans themselves become those very technologies.

Like when Germany invaded Belgium in 1914, at the beginning of World War I, and perfectioned a series of warfare practices which resulted in the coercive involvement of the Belgian civilians in the hostilities, transforming them into technologies of military mediation.

As the German military conquered new territory and expanded its empire, it forced many Belgian civilians to march in front of its soldiers, sometimes for entire days. The hostages were made clearly visible to the enemy and were told that they "were to have a taste of Belgian machine-gun fire". When "at a distance of 150 or 200 yards" the Germans would fire at the Belgian troops which in turn "opened fire from the flanks only, to avoid hitting their people" (Belgium. Commission d'enquête sur la violation des règles du droit des gens, des lois et des coutumes de la guerre, 1915, p. 54). In other instances, the Belgian troops would completely cease their fire. The use of human shields as a tool of deterrence worked.

A year after the invasion, an ad hoc Belgian governmental commission published one of the first governmental reports in history that used international law to assess the crimes committed in the battlefield. The issue of the systematic use of civilians as a protective buffer to conquer new territory received meticulous attention in the report.

The Belgian government defined the practice of forcing its soldiers to fire on Belgian fellow citizens while these were constrained to "serve as a living screen" by the Germans as the "most painful moral violence" (Belgium, 1915, p. xvii). To be sure, the use of human shields did not start in Belgium during World War I.

The practice was common to other conflicts (Gordon, & Perugini, 2020). However, whereas in previous conflicts –from the Chinese wars against the Mongols, through the Crusades, to the Middle Age and modern era deployment of hostages as buffers– the use of human shields was relatively sporadic, in Belgium it became unprecedentedly systematic, yard after yard.

Even more significantly, Belgium was one of the first instances in which the mobilisation of living human bodies to defend a military target was defined as an act of 'screening'. This idea of screening through the human body in war is not just a metaphor or a synonym for shielding. The notion of screen opens to a better understanding of the relationship between war and media.

Interrogating the human shield as a human screen is in fact crucial to understand how what is usually called human shield functions simultaneously as a weapon and a media technology. It allows to address the central question of this short archaeological essay: namely the question of how the distance of war –from the '150 or 200 yards' from which the Germans shot their targets, to the thousands of kilometres from which contemporary drones can kill– has historically come to be mediated by the figure of the living human screen, and how this peculiar inter-

vention of the human body in the battlespace has transformed the perceptual field of war, opening to multiple interpretations of the meaning of violence in the battlefield.

Indeed, what ultimately this peculiar kind of screening allowed the Germans to do was to mediate and calibrate the distance from which they could target their enemies. And while doing so, the screen of humans behind which they hid reshaped the field of perception in the battlefield.

Fig. 1 George Bellows, T*he barricade*, 1918. Birmingham Museum of Art.

Like optical screens, while they concealed the German troops and allowed them to advance, the bodies of the Belgian citizens used as weapons of protection also projected an image. An image that attributed a clear ethical meaning to the violence of war, like that of *The barricade* (Figure 1), the painting realised by the American realist George Bellows in 1918 to condemn the brutality of German human screening during the invasion of Belgium. This is not surprising if we think that screens have historically emerged as the result of this dialectical relationship between concealment and pro-

jection, invisibility and visibility, occlusion from the gaze and exposure of an image. As Rüdiger Campe has highlighted in his genealogical investigation of the notion of screen, the appearance of optical screens as technologies which allow to project and see can be better understood by tracing their relationship with a multiplicity of social forms of protection and concealment (Campe, 2019). In the early modern world, Campe explains, the term screen entertains an intimate relation with the space of war (screen as a refuge for the warrior from physical danger); with the space of hunting (screen as a protective device allowing hunters to hunt and kill their preys safely); and with the space of socio-legal relations (legal screening as a form of protection negotiated between social parties). A *schirm*, a screen –interchangeably used in German with that of *schild* (shield)– is a device that mediates the distance between the constitutive elements of different spaces: military, ludic, and legal. And while protecting people across these different social spaces, screens also projected and allowed to see something. So, for instance, in the military realm screens provided a refuge while allowing warriors to re-organise their warfare tactics and strategies. In the ludic realm, while protecting hunters, the hunting screening devices used in the early modern era also allowed to see, surveil, and target the preys (Figure 2).

Or, in the legal realm, in the case of the relationship between lords and clients, it is only through the screening provided by the lords to their clients that the latter appeared, were made politically present, and acquired a legal status in social space. It is in parallel with these processes that the *schirm* emerges also as the optical device that projects and generates a shape, an image.

BECOMING HUMAN SCREENS

Human screens present similar patterns to any screens, but also very important peculiarities which make them the

Fig. 2 Detroit Publishing Co., *Shooting from hunters' blind by shore*, 1900-1920. Library of the Congress. Retrieved from https://www.loc.gov/item/2016816199/.

very specific political technologies at the centre of this brief archaeological exploration. Like any other kind of body or surface that become screens, humans are not intrinsically screens. To put it with Francesco Casetti, they "become screens" as the result of other processes of mediation (Casetti, 2019, pp. 27-50; see also Carbone, 2016).

In order to transform a wall into a screen, a series of spatial and technological arrangements and mediations need to be in place. Similarly, a living person can become and function as a human screen only as a result of certain conditions and spatial arrangements. War needs to happen at a certain distance which can be modulated by the human screen. Certain weapons and technologies of killing need to be used. Crucially, war must take place in the proximity of 'people' who can 'become' screens.

This is the fundamental specificity of human screens which determine their political intensity. It is almost an ontological one: what becomes a screen is living people, living bodies in the midst of a war. Life itself is weaponized (Bargu, 2013; Butler, 2015; Gordon, & Perugini, 2015). It is life –the specific value of the life of vulnerable Belgian civilians– which allowed German soldiers to pit them against the machine guns of Belgian soldiers and modulate the distance from which the invading troops could fire. It is life, the specific value of the life of their innocent co-citizens, which prevented the Belgian soldiers from firing against the German soldiers.

This biopolitical element, in turn, reveals another important peculiarity of the process we could call 'becoming human screens'. Like in the case of other screens, human screens appear as a result of the intertwining of multiple historic-political forces. Human screens are assemblages of multiple historical continuities and ruptures. There would not be human screens without the military rupture which progressively led from close to distant warfare, and, later, to vertical aerial bombing. Human screens would not have emerged without the development of new technologies of seeing and killing resulting from this rupture. In turn, and decisively, humans could not have become screens without the emergence of a certain kind of legal and ethical sensibility whereby certain categories of people in the battlefield came to be conceived as non-combatants to be spared and protected, and whose use as war screens was prohibited. In other words, there would not be accusations of human screening without the development of a distinction between humane and inhumane forms of warfare grounded in the idea of protecting lives that are framed as innocent.

Hence, while protecting, human screens project and reveal these historical forces which have coagulated, due to multiple contingencies, into the figure of the human screen. An archaeology of human screens reveals that humans become screen through a twofold modulation process: while modulating the distance in a contingent battlefield, they

also modulate the flow of these historical forces –military, techno-visual, legal, ethical– which cross the body of the humans who are turned into screens. To say it with Richard Grusin's and Jay David Bolter's theory of remediation (Bolter & Grusin, 1999, p. 111), while transforming human bodies into mediation technologies in the midst of armed conflict, human screens 'comment on', reproduce, or refashion these existing military, techno-visual, legal, and ethical forces.

Through this act of remediation, a new layer appears. Certain human lives which are deemed to be spared from the violence of war become sacrificable lives. A sacred and disturbing element emerges in every new human screening configuration. That is why the appearance of human screens is particularly unsettling and has resulted into a complex transformation of the perception of war that we will try to disentangle further in the coming pages.

FROM SCREENS TO HUMAN SCREENS

In Ancient Greece, war was a muscular practice that often took place from a very close distance. In 'phalanx-fighting', men armed with shields (the hoplites) operated together; they "acted as a body, not as individuals or temporary bands. Soldiers in the phalanx fought closely packed together, protecting each others' sides, forming a wall with their shields" (Lendon, 2005, p. 41). They screened each other with the most common defensive weapon utilised across different civilisations: the shield. They moved together, proximate and across small distances, in "mass push" actions (Lendon, 2005, p. 41). Using a shield was an honourable practice and a symbol of heroism. "With your shield or on it", used to intimate the Spartan mother to her warrior son, since abandoning the shield in the battlespace would have constituted an unethical act of cowardice (Lendon, 2005, p. 52).

Aristotle wrote that those who did not "join sides" and "provide the shield" were expelled from the community. In

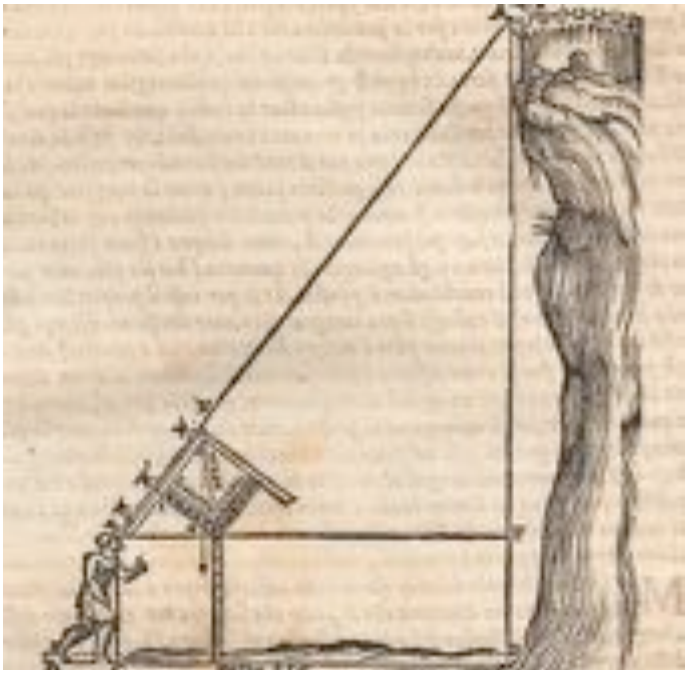
other words, shielding was synonymous with citizenship and, as highlighted by Giorgio Agamben, it sustained the political paradigm of civil war (Agamben, 2015, p. 17).

Similarly, in the Roman Empire the use of 'human walls' of soldiers protected by multiple forms of shields continued to constitute an important warfare technique.

However, in the following centuries, war underwent important changes and the distance between warriors and their military targets progressively increased. The introduction of both new powerful weapons and military strategies mediated this progressive distancing of war. Arrows, archeries and other weapons contributed to this process, until the epochal ruptures produced by the invention of gunpowder and the subsequent introduction of guns, cannons, and artillery. The art of war became more and more the art of calculating and arranging different elements in the space of the battlefield in order to find the good angles of attack and allow distance weapons to accomplish their lethal mission.

At the age of thirteen, Niccolò Tartàglia was injured at his mouth by a French soldier during the 1512 siege of the Ital-

Fig. 3 Tartaglia N., *Metallurgy, Ballistics and Epistemic Instruments*, 1537. The Nova scientia of Niccolò Tartaglia, Edition Open Access, 2013, p. 8.



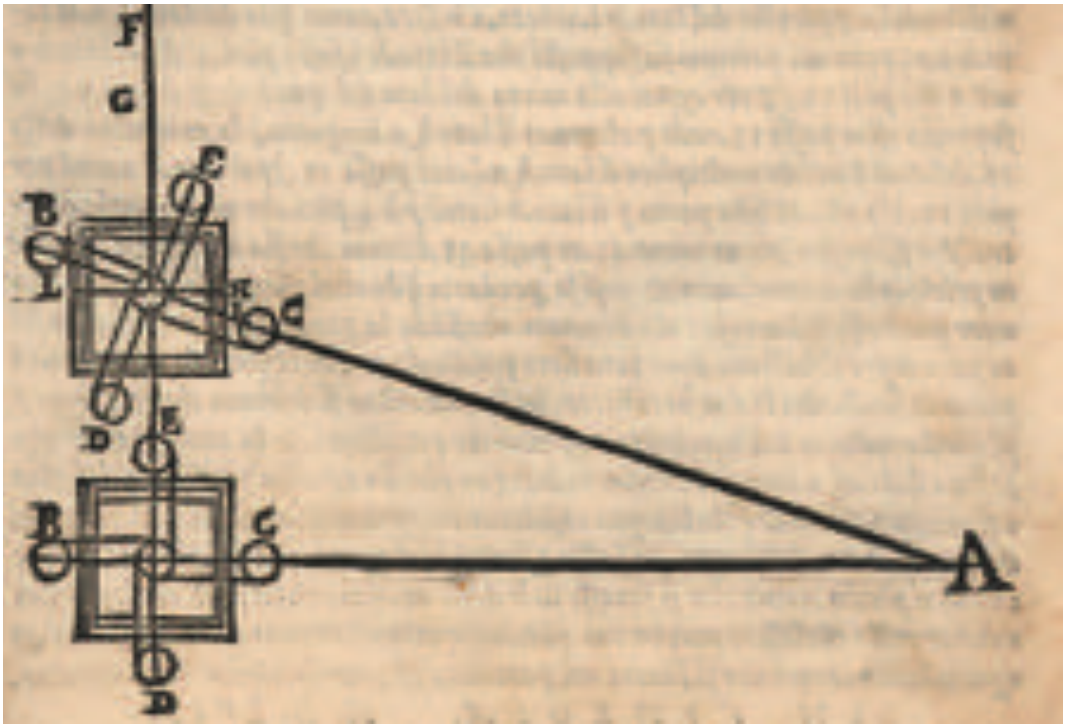


Fig. 4-5 Tartaglia N., *Metallurgy, Ballistics and Epistemic Instruments*, 1537. The Nova scientia of Niccolò Tartaglia, Edition Open Access, 2013, pp. 24, 29.

ian town of Brescia. Two decades later, Tartàglia wrote the *Nova scientia* (the new science), a pioneering ballistic treaty in which this Italian scientist with a strong interest for applied mathematics delineated the basic principles for making the use of artillery projectiles effective, at a certain angle of attack, at "45 degrees over the line of the horizon" (Figure 3). "I would like to manufacture," added Tartàglia in one of his propositions, "an instrument for myself that I can use to level the ground and to analyze it by means of sight and [to calculate] the heights, widths, depths, and diametral and horizontal distances of perceptible objects. This instrument should also be easily usable to investigate the variety of shots of each piece of artillery and, similarly, of each mortar" (in Valleriani, 2013, p. 23) (Figures 4 and 5).

A century after Tartàglia, Europe became a leading international force in the genre of calculations developed by the Italian mathematician and in the art of killing at distance. In highly asymmetrical contexts like colonial wars, distance often translated into the capacity to exterminate the indigenous enemy from a relatively safe position and without face significant losses, and without being seen. "At the end of the 1890s", writes Sven Lindqvist, "the revolution of the rifle was complete. All European infantrymen could now fire lying down without being spotted, in all weathers, fifteen shots in as many seconds at targets up to a distance of a thousand yards" (Lindqvist, 1996, p. 52). Killing at distance meant to be able to see and kill without being seen, a practice that has then become a key paradigm of contemporary warfare (Bräunert, & Malone, 2016; Chamayou, 2015a).

From the Greek shield to the revolution of the rifle, what we can notice is a decrease of the 'muscularity' of war –less and less human walls pushing with their shields, shoulder to shoulder, against their enemies– and an increase of distance that produced a whole new set of calculations and modulations. With the decrease of muscularity and the increase of distance, the human body has acquired new postures, new ways of fighting, and, crucially, it has come to occupy new

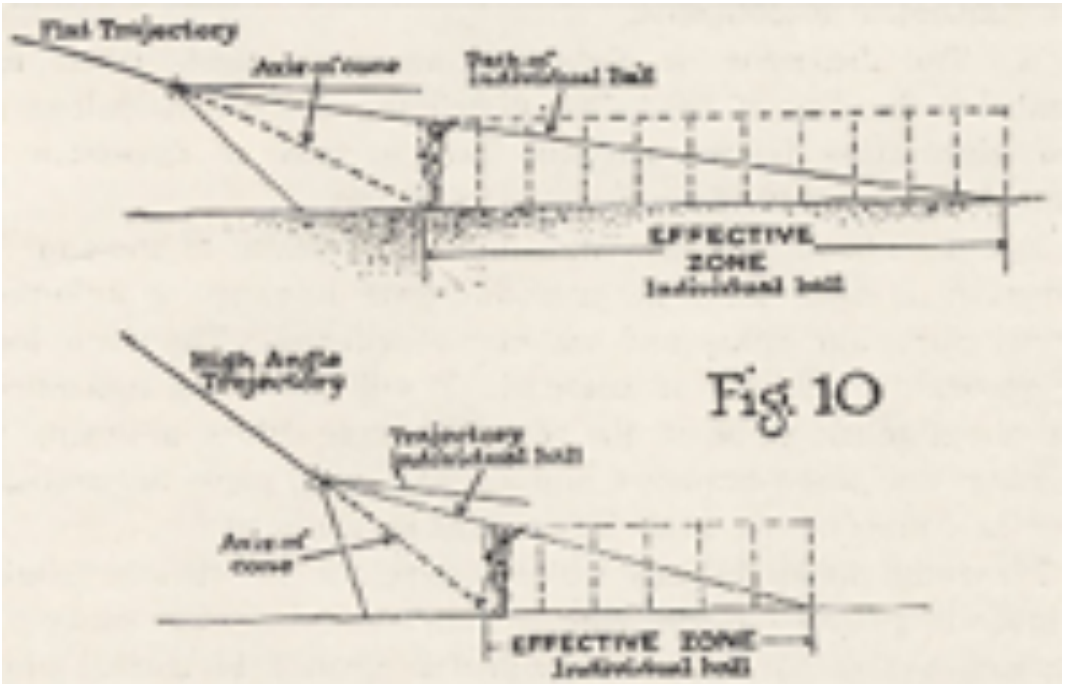


Fig. 6 Beard C., *Fire and Effect in Modern Artillery*, 1919, p. 463. Professional Memoirs, Corps of Engineers, United States Army, and Engineer Department at Large, Vol. 11, No. 58.

positions in the battlefield. This transformation was a fundamental passage in the creation of situations of asymmetric war epitomized by colonial and imperial aggressions, but also in the emergence of a multiplicity of in-between spaces in which human screens would have progressively appeared, remediating in new ways the distance of war.

VERTICAL HUMANITY

The introduction of airpower at the beginning of the Nineteenth century radically increased the capacity to kill at distance. With air bombing, distance became vertical. The aerial view was "enlisted into the practices of war" making the relationship between the art of seeing and the art of killing unprecedentedly complicit. From above, aerial distance translated into a position of rational, scientific, and military control of space (Adey, Whitehead, & Williams, 2013); but

also into a new mode of global government which shaped the international political order (Hippler, 2017).

As a result, aerial bombing exacerbated existing war asymmetries, transforming in particular the colonial and imperial battlefields –in which the inferior human status attributed to the life of the colonized populations allowed the deployment of brutal means of warfare– into huge laboratories of military and visual experimentation.

Every action generates a reaction. The rational dream of making the battlefield completely visible from the air in order to increase the capacity to kill the enemy was met with the enemy's tactic of "making the human body invisible" (Chamayou, 2015, p. 43). This is not surprising if we think that concealment is one of the "weapons of the weak" par excellence, a pillar of the arts of subordinate resistance against the dominants' omnivoyance (Scott, 1990). In colonial and imperial contexts, this struggle between visibility and invisibility at distance develops along racial lines.

During the 1935-1936 colonial invasion, while the Italian military airplanes were carrying out their reconnaissance flights in the Ethiopian skies, Vittorio Mussolini, a soldier-photographer in the colonial army and son of the fascist dictator Benito, took a series of pictures from above. While trying to identify military targets, Vittorio noticed some Ethiopian fighters in the proximity of the medical facilities established by the International Committee of Red Cross to assist the wounded in the battlefield. In his memoir *Voli sulle Ambe* (Flights Over the Amba Mountains), Vittorio tells the story of how the Italian airplanes were met by the fire of Ethiopian rifles coming from behind the white tents hosting medical personnel. The Red Cross facilities, adds Mussolini's son, were bombed and destroyed (Mussolini, 1937).

After the fascist bombing of the Red Cross became a systematic practice, it was brought to the attention of the League of Nations, which discussed the issue and gathered the different version of the fact. On the one hand, in the reports it sent to the League, the Italian government argued

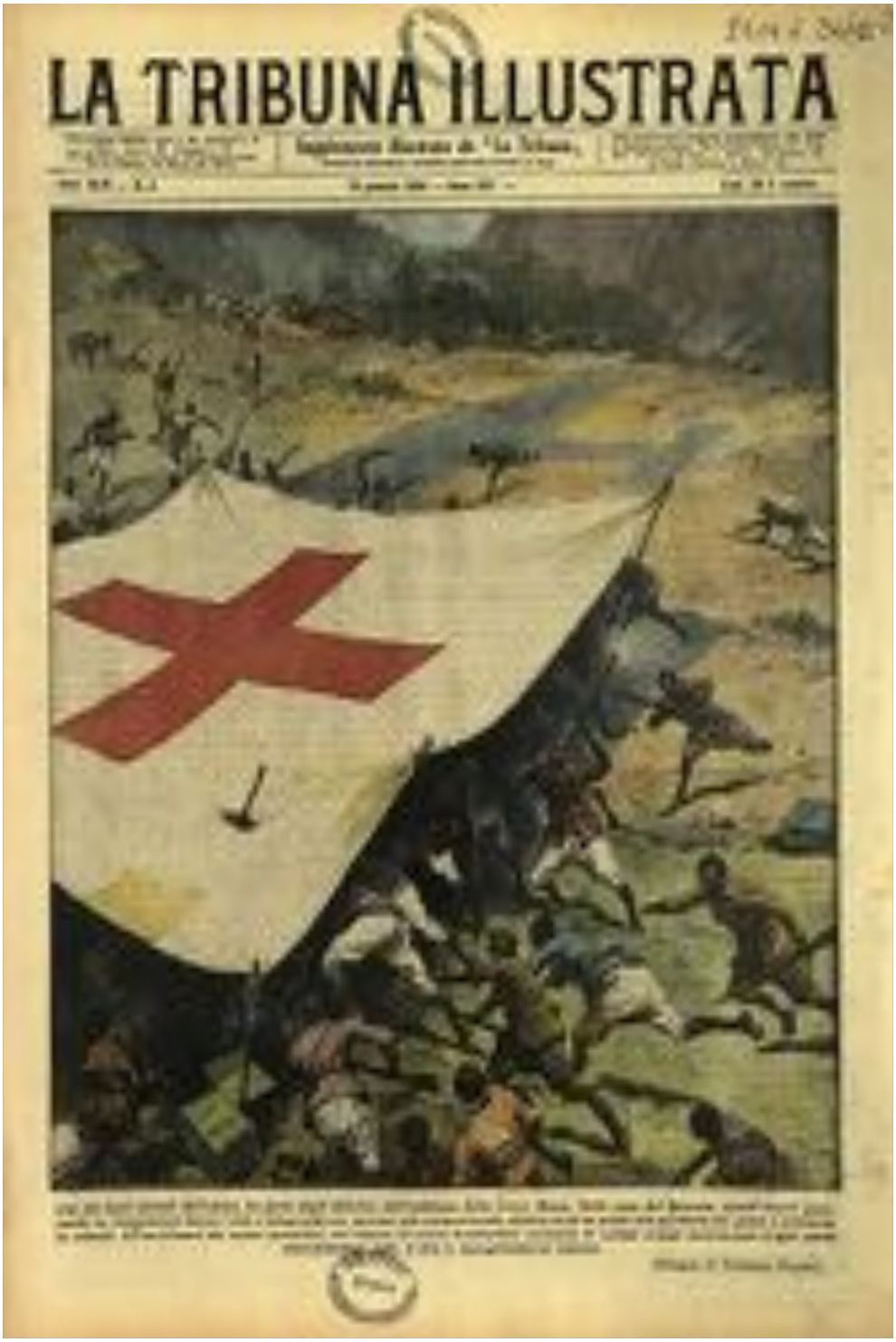
that its military airplanes had been precise and surgical in the choice of their targets, and that it was the treacherous Ethiopian resistance that was to blame for inhumanely screening behind the Red Cross tents and personnel. The fascist press echoed the government and produced a series of images accusing the Ethiopians of abusing and screening behind the Red Cross emblem (Figure 7).

On the other hand, the Ethiopian government denounced the practice at the League of Nations and replied that the Italian actions violated the basic laws of war and were a confirmation of the intrinsic inhumanity of the fascist military (Perugini, & Gordon, 2019). In other words, human screening mediated the understanding of colonial war at vertical distance not only by modulating the use of lethal force in the battlefield, but also by modulating the war of perception and representation in the international political arena.

This war was fought through the mobilization of colonial discourses and anti-colonial counter-discourses of humanity that would have become central to the era of decolonization and anti-imperial struggles which followed the Italo-Ethiopian war. In 1950, when the United States joined the United Nations and intervened militarily against North Korea after it invaded South Korea with the support of the Soviet Union, the Korean Red Army faced a similar accusation to that waged by the Italians against the Ethiopian resistance. In an official statement, the US representatives at the United Nations maintained that: "The aggressor in Korea has tried all manner of tricks to divert the attention of the world from his crime. […] Peaceful villages are used to cover the tanks of the invading army. Civilian dress is used to disguise soldiers of aggression. [The Korean Red Army is] using civilians as a *human screen* [Italics added] for ground forces" (Whiteman, 1968, p. 140).

The Korean Red Army was among the first military formations influenced by Mao Tse-tung theory of people's war. According to Mao, a people's war required the support of the entire population, including civilians. This theory shaped the

Fig. 7 *La Tribuna Illustrata*, January 1936.


LA TRIBUNA ILLUSTRATA

Supplemento illustrato de "La Tribuna"

imagination and practices of many anti-imperial militaries and armed groups in Asia and elsewhere. Like "fishes in the water", the anti-imperial combatants involved in these wars merged with the civilian populations that joined the war effort (Tse-Tung, 2000).

A couple of decades later, the Vietcong guerrilla systematised the Mao inspired people's war in its fight against the US invasion. In Vietnam, the blending and camouflage tactics initially adopted by conventional armies in World War I –including the "widespread techniques of concealment consisting of the use of screens" to hide military activities– were mimicked by the weak (Bousquet, 2018, p. 162). The jungle was used by the Vietcong as a shelter, leading to the US development of herbicidal warfare. And non-combatants living in the hamlets (administrative units) constituting Vietnamese villages offered their support against the invaders and screened the Vietcong.

The Vietnam war was a turning point in the development of the hide and seek tension that has decisively contributed to the proliferation of the idea of human screening. Faced with the Vietcong tactics of going invisible, the US military developed a series of techniques aimed at seeing, sensing, and targeting better the blending guerrilla forces. The dream was to make the enemy "transparent" (Belcher, 2015, p. 129). Thus, a new "fascination with the minutiae of hamlet activity emerged", and GIS allowed to produce computer-generated maps of the Vietnamese administrative units which were used as counterinsurgency tools in order to surveil and detect the intermingling of civilians and combatants (Belcher, 2015, p. 128). The US military also developed the first bombs equipped with television tracking systems, the so called 'smart bombs' (Correll, 2010). In addition, the use of helicopters became widespread, since they allowed for agile movements and for increasing the capacity to "un-screen", since for the Vietcong shooting an helicopter meant to loose "the advantage of cover and concealment and generally bring a devastating return of machine

gun fire and rockets" (Tolson, 1973, p. 149). Finally, leaflets aimed at civilians were dropped on the hamlets framing the Vietcong guerrilla as a perfidious force that "hide in the midst of the people and refuse to meet the government's forces on the battlefield" (Lewy, 1980, p. 69).

These different techniques of visualization and surveillance of the intermingling between guerrilla and civilians were the symptom of the anxiety generated by the Vietcong people's war and its screening practices.

These developments remediated the distances from which the war was fought. And while altering the way the war was fought and the enemy was visualized, they also helped US officials to frame the perception of battlefield –not unlike the Italians in Ethiopia– in legal and ethical terms, as a space in which a precise white air attacker was facing a 'treacherous Oriental Communist' human screening enemy. This argument was repeated by US officials at the beginning of the 1970s, when their military's 'precision bombing' caused the death of hundreds of thousands of Vietnamese and the US came under international scrutiny and criticism. Indeed, the tension between on the one hand supposedly ethical smart bombing that can see everything at distance, and on the other hand unethical human screening –a tension about the ethics and politics of visibility– dominated the international legal debates in the years which followed the war in Vietnam, when anti-colonial movements and colonial and imperial powers hold a series of discussions about the reform of the Geneva Conventions which resulted in the promulgation of the 1977 Additional Protocols (Kinsella, 2011).

In these debates, anti-colonial groups and states defended the 'right to invisibility' and to operate while concealing themselves among their own populations, since liberation was conceived as a collective popular effort. In contrast, colonial and imperial powers tried to defend the right to strike liberation and self-determination groups in spite of their 'terrorist' screening practice, asserting that

targeting these groups would not have violated the basic principles of humanity in warfare, since the enemy's deliberate human screening tactics were to blame for any civilian losses. A new decolonized order was emerging, one whose traces would have persisted until today and whose vertical humanity was mediated by living human bodies framed as screens.

WAITING FOR THE HUMAN SCREEN

Military and legal experts of global powers continued to discuss the question of civilian involvement in war and the development of precision techniques in the following decades. Until the First Gulf War in Iraq and then the humanitarian wars in the Balkans erupted in the last decade of the last millennium. In Iraq, the kind of war at vertical distance through the use television bombs that had appeared in Vietnam was amplified, also for media consumption. "Warfare and war reporting became one" to put it with Harun Farocki in his film *War at a Distance*. The bombs dropped from the air became also the technology through which distant targeting operations could be made closer to the spectators of war at home. The overlapping between "function of the weapon and function of the eye" (Virilio, 1989, p. 26) was complete. To such an extent that images did not even need to vehiculate any explicit propaganda message.

Images became 'operational images' devoid of people, Farocki adds in his *War at a Distance*. One bomb, one target, that was the 'clean' message of 'surgical' warfare. In operational images, human beings disappear from the pictures. Bridges are empty (Figure 8). The deadly targeting process is presented as smooth, devoid of human life. The images of war at distance are operational in the sense that they are "made to check the missile's functioning".

In the ex-Yugoslavia this cleanness and smoothness was challenged by the appearance of human screens.

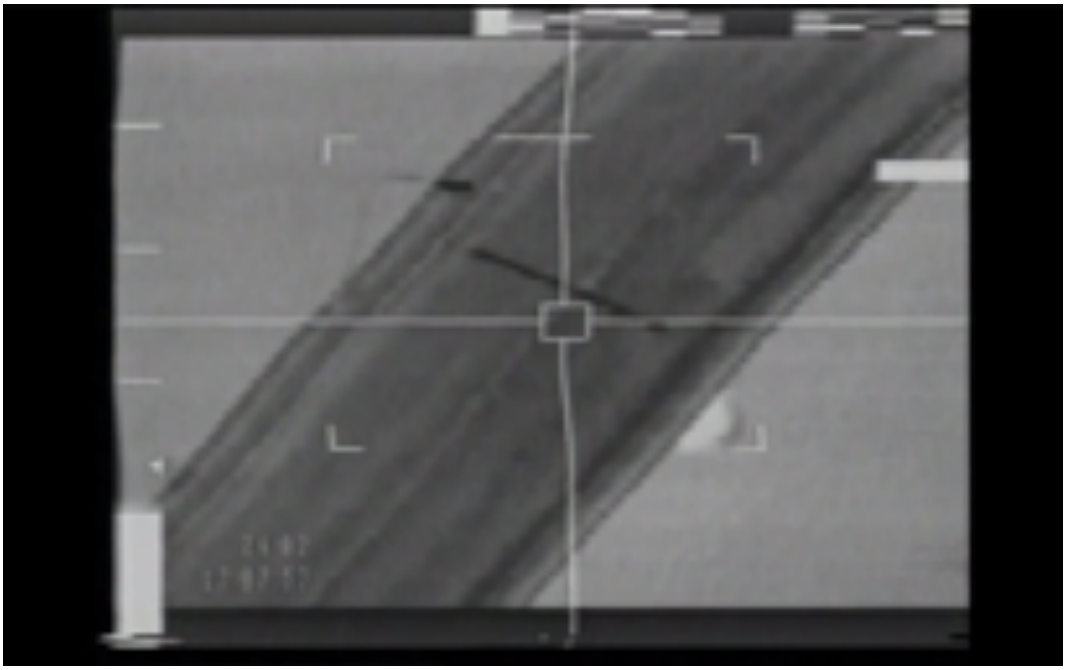


Fig. 8 Farocki H., *War at a Distance*, 2003. Screenshot from the film.

The paradigm of precise warfare according to which Western strikes had become surgical and produced only unintended "collateral" human deaths was defied at its roots. Like when Serbian civilians dressed as targets walked on a bridge in 1999 at the height of the NATO campaign to defend Kosovo, and, to put it with Peter Sloterdijk, they served "as an opposite commentary on the reality of air warfare in the 20th century" (Sloterdijk, 2009, p. 53).

These human screens put their bodies in-between –in the vertical axis of bombing, between the eye of NATO pilots and a bridge that had become a potential target– projecting an image that tells us that war at vertical distance cannot but terrorise and target entire civilian populations (Figure 9).

By deliberately becoming human screens who protected a civilian infrastructure, they commented against the normalisation of the idea of 'precision targeting'.

And they commented also on Farocki's operational images, re-inserting the people, the human component, into

Fig. 9 Human shields on bridges in Serbia at anti-Nato protests, 1999. Retrieved Month, Day, Year from https://www.youtube.com/watch?v=isJvgdLidm8.

the images of war. In this historical struggle for the attribution and reattribution of legal and ethical meaning to war at vertical distance, the development of drone warfare should be conceived as the most recent counter-measure adopted by the international powers which dominate global skies in order to neutralize the kind of critique embodied by the Serbian human screens. After the war in Kosovo, at the beginning of our millennium, millions of people tried to oppose the invasion of Iraq and the so-called War on Terror.

The protesters who took the streets of many Western capitals did not become human screens, but sent a similar message to that of the Serbian human screens: there is no surgical war, all wars ultimately target civilians. In response this radical critique of war, drone warfare has tried to radicalize the discourse of vertical humanity. Let us see how.

Drones are weapons par excellence of the War on Terror, a war against African and Asian enemies who are framed

through a racialised discourse of humanity similar to that of the colonial wars of old.

The War on Terror, the discourse goes, is fought in theatres of conflicts where inhumane terrorists deliberately intermingle with and screen behind non-combatants in order to induce the Forces of Good, who are driven by a higher sense of humanity, to commit war crimes and kill innocent civilians. The proponents of drone warfare often embrace this racialised worldview and argue that drones, with their sight from the sky, increase unprecedentedly the precision of warfare and make the distinction between inhumane and humane warfare even more evident.

Drones, indeed, operate a radical remediation of war. They re-modulate the distance of war, compress the distance of vertical warfare –the distance between the predatory eye and the target– and transform the temporality of killing. They "compress the kill chain" (Gregory, 2013, p. 50-51).

Drones roam in the skies and surveil the life of the military targets for days, offering, from the thousands of miles from which they are operated, a close visualisation of the movements of these targets and their daily social relations, as if the drone operators "were there" with their targets. What ultimately drone targeting operations try to produce is a "death of distance", to put it with Derek Gregory (Gregory, 2013, p. 67-70). The targets are surveilled and filmed at extremely 'close distance', in their homes, close to their relatives, interacting with the civilian populations among which they live and operate.

In such a way of war, we are told, there is almost no margin of error. The abidance by the legal and ethical standards of humanity required by contemporary precision warfare is almost total. In order to prove this point, sometimes the militaries that rely heavily on drone warfare edit drone footage and share it with the media (Perugini, & Gordon, 2017).

Like in the images from the video distributed in 2017 by the US Department of Defense in relation to its operations against the Islamic State in the Iraqi city of Mosul (Figure 10).

Fig. 10 *Drone video shows ISIS moving civilians into home as human shields*, ABC News, 2017. Retrieved December, 6, 2020 from https://abcnews.go.com/Politics/drone-video-shows-isis-moving-civilians-home-human/story?id=46945876.

Here, the figure of the human screen plays a central role and is mobilized to corroborate the discourse of vertical humanity that drone warfare tries to radicalize.

The aerial surveillance footage shows presumed ISIS operatives establishing firing positions among civilians in West Mosul. Women and children can be seen within the gunsight while they walk in the compound. It is unclear if they were forced to act as screens for the firing positions.

But according to the spokesperson of the US Central Command who was interviewed to comment on the video, there is no doubt. The civilians we see on the screen are human screens illegally deployed by an inhumane enemy, we are told.

And to corroborate the legal and ethical superiority of the US Central Command he added: "The Coalition, through full motion video and real-time surveillance, observed the civilians and therefore did not respond with an airstrike against the position" (Drone video, ABC News, 2017).

But there is a different way to read this sort of military-media configuration. Indeed, similarly to any basic screening configuration in which certain elements are arranged and assembled in order to render a certain surface a screen, in this military-media configuration different technologies

of surveillance and different elements of the battlefield are arranged in order to wait for the appearance of the human screen. The fighters, women, and children, as well as the compound in which they live, have probably been observed for extended periods of times, waiting for that specific moment, that specific configuration then framed as human screening by the US Central Command video.

Ultimately, while being circulated with a justificatory legal and ethical meaning – 'the coalition did not respond since we are more humane than our barbarian enemies'–, these images reveal also a mechanism of embodiment, to say it Lauren Wilcox, through which certain bodies are 'produced' by the US-led coalition as ungrievable (Wilcox, 2015). They expose how through the prism of a racialized enemy observed from the close distance of the drone eye, certain human bodies are framed as human screen in the era of the War on Terror.

Curiously, footage like that of the US Central Command, in which an attack is called off, is rarely shared by drone warfare coalitions. What we are more used to, is the systematic invocation of the figure of the human shield to justify the killing of innocent civilians, blaming the enemy for the crime, not unlike the Italians in Ethiopia or the US in Vietnam.

Indeed, the configuration through which the civilians subjected to the War on Terror are 'produced' as human screens should be conceived as a necropolitical configuration. Being recognized as human screens means becoming killable as human screens. It produces a radical alteration of the meaning of lethal violence in the battlefield.

This passage from a 2010 drone strike communication transcript obtained by the Los Angeles Times in relation to a series of vehicles carrying civilians in Afghanistan, can clarify this provisional conclusion of our archaeology. Not unlike in the US Central Command video, some civilian vehicles are observed from a drone base in Nevada for hours by a sensor operator, a pilot, a "mission intelligence operator" and other actors of this media-military configuration.

1:21 (Sensor): I think they're gonna make it
1:21 (MC:) I hope they get out and dry off, and show us all their weapons
1:21 (Pilot): Yeah, exactly man. So what's the, we passed him potential children and potential shields, and I think those are both pretty accurate now, what's the ROE on that?
1:21 (Sensor): Ground commander assessing proportionality, distinction
1:21 (Pilot): Is that part of CDE, is that part of ground command? I'm not worried from our stand point so much, but that's a (expletive deleted) for them
1:21 (Sensor): I think if that's the case and that's what their confident with then they're gonna have to wait until they start firing, 'cause then it essentially puts any possible civilian casualties on the enemy but if we've got friendlies taking effective fire from that position, then we've gotta do what we gotta do.

Military targets and civilians are intermingling. Their proximity can be seen at a close distance from a drone. Children and other civilians are framed as 'potential shields'. Potential. They are not shields yet. They are not intrinsically human screens. They need to be 'produced' as screens. They will become screens only when one of the armed men will open his fire against US friendlies, the drone communication transcript tells us. And while becoming human screens, they will become subjects who can be killed from a drone without legal and ethical responsibility, 'it essentially puts any possible civilian casualties on the enemy' says the sensor.

Indeed, human screening configurations in the era of the War on Terror are military assemblages in which the forces that arrange the different elements which transform living human beings into screens are the same that pulverize these subjects-screens in impunity. In this contemporary necropolitical configuration, the production and destruction of human screens coincide.

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HOW FAR IS THE FUTURE?

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POST-PANDEMIC
FUTUROLOGY
CLIMATE CRISIS
RESTART
VACCINE

The pandemic and consequent economic fallout, intertwined with the climate crisis, has led to a recalibration of the distance that separates the present from the future. This essay draws on media theory to delineate some of the paradoxes involved in predicted or knowing when the future will have arrived during this period of 'new normal'.

The coming of the virus, the consequent economic recession and the climate crisis have upended more traditional responses to the question 'how far is the future?'. In one sense the pandemic brought the future closer. It did this with the indication of a specific event that would signal a crossing of the threshold between the present state of emergency and the 'post'; an event that could be heralded with headlines and a market rally: the announcement of the approval of a safe and effective vaccine, one expected to arrive much faster than it might have in the recent past due, in part, to the immense acceleration of biomedical computation and to an unprecedented investment of capital[1]. Donald Trump called 'his' vaccine search 'Operation Warp Speed', a reference to the fantasized mobility of the star ships of the twenty-second century in the *Star Trek* media empire through folded spacetime[2].

In any case, a vaccine would certainly qualify as a breakthrough of the sort that some hope will come to 'solve' climate change. It will signify a break from the present of the crisis and trigger a 'restart' that might be greener and more equitable, in the best of circumstances. The early months of the pandemic saw cleaner skies in some urban centers but mainstream reporting on this phenomenon, I argue, only served to muddy existing confusion between air pollution and invisible greenhouse gas concentrations in the atmosphere. Most experts believe CO_2 will spike again in the period 'after' the coronavirus. Meanwhile, unprecedented warming in the arctic has begun to trigger positive feedback while 'ghost flights' transport wealthy tourists to nowhere and back, just for the feeling of being on a plane. Fossil fuel companies continue to receive subsidies and are among the recipients of bailout funds meant to keep 'the economy' going. ExxonMobil, the world's fourth largest oil company, expecting huge losses due to the economic slowdown, may be forced to increase emissions as much as 17% over the next five years (The Energy Mix Staff, 2020)[3]. And the Amazon continues to burn.

Before the pandemic a climate-changed future was, for most humans of the first world, simultaneously a real threat

in the present, but rather distant: a shift, a collapse that will affect 'people like me' but not me. It was decades away, far enough that I might hope 'technology' will 'solve' it; far enough that it did not impinge on my sense of the present –one where each year for the past thirty has been warmer than the one before it; a blurry horizon such that my inability to visualize it gave me dispensation to think that my choices in the present might contribute to stopping it while the genuinely significant forces adding to atmospheric greenhouse gases continue(d) unfettered. The targeting of the individual consumer with mild forms of guilt, which also served to distract from the question of distance, was a strategy, whether conscious or not, that even the most brilliantly cynical of the fossil fuel industrialists could not have cooked up.

Fig. 1 New York City, October, 2020. Photograph by the author.

Fig. 2 Climate change Countdown Clock. New York City, October, 2020. Photograph by the author.

It goes without saying that various vulnerable states of the developing world cannot and do not project climate change into the future with the same sort of logics.

Today, the term 'energy transitions' is quite common in climate change discourse. The 'transition' may begin soon. Perhaps it has already begun and it is expected to ease us into the future without disruption, and so it is aligned with a Keynesian, steady-state model of compound interest, once described by sociologist Daniel Bell (1973) in the following terms:

> 'If in the foreseeable future –say for the next hundred years– there will be neither Utopia nor Doomsday but the same state that has existed for the last hundred years –namely, the fairly steady advance of 'compound interest'– the banality of this fact –how jaded we soon become of the routinization of the spectacular!– should not obscure the extraordinary achievement Keynes called attention to. For the first time in human history, he reminded us, the problem of survival in the bare sense of the word –freedom from hunger and disease– need no longer exist. The question before the human race is not subsistence but standard of

> living, not biology but sociology. Basic needs are satiable, and the possibility of abundance is real. To that extent, the Marx-Keynes vision of the economic meaning of industrial society is certainly true'. (pp. 810-811)

This foundational, common-sense narrative is hard to dislodge. However, a planetary future was drawn much closer than it been by an explosive report by the IPCC released in 2018, outlining a very short period of time –roughly ten years– to a point of no return. This narrow window is now displayed in real time in a countdown clock in New York's Union Square[4]. Still, the older language of transitions continues alongside, or underneath, a new set of terms in limited circulation such as 'emergency' which implies immediacy and conjures up the sirens of ambulances carrying Covid patients during the height of the city's viral spike.

But of course, climate change is not a 'novel' molecule introduced into populations, causing panic, death, and upending daily life. Activists may use the term 'emergency', as often as they like, but they have not –yet– achieved the minimum threshold of adherents to cause a seismic shift in 'public opinion', let alone action. We have not yet found the language to speak about the unfathomable temporal compression of climate change, let alone how to mitigate or adapt to it. For instance, in a speech delivered on November 7, 2020 in which he accepted his win –without a prior concession by the loser– Joe Biden awkwardly mentioned the need to 'control the climate', as if this were a matter of flicking a switch on some domestic appliance.

In the United States, climate activism has been forced to confront its homogeneity in the face of a fourth, long-simmering crisis brought to a boil in 2020 by the death of George Floyd and other people of color at the hands of police. 'That crisis' has meant a reckoning, for some, with a national past marked by slavery, the formation of militias and white supremacy. And for all that the media acknowledges the racialized imbalance of the effects of the virus, economic collapse or climate change on communities of color, it is not

clear what symbolic or quantitative figure or event might signal a shift into the future for *Black Lives Matter* adherents, for instance. Afrofuturism has ushered in a new iconography of images and possibilities for a/the black future that is here and yet not yet here; joyful and chaotic, but disembodied from mainstream temporalities.

The future, in a more 'unracialized' or better, a white sense, is, among other things, an aesthetic style that reappears with a certain periodicity. That style may be characterized by space-age or atomic imagery, advanced mobility, skyscrapers and urban growth. World's Fairs, for instance, have often been highly 'futurized', and notably, the 1939 New York World's Fair. At that time, the end of the war would have signified a threshold onto the future and wars, to this point, no matter how bloody, did come to an end. The postwar period certainly did see a rise in a professional futurology notably tied to scenario planning and cybernetics.

A generic futuristic aesthetics –including some elements of Italian Futurism– has characterized twentieth century world's fairs, design, and various media, including popular television series such as *The Jetsons –I pronipoti* in Italy– or the

Fig. 3 *The Jetsons* was projected several decades into the future, recycling familiar 'futuristic' imagery. Retrieved October 7, 2020 from https://hanna-barbera.fandom.com/wiki/The_Jetsons

blog *paleofuture.com*[5]. If one were to generalize one might say that such futures are characterized by cleanliness and order, but not large crowds. They are urban without the dirt, often airy –personal jet-packs or hovercraft. They feature video communication devices –hence a number of older images have been recycled during the pandemic in memes for the home worker or student. What I will call 'World's Fair-Style' futuristic technologies have often been realized, which grants retrospective authority to the inventors of the styles and simultaneously suggests that the groundwork was already laid for social acceptance. In many cases, the nuclear family remains intact in such futures –a white American nuclear family, to be sure. Alongside this milder and rather nostalgic futurism, a group of men called *The Long Now Foundation* is creating a 10.000-year clock in a mountain in Texas that they expect will continue to tell time in a future roughly equivalent to the past of human civilization[6]. The clock will be accessible to those able enough to make a day-long hike over rough terrain. Members of the Foundation view the project as a means of raising awareness in the hope, perhaps, that awareness might lead to action to save the earth. In an interview, the clock's designer, Danny Hillis (2019, May 19), engages in fuzzy thinking, typical of the futurism of disaster or better, disaster futurism. After discussing the fact that the clock will continue to mark time long after 'we' are present, he states:

> 'Speaking personally, global warming was a very abstract issue for me until I started designing the clock. I had to account for the slowing of the earth and the melting of the icecaps, and incorporate this into the design of the clock. I now think completely differently about a radioactive waste disposal. If you start thinking on those timescales, what is radioactive waste today will actually end up being a very valuable resource for people in the future'[7].

Recently, as part of a thought experiment meant, in part, to help us realize our insignificance in terms of geological time, several scientists have put forward the hypothesis that there are plenty of spaces in the deep time rock record for the existence

of an advanced civilization (Frank, 2018). If they had existed for a brief period, leaving no legible traces in the rock record, would they have necessarily have had to exploit fossil fuels? And would they have been undone by high concentrations of greenhouse gases? Published in the *International Journal of Astrobiology*, this was a speculative exercise rather than a serious hypothesis about the past and the future, one that at the very least forces us to confront the limits of the uniqueness of the present. No doubt speculations on futurity belong to a heterogeneous archive that threatens to expose us to too much information –'infowhelm,' as Houser would say (Houser, 2020)– an archive that is growing thanks to the acceleration of media and fossil fuels as they are authentically intertwined[8]. Such acceleration might be paused –this is one of the myths of the pandemic lockdown– or reversed –a return to nature, with all of the bad faith this implies– and in this sense, the present essay may have a short shelf life, since it refers to a peculiar moment. Regardless, the language of the 'restart' or the 'post-Covid era', the collective slogans declaring 'we will get through this together' or '*andrà tutto bene*' are inadequate to the wicked complexity of measuring the distance that separates today from tomorrow.

At the corner of 6th Avenue and 47th Street in Manhattan, a faded billboard –left over from last winter and waiting to be replaced, one assumes, once the city restarts– advertises a pass to several ski resorts on the East Coast of the United States. It looms over diamond stores, traditionally owned by orthodox Jewish families, while a news kiosk asks residents to consider the possibility of genetically engineering their future children[9]. These three signs, if we like –a rather desperate attempt to keep alive a leisure activity threatened by warming (all of the resorts make snow but they require a base), the persistance of an old hedge against market volatility, and a popular book suggesting that genetic engineering of children is not far off– together provide a rather emblematic backdrop for the present.

NOTES

1 Things are moving so quickly that between the time I began to write this essay and the time of its publication this signature event is likely to have 'occurred'. Markets did rally on November 9, 2020, for instance, with the announcement by the American pharmaceutical giant, Pfizer, of better than expected results in their trial, although at the time of this writing the company has not yet published their precise data. But even before this, United States markets had been rising for a week or so on the expectation that Joe Biden would win the White House but the democrats would not gain control in the Senate, meaning four years of gridlock in which no major legislation would be passed, and especially not around energy or climate.
2 This is a *cliché*, to be sure. For instance, when interviewed about the recovery of markets after the precipitous dip in the early spring due to the pandemic, a financial analyst responded: "Everything about this crisis has been oversized and has moved at warp speed […] If the economy continues its recovery and real GDP growth is anywhere close to the current consensus view, the stock-market bull may just be getting warmed up" (Paulsen, 2020, as cited in Banerji, 2020).
3 The fantasy of the oil giants engaging in self-regulation or deliberately shutting down carbon intensive operations is a fascinating one that I can't explore here.
4 This clock had been developed over a decade ago as an art project meant to scramble our perception of time, but it has now been repurposed. Since it includes spaces for days, minutes and seconds, these intervals have been programmed in, even though they make little real sense in this context.
5 One of the many brilliant aspects of this series, produced by Hanna Barbera, was that it was essentially *The Flintstones* (in Italy *Gli antenati*), but redeployed from the primitive past to c. 2000, several decades in the future. To be sure, though, this is not a rigorous futurology: the year 2000 sounded like an appropriate threshold to ears of the 60s. The nuclear family, including a stay-at-home mother, is at the core of each cartoon civilization. A number of recent studies have detailed the development of postwar futurology in relation to computing, including Jenny Andersson (Andersson, 2018).
6 'Whole earth' visionary Stewart Brand is among the founders, along with Jeff Bezos, of Amazon. The title for the group came from Brian Eno, who also composed the music for the clock's bell chimes. The project is said to cost at least forty-two million USD.
7 Important recent scholarship has documented the design of surface markers meant to communicate to future beings the existence of dangerous matter buried below. See Bruyere, 2018; Moisey, 2017; Bryan-Wilson, 2003.
8 For a brilliant analysis of media ecology and infowhelm, see Woods, 2017.
9 The allusive image is an advertisement for a mainstream nonfiction book, Jamie Metzl's (2019) *Hacking Darwin. Genetic Engineering and the Future of Humanity*. Metzl argues that the availability of gene-editing technology now means that 'his' future –including freezing his own sperm– is imminent, while there are currently, in our present, no ethical standards, whether universal or local, to regulate practices.

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NOTES ON THE PROXEMICS OF THE ‘NON PLACE-TIME’

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PROXEMICS
URBAN SPACES
URBAN MULTISENSORIAL SURVEY

During the period of confinement due to the pandemic emergency, the overly abused definition of 'non place' introduced in 1992 by Marc Augé seems to have found an involuntary and unexpected actualization, composing itself with the specular notion here defined as 'non time'.

The space-time expansion due to the sudden absence of bodies in the urban space and to the forced alternation of the monochronic and the polychronic time is at the basis of the atypical urban experience lived in the weeks of domestic isolation, which has made evident even to the wider public how much the city is a complex multidimensional agglomeration where many intangible elements coexist with the material dimension of the city.

The notion of 'non place-time' is investigated through the analysis of the link between man, time and place and the reversal determined by the various space-time caesuras that occurred between people and between people and the collective scene of the city, as well as the definition of technological 'immediate' as an emerging co-constitutive process of personal experience and the environment.

INTRODUCTION

During the period of confinement due to the pandemic emergency, the all too abused definition of 'non place' introduced in 1992 by Marc Augé (Augé, 1992/1995) seems to have found an involuntary and unexpected actualization, composing itself with the specular notion here defined 'not time': the much recurring time suspended in which we have all been immersed, and of which we have somehow acquired full perception only in the slow phases of return to almost normality –and also the need to forge new synonyms dense with periphrasis is a sign of the conceptual inadequacy and of the progressive focus of problems.

The connection of two fields of investigation contributes to outline the framework of the discussion: on the one hand, the definition of the link between man and his built habitat, represented by the condensation of the immaterial dimensions of man's presence in the material characteristics of the city, according to a consolidated vision in urban studies that is linked today with some humanistic approaches to the knowledge of places –from the 'geophilosophy' of Gilles Deleuze and Félix Guattari (1996) to the 'emotional geography' of Giuliana Bruno (2006)–, on the other hand, the definition of the physical and informational context of the 'infosphere', today described by the two continua mind-body and body-environment which involve refocusing the role of technological mediation as assumed in the period of confinement due to the pervasiveness of the digital.

This notion of 'non place-time' is closely reflected in the atypical urban experience we lived in the weeks of domestic confinement –and for reasons of methodological approach we will define the 'observation period' below– which is investigated through the analysis of the link between man, time and place and the reversal determined by the various space-time caesuras that took place between people first and then between people and the collective scene of the city, as well as the definition of technological 'immediation' as an emerging process co-constitutive of personal experience and environment (Tiainen, Aula, & Järviluoma, 2019).

Fig. 1 Massimo Uberti. (2020). *LOST* [neon and converters]. Naviglio della Martesana, Milan. Courtesy of ArtCityLab. Photograph by Fabrizio Stipari.

DEFINITIONS. TIME AND CHRONESTHESIA

Time is a fundamental dimension of everyday life, of which we perceive the passing and to which we adapt our behavior but it is also a particularly elusive dimension of our daily experiences, as it depends on many factors –age, the activities we carry out and emotions associated with them, cognition, culture– and in turn conditions them by relativizing the psychological time (Gobbis, 2020).

Furthermore, in the Western world, the concept of time for many centuries at the basis of intellectual and religious thought has been and still is in part linear, directional, progressive (Helman, 2005): a conception of time as a road or a tape that connects past and future, rigidly organized into quantifiable segments –years, months, days, hours, minutes–, which Edward Twitchell Hall defined as "monochronic time", as opposed to "polychronic time", which instead passes less linear and where life goes in a fluid and not so rigid flow as in clock's time (Hall, 1983, pp. 41-55). If the clock and the calendar have been among the main cultural

symbols of Western industrial society also as iconic symbols of the close relationship between time and work, our growing need for flexibility in the management of working times has in fact created the conditions for the substitution of polychronic time for monochronic time: in the emerging knowledge society the rigidly organized time necessary for the coordinated functioning of industrial society needs to be increasingly reconciled with polychronic time, more responsive to current lifestyles.

It is common and widespread empirical data, as well as shared scientific opinion, that the subjective perception and experience of time also depend on the type of activity that an individual performs –time seems to accelerate when we are involved in stimulating and pleasant activities– and that emotions affect on our experience of time, which is altered in both senses –it may seems accelerated when we are in fearful situations or slowed down in unpleasant or problematic ones– therefore, like the sensory one, our perception of time is also not truthful, but it is modulated by changes in

Fig. 2 Massimo Uberti. (2000). *Scrittoio* [neon and converters]. Courtesy of Massimo Uberti.

the environmental context. This widespread, even banal, observation does not yet seem to have found a univocal and complete scientific explanation of its deep mechanisms and, both in psychology and in neuroscience, there are different theoretical models and contradictory theories dealing with the new research area that investigate chronesthesia, such as the "awareness of subjective time" (Tulving, 2002, p. 313).

It is known, however, that the processes that lead us to estimate the duration of time are closely linked to the important relationship between time and psychological functions, especially as regards the orientation of the human being through the space-time *continuum*: we cannot analyze time without discussing space as well.

BODY AND SPACE

In *L'intervallo perduto* (Dorfles, 1989) the discourse on the performing arts enucleated and emphasized emptiness as a determining factor in the assumption of a sense of fullness, whether we are talking about the emptiness of the space where the movement of the human body takes place when dancing or of the physical phenomenon of sound that materializes the void of time in music.

In the urban and architectural dimension, on the contrary, the human body gives density to the spaces, making possible the measured perception of distances and allowing us to measure full volumes, above all through spontaneous comparisons of anthropometric proportion, as well as to orient ourselves in space.

"The human body becomes something else again. The human body in its being a complex organism, microscopic or macroscopic portion of the matter, has always been presented/represented as a medium between codes: between the individual and the place, both material and immaterial, that he inhabits; between the individual and the design of space, city, environment and territory; between the individual and

objects, products, interfaces, everyday environment; within the relation between individuals." (Balzani & Raco, 2020, p. 78). The sudden absence of the bodies in the urban space – forcibly lived in the period of observation– therefore implies the impossibility or at least the difficulty of orienting oneself in urban contexts, including family ones, which have suddenly become 'extraneous', where the etymology –'extraneous', deriving from extra 'outside of'– helps and designates "not belonging or proper to a thing; not intrinsic or essential, though attached; foreign" and "of external origin" (Online etymology dictionary, n.d; Lexico, n.d), underlining the lack of familiarity, disinterest, indifference.

Body, physicality and presence in the space-time *continuum* therefore emerge as powerful presuppositions of the sense of belonging to the place, in a relationship between individual, community and place that inextricably shapes and holds together individual and collective identities, mutually strengthening them (Bracconi, 2020).

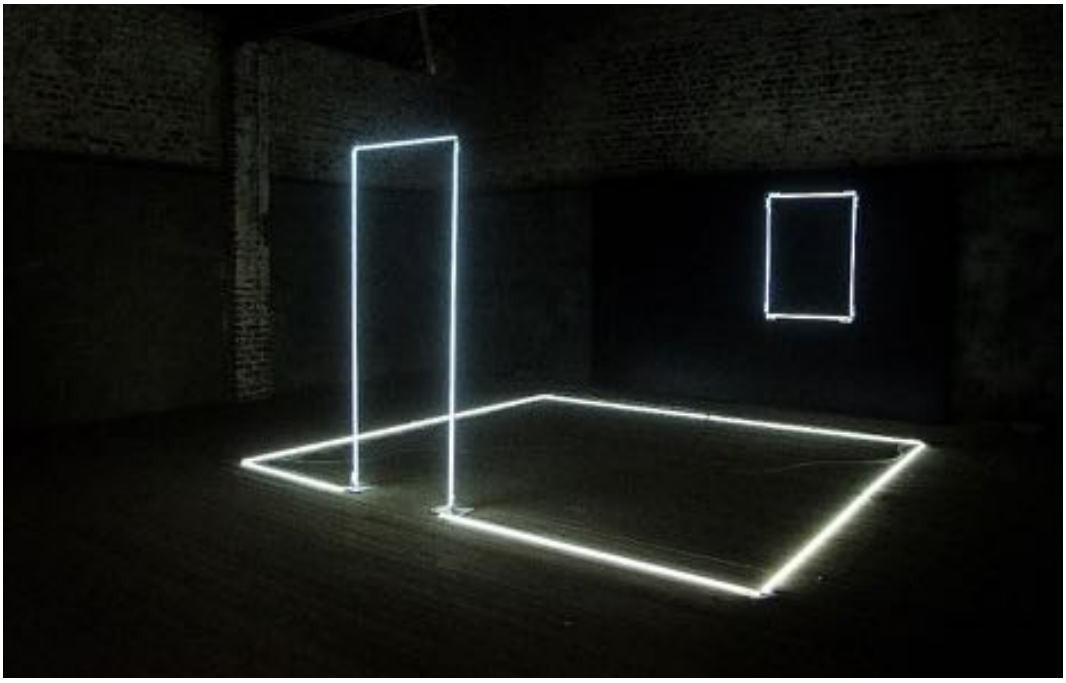

Fig. 3 Massimo Uberti. (2001). *Stanza silente* [neon and converters]. Watou, Belgium. Courtesy of Massimo Uberti.

PUBLIC DOMAIN AND *CIVITAS*

The experience lived during the observation period has also shown to the wider public –not necessarily specialized in the comprehension of architectural and urban space– how much the city is a dense and complex multidimensional agglomeration and has highlighted the existence of many intangible elements which, like the material dimension of the city, act on us with such submerged power to seriously endanger, if not undermine, individual and collective well-being.

"With monuments, written documents and orderly associative organizations, it expanded –the city NDR– the reach of all human activities by prolonging them back and forth in time. With his storage facilities –buildings, crypts, archives, monuments, boards, books– it managed to transmit a complex culture from one generation to the next because was able to organize not only the material means but also the human agents necessary to transfer and expand this heredity." (Mumford, 1996, pp. 703-704)

The observation period, therefore, also was as a marker of urban vulnerability, suddenly explaining for everyone how close the relationship between man and city is, and how much the functions that take place there also have a physical impact on places and vice versa on their livability.

A sort of scalar continuity is established, in fact, in the relationships between the individual and his environment: first of all with his home, a relationship also represented by the two terms, on my reading of Martin Heidegger –because in his theory language is considered the authentic abode of being– (Heidegger, 1889/1976) not coincidentally in Italian language close also lexically, *abito* and *abitare* 'habit' and 'inhabit', and gradually up to reverberate in the urban environment, according to the still very current lesson of Edward Twitchell Hall –the use of space obeys cultural as well as physical elements– on the cultural regulation in the use of interpersonal and public space, whose reinterpretation today cannot than dealing with collective reactions appropriate to

the new painful ways of frequenting public space under social distancing rules (Hall, 1966/1996).

Public space, is the space of relationship and "space between things as a concrete space available to civil life, its needs, its wanderings" (Gregotti, 2016), represents the clot interface between the physicality of bodies and architecture and the intangibility of values where *urbs* and *civitas*, people and their identity are held together. The public spaces must therefore not be considered only as the resulting empty space between the full blocks of buildings, but constitute the scene where people meet and where broader social relationships can be generated, and as elements that transform residents from city users into inhabitants and are capable of transforming the surface of a square or a building aggregate into a complex space forming the townscape, as defined by Norberg-Schulz "the spaces where life occurs are places [...] a place is a space which has a distinct character. Since ancient times the genius loci, or spirit of place, has been recognized as the concrete reality man has to face and come to terms with in his daily life" (Norberg-Schulz, 1979, p. 5). The public domain, most of the part we can see in the city in our social life, is "the common ground where people carry out the functional and ritual activities that bond a community, wheter in the normal routines of daily life or in periodic festivities" (Carr, Francis, Rivlin, & Stone, 1992, p. 11); the urban experience is well substantiated if there is a harmonious coexistence of material components –buildings and open spaces– and immaterial components –conditions of liveability– that provide for and favor the realization of the social environment, promoting orientation and identification, from which the attribution of meaning and belonging to that particular place develop. When the public space does not allow orientation and identification –due to its original physical characteristics or because it suddenly loses its human presence as it happened in the observation period– this attribution of meaning does not occur and the connective space is emptied, remaining relegated to the sole function of pure crossing of the city.

Fig. 4 Massimo Uberti. (2018). *Abitare. Palazzo Beccaguti*, Mantua. Courtesy of Massimo Uberti.

SPACE, PLACE AND ENVIRONMENT

This vision of the city as a system of material and immaterial systems that holds together people-centered and place-based approaches in an integrated cultural vision highlights the relationship and interdependence of people to their place, where the human being is an integral part of a settlement and inseparably linked to it. The sense of familiarity that binds the inhabitants of a place to each other

and to the context develops over time and brings together all the social dimensions of the life of a community and its culture. Every day, in fact, the city collects and condenses a cultural stratification of knowledge, traditions and rules that constitute it in a continuous, unique and irreplaceable way: a way to transmit and reflect cultural notions, associations and values on how a society thinks about and at the same time, which includes particular morphological and cultural characteristics that form the physiognomy of a place.

Every human action and behavior also constitutes a temporal layer represented by a material reality in the physical structure of the city. In other words, the urban image is the visual result of the overall material and immaterial components of the city, which reflects the diachronic way in which our cities have been experienced over time.

This stratification is particularly significant in historical contexts –all contexts– of the human environment with considerable historical, urban, architectural, social and aesthetic value that allow intangible assets, ideas, practices and values with such naturalness to constitute not only the physical scenario but create also the cultural identity of the inhabitants and is what produces 'the perceived uniqueness of a place', the specificity of each context that has the particular physiognomy of Genius Loci, expressed through its tangible and intangible elements and the result of a combination of physical characteristics of the place, of the activities that take place there, and of the meaning attributed to that place by the inhabitants.

The spirit of the city is a cloud of relationships, representations and actions, but also of smells and flavors: an emblematic case of this all-encompassing unity of the townscape is the evidence of how much, for example, even noise is integral and relevant component of the landscape itself and represents a constitutive factor of the identity of places. It is common experience that during the observation period it was almost difficult to identify the street where we have also lived for years –which became empty due to a lack

of people, activities, sounds and noises– with an overturning that even led us to value an environmental condition of noise, up to a few weeks earlier considered unwanted or neglected.

Understanding these layers and their reciprocal relationship is a crucial factor in understanding the city, perceiving its identity, understanding its physical and historical cultural specificity of places and its material and immaterial vulnerabilities. Understanding a place, its peculiar aspects, today cannot fail to pass through an integrated analysis of all its characteristics, the material, measurable, and connectable to the sense of sight, but also to the other senses (Puma, 2018; Puma, 2019b; Migliorati, 2020).

Among the most significant referring theories and methodologies it is here useful to mention the approach of 'geophilosophy', a term used for the first time in the 1990s by Gilles Deleuze and Félix Guattari (1996), which focused on the already growing homologation of the globalized world in

Fig. 5 Massimo Uberti. (2014). *Abitare* [neon and converters]. *Università Bocconi*, Milan. Courtesy of Massimo Uberti.

order to stem the loss of the identity heritage of the places and of the social and anthropological means themselves.

The sensorial domain in the study and design of architectural and urban environments is at the center of various experiences based on a multisensory approach to the built environment, which broaden the multidisciplinary view of places by integrating human and technological sciences, as in the *Laboratoire AAU-Ambiances Architectures Urbanités*, born in 1998 and located between Nantes and Grenoble. The recent *Smell of heritage* program is also part of this trend, in which Cecilia Bembibre introduces the sense of smell among the cognitive elements of historical places, and the even more rooted and consistent experiences on the soundscape, among which we only mention here the progenitor *World Soundscape Project*, set up by Raymond Murray Schafer in the 1970s, and the activity of the *Cartophonie* laboratory in Grenoble and of the the London Sound Survey.

IMPLICATIONS. THE MIND-BODY *CONTINUUM*

Listening, touching, feeling the gestures of living, however, today means representing the corporeality of people and communities both in the physical places and in the infosphere of the so-called fourth revolution. Since what is real is informational and vice versa, the infosphere is the fluid 'onlife' environment mixing our analogue and digital daily life where it is no longer possible to separate and discern between online and offline life (Floridi, 2017). In this *continuum* mind and body, therefore, must be thought of in a sort of monism based on different informational configurations, a state that the physicist John Archibald Wheeler summarizes in "it from bit" (Wheeler, 1990).

The presumed dichotomy between the physical dimension of the body and the mental one of the digital world must take into account the fact that the 'networked body' also exists, and this reconfigures the recombined multisensory perception in terms of 'digital proximity': if in the digital world two senses

prevail on the others, immersive technologies call into question the gnoseological primacy of sight in Western culture (De Kerckhove & de Almeida, 2014) by involving the whole body in remodeling spatial and temporal distances of the body in real time in the virtual environment. This means that ICTs have become anthropological and social actors on which we structurally depend, at least in terms of effective and efficient management of the information life cycle.

On the one hand the sudden and totalizing projection in the virtual world lived in the period of observation has limited and mortified the individual and collective physicality in public places, but it has also condensed on itself a resilient response heavily entrusted to technology, which has also found a glue in the mixed and pervasive onlife of the infosphere and has made it possible to cushion the absence of the body and better manage the forced passage from monochronic to polychronic time.

Fig. 6 Massimo Uberti. (2019). *Loved space* [neon and converters]. Milan. Courtesy of ArtCityLab. Photograph by Fabrizio Stipari.

THE BODY-ENVIRONMENT *CONTINUUM*

The mind-body *continuum* in the infosphere described above joins the one outlined in the paragraph *Public domain and* civitas, relating to the *continuum* between body and environment, closely derived from urban studies. In this sense, other different lines of research also go, which with a humanistic approach intertwine media and cultural studies, also highlighting the continuity between body and environment in this perspective, where they are seen as not separate dimensions of reality, but rather as constituting a second *continuum* defined from 'immediation' (Tiainen, 2020, p. 33). In this theoretical line, the reconsideration of human subjects in environmental and situational relationships becomes an attempt "to rethink mediation –between man and environment, NdR– beyond the idea that mediation events take place between preformed entities, like when technological devices are thought as 'mediating' the experience of environments to human 'users' of those technologies [...] to suggest that there is not first a body, then a world, but a worlding through which bodyings emerge" (Tiainen, 2020). If we assume the relationship between environments, technology and sensory experience as fundamentally co-constitutive and dictated by mutually compositional ways the concept of device as medium also assumes another adjective mean clearly exemplified by the IOT: the spread of the IOT realizes connection between things and induces a real evolutionary leap –expressed by the addition to the communication between people and to that between man and machine the communication between objects– which therefore also modifies the meaning of mediation understood as a technical form capable of modulating the physical distance.

What status does the mediating device between man and external reality assume when it is supplanted by a reality that independently makes objects communicate with each other? There are at least two effects that can be reported as a first approximation. On the one hand, the medium multiplies and spreads in an environment where many objects have also become media, therefore not as *altro da sé* but as an active

Fig. 7 Massimo Uberti. (2018). *Città Ideale* [neon and converters]. *Palazzo Ducale*, Mantua. Courtesy of Massimo Uberti. Photograph by Paolo Bernini.

extension of man in the external world accessible most of the time by an image that becomes an interface (Puma, 2019a). On the other hand, in this substantial continuity between the person and the environment, the need for humanization and personalization of the virtual proxemics emerges, expressed by the so-called affective computer science which for some time has committed many efforts in the direction of the 'animation' of objects, starting with robots, and the activation and involvement of emotions in technology.

CONCLUSIONS

As argued above, the two ontologically constitutive dimensions of human existence, space and time, are linked in such a close union as to create a general imbalance even when they are individually misaligned. The strong discontinuity

in the chronesthesia experienced by many people in the observation period cannot therefore be associated only with the uncoordinated alternation of monochronic and polychronic time but needs to be framed in the broadest relations of proximity between body and environment, in all the scales that configure the human habitat, from the domestic dimension to urban spaces. Proximity relationships during the observation period underwent a reversal that took place in our daily physical experience of the city, where the suddenly denied human presence also entailed the need to readjust our perception of distance –understood as the measure of physical emptiness– anchoring it only to the urban and architectural landmarks –the human figure is also a measuring element of space: in the urban environment it is the fullness of bodies that gives meaning to the void.

The human body, in fact, substantiates the space both in physical terms and in behavioral and anthropological terms in a process so fluid and continuous as to be natural and unnoticed, therefore when the sudden and totalizing projection in the digital world has exalted the negation of physicality it has also cracked the space-time continuity of our experience of modern flaneurs, engaged in the constant drift of subjective mapping the city. In the prolongation, then, of a distorted situation, this also negatively influenced the individual and collective identity represented materially by the city as a palimpsest and stratification of intangible relationships between people and the community scene in the immediation of the two continua mind-body and body-environment previously described.

The sudden silence of the cities, the sudden re-emergence of space as an hidden dimension and interval 'no longer lost' then gradually expanded into the condition defined here as the 'non place-time', at the base of which could be the cracks and space-temporals caesuras of the context as have been felt by many people in the period of observation but especially after the resumption of the usual frequentation and immersion in the city.

Fig. 8 Massimo Uberti. (2020). *Spazio Amato* [neon and converter]. WWF Oasi, Lago di Burano. Courtesy of Yhpermaremma.

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"Seeing comes before words" (John Berger, *Ways of seeing*, 1988).
The contribution consists of a double text, verbal and visual, independent but intertwined: the author thanks Massimo Uberti for having wanted to choose the proposed verbal text, adopting it as illustration of his own autonomous visual text.
If the verbal text has the deceptive pretense to denote, to comprise objectively the reality, images impose processes of interpretation and reveal the figurative dimension of meaning, thus the narration grows in the encounter between text and images, in which one does not make sense without the others, particularly significant in the two recent public art projects, *LOST* and *Loved space*.

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DEFYING DISTANCE

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GESTURES
BODILY ARCHIVE
REFUGEEHOOD
CONNECTION
DISTANCE

In 2018 as part of my long-term project the *Archive of Gestures*, I created a participatory dance performance with three Palestinian artist refugees entitled *Gesturing Refugees*. The performance faced many obstacles during the creation period related to UK visa denial to the artists, which resulted in the creation process taking place digitally, as an attempt to defy the physical distance among the artists and later also between the artists and the audience. To insist on this formal and political choice, in 2020 I developed *Past-inuous*, an interactive dance video, created over a digital platform with eleven Palestinian dancers, most third generation refugees, some living in the diaspora and others in Palestine. Through the work, I investigated ways of defying distance between third generation Palestinian refugees, which was created by Israel's regime of dispossession. I did that by experimenting with how a digital platform can be remediated into a creative space for rehearsal, creation and transmission of bodily archives, through an interactive dance video with the viewers. But also by reflecting on the technical issues and delays caused by specific political conditions of disadvantage which arise during such a process, and exploring ways of using these issues in the video itself, so as to reflect the creation process and involve the viewers, especially now that during the pandemic, working at distance through online platforms has become a collective global experience.

In 2014 I started a long-term practice based reseach –the *Archive of Gestures*– that aims at unearthing latent narratives from the Palestinian history, dealing with the body as the main form and source of archive. I conceive an archive as an archeological practice that allows discourse to emerge, through enabling statements to both survive and transform (Foucault, 1972). I treat the body as a privileged site of archive, because differently than other kinds of archive, it involves multiple levels: the affective, the political and the aesthetic (Lepecki, 2016). In my choreographies, I unfold the bodily archives by reenacting, transforming and deforming the gestures of the narratives in my body and the bodies of the other artists who work with me, and by transmitting them to the bodies of audience members through interactive artistic work. My long-term research is resulting into a series of artistic works. One of the lastest is an interactive video dance performance entitled *Gesturing Refugees*. This performance was created between 2017 and 2018 to unearth alternative narratives and gestures of refugeehood, including my own (Figure 1). The creative process faced many obstacles related to visa denial to the refugee artists and the impossibility of our physical encounter in Edinburgh, where the first artistic residency was supposed to take place in Spring 2017. The visas of the dancers were denied by UK authorities and we decided to work over online platforms –*Skype* and *Messenger*– which added new formal and political layers to the performance. The impossibility of physical encounter and the distance imposed on us by the discriminatory international regime of migrations opened up the question of how gestures can be archived and shared remotely, via a digital platform, and how accepting to work remotely, each appearing physically in a different space and time zone, can still constitute a form of collective political and artistic action.

Can media help to defy distance and its political conditions? In *Notes Towards a Performative Theory of Assembly* Judith Butler (2015) argues that also the bodies of people who don't appear in public space because of a physical impossibility

Fig. 1 A still from a video that is screened during the performance where Hamza Damra (on the left) in Nablus re-enacts his brother's shooting scene, while Fadi Waked in Berlin and Farah Saleh in Edinburgh embody his gestures over *Messenger*. Still from *Quicktime* recording May, 2018.

of appearing, can still be still be considered as political bodies that exist, have rights and reclaim the right to appear and act in concert. According to Judith Butler, performativity involves both necessity and agency, so that even when people act because of embodied necessity –for example the need for food, shelter, freedom of movement etc.– they still can act for freedom and channel their necessity towards performativity and appearance. Building on Judith Butler's theory of assembly, in *Gesturing Refugees* (Figure 2) I investigate how vulnerable subjects who choose to perform certain gestures as

Fig. 2 Liverpool, UK, *Arab Arts Festival*, July 2019. The closing circle of *Gesturing Refugees*, where the audience and I re-enact for the last time some of the gestures. Photograph by Jazamin Sinclair.

a result of their condition of oppression and dispossession, can realize through their performance –in their houses or in front of a computer– the condition of collective vulnerability and interdependence and generate forms of rejection, resistance, and solidarity. I do that by transforming the distance that we had to work with into proximity with the audience members, inviting them to a participatory performance where they can witness and re-enact the stories and gestures of my colleagues through recorded video calls, and witness and re-enact my story and gesture live in the space. Where I also encourage them to embody my colleagues' gestures and mediate between the screen recorded time and the present time.

In that sense in *Gesturing Refugees*, I experiment with how participatory performance can defy distance, and contribute towards the interchange between subjectivities, the creation of future responsibility and the potential of action after the event. An event where the audience is invited to feel-think together, and to experience alternative stories and gestures of refugeehood through video calls and live performance by reenacting, transforming and deforming them in their bodies and carrying them beyond the performance space. In this way, what I created for and with them is an afterlife of the event that could materialize in different degrees and forms.

To insist on this formal and political choice, in Autumn 2020, I started developing *PAST-inuous*, another narrative of the *Archive of Gestures*, in the form of an interactive dance video, created over a digital platform with eleven Palestinian dancers, most third generation refugees, some living in the diaspora and others in Palestine: two in Edinburgh, two in Berlin, four in Gaza and three in Nablus and in collaboration with four video artists –one in each location– a composer and a set and costume designer. The idea was conceived in November 2019 –before the pandemic– to reflect on the ongoing Palestinian refugee problem created in 1948 by the creation of Israel on Palestinian land and the expulsion of Palestinians all around the world, now estimated to be five million (United Nations Relief and Works Agency for

Palestine Refugees in The Near East, 2020). The work deals with the bodies of the eleven artists as living archives. It attempts to dig into these archives to find connections between the artists daily gestures in the now and the gestures of their expelled families in the past. By doing that, it aspires to reflect on the future of the Palestinian refugee cause in particular and its connection to the current global refugee condition in general.

Before starting the creation process, I asked all the dancers to collect stories that they remember from their grandparents daily lives before they were forced out of their land by Israeli militias in 1948, to investigate the remanence of their daily gestures in our bodies and to our daily gestures in the present. I also asked them to bring archive material from their family archives, such as pictures, objects or recordings, which some did. We exchanged these stories and their archive material during the first day of the creation residency over *Zoom*, which lasted for two weeks. We decided to use *Zoom* this time, rather than *Skype* and *Messenger*, as it was widely used during the pandemic, due to its better quality and multiple functions. Suddenly political and pandemic distances overlapped in this project.

The experience of that first exchange had a strong impact on me personally, but also on the other dancers, as reported by them. Everyone was curious and asking questions when one of us was recounting a story and showing some of its gestures. It felts as if the stories were familiar, but still had some novelty. They were romanticized, at the same time realistic. They were personal, but at the same time collective. The whole exchange felt like a long-awaited encounter between grandchildren of Palestinian refugees, taking place over a digital platform because of the imposed physical distance by the same regime of Israeli dispossession.

Zoom encounters, chats and rehearsals brought us spatially closer. It helped us to bridge the physical distance between us at times. As Walter Benjamin explains, technical reproduction of art aspires at modulating physical and

human distances, by bringing the distance closer (Benjamin, 1936). But this wasn't always the case during the production process of *PAST-inuous*. Sometimes, when we became keen to meet and work together in person, or when we were experiencing regular internet problems especially in certain locations, often due to political reasons –for instance in Gaza, where the Israeli siege has reduced the available daily electricity to four hours– meeting over a digital media marked the distances even more.

Jay Bolter and Richard Grusin (Bolter & Gruisin, 1999) define as remediation the repurposing of older media into new media, to answer the needs of society for experiencing the real or the mediation of the real. They propose that remediation functions through two types of media, first through transparent media, such as TV, immersive installation or video calls, which aims at erasing the media they are using, and give the viewer the sense of immediate contact with the image. Second, through hypermedia, such as applications and multimedia programs, which reference other media and contents all the time, without wanting to erase them.

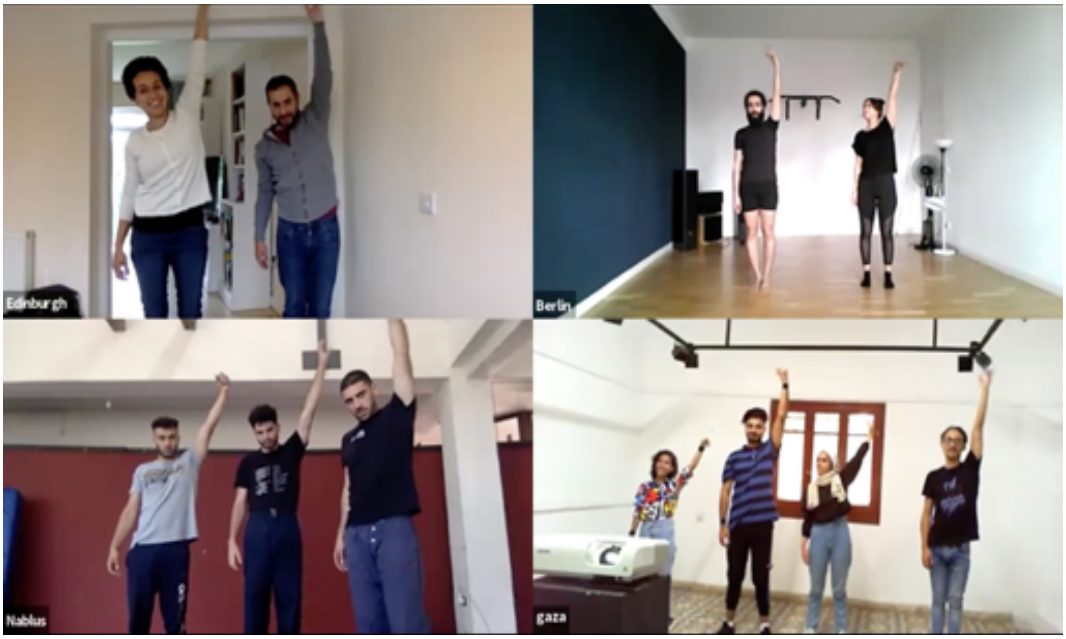

Fig. 3 From top left to bottom right Farah Saleh, Jamal Bajali, Fadi Waked, Duaa Sabbagh, Abood Damra, Amir Sabra, Hamza Damra, Dima Kurraz, Mohanad A. Smama, Yasmeen Koheil and Mohammed Emrany. Still from *Zoom* recording August, 2020.

Both transparent media and hypermedia strive for a real and authentic experience of the viewer, one that would evoke an authentic, immediate and emotional response. Building on Richard Grusin and Jay Bolter, I conceive the act of meeting, rehearsing and creating a work of art over a media that was originally created for work meetings –in sum the process of creation of *PAST-inuous*– as an act of remediation (Figure 3).

During the creation period of *PAST-inuous* through *Zoom*, we dealt with both transparent media and hypermedia. When we were warming up and exchanging stories and gestures over *Zoom* as a video call, we all felt the authentic experience of working together on an artistic project, and even for short period of times, forgot that it was mediated through a screen over distance. But as soon as there were cuts and delays in the communication and we had to text each other to know what's going on, to send voice messages or pictures via email or WhatsApp, the media we were using became very present again. While still allowing us to live immediate and emotional response to the exchange, the distance was widely felt.

Fig. 4 Dancer Duaa Sabbagh re-enacting her grandmother's gesture. Still from *Speaker View Zoom* recording August, 2020.

This digitally mediated encounter and exchange of stories and gestures resulted in a three-part dance video. The first part consists of a two-minute introduction using *Speaker View* on *Zoom* (Figure 4), in which for dancers, one from each location, explain a gesture and invite the viewers to do it when they see it performed in the choreography. For example, Duaa Sabbagh, a dancer based in Berlin, born and raised in Al Yarmouk Palestinian refugee camp in Syria, shows and explains the gesture of her grandmother hand washing clothes in Al Tantura village in Palestine before 1948. Another dancer, Amir Sabra, born and raised in Balata Refugee camp in Nablus re-enacts his grandfather's gesture of honing knifes that he used to do daily before he was forced out of the Palestinian city of Al Lud. The aim of explaining some of the gestures to the viewers at the beginning of the video –including the context in which they were produced, then asking them to re-enact the gestures when they spot them in the video– is to transmit some of our bodily archives to the bodies of the viewers, allowing for our personal and collective archives before being expelled from Palestine to disseminate into the viewers bodily archives. As André Lepecki explains in *Singularities: Dance in the Age of Performance* (Lepecki, 2016), re-enacting gestures from the past, allows us to invent something new, by suspending the economies of authorship over the gestures, disseminating them and giving them an afterlife. In the second part, which consists of a seven-minute choreography of gestures by all eleven dancers, in which each dancer contributes with her/his family story and gestures before 1948, reflecting on whether the gestures have remanence in their bodies and are connected to their daily gestures of today. For examples, dancer Mohanad A. Smama from Gaza, re-enacts a technique of fishing that was used before 1948 in Gaza and is still used today by fishermen, including himself. While I share the gesture of protest my grandfather used to perform during workers strikes against the British Mandate in Palestine during the 1930s, which is a gesture I still practice when I go to demonstrations against

the Israeli military occupation in Palestine, or is used against other repressive regimes in the world.

During the choreography, the viewers can witness and sometimes re-enact the archive of gestures unfolding by the dancers. This archive that collects fragments of the gestures present in all the stories the dancers recounted and is in dialogue with the three constituting parameters Jacques Derrida suggests an archive should have: a certain exteriority, a technique of repetition and a place of consignation (Derrida & Prenowitz, 1995). In fact, the dancers re-enact and explain the gesture to the viewers before asking them to re-enact them. They repeat them, change their speed, distance from the floor and position in relation to the camera. Finally, they archive the gestures in their bodies and invite the viewers to do the same. In the choreography part we use *Zoom Gallery View* (Figure 5), thus the screen is divided into four video calls, with dancers in each city –Gaza, Nablus, Edinburgh and Berlin– present in the same calls, whenever possible. The screen functions as a stage and the choreography aims at orchestrating the attention of the viewers by using

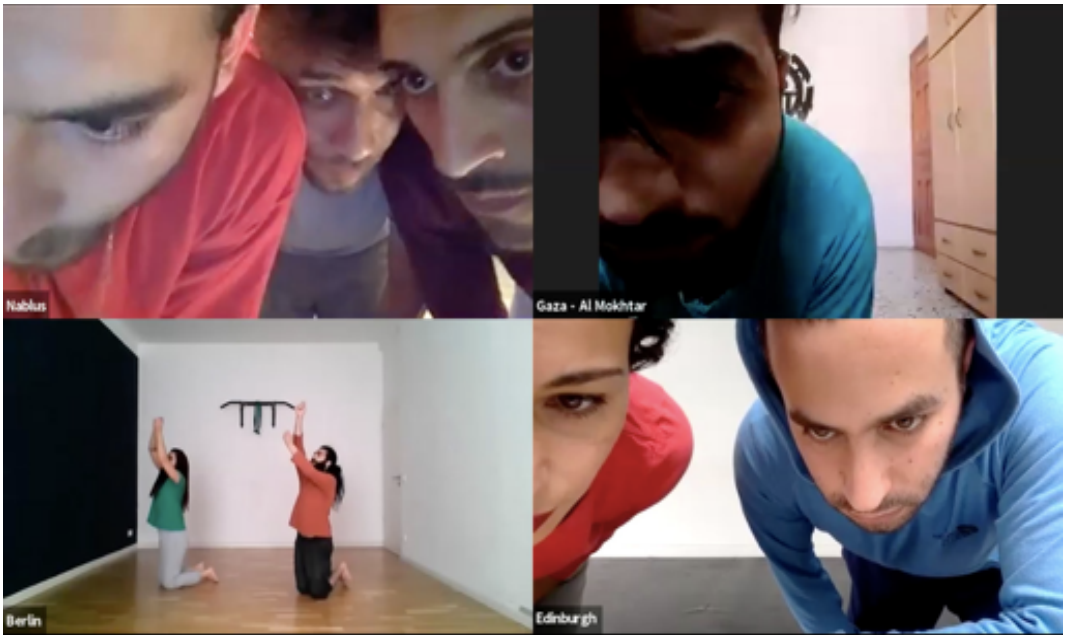

Fig. 5 Dancers in Nablus, Edinburgh and Gaza witnessing the archive of Berlin dancers unfolding. Still from *Zoom Gallery View* recording September, 2020.

choreography tools, such as having the dancers move in synch, leave the stage or stand still, repeat a gesture or come very close to the camera. In the first days of rehearsal it was possible to have all the dancers in the same location on one screen, but then a lockdown was imposed in Gaza because of Covid-19, and the dancers there had to work from home with limited electricity due to the Israeli siege. We had to find ingenious solutions in order not to have more than for screens at once, since the image becomes too small and the gestures become difficult to see and re-enact. Therefore, the seven-minute choreography was divided into three sub-sections.

In the first sub-section there are four screens with Edinburgh, Nablus, Berlin dancers and only one dancer from Gaza. In the second sub-section, we zoom into Gaza with only the four dancers in Gaza appearing on the four screens, finally the last sub-section brings back four screens from all four locations with a different dancer now joining from Gaza and with the virtual background element introduced. We use the virtual background as an ironic comment on the fictional way we are trying to be all together in one place, and where

Fig. 6 Experimenting with virtual background, designed by Zephyr Liddell for the project and used in the choreography part. Still from *Zoom* recording September, 2020.

one can easily notice that the virtual background doesn't work well, because of the impossibility of having green screens in the for locations. In fact, in the virtual background we created, one can only see fragments of our bodies and gestures, just like the fragments of our archives in the choreography (Figure 6). The virtual background we use is designed by our set and costume designer Zephyr Liddell and is inspired by the archive material the group provided: pictures, stories and objects. The full choreography was created, rehearsed, performed and recorded through *Zoom* with all the dancers present at the same time, as if it's a live performance, with very small edits being allowed to the recording. The choice of filming the choreography in one shot was taken also to include the creation process in the artwork itself. Working digitally in different geographical areas because of the political situation –and now also because of the risks related to the pandemic– raises technical issues such as low-quality videos recorded from computer cameras and internet delays. To leave these technical issues intact in the final video would very much reflect the daily creative process and would allow the viewers to relate more to both the content and form of the work, since most people now around the world are working remotely and are faced with similar technical issues.

In the last part of the video, dancer Amir Sabra, asks the viewers to think and reenact in their own way a few gestures that were performed by the dancers in the choreography and that they felt were close to their own personal archives. He also asks them to film themselves while doing these gestures, then post their video on a private social media group, where all the artists involved in the project can see and try the gestures of the audience member, so that there would be an exchange between the viewers and the dancers daily gestures. In this way, the viewers will experience the work and share their own bodily archives, rather than just see and try the dancers' gestures and personal archives, which also makes the work interactive, and possibly allows for an afterlife of the gestures in the bodies and minds of both the viewers and the artists.

To enhance the experience for the viewers, two instructions will be given to them before starting the video. First, to watch the video on a laptop on top of a table, so not using a tablet or a phone or putting the laptop on the floor for instance, since the artists were working from their raised laptops. Second, to clear the wall behind them from most objects, just like the artists were asked to do, in order not to reflect a domestic background, but more of a neutral background, were the gestures can be fully visible. With this interactive approach, the aim is to allow the viewer, just like the artists during the creation process, to experience a twofold relationship with the medium. To both establish an authentic connection with the artists and their gestures denying the mediation of the video, but also to experience immediacy through acknowledging the multiple media at stake, such as filming oneself and sending the video to a social media platform.

CONCLUSIONS

In this article, I interrogated ways of defying distance between Palestinian refugees created by Israel's regime of dispossession. I did that by experimenting with how a digital platform can be remediated into a creative space for rehearsal, creation and transmission of bodily archives through an interactive dance video with the viewers. But also by reflecting on the technical issues and delays caused by specific political conditions of disadvantage that arise during such a process and exploring ways of using these issues in the video itself to reflect the creation process and involve the viewers, especially now that working at distance has become a collective global experience.

As Walter Benjamin suggests in *The Work of Art in the Age of Mechanical Reproduction* (Benjamin, 1936), it's easy to fall into *l'art pour l'art* –the art for the sake of art– in a world changed by technology, where people look for experiences of pure pleasure, sometimes even accepting to be distracted viewers.

To challenge that, he urges artists to respond through politicizing art and engaging the viewers in the work of art. The media we use to remediate the distance of our political or pandemic exiles make no exception.

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IMMEDIACY AND ITS HIDDEN INFRASTRUCTURE

WHEN AMAZON EXTENDS ITS DELIVERY TIMES DURING THE COVID-19 PANDEMIC

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IMMEDIACY
AMAZON
INFRASTRUCTURE
DELIVERY
COVID-19

During the confinement due to the Covid-19 pandemic, Amazon faced crushing demands. The firm chose to extend delivery times for non-essential in-stock goods and to hire more workers. These strategies contrast with Amazon's usual core of business: making delivery always faster and replace as soon as possible most workers by robots.

By describing this transient episode of voluntarily extended delivery times by Amazon and by inscribing it in the history of immediacy as a paradoxical horizon of mediations, as discussed in the field of media theory, the article shows that Amazon's strategies of adaptation during the Covid-19 pandemic reveal once again what media studies had already emphasized: that many technological, logistic and human mediations are required to fulfill an online order as soon as possible, tangentially immediately.

The article finally highlights an understated aspect of mediations: the importance of economic factors in shaping our societies, where shrinking spatial distances by getting separate things closer ever faster is economically profitable in spite of hidden and disastrous consequences on work conditions, on the global organization of the retailing and circulation of goods, and on the environment.

INTRODUCTION

"It's simple, I've never seen so much activity in my Amazon warehouse", declared in April 2020, during the Covid-19 pandemic, a trade unionist of the Italian General Confederation of Labor on the site of Castel San Giovanni (Emilia-Romagna, Italy) (Malet, 2020). In the United States, according to an inside source quoted by the *New York Times*, orders for Amazon groceries have been 50 times higher than normal during the confinement (Conger & Weise, 2020). As revealed on April 30, Amazon's Prime subscription revenue climbed 28% in the first quarter from a year ago (Ho, 2020).

Amazon Prime costs $119 a year in the US and, among other services such as video and music streaming, usually allows delivery in one or two days. But, in order to face the crushing demands, part of the strategy during the confinement was to indicate long delivery times (5 days to a month) for non-essential in-stock goods, in order to discourage some commands and release the pressure (Del Rey, 2020). This strategy strikingly contrasts with Amazon's usual core of business: making delivery always faster. In an article entitled "The Uber-All Economy of the Future", Smith underlines that Amazon "has always focused on speed of delivery, from 1-Click to Prime to PrimeAir to #AmazonCart to PrimeNow. It has relentlessly chipped away at the gap between order and fulfillment. PrimeNow is Amazon's on-demand service, with two-hour delivery for free and one-hour delivery at premium for occasions when immediacy is imperative." (Smith, 2016, p. 386) Amazon is currently working on a delivery system by drones that could shrink the delivery time to 30 minutes for light products in some cities.

My article aims at replacing this transient episode of voluntarily extended delivery times by Amazon in the history of immediacy as a paradoxical horizon of mediations, as discussed in the field of media theory. Don't Amazon's strategies of adaptation during the Covid-19 pandemic reveal once again what media studies had already emphasized: that many techno-

logical, logistic and human mediations are required to fulfill an online order as soon as possible, tangentially immediately?

I will first present materials about the history of Amazon's strategies for speeding up delivery. This desire for immediacy will be explored thanks to the insight given by media theorists on immediacy. It will allow me to better understand Amazon's paradoxical strategy of extended delivery times during the pandemic, relying here mainly on journalistic enquiries and data given by Amazon.

As a result, I will show that inscribing Amazon's episode of extended delivery times in the history of immediacy highlights the usually hidden infrastructure, especially the human workforce, implied by the immediate satisfaction of desires by ever quicker delivery.

I will finally discuss this result, showing that new considerations about immediacy are obtained when paying attention to the economic forces that drive mediations and our perception of time, delay, satisfaction and consumption.

MATERIALS AND METHODS

A succinct presentation of Amazon will be useful to better situate what happened during the Covid-19 confinement. Founded in 1995 in Seattle, Amazon is the worldwide leader of online retailing sales. It started by selling online books, then CDs and DVDs and finally all sorts of goods worldwide, including food in the US. It developed a selling strategy based on users' reviews of products, a market place with third parties proposing goods on the platform, and warehouses where employees and robots could maneuver easily to pick them up using electronic scanning systems (Galloway, 2017, p. 27). Amazon holds 110 buildings worldwide, specifically order preparation centers, storage centers, specialized centers and shipping platforms. Amazon employs almost 800,000 workers, most of them temporarily employed. In 2019, Amazon increased its workforce by 23%.

Amazon's success largely relies on the enormous catalogue of goods it provides on the same platform, to lower costs of products thanks to centralization and to the marketplace (the sellers don't make customers pay for their own retailing infrastructure), and to faster delivery. Among other activities, Amazon also developed a personal electronic assistant named Alexa, that can search the web and add products to shopping cart. With the big data information collected about the consumers' habits, Amazon plans to develop a retailing service bypassing the purchasing process. Goods will be delivered at home without any purchase, and the unwanted ones could be returned. Galloway (2017) calls this trend "Amazon's unwavering focus on making consumer purchases increasingly frictionless" (p. 33). Erasing the deed of purchase and shrinking the delivery time both tend to erase mediation in the consumers' experience of acquiring goods.

This vein exploited by Amazon can be understood referring to a paradox that media theorists have explored under the name of immediacy. In a first approach, immediacy could be situated at the intersection of time simultaneity and space ubiquity. What goes very quickly between two different places tends to immediacy (in the case of Amazon, from the warehouse to the consumer). Time of delivery decreases, giving an impression of having overwhelmed spatiotemporal constraints (that is, distance), and of having made mediations disappear, as the prefix of "im-mediation" shows.

Some media theorists brought interesting insights to understand immediacy. A powerful principle of media theory would state that immediacy is the paradoxical horizon of all mediation. Mediation should erase itself to be efficient. If we think to the electric wires during a phone call, it is because the transmission is bad, and the mediation too present. It results in a failure of the expected authentic experience of communication (authenticity being a connotation of immediacy). Mersch (2018) calls this principle

the negativity of the medial and situates it in the wake of the dialectics of Hegel (p. 45). The medium should make things appear, make information and goods circulate, but should not be visible itself. Krämer refers to it as the postal approach of media theory: transmission succeeds when the medium erases itself. She uses the metaphor of the messenger that dies when delivering his or her message, abandoning her own agency in order to properly fulfill her mission (Krämer, 2015, pp. 19-26).

The interesting thing about immediacy is that it is *a negation* of mediation. Immediacy cannot be thought without mediation. Indeed, in order to reach ever more immediate transmission of information and supposedly authentic experience, ever more elaborate technologies and infrastructures are implied. Bolter and Grusin (1999) showed that "immediacy depends on hypermediacy", i.e. on the use and 'remediation' of multiple mediations (p. 6), rather than on the absence of any mediation. Sprenger proved that, if immediacy goes back to the origins of mediations, it received a serious boost with the growing mastery of electricity in the 17th and 18th centuries and its later use in telegraphy in the 19th century (Sprenger, 2012). These technologies reinforced the fantacy of a peaceful, global, instant and ubiquitous transmission that culminates in Marshall McLuhan's enthusiastic promotion of immediacy in the 1960s.

Nevertheless, the ecologic, sociologic, geostrategic and economic effects of technologies of immediacy tend to be neglected, which blinds users and consumers about the consequences of their use of seemingly ever more immediate mediations. Starosielski (2015) precisely described the undersea fiber-optic cables: with her ethnographic approach, she reveals the "hidden labor, economics, cultures and politics that go into sustaining everyday intercontinental connections" (p. 2). More recently, with the exhibition *The Supermarket of Images*, Szendy et al. (2020) also tried to counter the ideology of immediacy and dematerialization by presenting artworks that unfolded the networks and the

power imbalance implied by technical mediations. The exhibition included *Amazon* (2016), a photograph by Andreas Gursky that, by its large format (4x2m) and its play on the codes of landscapes and marines, presents "an organic and cumbersome set that contradicts the apparent fluidity of the dematerialized commercial exchanges practiced by the online sales platform. Behind a supposedly ethereal digital world lies a saturation of objects, detached from their function and organized according to a single logistic classification" (Voss, in Szendy et al., 2020, p. 58).

Could one say that Amazon's success even relies on this concealment to the eyes of the consumer of the mediations implied by each purchase? That's what the French journalist Jean-Baptiste Malet, who worked from November, 2012 to February, 2013 in an Amazon warehouse in the south of France in order to penetrate the secrets of the firm, thinks: "If Internet users know the homepage of the famous website, most of them do not know what is going on behind their screen, once the order has been validated, when the presumed virtual digital economy becomes real again." (Malet, 2014, p. 9) Faced with the silence imposed on employees, other journalists infiltrated warehouses (Newell & Foggo, 2008; Cahour, 2019) or had to do a huge work of getting closer to employees in order to gather their testimonies (Soper, 2011; Löbl & Onneken, 2013). Thanks to his immersive investigation, Malet describes how Amazon forces employees to remain silent about their hard conditions of work in warehouses, even if it is contrary to the French labor legislation: "They all lived as if they had no right to express themselves." He concludes: "In a world that has been declared open and transparent by virtue of the Internet, where information circulates at the speed of light, supposedly without any limits, high walls rise everywhere and every day that encircle the areas of production and distribution of goods." (p. 11)

Nevertheless, during the confinement due to the Covid-19 pandemic, Amazon could not keep up with the line

of frictionless purchases and of delivery time and users' experience verging immediacy. Contrarily to the promise of quick delivery that is part of its success, the firm strategized discouraging commands through extended delivery times. This was set up on March 17, 2020, as announced on Amazon's Covid-19 blog: "To address this need and help ensure the safety of our associates, we've adjusted our logistics, transportation, supply chain, purchasing, and third-party seller processes to prioritize stocking and delivering higher-priority items. This will result in some of our delivery promises being longer than usual." (Day One Staff, 2020) What falls under the category of "higher-priority items" is indeed very large: "Amazon defined several categories as essential products that can continue shipping, including baby products; health and household items; beauty and personal care; grocery; industrial and scientific; and pet supplies. Books are included as well." (Hu & Dastin, 2020)

But another strategy is worth mentioning in regard of that of extended delivery times for non-essential goods. Amazon had to increase its labor force by hiring temporary employees (targeting those who had lost their previous jobs in hospitality and travel), and by keeping its existing employees at work by increasing wages by $2 per hour. This strategy had been announced on March 16, 2020 by Dave Clark, Amazon's senior vice president of worldwide operations, in a blogpost. In his words, it aimed at "delivering critical supplies directly to the doorsteps of people who need them" (Clark, 2020).

RESULTS

As a result, I argue that Amazon's episode of extended delivery times during the Covid-19 pandemic is yet another breach allowing us to verify and deepen the accuracy of the concept of immediacy as the paradoxical negation of mediations. Including Amazon's episode of extended delivery

times in the history of immediacy highlights the usually hidden infrastructure implied by the immediate satisfaction of desires.

Altogether, both strategies of Amazon (extending delivery times for non-essential goods and expanding the workforce) suggest that it is the human workforce, vulnerable to the virus, that grinded the hidden infrastructure to a halt. These strategies were a way to respond to the difficulty to keep the employees at work whereas their working conditions were not safe. Weise (2020) described in an article for the *New York Times* the discrepancy between Amazon's communication about workers' protection against the propagation of the virus at work and the reality of lately applied and insufficient measures denounced by employees.

In France, this discrepancy led to a legal standoff between the multinational and the French trade unions during the pandemic. On April 24, the judiciary court of Nanterre imposed on Amazon to restrict its activity to orders for food, medical and hygiene products until the company properly assessed the risks to which its employees were exposed due to the Covid-19 pandemic. Amazon France decided to close its logistic sites from April 16 to 20. On April 24, the court of appeal of Versailles confirmed, while softening it, this decision. Trade unionists of the Lauwin-Planque warehouse, in the North of France, had already filed a complaint for endangerment of life on March 31 (Vasseur, 2020).

In the US, on June 3, three workers of the New York warehouse sued Amazon for failing to take the necessary steps to protect its employees from the coronavirus. According to them, Amazon let workers come to work even if they had been in contact with people who tested positive, discouraged resorting to sick leave, and kept asking high work rates that did not allow enough pauses for washing hands and work tools (Statt, 2020).

Amazon's tugging during the pandemic between its employees' health and the growing number of orders thus invites us to reconsider the importance of the human com-

ponent that is still, as the Covid-19 pandemic has evidenced, at the core of the hidden infrastructures of technological acceleration.

Amazon draws its strength from a powerful logistic infrastructure. In order to receive goods from all over the world in the warehouses, and to send them in many countries, it uses all means of transport: overland roads, sea roads, sky roads. In 2019, Amazon expanded its air cargo fleet with 15 more Boeings, planning to have 70 planes by 2021 (Perez, 2019). In the same year, Amazon obtained from the Federal Aviation Administration, after Google's parent company Alphabet, a one-year authorization for testing delivery by drones in the US, planning to run Amazon Prime Air within a few months (Dunn, 2019). In early 2016, Amazon was given a license by the Federal Maritime Commission to implement ocean freight services so it can ship others' goods, getting a position in oceanic transport business (Galloway, 2017, p. 42). Amazon is thus increasing its positioning in global transport and, because it is very expensive for Amazon to have consumers ordering goods, bringing these goods to them, and eventually having to pick them up if they don't please consumers, the firm developed two strategies: garner membership fees through Amazon Prime, and charge others to use its infrastructure because it's way cheaper for them than building their own infrastructure (Galloway, 2017, p. 48).

Nevertheless, as the extended delivery times and the hiring of temporary workers during the pandemic revealed once again, at the core of this infrastructure lie the humans who plan, activate and maintain it. But it seems clear in Amazon's strategy that humans will be more and more replaced by robots (100,000 are already in use), even if the firm rather emphasizes the collaboration between humans and robots, and its alleviating the hardness of human work thanks to robots (Fulkerson, 2019). As Galloway explains: "The reason [Amazon's founder and CEO] Jeff Bezos is advocating a guaranteed income for Americans is he has seen the future of work and, at least in his vision, it doesn't involve

jobs for human beings. At least not enough of them to sustain the current workforce. Increasingly, robots will perform many of the functions of human employees, almost as well (and sometimes a lot better), without annoying requests to leave early to pick up their kid from karate." (Galloway, 2017, pp. 50-51). In Galloway's eyes, Bezos thinks "there's no way the economy will be able to create, as it has done in the past, enough jobs to replace those being destroyed" (p. 51). In 2012, Amazon bought Kiva Systems, a company that manufactured robotic fulfillment systems, and equipped most of its warehouses with robots, obtaining significant time savings on the preparation of orders. Existing employees are supposed to act like the robots that will almost totally replace them as soon as they will be cheaper than humans, as Malet observed during his immersion in a warehouse. Referring to the employees who go looking for items on the shelves, he writes: "Pickers are cheaper and more efficient than robots. With them, no technical maintenance is required since they are mostly temporary workers. Amazon's management can easily replace them when they are exhausted or no longer do the job by simply drawing on the huge reserve army of the unemployed." (p. 44) His work in the warehouse of Montélimar allows him to compare the repartition of functions into highly specialized and separated tasks (*eachers* and *stowers* for the reception part; *pickers* and *packers* for the preparation of packages) to working in a factory. Humans become just another tool of the highly computerized industrial process, that will be replaced as soon as possible. Everything is already digitized thanks to scanning systems, whose duplicity he describes: they are supposed to maximize the employees' operations of storing, picking and packaging, but they are also used to watch every movement employees do in the warehouse and to put increased pressure for performance. For Malet, workers are supposed to become machines if they want to keep their jobs: "each human being has to self-discipline in order to mechanize his body and his mind." (p. 36)

Fig.1 Bianca Argimón, *Melancholia XXI*, 2019, oil on linen, 125 x 95 cm. Courtesy MacVal.

DISCUSSION

By applying immediacy as a conceptual tool borrowed to media studies to Amazon's retailing strategies during the Covid-19 pandemics, I confirmed its accuracy for understanding that promises to cancel distances and mediation have concrete consequences. Many levels are implied: the health of workers and their well-being at work; the organization of the circulation of goods worldwide, that relies on private firms having more and more powerful logistic networks and imply long-distance transportations that are not sustainable for the Earth; the relation of societies to time, delay, satisfaction, and possession.

Media theorists and historians of perception showed that media participate in modulating physical distance and time perception. A debate raised among them about what comes first: do media change our perception of time and space, or do societies change, and accordingly create new media to satisfy their need for more and more speed (Koselleck, 1976; Rosa, 2003; Tomlinson, 2007)? My detour by Amazon suggests that this debate could be enriched, that is, displaced, when paying attention to the economic forces at stake. One cannot deny that our perception of time, of waiting, of distance, of presence, is challenged by media, but it is interesting to wonder what role play profit-oriented companies such as Amazon for supporting orientations towards quickness and, tangentially, immediacy. Amazon's huge infrastructure, that still relies on humans for being planned, activated and maintained, has to be voluntarily concealed in order for the customers not to think too much about the consequences of the human, technological, logistical and legislative mediations necessary for receiving the products they purchased. But this hidden infrastructure is clearly revealed in times of crisis, such as the confinement due to the Covid-19 pandemic or the strikes of the employees, be these strikes against their bad work conditions as well as Amazon's devastating impact on the environment (Massiot, 2020).

CONCLUSION

During the confinement due to the Covid-19 pandemic, those equipped with computers or smartphones largely used the e-commerce worldwide leader Amazon's online interface to overwhelm distance from the goods they more or less needed. As the promise of immediacy of delivery could not be maintained for many non-essential goods, the hidden infrastructure of this promise was once again revealed. The notion of immediacy, developed in the field of media studies, helped us understanding the problematic consequences of such a concealment.

In return, paying attention to the strategies of a firm that promises to reduce delivery time to a minimum and that tries to conceal to the consumer all the human, technological, logistical and legislative mediations it requires to deliver goods, led us to highlight an understated aspect of mediations: the importance of economic factors in shaping our societies, where shrinking spatial distances by getting separate things closer ever faster is economically profitable in spite of disastrous consequences (on work conditions, on the global organization of the retailing and circulation of goods, and on the environment).

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CODE, DESIRE AND CONJURING

ON THE MAGIC FABRIC OF CONTEMPORARY COMPUTING TECHNOLOGIES

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MAGIC
LANGUAGE
DESIRE
DIGITIZATION
INTERFACE

In this paper I endeavor to bridge the gap between the concepts of magic and of digital technology. I do this by focusing on the intersection between the magic spell and software or code. By scrutinizing the interplay between the (magic) formula and the way it is performed in order to achieve a specific impact, it becomes possible to describe a close proximity of the magic formula with contemporary software. Today, digital machines and their relevant algorithms are almost exclusively seen in the light of a narrow rational and technical concept. Historically, the 'use' of technology is much more diverse, and I argue out of this perspective that it is time to historicize the working structure of digital machines in a way, that they can be embedded within the long history of magic conceptions.

INTRODUCTION

This paper aims to adapt the concept of magic to approach core characteristics of contemporary digital computing media. For this purpose phenomena, which are normally not connected to the concept of magic, will be analyzed. In the historic conception the terms or concepts μαγεία, ars magica and magic have been adapted, reevaluated, expanded and restricted in various ways during their European history (Otto, 2011). In the following paper the concept of magic is understood as a poetic strategy, using symbolic or expressive procedures in order to transform 'reality'. And by highlighting, that nowadays our everyday life-world is permeated by algorithms operating in the background of broadly dispersed computer-interfaces, respectively 'intelligent' artificial entities guiding and monitoring our movement through our digitized and interconnected environments, I will demonstrate a new relevance of the concept of magic. As I will show, technological interface networks nowadays rather ask for 'desires', 'wishes' and in particular specific poetic communication strategies, instead of orders and arguments. The term 'magic' hence will be used to analyze the way how digital computational media changed and changes the actual living reality of people to a place (again) defined by 'opaque'[1] entities. I will explain, how today's computational media explicitly epitomize 'magic' characteristics of technology thereby changing our perception on reality.

MATERIALS AND METHODS

In the following, I will rely on historical and theoretical contextualization of contemporary technological phenomena. Contemporary computer code and Artificial Intelligence algorithms will be counterpositioned with historical concepts like the magic spell or magic invocations in order to point out similar aims and interaction strategies.

DISCUSSION

The magic spell

Language is not only a 'medium' for modulating physical and temporal distances. Language also is a poetic tool allowing us, to change and develop relations between ourselves, our environment and other 'non-human' entities. Or to put it another way, language has a dimension of "magical" powers in the sense, that it affirms (medial) communication structures in characteristics, that might contradict rational 'objectivity'. This argumentation can be validated by relying on etymology. As the linguist Michaela Essler proves, the term 'magic' has a clear reference to ritualized speech, to the 'effect' of direct invocations and thus to actors focusing on memory and the power of thought (Essler, 2017, p. 237). But it goes without saying that magicians never saw themselves as linguists analyzing connections between signs, metaphors, formulas and symbols. Magical invocations (ideally) transform representation, respectively symbolic or expressive procedures into reality. They do not allow signs to represent things or events, but rather update them in targeted effects (Bracken, 2008, p. 113).

For magicians language thus possesses a specific (medial) immediacy, which enables them not only to categorize the world, but also to address a desired state of the world. In speaking or more precisely speeches, in the famous magic formula, magicians thus emphasize a potential synthesis between wish and word, between magical expression and its effect. Magical approaches accordingly define a specific syntactic system allowing to link wishes, respectively poetic imaginations by relating wordings to planned effects.

Magical machines

In superficial contrast to this, (digital) technology is generally categorized as a rational phenomenon strictly building on 'technological' approaches. I question this classification by focusing on the structural build of contempo-

rary computing machines and our current computerized networks. As is broadly understood, the functionality of a 'computer' is defined by its software and only restricted in its working power by hardware. Fundamentally relying on the concept of the 'Turing machine', which proved a valid functional model, depicting the possibility to technically perform any calculation (Wiener, Bonik, & Hödicke, 1998), a computer is in its core a universal machine, which can 'run' a potentially unrestricted number of software-programs[2]. The utopian climax of this conception is the so-called 'cyberspace'[3], which in its pure technical vision is a realm, in which software gets downright transcended and freed from the restrictions of our physical world. This is why the cultural scientist Vincent Mosco speaks of an electronic or digital sublime manifesting itself in present cyberspace visions (Mosco, 2004, p. 24). Cyberspace hence can be understood as techno-magic spheres, in which software changes to the status of a magic formula.

It has to be mentioned however, that the actual 'cyberspace', we are dealing with never was (beside science fiction stories) a realm of unrestricted magical freedom. In fact, for example our digitally networked machinery is still highly dependent on the fossil fuel that is running their energy-consuming server infrastructure. It is hence rather the vision of universality, that has to be identified as one magic 'marker' inscribed in the concept of software. I hence argue that software or better code can be related to the magic spell, in its characteristic as a 'universal' problem-solving concept, even if the reality is much more complex. But in order to further determine the inner connections of software and magic, we must continue to deepen and differentiate.

As the cultural scientist Yuk Hui highlights, modern computational machines are to be understood as 'syntactic' rather than semantic machines (Hui, 2016, p. 76). They hence rely on the possibility to install relations and not to define, respectively stabilize sense systems. And here we

are faced with another characteristic of software, cause also the way computers work, relies on establishing connections between wordings and functions. Since software or better the applied (source) code has to be a 'language' to be transformable in binary code[4], it has to create relations between input and commands. In consequence, software or source code have to link more explicitly to the concept of orders or wishes, than to actual transfers of meaning. Against this background, it is possible to further evaluate the connection between code or software and the magic spell. In fact magical formulas were historically constructed like code, they consisted or consist of individual 'elements', which are perceived as powerful, if they are combined in the right way (Lecouteux, 2015, p. XI-XXV). (Historic) magic spells link speech patterns or vocal elements with targeted effects. Software hence is comparable to magic spells in its characteristic to allow a computing machine to translate / process (combined) working instructions and building on this, perform operations, which are targeted by its user.

So, if Lev Manovich claims in his famous book *Software takes command*, that software has become our interface to the world, to our memory and our imagination (Manovich, 2013), he relates himself, without explicitly referring to this, with the ages old history of the magic formula. Out of this perspective, one could even claim, that positions like those of Manovich aim to define a new adamic language. One could claim, that they understand language as a powerful magic 'tool' offering true power in understanding and changing the fundamental bases of our reality and being (Benjamin, Lönker, & Benjamin, 2019). It is no need to further deepen this perspective to understand the familiarity of software or code with the concept of the magic spell. But how to allow people, who are not able to write and read code to work with a computerized machine (system)? With this question, we will have to start considering the discussion of the interface.

Interfaces and co-users

In the context of digital media, contemporary computing interfaces define 'zones', in which dynamic relationships between people, machines, devices, digital processes and networks as well as entire organizational structures are created and negotiated (Hookway, 2014, p. 4). Classical Graphical User Interfaces (GUIs), as they are still used today (for example in our computer desktops), define since decades our interaction processes with digital technology. GUIs allow control operations based on man-machine feedback loops (Wardrip-Fruin, 2003, pp. 3-82). GUIs thereby promise to form powerful technological structures with a user-subject in its center. As Nishant Shah classifies: The GUI was a way by which complex technical background processes, "the normative nature of pre-programmed algorithms, the restricted variables that determined the stable state of the computer, and the controlled nature of code, were made invisible behind animated point and move gestures that would allow the newly enfranchised user to initiate a pretended conversation with the computer" (Shah, 2017, p. 185). The GUI hence is a powerful tool for man-machine cooperation, that rather simulates then performs interaction. Against this background, it is striking to consider, that the concept of the GUI lost its central position during the past years. Today, it is far more relevant to address the topic of the 'network', or rather the networked life-world of human and non-human (algorithmic) actors. The cultural scientist Benjamin Bratton describes this new network reality as defined by technical 'layers', as a place of 'participation' or technical 'containment' and names it with the term 'the stack'. As Bratton argues, human beings located in the stack must permanently network through a variety of 'interfaces' with non-human 'co-users' in order to survive his or her everyday life (Bratton, 2016, p. 38).

So following Bratton, the interfaces today changed from tools suggesting or simulating user control, to a system built on a variety of 'docking ports', which includes the user in a broader networked structure. That's a classification, with

which every owner of a smartphone for sure can agree. But what is explicitly relevant for understanding the digitally networked reality of the stack is Barattons introduction of co-users. To explain this classification, it is relevant to turn to the so-called neural networks, respectively artificial intelligence computer programs (AIs). As the computer scientist Melanie Mitchell explains, contemporary neural networks build on 'connectionist' strategies, what basically means, that they 'weight' connections between units they are trained to recognize (Mitchell, 2019, p.65). The semantic proximity relevant for those 'Algorithms' is thereby deduced from statistical proximity between all of the terms in the corpus of themes relevant for the respective AI (Cardon, Cointet, Mazières, & Libbrecht, 2018). AIs hence are nowadays involved in so called pattern-recognition processes. We are again confronted with a structure valuing syntax over semantic.

For example Googles web search engine is a good example for explaining the connectionist approach dominating our contemporary AI infrastructure. This search engine AI constantly analyses with sheer computing power the way how webpages are interconnected, plus the way human users interact with this infrastructure. Relying on its breakdown, the Google AI offers results "useful" for human users and even more useful for companies, who want to develop target specific advertising. Out of this reason Google has to constantly update its AI relying on new user requests. To organize its results, the Google AI hence needs not only content data, but also user interaction data. The functioning mode of AIs so can be defined at this point, is one of an 'autonomous' machine, that constantly has to be 'serviced' with human user input in order to gain access to semantic perspectives. Against this background Hamid R. Ekbia and Bonnie A. Nardi are speaking of 'Heteromation', when describing our contemporary digitized economy. As the authors show basically most companies using AIs have to rely on services like Amazons 'Mechanical Turk' platform[5], to be able to produce discreetly functioning neural networks (Ekbia & Nardi, 2017).

Following this Brattons description of being a co-user gets now understandable. Bratton obviously wants to highlight, that we nowadays do co-evolve within our digital networks with new computational 'actors'. And this situation means, that we can neither fully control nor monitor our digital machines anymore. Living in the 'stack' hence means relying on new modes of interaction with our digitized environments. It means, that we have to develop new (magical) interaction 'formulas', new interface structures in order to integrate in our brave new computerized living-world.

CONCLUSIONS

If one considers against this background, that, inside the digital environment including the user, communicative 'interaction processes' with our opaque co-users function in a way that can be classified as poetic, one can further claim, that there are profound relations between magic and contemporary digital technology. Today, for example, one cannot just use any wording to approach a digital assistant like *Google Now*, one has to know its name to start the conversation and rely on a specific way of talking in order to enable the algorithm to interact. Against this background, one could even claim, that the syntactic synthesis between wish and word, between magical expression and its effect characterizing historical magical strategies, recently was updated in the stack by rules focusing on the pattern recognition abilities of AIs.

Furthermore, without a co-user offering a clear semantic input, respectively the capability to link his wishes or his desire with specific wordings, the digital actors evolving with us obviously loose structure and objective. In interaction with our digital co-users, we hence are forced to act like classic shaman magicians constantly aiming to allow mediation between words and effects, wishes and will (Descola, 2013, p. 20). It is crucial to again recall at this point: Magical approaches accordingly define a specific syntactic system allow-

ing to link wishes, respectively poetic imaginations by relating wordings to planned effects. As was shown, todays digital machines are building on similar 'connections' of wordings and effects. Those machines, one can claim at this point, not only use computing power to detect patterns and frameworks to rely on. They are also creating 'animacies' in the words of Mel Chen. They are creating communication and interface structures, that in fact rather utilize the alchemical or poetic 'magic' of human 'language', than the structure of human attributions (Chen, 2012, p. 23). Out of this perspective one can claim, that in fact the human ability to allow a synthesis in between wording and will, between poetic abstraction and direct manifestation is central for contemporary AI based machines. Todays stack hence is basically an artificial 'garden' full of non-human 'beings', that all ask for 'desires', 'wishes' and 'invocations', in order to allow a co-evolution, respectively a co-development of our shared 'reality'. The magic spell, the idea of invocation, of hidden powerful beings, that was relevant for centuries of European history is again central today. We just are not using its historic name till now.

NOTES

1 For example Google engineers have to use so called "concept activation vectors" in order to explain the functionality of their AIs (Rodriguez, 2019)
2 A good introduction in the setup of the turing machine can be found on the following webpage: https://plato.stanford.edu/entries/turing-machine/
3 The term cyberspace was invented by the science fiction author William Gibson in his book *Neuromancer*. In this book he describes the cyberspace as a location, in which people can leave all 'restrictions' of their flesh behind and become pure digital animas.
4 Binary code is a translation of the source code a digital machine needs in order to function. It is basically the only means allowing a computing machine to react on external triggers.
5 Amazon Mechanical Turk (MTurk) is a crowdsourcing marketplace that makes it easier for individuals and businesses to outsource their processes and jobs to a distributed workforce who can perform these tasks virtually. https://www.mturk.com/

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RESHAPING TEACHER-STUDENT INTERACTION IN THE VIRTUAL CLASSROOM
A CASE STUDY

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CONVERSATION ANALYSIS
ONLINE CLASSROOM INTERACTION
QUESTION-ANSWER SEQUENCES
TURN-TAKING

This paper presents an exploratory examination of video-mediated classroom interaction in School and University settings, a modality of teaching and learning which has recently experienced a rapid growth as a consequence of the COVID-19 emergency. Based on a corpus of audio and video recorded virtual classes, we analyze how instructors and students cope with the challenges of not being physically co-present and lacking direct visual contact in the virtual enviroment, and discuss how fundamental mechanisms of face-to-face classroom interaction –participants' mutual orientation in the opening phase, speakers' identification and recognition, as well as instructors' actions like comprehension checks, solicitations for questions/comments, questions and evaluations– are partially modified in the virtual environment, making it more complex, for instructors, to enhance students' active participation. Final considerations are devoted to the possible implications of these preliminary findings.

INTRODUCTION

With the spread of the Internet, since the early 1990s computer-mediated communication has increasingly found application not only in business and private contexts (e-mail, text messaging, videoconference, etc.) but also in educational settings; in these latter, a variety of tools has been employed to bridge physical distance among teachers and students and as substitute for oral class discussions, such as *Internet Relay Chat* channels, pre-recorded lectures –typically implemented by digital Universities–, as well as, more recently, synchronous online classes.

The obligation of physical distancing imposed over the last few months by the COVID-19 emergency, furthermore, has forced Schools and Universities to rapidly switch teaching activities to online synchronous and a-synchronous modalities, and to face challenges related to technical issues, as well as, and more relevantly, to the way teaching and learning can be successfully carried out in the (for many) new digital environment.

The present paper[1] addresses some of these challenges by examining a collection of videoconference-mediated classroom interactions in School and University settings in South Tyrol. These are investigated within the framework of Conversation Analysis, a theoretical and methodological approach devoted to the study of social interaction and language use (Sacks, Schegloff, & Jefferson, 1974; Sidnell & Stivers, 2013), based on the analysis of audio and video recorded naturally occurring communicative events. In particular, we focus on the way the online environment may affect classes openings and participants' identification (chap. *Opening the event, opening a conversational exchange*) and examine the possible difficulties faced by instructors in sustaining students' participation through comprehension checks and invitations for questions and comments (chap. *Checking students' understanding and opening the floor for discussion*). Furthermore, we analyse how the accomplishment of question-answer sequences, typical of classroom interaction, may be modified through affordances and constraints of

the virtual medium (chaps. "*Who can answer this question?*" *Non-addressed questions, silence, and overlaps* and *Evaluating students' answers*), and finally discuss some implications of our findings for enhancing the very sustainability of pedagogically interacting, as instructors and students, in a virtual environment.

Face-to face and online classroom interaction: the perspective of Conversation Analysis

Since its inception in the late 1970s, Conversation Analysis (CA) has provided detailed investigations of fundamental mechanisms governing interaction, describing how social actors make use of a variety of semiotic resources (talk, gaze, gestures, etc.) (Streeck, 2009; Goodwin, & LeBaron, 2011) to produce and recognize interactional conduct, both in ordinary, symmetrical conversations (for instance, among friends) and in "institutional" settings like classrooms, hospitals and courtrooms, showing how in these latter contexts participants typically orient to institution-specific goals and to restrictions on the nature of their contributions (Drew & Heritage, 1992). A case in point for such orientation is classroom interaction, where teachers take up the role of "leaders" or class "managers", opening and closing the encounter, giving students the floor, selecting topics and resorting order whenever necessary (Gardner, 2012; 2019).

CA studies have also highlighted how, while classroom work may encompass students' symmetrical peer interaction (as in group work or plenum discussions), instructional activities are typically organized in three-part sequences (IRE or Initiation-Response-Evaluation sequences) (Margutti & Drew, 2014; Mehan, 1979; Sinclair & Coulthard, 1975), that is, triadic structures whereby teachers direct questions whose answer they already know (so-called "known-information questions" or "display questions") to students, as a way of instructing them or verifying their knowledge, and subsequently evaluate their answers with positive or negative feedback.

Earlier CA research on classroom interaction was mainly centred on verbal conduct; in the two past decades, though,

scholars have started to examine face-to-face teacher-student communication from a broader, multimodal perspective. It has thus been shown how teachers and students bodily coordinate in space in lessons beginnings, so that a mutual focus of attention is gained and instructional activities can start (Ingwer, 2007); the teacher's gaze has been found crucial in actions like giving students the floor (Kääntä, 2012) or in reproaching students' unacceptable conduct (Andrén & Cekaite, 2017), while (silent) students' visual orientation has been examined as possibly displaying engagement in the activity at hand (Heidtmann & Föh, 2007; Orletti, 2015). Teachers' gestures in vocabulary explanations (Waring, Creider, & Box, 2013) and in soliciting students' correction (Majlesi, 2014) have been scrutinised in detail; attention has also been devoted to material objects like the (traditional) blackboard, and the way blackboard inscriptions may serve as resources in co-constructing and stabilising knowledge (Demo & Veronesi, 2019; Pitsch, 2007).

Since the late 1990s, furthermore, conversation analysts have expanded their interest from face-to-face conversation to computer-mediated discourse (Arminen, Licoppe, & Spagnolli, 2016; Giles, Stommel, Paulus, Lester, & Reed, 2015; Meredith, 2019), examining how basic rules of social interaction –turn-taking, the organization of actions that are performed through talk and other semiotic resources, and the way problems in speaking, hearing and understanding are solved– may be adapted in the virtual enviroment in events such as *Skype* video calls (Licoppe, & Morel, 2012), chats in ordinary and classroom settings (Garcia & Jacobs, 1999; Hutchby, 2001; Schönfeldt & Golato, 2003), *WhatsApp* conversations (Petitjean & Morel, 2017), *Periscope* live video streams (Licoppe & Morel, 2012), *Facebook* chats (Meredith & Stokoe, 2014), online support groups (Stommel & Koole, 2010), online video gaming (Reeves, Greiffenhagen, & Laurier, 2017) and, last but not least –though still very limited–, online classroom interaction (Hjulstad, 2016).

Drawing upon this body of research, in the following we thus examine how teaching and learning may be both made

possible and constrained by the use of audio and video technologies, in virtual classroom contexts in which instructors and students, rather than being temporally and physically co-present, communicate via an Internet connection and a PC, a smarphone or an iPad within a given platform and make each other audible and visible through microphones and webcams, can share files on their screen, write in a chat channel or on a virtual blackboard, as well as distribute themselves in groups within dedicated sub-channels for project works and the like.

Research methodology and data

In this paper we orient to the theoretical and methodological framework of Conversation Analysis (see chap. *Face-to face and online classroom interaction: the perspective of Conversation Analysis*), adopting an emic perspective that aims at capturing participants' actions and understanding of interaction as it unfolds moment-by-moment. Data consist of a corpus of videoconference-mediated classroom interactions held, via *Teams*, *Zoom* and *Google Meets* platforms, in School and University settings in South Tyrol (3 middle school classes and 3 secondary school classes, documented through audio-recordings, ca. 3 hours and 15 minutes; 8 university lectures and 9 labs, all video recorded, ca. 34 hours and 45 minutes) and collected between March and May 2020 with participants' informed consent[2]. Middle and Secondary school classes (Math in German L1, with 17 pupils, and Italian as L2 in two different classes, with 24 and 25 students, respectively) are structured in two main types of activities, that is, jointly revising home assignments and/or carrying out new exercises and tests, as well as dealing with new topics introduced by the teacher. University data are taken from a master's degree course attended by 13 students and held in German, English and Italian, with (some) lectures mostly constituted by lecturers' monologic talk, and labs characterized by a more balanced alternation between instructors' explanations and students' direct engagement in individual or pair/group work, as well as in oral presentations.

ANALYSIS

Opening the event, opening a conversational exchange

As outlined in CA studies (cf. for instance Kendon, 1990), for a face-to-face interaction to take place participants need to be spatially oriented towards each other and establish a joint focus of attention. In the physical setting of the classroom, as already mentioned, this is reached by instructors and students through bodily coordination and mutual gaze orientation; in which way, though, can such a joint orientation be reached in a "fractured" digital environment (Luff et al., 2003) where participants are not physically co-present and interact through a video and a microphone?

As expected, and as observed in our data, some time is spent, in the very opening phase of online classes, in checking visibility and audibility (typically by instructors) to ensure the very feasibility of interacting online: a phase which, intermingled with greetings, in our corpus ranges from a few seconds to five minutes, and which may recur whenever instructors or students share their screen to show documents and the like.

Participants' online conduct may also be negotiated, with instructors asking students to turn off microphones and cameras when not speaking: a specific participation framework (Goffman, 1981) which, though ensuring a higher sonic intelligibility of the instructors' talk and the avoidance of channel noise, may amplify the perception of the virtual environment as a fractured, fragmented space and lead teaching staff –as reported informally by some of the involved instructors– to feel as if talking in a vacuum, since they lack both visual and aural access to students as possible cues of their engagement and understanding[3].

A further, major issue coming into play here concerns the way in which a participant speaking into their microphone and deactivated camera may be identified and recognized by other participants; a task, as reported by Licoppe & Morel (2012) for *Skype* video calls, not always easy to accomplish. In fact, digital platforms do take such issue into account: in *Teams*, whenever a participant speaks into the (activated) mi-

crophone, his/her circle icon (with initials or a profile picture) is displayed in the upper, larger part of the screen while the icon squared background changes colour. In *Zoom* –where a selection between a 'speaker view' displaying the current speaker only and a 'gallery view' showing all participants can be made– the current speaker's image is similarly boxed with a different colour, and the same goes for *Google Meets*, which allows to switch between seeing all participants and a single one, and in which the current speaker's icon (as initials or profile picture) is highlighted in a different colour.

Such visual cues, though, may not always be easy to notice for instructors, given the fact that not only, as observed in our University data, students tend not to activate their video camera when speaking, but also because the speaker's icon appears next to previous speakers' icons, in the upper part of the screen (*Teams*), or together with all other participants (*Zoom* and *Google Meets*, 'gallery view').

The following extract, taken from a University lab, may exemplify how instructors and students deal with this issue (example 1). Here the lecturer (LEC), after having introduced the next activity –namely student presentations of an individual home assignment (collection and analysis of a phone call, with data and transcription delivered to the lecturer prior to the lab session)–, opens the floor inviting someone to volunteer as first presenter (line 1).

Example 1 (Lab1_2, 05:32-06:16, who's talking?)[4]

```
 1  LEC  who would like to to start¿ remember that you only have
 2       ten ten minutes so: it's really a- a sma::ll exercise
 3       but still I'm very happy with the works that you have done
 4       ah collecting and transcribing, analysing
 5       (0.3)
 6  BIR  should I? ((BIR's icon changes colour))
 7  LEC  yeah who's talking?
 8       (0.2)
 9  BIR  I mean mine (xxx) ah: Bir (.) git
10  LEC  yeah. was <your> ehm:: I had some strange feelings
11       >not strange feelings but< about your phone call
((LEC comments on phone call,
BIR provides details and presents analysis))
```

As can be seen in the transcript, following the lecturer's invitation and after a short pause (0.3, line 5), student Birgit (BIR) announces her availability to present her work ("should I?", line 6), while the background of her icon, already displayed in the upper part of the screen due to prior talking activity, turns from grey into bluish. As it becomes clear at line 7, though, LEC does not notice the colour change, nor does she manage to identify BIR by her voice, so that, after ratifying BIR's self-selection and thus giving her the floor, LEC explicitly asks the student to identify herself. Only after this is done, and confirmed by the lecturer (line 10, "yeah."), interaction can move on.

Checking students' understanding and opening the floor for discussion

Both School and University classes, as described above, are, to a lesser or greater extent, characterized by the alternation between monologic explanation phases by the instructor and more dialogic phases in which students' active contribution is required and encouraged, such as in pair/group work, discussions, or in question-answer-evaluation (IRE) sequences initiated by the instructor. During explanation phases, though, it is not rare for instructors to check students' comprehension, as well as to open the floor for clarification questions and comments. In face-to-face classroom interaction, such comprehension checks ("Is everything clear?") and invitations for questions ("Any questions?") and comments are typically deployed by instructors before closing the topic or activity at hand, thus opening a possible space for students' contributions and later move on to the next topic/activity. Students, on their part, may provide an explicit verbal positive/negative response, but also visually display understanding, agreement or perplexity through nodding, smiling and further facial expressions. How is comprehension verified, then, and how do instructors manage the (possible) absence of visual contact with students in online classes?

Let us consider the following episode (example 2) from a University lecture. Prior to the beginning of the excerpt, the lecturer had delivered a lengthy explanation of fundamental concepts around the topic "multilingualism", for which she had provided definitions and examples. After that, she asks students whether they have questions or comments on concepts and phenomena dealt with that far in the lecture (lines 1-6), so that they can "close the first round on terminology" (lines 7-9)[5].

Example 2 (LEC1_1; 35:42-36:57, "es kommt kein im chat herein")

```
 1  LEC  Ich wollte sie nun fragen, gibt es noch
 2       weitere begriffe oder phänomene,
 3       die wir jetzt in diesen ehm:: eh: vorlesungsstunden
 4       ja >die heutigen stunden, würden ja, verlängert,<
 5       eh: noch gesehen haben, was ihnen noch
 6       als etwas neues, oder bemerkenswertes,
 7       noch aufgefallen ist¿ damit e:h wir >so zu sagen<
 8       die erste terminologie, >den ersten terminologieschub<
 9       ehm:: hier  abschließen können?
10       (0.5)
11  LEC  bitte wenn sie sich jetzt im chat melden würden,
12       *(3)
         *looks down*
13       *(7)*
         *looks at chat*
14  LEC  <ja: es kommt kein im chat herein.>
15       ich kann ihnen auf jeden fall versichern,
16       wir hatten ja noch ehm: begriffe gesehen wie
((LEC2 mentions a number of concepts))
```

As can be noticed, the lecturer's long invitation for students' contribution –uttered in its final part with a rising, interrogative intonation (line 9) which clearly signals the end of the turn and opens the floor to interlocutors– fails to receive any kind of visible or audible reaction by students, so that, after a half a second pause, the lecturer relaunches the prior action by soliciting potential speakers to use the chat (line 11), a tool typically drawn upon for students' contributions in this course. Ten seconds go by while LEC looks down and then at the chat on her screen and, given the fact that nobody claims for the floor, she

resumes speaking by mentioning further concepts seen that far. The absence of students' responses is thus interpreted by the lecturer as absence of questions or comments and, consequently, as silent invitation to go on with the lecture. It cannot be claimed, evidently, that in similar cases a "verbal "response might "not" be provided in face-to-face classes either; what is striking, though, is the fact that students do not compensate the drawbacks of physical distance and momentary lack of mutual visual access by taking advantage of the possibilities offered by the medium (i.e., turning on the mic and provide a verbal feedback), and, instead, leave instructors' invitation non-responded.

One may suppose that the lack of students' questions and comments might be also linked to the overall challenges of teaching and learning in a virtual environment, as one university lecturer asks herself and her students towards the end of one of her classes[6]; nevertheless, what is observable here, as well as in similar cases documented in our corpus, is the complexity of sustaining students' participation in the digital classroom, as well as the momentary modification of fundamental mechanisms of face-to-face talk-in-interaction such as turn-taking and action sequentiality, as also noted for digital written communication (Schönfeldt & Golato, 2003).

"Who can answer this question?" Non-addressed questions, silence, and overlaps

As already mentioned (see chap. *Face-to face and online classroom interaction: the perspective of Conversation Analysis*), a typical organizational structure of classroom interaction, particularly whole-class teacher-led communication, is the IRE sequence, constituted by the teacher's (answer-known) question, the student's answer, and a positive or a negative teacher's third evaluative turn. Teacher's questions can be non-addressed or pre-allocated: the former are questions asked by the teacher the whole class, which may be followed by some student's verbal or non-verbal (i.e., via hand raising) claim for the floor; pre-allocated questions, on the contrary,

are those explicitly addressed to a particular student through individual nomination or other types of turn allocation (vocatives, gaze, pointing gestures).

While the ratio between addressed and non-addressed (answer-known) questions may vary across instructors, educational levels[7] and pedagogical goals[8], it is worth examining how these are accomplished in the virtual environment, and what consequences this may possibly have on the organization of teaching and learning, as compared to face-to-face classes.

In our data, pre-allocated questions are asked by instructors by explicitly mentioning students' names, thus identifying and selecting the next speaker in a way that is potentially intelligible for everyone. Interactional 'troubles', instead, seem to arise, similarly to the case of instructors' comprehension checks and solicitations seen above (chap. *Checking students' understanding and opening the floor for discussion*), when instructors address their questions to the whole class. In five university lectures and labs examined in detail, for instance, most instructors' non-addressed questions are followed by considerable silence (from 3 to 20 seconds)[9] and similar 'gaps' are to be found in secondary school classes, leading instructors, in case of non-responses, to select a particular student, or to reformulate and/or expand the initial question and open the floor again for students' answers.

Though limited and to be confirmed through the analysis of a larger corpus, these data seem to suggest that online classes in which students are "individually" called to contribute, rather than being generally addressed as members of the class, might be more successful in enhancing participation. This, in fact, might hold for face-to-face classes as well, particularly in school settings, but the physical distance and the potential (and, in most cases, actual) lack of visual contact between participants in online interaction –let alone connection failures and the like– might well increase the possibility that turns go unresponded and that longer silences between turns are not accounted for, as it may be the case in multiparty online chats and forum messages (Antaki,

Ardévol, Nunez, & Vayreda, 2005; Schönfeldt & Golato, 2003).

The technical difficulty for online participants to constantly see each other, on the other hand, seems to have been taken into account by digital platform developers: *Zoom*, for instance, gives users the possibility of virtually raising their hand, and thus request for the floor and pre-announce a (possible) imminent contribution, through a corresponding icon, and indeed this function was taken advantage of in the middle school classes examined here. Interestingly, a similar hand-raising icon was integrated in *Teams* in early May 2020 –that is, some months after the outbreak of the COVID-19 pandemic and the consequent increased use of this platform in the field of education– allowing participants to better manage turn-taking in large multiparty conversations by possibly avoiding overlaps between speakers competing for the floor, these latter representing one further interactional challenge participants had to face in some of the classes in our corpus.

Evaluating students' answers

In this last section we examine how, in the context of IRE sequences, instructors provide feedback to students' answers in the online environment and discuss how this context may lead to modifications with respect to face-to-face classrooms. As already mentioned, students' answers to answer-known questions are typically followed by the teacher's evaluative third turn, which confirms or rejects the answer, and which students expect and orient to; confirming evaluative turns are generally delivered without hesitations and in a short-time span (Margutti & Drew, 2014), while negative evaluations may be delayed and mitigated (Gardner, 2012).

How this kind of sequences may be 'translated' in the virtual classroom is shown in the following episode, taken from a high school class. The whole session has been devoted to reviewing Italian tenses; in this particular phase teachers and students are engaged in a series of exercises focusing on the subjunctive mood, to be used when conveying

uncertainty and after verbs expressing opinions ("think", "believe" etc.). Each exercise, assigned to a student and displayed in a table on the teacher's screen, comprises three sentences; in each of them, two verbs are to be substituted. The extract begins with the teacher (TEA) asking student Verena (VER), previously dealing with the first sentence, to do "the following one too" (line 1).

Example 4 (Sec_3, 07:50-08:20)

```
 1  TEA  pure il prossimo,
 2       (1.1)
 3  TEA  [voi dicevate che cri]stian faceva?
 4  VER  [voi dicevate che c-]
 5       (1.3)
 6  TEA  mh=mh,
 7  VER  voi pensavate che cristian (0.2)
 8       facesse bene il suo lavoro.
 9       (2.3)
10  TEA  m:h,
11       (3.2)
12  TEA  l'ultimo,
13       (2.5)
14  VER  voi pensavate che cristian, avesse
15       imparato l'inglese, a londra.
16       (2.4)
17  TEA  <(molto) bene.>
18       (1.3)
19  TEA  (x) (0.6) prossimo esercizio, Marlene
```

The teacher's invitation at line 1 is not immediately responded to by the student, so that the teacher starts reading the sentence to be transformed ("you were saying that Christian was doing?"), in overlap with the student, and pronouncing with particular emphasis the verb to be substituted with a subjective tense ("faceva", *was doing*). There follows a pause (line 5) and the teacher's minimal feedback "mh=mh," which encourages Verena to take the floor again and thus deliver her answer (lines 7-8).

Although this is correct, the teacher provides (minimal) positive feedback only after 2.3 seconds; a similar long pause is to be found after Verena orally transforms the following and last sentence of the exercise (lines 14-16), and before

the teacher gives her an explicit positive evaluation ("molto bene.", *very good*.), which also serves to close the interactional episode with Verena and to move on to the next exercise and the next student Marlene ("next exercise, Marlene").

What is remarkable in this fragment, which comprises two IRE sequences, are first of all the long pauses needed by VER to take the floor and perform the assigned task, and the fact that she waits for the teacher's verbal 'go-ahead' before doing that, a conduct that may be, at least in part, attributed to the fact that the teacher is sharing his screen and is not visible, but only audible, for students. Secondly, and more relevantly if compared to face-to-face classroom interaction, positive evaluations are produced by the teacher with delay, with a timing that would be otherwise common for negative evaluations: if connection problems – indeed audible in this episode– might be one of the reasons explaining such delay and individual teaching styles may also play a role here, it is clear that the lack of visual contact between interlocutors, with the teacher possibly providing a non-verbal positive feedback, makes the accomplishment of the IRE sequence cumbersome, with a temporal expansion of actions and responses, and with a contextual reconfiguration of meaning-making resources such as silence and preference in conversation.

DISCUSSION AND CONCLUDING REMARKS

In this exploratory paper we have examined some of the peculiarities of video-mediated classroom interaction –a modality that has become common worldwide in school and university education, after the outbreak of the COVID-19 virus pandemic in early 2020, to remediate the impossibility for instructors and students to be physically co-present in the classroom–, showing how teaching and learning in a synchronous online environment is both made possible and constrained by the affordances of the digital medium.

Apart from the need of checking the well-functioning of everybody's connection to the digital platform, of solving digital system failures whenever they occur, as well as issues of speakers' identification –this latter being much less immediate than in face-to-face encounters due to the lack of direct visual contact between interlocutors–, our data hint at the complexity, for instructors, of sustaining students' participation in the virtual environment, which increases typical challenges of face-to-face instructional events, and in which participants partially depart from known communicative practices of classroom discourse.

It was thus shown how instructors' comprehension checks and invitations for questions and comments, addressed to the whole class, may fail to receive a verbal or written response by students, while these do not make themselves visible to instructors. Similarly, content questions (whose answers are already known by instructors) open to all students are often followed by considerable silence or go unresponded, a phenomenon that can be observed also in face-to-face classroom interaction, but which seems to be amplified by the lack of physical proximity in the digital setting. Basic mechanisms such as turn-taking and the organization of actions are thus temporarily modified in online interaction, as observable also from the delay in which positive evaluations of students' answers are provided by instructors, as compared to their promptness in face-to-face instructional encounters.

These preliminary findings, on the one hand, hint at the need for instructors and students to develop a fine-grained sensitivity to affordances and constraints of online interaction: instructors, for instance, may have to direct more questions to individual students rather than to the whole class if they want these to be answered, while students may be encouraged to make their engagement, understanding and/or doubts much more visible or audible. On the other hand, and from a larger perspective, these data hint at the need, for all participants, to find new, more dialogic and less

teacher-led ways of co-operating in the digital environment, with students' higher involvement in autonomous pair/group activities, oral presentations and the like; last but not least, they hint at the importance of further investigating virtual classrooms at the microlevel of interaction, as proposed in this paper, if we want to gain access to what speakers actually do with the technologies that are made at their disposal to remediate the impossibility of copresent talk.

NOTES

1 The paper is the result of the collaboration between all authors; Daniela Veronesi is directly responsible for the chapters *Introduction*, *Face-to face and online classroom interaction: the perspective of Conversation Analysis* and *Discussion and concluding remarks*, while Ilaria Chizzoni, Katia Raineri, Veronica Schmalz and Monika Taferner are directly responsible for the chapters *Research methodology and data*, *Opening the event, opening a conversational exchange*, *Checking students' understanding and opening the floor for discussion*, *"Who can answer this question?" Non-addressed questions, silence*, and *overlaps* and *Evaluating students' answers*.

2 Data were collected by Katia Raineri and Monika Taferner (Secondary and Primary school) and by Ilaria Chizzoni and Veronica Schmalz (University lectures and labs) in the context of the "Conversation Analysis" lab offered within the *Master in Applied Linguistics* at the Free University of Bozen in a.y. 2019-2020, held by Daniela Veronesi.

3 See for instance the following instructor's question during a university lecture: "it's really weird, it's extremely quiet, are you all able to hear me okay?", before she invites students to activate their videocameras.

4 For transcription conventions, see Jefferson, 2004.

5 "I just wanted to ask you, are there any other terms or phenomena, that we have seen in these lecture hours, yeah, today hours were a little bit longer, uh that for you are something new or remarkable? So that we can, so to say, close the first round on terminology here? (0.5).
Please if you can write on the chat now (10) yes, nobody's coming in the chat. Anyway I can assure you, we did consider further uh concepts like…".

6 "We still have time for questions, if someone has them… I don't want to stretch this too far, but in this modality it is always a little difficult .hh to understand whether uhm whether more time is needed for questions to get formulated, or whether there really are no more questions, right? so I'll wait one more moment" (translated from German).

7 In our School data, for instance, pre-allocated questions prevail in High school classes (189 out of 210 questions), while in the Middle school context non-addressed questions (26) are used more frequently than pre-allocated ones (5).

8 Cf. Veronesi & Demo, 2020 on the importance of balancing the two types of questions for enhancing pupils' participation and inclusion in Primary school.
9 On a total of 39 non-allocated answer-known questions, 9 are responded to immediately or after a gap of 2 seconds or less; 11 are followed by a 3-5 second gap, while 19 are followed by longer silences (6-20 seconds).

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MAKING THINGS TALK
HOARD, COLLECTION, ARCHIVE

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ARCHIVE
COLLECTION
HISTORICAL MEMORY
HOARDING
STORYTELLING

We store things in our everyday spaces –objects, artefacts or images– that over time betray their original function to become stories. As they accumulate, they lie in wait for someone to find the time to interrogate them and bring them back to the present time.

Whether they be large or small, digital or physical, public or private, hoards prevent access to the stories of the things they contain. To give a group of things a structure than can last over time, guaranteeing controlled development and greater access to the stories they contain, hoarding is not enough: the hoarded objects can only begin to talk and tell their story if they are organized into a defined order, if they are curated, either through the work of an archivist or the criteria of a collector.

This paper considers the hoarding of objects in every possible sense, reflecting on their narrative power and on the capacity of artefacts to constitute a recorded historical memory, be it personal or collective.

INTRODUCTION: HOARDING

Our everyday spaces become repositories for objects that betray their original function over time to become stories. "Without things, we would stop talking. We would become as mute as things are alleged to be" (Daston, 2004, pp. 9-24). As they accumulate, they lie in wait for someone to find the time to interrogate them and bring them back to the present time. Their content is varied, corks, postcards, aeronautical magazines, telephone books, subway tickets, souvenir photos, as well as newspaper clippings and illustrated images from various periods in time: all the most loyal servants of the realm of the past, recent or distant, lend themselves to this transformation, from functional objects to tools of narration.

For the transformation to occur, it is not enough that they survive the conditions dictated by the time and space in which they have been stored. If nothing or no one intervenes, these objects are destined to simply accumulate, to take up space with no functional purpose other than to become a hoard.

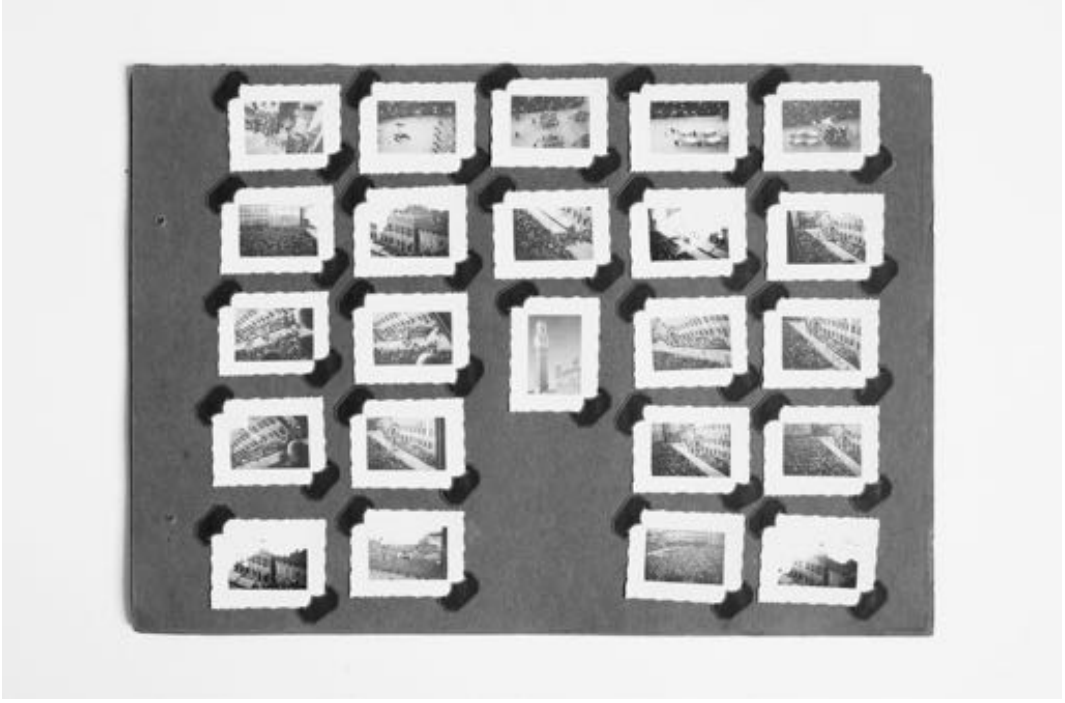

Fig. 1 Sestini family Photo Album, dating back to the late 1930s. A hoarding of family photos is mostly intended to survive over time to tell the private stories of those who know the people and places portrayed. Without discards, without selection, these images remain locked up in the circuit of household things. On the contrary, by working on them a selection, inspired by the criteria that guide the construction of an archive or a collection, can become objects through which to compose new stories, no longer linked to private memories.

Whether they are large or small, digital or physical, public or private, hoards prevent access to the stories of the objects they contain. In a hoard, the only rule is to hoard. There is no waste, no selection. The order does not matter, there are no rules. The hoard adapts to the space it has. Nothing in a hoard may truly be said to have been saved. It all just floats, awaiting retrieval to begin a new dialogue with the present time[1].

To give a group of things a structure than can last over time, that can guarantee controlled development and greater access to the stories they contain, it is not enough to hoard: the hoarded objects can only talk and tell their story if they are organized in a defined order, if they are curated, either through the work of an archivist or the criteria of a collector.

COLLECTION AS A NARRATIVE VECTOR

Originally it was the *Wunderkammer*, a phenomenon that developed in the fifteenth century to define chambers of wonders in which erudite scholars and wealthy patrons once collected and conserved extraordinary objects in order to study them, to cultivate social relationships and at the same time, to establish a position and assert their personal status[2].

This approach to gathering objects is that of a collector and is founded in a desire to use them to build a unique story, usually an intimate, personal and subjective one, without necessarily establishing a system of rules by which to distinguish them. For Roger Cardinal (1994), the collector is someone who creates "a concerned gathering of selected items which manifest themselves as a pattern or a set, thereby reconciling their divergent origins within a collective discourse" (p. 71). In a collection, the objects acquire full value only when they are considered as a whole: the individual object is thus defined exclusively by its relationship with the other objects in the collection.

According to Mieke Bal (1994), the desire to collect is an essential human characteristic that derives from the need to tell stories, but for which there are no words or other

Fig. 2 Fausto Sestini, *Travel slides*, 1952-1963. Dealing with a backlog of familiar images, in order to access new stories leaving aside private memories, one must make choices based on objective criteria, such as a particular format, a photographic genre, references to specific historical events. In this way, a new set can be taken away from the hoarding, a selection of images that no longer depend on the private stories of the person who took them.

conventional forms of narration (p. 97). Collecting objects may therefore be equated with telling one's story through them, because "the potential inwardness of objects is one of their most powerful characteristics, ambiguous and elusive though it may be. Objects hang before the eyes of the imagination, continuously re-presenting ourselves to ourselves, and telling the stories of our lives in ways which would be impossible otherwise" (Pearce, 1992, p. 47)[3].

Massimiliano Gioni, in presenting the exhibition titled *The Keeper*, dedicated to 'the act of preserving objects, artworks and images and to the passions that inspire this undertaking', described the 'unreasonable act of iconophilia' comparing it to the figure of the junk dealer: "To me, this man has in some ways come to symbolize the essence of the collector, not the kind that crowds auction rooms, but the collector as the ragpicker of memories and things: the Lumpensammler,

Fig. 3 Clara Sestini, short film using pictures coming from her family photo hoarding (Figures 1, 2). Its frames narrate a new story in which the users can recognize themselves in contents completely far apart from their original contexts, 2018.

the collector of the forgotten and of the disregarded, the lover of the inferior, who incarnates the drama and perhaps even the romance of an individual trying to complete himself through the objects with which he surrounds himself. For collecting is always a struggle between order and disorder: to achieve the wholeness of a collection, one creates order and gives meaning to objects so that they form a universe of their own, which, in turn, becomes a mirror of the world in which those objects originated" (Gioni, 2016).

The collections that speak of their owners are the focus of the exhibition titled *Magnificent Obsessions: The Artist as Collector*. It gathered the private collections of established artists in the second half of the twentieth century, revealing their fetishes, the personal or intimate introspective aspects of their research: in this regard, artist Hiroshi Sugimoto said: "My collection is my mentor [...] It trained my taste and sensi-

Fig. 4 Fiona Tan, *Inventory*, 2012. Through a contemporary projection on six screens, this video installation presents a series of images from the collection of Greek and Roman antiquities by the English neoclassical architect John Soane (1753-1837), housed in his London house-museum.

tivity" (Yee, 2015, p. 195). And so we discover that Walker Evans collected postcards that portrayed everyday life in America even before his *American Photographs* (1938)[4], Andy Warhol collected ceramic cookie jars, Matisse was obsessed with exotic fabrics, Martin Parr with the Soviet memorabilia of space dogs[5], and Damien Hirst was an admirer of taxidermy.

When an object becomes part of a collection, it is separated from its original function to acquire a new one designated by the collector/narrator. A collection is therefore also a place in which objects become rhetorical instruments to tell a story, recreating miniature scenarios of the past.

Collections serve to reconstruct the past by passing down stories, yet at the same time they offer the possibility of telling new ones, as they come to identify themselves through the perspective of their owners. In the film *Kingdom of Shadows* by Fiona Tan (2000), Sandor Kardoj talks about his col-

Fig. 5 The images of *Inventory*, through the simultaneous display of the elements of an accumulation of fragments of classical sculptures, represent the deepest soul of collecting: the desire to stop time. Courtesy of Fiona Tan.

lection of amateur photos. He owns millions of photographs, anonymous snapshots, that show what these anonymous photographers wanted to preserve of themselves, of their surroundings, of what in many cases they appeared proud of (their wife, their car, their children). Theirs (ours) is an attempt to preserve despite memory, "we organize frenetically with the purpose of saving things, nevertheless they continue to be lost. The same thing happens to souvenirs, and to photos, they disappear or are forgotten because they are not important". Quoting Susan Sontag (1978) Kardoj sustains that "photographing is like cataloguing the world, selecting only those fragments that are valuable to us".

During her career, Tan has become increasingly preoccupied with museal collections and their setting and staging, researching the forerunners of the contemporary museum: early art collections, *Wunderkammer* and cabinets of curiosity.

Such collections have been likened to the so-called "memory palace", the Ancient Greek method of memorizing knowledge by setting out objects within an imaginary architectural course. The museal maintenance and storage of these objects then allows them to serve as triggers for memory and meaning (Tan, 2012) (Figures 4, 5).

BETWEEN ARCHIVE AND COLLECTION TO NARRATE HISTORY

In the second half of the 1920s, Aby Warburg, the German historian and art critic, developed the *Mnemosyne Atlas* (1924-1929) to map the "afterlife of Antiquity", or more simply, to examine how images of Western antiquity reappear in the art and cosmology of later eras and places, from Alexandrian Greece to Weimar Germany (Warburg, 2020). The atlas, of which there are photographic reproductions and posthumous reconstructions made by the *Warburg Institute* in London, consists of 40 wood panels covered in black fabric, on which over 1000 images have been pinned from books, magazines, newspapers and other vernacular sources, organized on the basis of 14 themes chosen by Warburg and involving recurring elements in the evolution of art and history. *Warburg*'s original intention was to recreate a universal memory, consciously assembling and composing images that would represent the history of Europe in its entirety. Warburg believed that the use of images was the most efficient way to quickly transmit and evoke the memory and impression of an event ("To the image, the word! - zum Bild das Wort") because they have the primordial but powerful capacity to evoke and express collective memories with energy and vitality (Johnson, 2013).

A similar example –which relies on reproductions rather than originals– is the concept of an "imaginary museum" by André Malraux. He assembled and organized montages of photographic reproductions to create "*Le Musée imaginaire*",

a "museum without walls" that questioned the conventional concept of artwork, shifting attention from the artistic object to the idea and how it was developed. This subversive approach, which gives greater significance to curatorial practice over artistic reproduction, clearly states that the importance of the work lies in the creative, performative act, in the process of assembly, grouping and visualization of the works rather than in the artifact per sé, advancing art's loss of authority, previously theorized by Walter Benjamin and John Berger (Malraux, 1974)[7].

To draw a contemporary parallel, it is worth considering the trend, particularly widespread on social networks such as *Instagram*, to collect, catalogue, disseminate or analyse monothematic series of artefacts, images and objects from a more or less recent past. The intent of these accounts –present-day digital archives about the widest variety of disciplines– is strictly related to what in recent years has come to be known as *Public History*: a set of practices that run parallel to the traditional sciences, which purport to communicate history "outside the academic environment" (Tucci, 2018)[8].

CONCLUSION: THINGS THAT TALK

"Each object is designed to amuse, annoy, bewilder, mystify, inspire reflection" (Man Ray, 1961, p. 48).

We live in a time that is extremely fortunate for fans of taxonomies of the most varied typologies. Thanks to enlightened policies of dissemination adopted by public and private institutions, such as the *Rijksmuseum* of Amsterdam, the *Met* in New York, the *Wellcome Library* of London, or projects such as *Google Arts & Culture*, to name just a few, the quantity of artefacts, or rather their reproductions, available in the public domain is infinite.

Objects talk. According to Anthony Hudek, "Objects define us – where the 'us' becomes an answer to the multiplicity and collectivity of objects and things inviting us into their midst" (Hudek, 2014, p. 15).

Removed and evolved from the hoard, the objects-gathered within the various definitions of series analysed above shed that indefinite quality, acquire distinct coordinates in time and space, establish relations with one another through a precise system of rules that protects each and every individual story, and at the same time, tells a single and collective story in which we can recognize ourselves[9].

NOTES

1 A further reflection on this particular aspect has been recently provided by Steven Heller, 2020, np.

2 On this topic see Impey and MacGregor, 1985. Starting with the concept of *Wunderkammer*, an interesting contemporary evolution on the theme is presented in *The Spitzmaus Mummy and Other Treasures* (Anderson & Malouf, 2019), a recent exhibition that sought to question the traditional canons of curation as defined by museums, proposing new relations between these institutions and their collections, between the professional figures and museum audiences.

3 To further pursue this argument, Lorraine Daston and Antony Hudek provide an interesting account of the narrative potential of objects and their storytelling function: any object, if analysed in detail together with the surrounding context, noting its material and meaning, is able to tell a story, to become a pretext for research and a narrative vector (see Daston, 2004 and Hudek, 2014).

4 Over the last two years of his life, Walker Evans took over 1000 photographs portraying his friends and students with a Polaroid SX-70. Like a collection, the Polaroids are taken with no mannerism or style, in an impulsive and uncontrolled manner. They are however unique representations, and Evan's care in achieving this result is tangible: his lack of attention to both the nature of the pose and his way of shooting the picture, goes beyond all visual ambiguity. A single photo says little of the subject, but the series –considered in its entirety– describes an era (Fineman, 2000).

5 On this subject see Hollingham and Parr, 2019.

6 For more on this topic, see Ragaglia, Hapkemaier & Carazzato, 2019.

7 Malraux adds that for all those users who do not have the chance to see the original in person, the reproduction itself becomes the work of art (Malraux, 1974, pp. 13-14). Here it is necessary to acknowledge a lineage that follows up on Marcel Duchamp's non-art and ready-made, concepts that seek to elevate everyday items into works of art by placing them in artistic contexts (museums, galleries, art magazines). Only thus does the object acquire value and artistic meaning. These can be interpreted as a critique against art, its market and its aesthetic, and the arbitrariness with which a museum/gallery labels one item rather than another as art, a critique which in reality was sterile and immediately assimilated into the

very system that it was criticising, turning the ready-made into 'a kind of "idea" art'. The ready-made considers the work of art as a 'binary opposition', i.e. only when it is in the museum context is it art; outside of it, it is non-art. Drawing a parallel, the work of art in book form is as critical of the institutions as was the ready-made. In addition, the artist's book also levels this criticism in non-artistic contexts, making it as independent as possible of the art industry. As regards the critique of the art world, Gwen Allen argues that rather than the dematerialisation that critics hoped for, it produced 'a strange subset of documents –texts, photographs, maps, lists, and diagrams– which served as evidence, as stand-ins, as archival traces of the artistic act. With its reliance on textual and photographic documentation, conceptual art ushered in a dramatically new set of exhibition practices, practices that no longer revolved around the display of unique objects but were instead based on the reproduced page (Allen, 2011, p. 15). In this regard, it is worth considering Seth Siegelaub's idea of "Primary information" as used in relation to the artists' publishing practices: "the use of catalogues and books to communicate (and disseminate) art is the most neutral means to present the new art. The catalogue can now act as primary information for the exhibition, as opposed to secondary information about art in magazines, catalogues, etc., and in some cases the "exhibition" can be the catalogue" (Harrison & Siegelaub, 1999, p. 199).

8 The parallel between the traditional archive and popularization accounts on the Internet is a hyperbole. They do however have many points in common, for example the comparison between an archive label and a hyperlink as a string, both are characteristic each of its own source to make their indexing clear.

9 Contributions: text conceived by Gianluca Camillini (first/lead author), who wrote and edited all sections of this publication. The collaboration of Clara Sestini (second author) and the support of Roberto Gigliotti (third author) were helpful to collect materials and draft sections "Introduction: hoarding" and "Collection as narrative vector". This text is inspired by Clara Sestini's Thesis research study, presented at the Faculty of Design and Arts, Unibz on November 30th 2018, under the supervision of Prof. Roberto Gigliotti (supervisor) and Dr. Gianluca Camillini (co-supervisor).

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DIGITAL TECHNOLOGIES, MOTION RECOGNITION AND ANALYSIS OF BASIC MOVEMENTS FOR IMPROVING THE TEACHING OF BALLET DANCE

THE DIGITAL DOUBLE OF THE PASSAY PROJECT

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DIGITAL DOUBLE
EDUTAINMENT
DANCE

The paper will describe the PASSAY project, an educational system that helps ballet teachers conveying basic movements to young students thanks to the use of optical tracking devices and the development of a digital double to check and validate movements. The project brings a significant innovation in a discipline that could sometimes look anachronistic in relation to today's social context in which the technology has a fundamental role. Moreover, its use can help in overcoming distances, like the pandemic is imposing, and engaging more people and young students in particular.

INTRODUCTION

The concept of teaching ballet has changed very little during the years, mainly because its effectiveness depends on the dedication and discipline, bearing boredom of repeated and long exercises to fix in mind the basic moves of ballet.

This initial phase is essential for a student to create the basis of the classical ballet techniques but is also the most frustrating and long part, where new technologies can mitigate difficulties.

Since this art is well described and codified by various methods, it is very easy to understand if a movement is correctly executed or not.

Therefore, technologies and algorithms, that uses machine learning and motion recognition, are a good vector to analyze, record and give feedbacks based on these methods.

The possibilities of now-a-days technologies are endless; thus, to be effective, the focus has to be strictly on helping the users. For these reasons, the PASSAY project, developed within the Master Degree in Innovation Design at the University of Ferrara, tried to give a consistent answer, through experimentation, to two main problems:

1. Helping both teacher and young dancers during the lesson, to improve proprioception;

2. Helping a dance student during the phase of memorizing the choreography.

For both, several techniques have been used to create a digital double, a replica of the dancer's body and his/her movements, assembled by the use of image tracking, motion analysis and other numerical outcomes, for achieving the best accuracy and effectiveness.

Thus, the paper will dig deeper into learning processes and teaching methods at first, and then will focus on how new technologies can be applied to that, stressing users and stakeholders' benefit from these advancements.

MATERIALS AND METHODS: ANALYZING LEARNING PROCESSES AND TEACHING METHODS OF BALLET DANCE

Learning or Playing?

The area studied by this research is the classical dance lessons, which is an easily involving subjects because who is interested is also entertained by it. Every time young dancers enter in the dance venue, they feel immersed almost in a different reality. The moment of the class is very similar to the concept of the 'magic circle' depictured by Huizinga (2002): "All play moves and has its being within a play-ground marked off beforehand either materially or ideally, deliberately or as a matter of course.

Just as there is no formal difference between play and ritual, so the 'consecrated spot' cannot be formally distinguished from the playground.

Fig. 1 Edgar D., *The cone of experience*, 1969. The cone shows how people are keener to learn and remember that they do and play instead of what they see or say. Retrieved April, 22, 2020 from https://innovedtech.com/blog/tag/meshing+hypothesis.

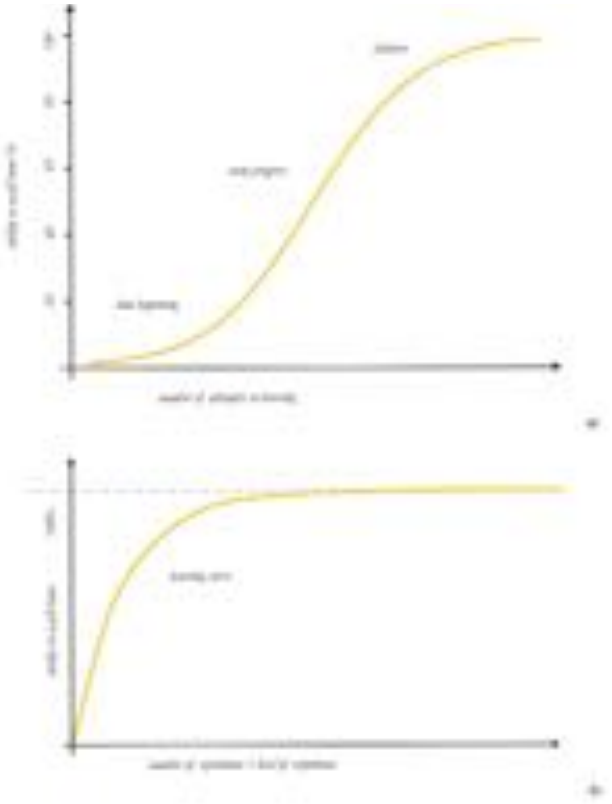


Fig. 2 Zambonini A., a representation of the learning curve (a) that divide the process into three sections (slow beginning, steep progress and plateau) and another one (b) that instead shows how repetition of several recalls of the same element exponentially increases the retention percentage, 2019. Retrieved April, 22, 2020 from https://kaylaslearningcurve.wordpress.com/2011/04/01/what-is-a-learning-curve-anyway/. https://www.valamis.com/hub/learning-curve.

The arena, the card-table, the magic circle, the temple, the stage, the screen, the tennis court, the court of justice, etc., are all in form and function play-grounds, i.e. forbidden spots, isolated, hedged round, hallowed, within which special rules obtain. All are temporary worlds within the ordinary world, dedicated to the performance of an act apart" (p. 10). The lesson of ballet has several elements that can let this be described as a playful moment: it has pre-chosen rules, the participants have different roles that sometimes can be changed, every 'player' mainly has a voluntary approach to the game and most importantly the art of the dance is itself a good representation of the concept of mimicry and ilinx described by Caillois (2001). For the first concept –mimicry– is clear that during plays, the actor or the dancer assumes a very specific role that has to be portraited during every act

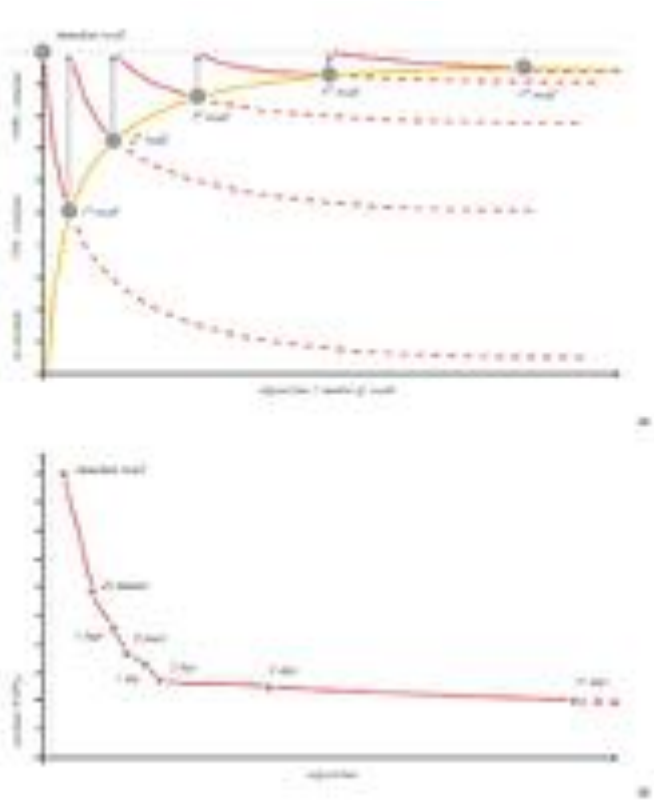


Fig. 3 Zambonini A., the graph (a) shows the correlation between each recall and the retention percentage, while the graph (b) represents the Ebbinghaus forgetting curve, 2019. Retrieved April, 22, 2020 from https://qz.com/1213768/the-forgetting-curve-explains-why-humans-struggle-to-memorize/.

of the play. "Each game presupposes temporary acceptance, if not an illusion of one closed, conventional and, under certain aspects, fictitious universe. The subject denies, alters, temporarily abandons his personality to make another" (Caillois, 2001, p. 24).

The second concept of the game classification, ilinx "it is the search for vertigo; an attempt to destroy for a moment the stability of perception and to make the conscience, lucid, suffer a sort of voluptuous panic" (Caillois, 2001, p. 23). This is mostly present during the parts of the lessons where the students can execute freely the moves that they've learned. Even if it is entertaining, one of the first learning gesture, that is essential to execute correctly a '*plié*', is the motion of the head that prevents this dizzy/funny feeling and to secure the balance during the rotation.

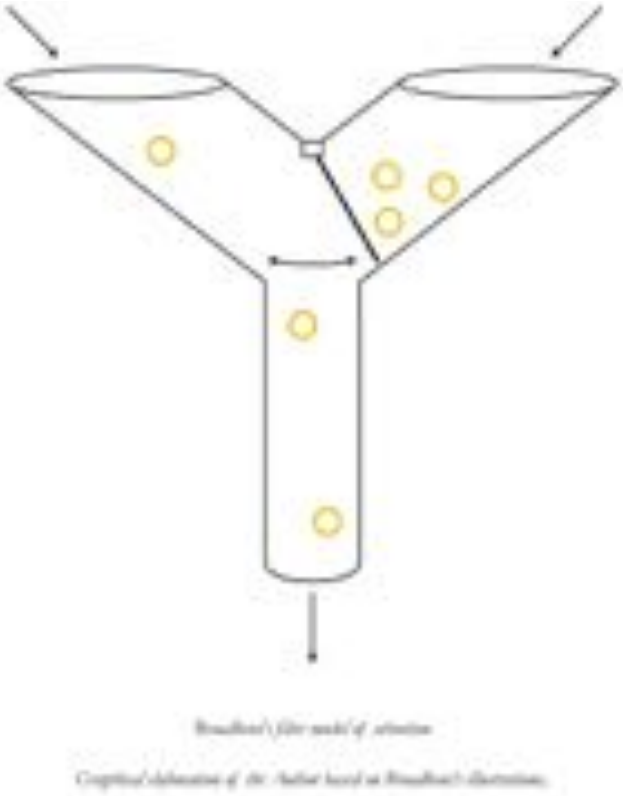


Fig. 4 Zambonini A., the Broadbent's filter model of attention. A graphical elaboration of the author based on Broadbent's illustrations, 2019. Sinico, M. (2012), p. 21, Fig. 1.2.

There are several schools and ways to conduct a dance class, some more rigid, other more tolerant, applying approaches close to the concept of "paidia" or the opposite "ludus" (Viti, 1998). Considering the lesson as a form of role-playing within the magic circle of the venue with a duration of usually an hour, it's important to understand the 'sacrality' of the game for the students and to maintain this playful quality of the lesson (Joyce, 1984).

In our contemporary world, the teaching of dance is more common, especially to children, as a form of entertainment and physical expression of music. This view, however, as shown by Plato's quote in Huizinga's text, already belonged to antiquity: "The young creatures cannot keep the body and the voice at rest, they must make step and noise, jump, jump, dance with joy and emit all sorts of sounds" (Huizinga, 2002,

p. 159). This quote reveals an interesting insight into the ballet student: the activity of the dance is totally volunteered and entertaining for the student. According to the cone of experience (Figure 1), theorized by Edgar Dale (1969) people are keener to learn and remember something that they do and play instead of what they see or say. In fact, the active contribution to a lecture, in this case to a workshop or regular dance class, is the most effective tool that a student has to be able to learn the subject in a faster and correct way.

Experiencing something in the first person and been asked to perform something forces the student to be ready at any time. Furthermore, it has been shown that there is a strong correlation between the 'environment' and the results of the students. In every real-life lesson, the student will encounter colleagues, teachers, dedicated rooms provided with technical tools. All of this could be indicated as 'environment' according to the vision of Huizinga.

Every teaching subject has different needs and different layout/spatial arrangement. Vygotskij (1973) described how much the environment is important for the student: a welcoming space with the correct tools, a stimulating team/competition, and a motivating and competent teacher are essential to overcome faster the zone of proximal development.

Fig. 5 Zambonini A., Several teaching methods for ballet were analyzed in order to consistently develop a smart system in line with teaching requirements, 2019. Vaganova, A. (2007), p. 57, Fig. 10 - Retrieved April, 22, 2020 from: (Vaganova) www.alisonsstudioofdance.com/single-post/2017/01/21/Spotlight-Agrippina-Vaganova; http://www.diomedia.com/stock-photo-lady-sarah-armstrong-jones-during-a-ballet-class-royal-ballet-school-1974-image4235388.html; (Cecchetti) http://cecchettiusa.dutcher-design.com/about/who-was-enrico-cecchetti/; (Balanchine) http://www.dancespirit.com/these-are-some-of-the-legendary-ballet-dancers-that-you-should-know-2476166676.html.

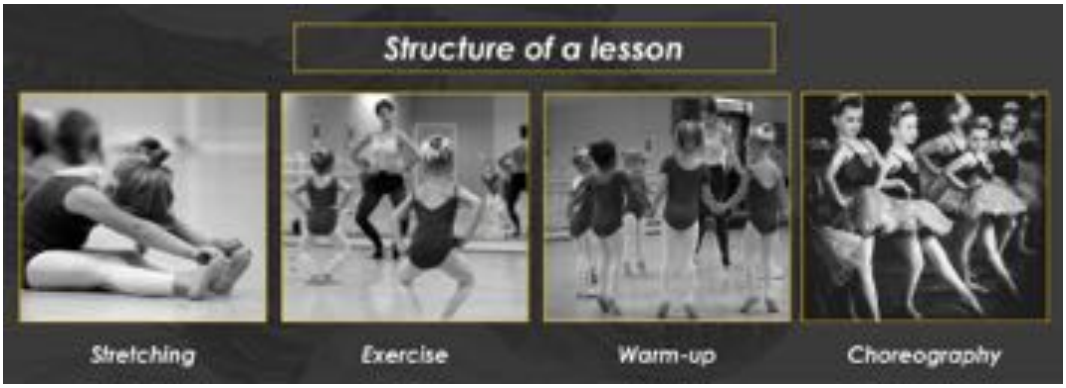


Fig. 6 Zambonini A., even if methods significantly differ one among the other, a main definition of the lesson structure can be summarized in 4 steps, 2019. Retrieved April, 22, 2020 from (from left to right): http://www.richardcalmes.com/"; http://www.pbase.com/rcalmes/image/66226008; http://www.theodysseyonline.com/dancers-arch; http://matinlumineux.blogspot.com/2012/11/richard-calmes.html.

The Human Factor in the learning process

Since the topic of the ballet has a deep connection with body and motion, it's important to understand that this physical-human factor is essential for the learning process. "When it comes to 'human factors', in design, we refer generically to the scientific knowledge on human factors that affect the design and which are particular objects of investigation in ergonomic research" (p. 11). This opening quote from Michele Sinico (2012), summed up the definition of ergonomic, considering both the physical and the cognitive sphere of perception. The most important elements considered for this study are the one related to the factors that allow a human to learn and forget elements and the cognitive perception of physical stimuli to improve the learning and the execution of the steps, maintaining unaltered the joyful factor. The main topic is inquired because this research aims to provide an effective learning experience that considers the attention of the students, their learning curves and their retention curve.

Remembering and Forgetting

In 1885, Ebbinghaus published *Über das Gedächtnis*, a great research that, for the first time, studied the unexplored field of learning and memory through empiric experiments. In this work, he defined the 'learning curve' as "a correlation between time and capacity of absorbing exter-

nal information" (Ebbinghaus, 2014, p. 67). In other words, it refers to how fast one learns information and it is described by an exponential curve. The learning curve of a person could be different from someone else because this ability depends on several factors, first of all, what is happening the life of the experimental subject: a job promotion, a new technology to develop with, a new car are all different events that could make better or worsening the ability to recall an element. Usually, a learning curve (Figure 2a) can be divided into three sections but the most important for this research is the beginning, in which the student has to overcome the first touch to properly lay the foundations of the new knowledge.

Analyzing different learning curves is easy to understand not only the progress of the student but also the efficiency of the learning system. The learning curve is related to the forgetting curve, which is exponential too because it describes the time that it takes for not recalling anymore something learned. The L.C. (Figure 2b) instead is created by the repetition of several recalls of the same element, and based on the number of recalls, the retention percentage will increase exponentially. For example the graph (Figure 3a) shows that the first time that the learning is recalled, one has the 50% of retention, instead of at the fourth recall, it is the 80% of retention.

The Ebbinghaus forgetting curve (Figure 3b) also shows the retention of learning over time where the experimental subject does not try any effort to recall it. If an item is recalled after 20 min the retention is around 50% and after one day is 33, but most importantly if something is retained after one day, most probably it can be recalled even after a month. Ebbinghaus divides also the memories between voluntary and involuntary to understand whether the retention of the information derived from a willing act of study or a spontaneous one. It is essential for an educational system to work on the latter, focusing more on the experience as a tool to convey information.

Focusing and keeping the attention

For a concept to be learned (especially if it is transmitted verbally) one of the fundamental elements is the attention. In this case, attention is referring not only to the actual attention that the student pays to the instructor but on the human capacity of attentivity. In particular, Broadbent, carrying out several tests, theorized the attention as a filter (Figure 4): the information reaching the person could be several, but only one at the time is actually perceived by the brain (Broadbent, 1958). There is a boolean correlation between different channels, the filter model will shift the attention from one channel to another but it will never accept information from both sides at the same time. It needs a bit of time to shift the attention from one side to the other, depending on the time of stimuli and the channel involved. This is related to the types of content that are perceived by the user, in any case, it is very important not to overlap different or opposite information.

This study helps in the definition of which type of feedback needs to be designed in this research and what timing has to be applied to the feedback to make the experience efficient for the students.

Ballet teaching methods and notation systems

Several teaching methods for ballet were analyzed (Figure 5), including the Vaganova Method, the RAD - Royal Acacemy of Dance method (Trevisan, 2017), the Cecchetti Method (Cecchetti, 1997), the Balanchine Method and the eurythmy art of movement (Poplawski, 2020), but this research mainly refers to the Vaganova's one (Vaganova, 2007). Different methods imply also different approaches to the lesson even if in the Vaganova method the structure of the lesson is not as rigid as the sequence of which step has to be taught at a certain age of the student. However, a main definition of the lesson structure can be summarized as follows (Figure 6).

- Warm up: is one of the most important parts of the lesson in which the students warm up their bodies to be pre-

pared for stretching and performing difficult moves without harming themselves;

- Stretching: consists in different exercises dedicated to stretching the body of the students to better their extension. Usually this part of the lesson can be performed in groups of two people where one is stretching the other forcing the stretch;

- Practice: is the actual dance lesson, where the instructor will teach different moves so the students can execute them several times. It is also useful, for very young students, to simply keep a rigid position to improve their balance and proprioception. The training part is composed by three interchangeable parts: center, *barrè*, floor *barrè* and diagonals.

- Choreography: is the moment where the student will learn to merge the different steps in a unique performance designed by the instructor. The choreography is taught in several days, based also on the ability of the students to learn the consecution of moves or the single gestures, and repeated many times. It is common to do this in preparation for a public show. This phase is mainly done for students of

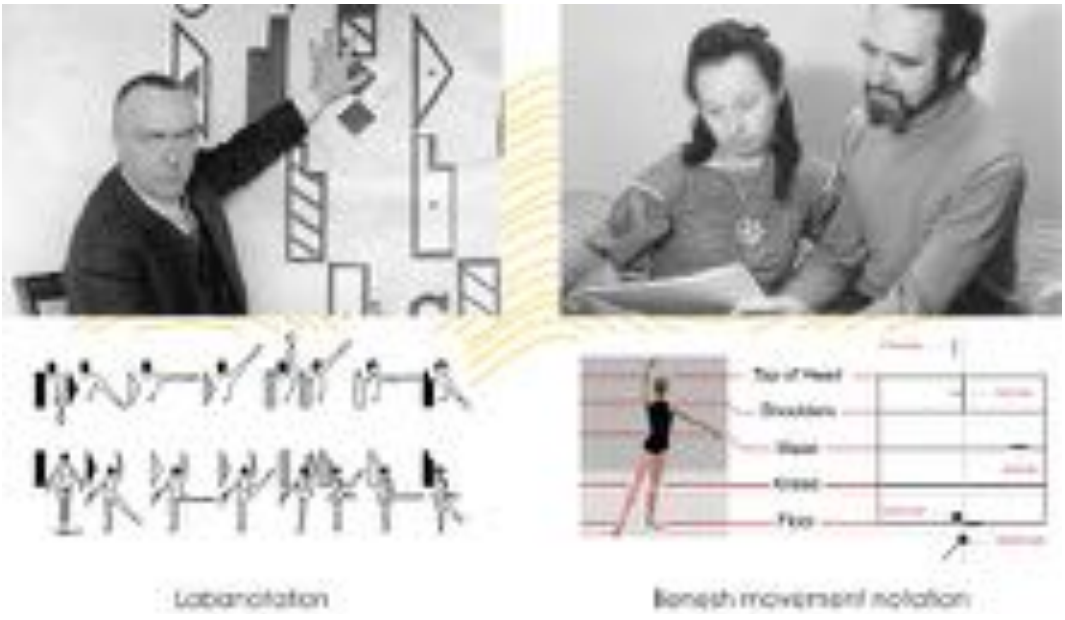
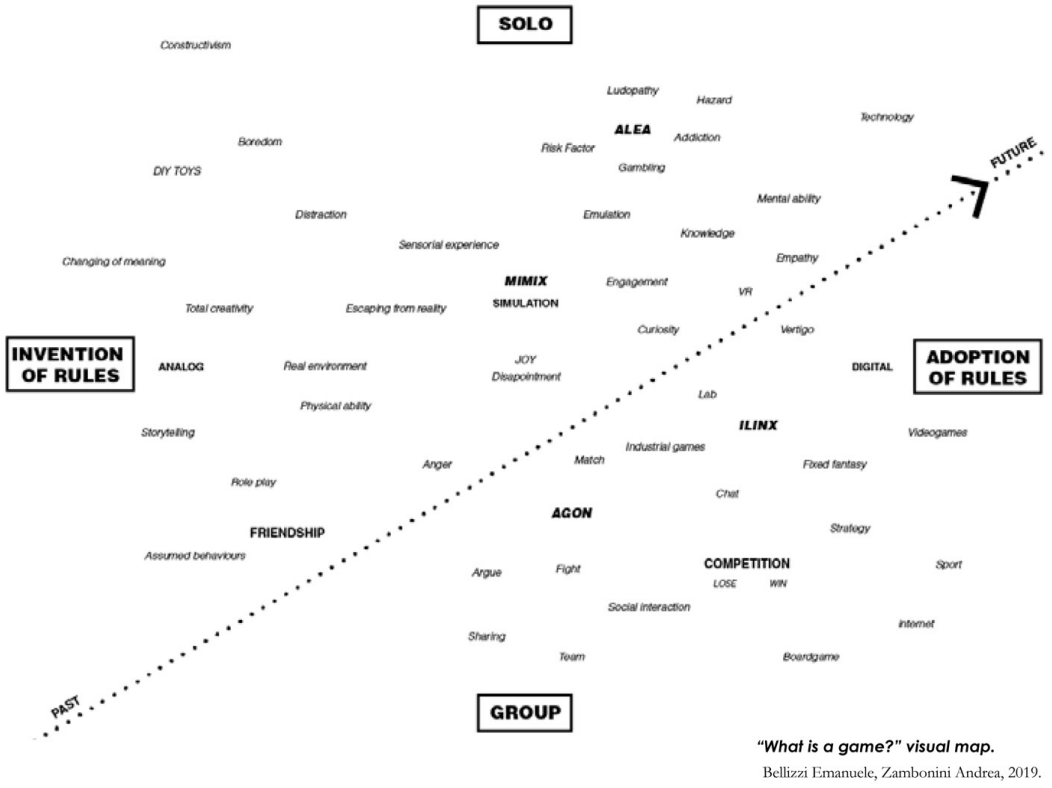


Fig. 7 Zambonini A., photocomposite, the two main notation systems analyzed and used for the development of the PASSAY project: Labanotation and Benesh (BNM), 2019. Retrieved April, 22, 2020 from https://en.wikipedia.org/wiki/Labanotation; https://owlcation.com/humanities/what-is-choreology; https://en.wikipedia.org/wiki/Benesh_Movement_Notation.



"What is a game?" visual map.
Bellizzi Emanuele, Zambonini Andrea, 2019.

Fig. 8 Bellizzi E., Zambonini A., graphical elaboration. The schema is a visual map on what is a game. It's based on two variables: on the vertical axis is represented the number of players and on the horizontal axis there is the difference between 'ludus' and 'paidia', 2019.

at least 8 years old. When it comes to ballet and its teaching methods, a common question is how something intangible and temporary as this form of expression was described and recorded in the past to be passed on to future generations (Figure 7). In the second part of the XX century, the dancer, choreographer and theoretician of dance Rudolf Laban drown up a written method for record choreographies (Labanotation) (Watts, 2015). His purpose was to fix something ephemeral, as the dance choreographies are, in something eternal (at that time there weren't video supports).

Thank to this method anyone, in particular future generations, could have the possibility to understand and reproduce choreographies designed in the past. He studied the movement with a physical-mathematical approach, with the purpose to eliminate every subjective aspect of the

motion and create a universal interpretation of the scores. He considered, for the analysis of the movement, three variables: direction, height, duration. After, he translated the results in a graphical language, with vertical reading (from the bottom to the top). It's divided in two parts with a central axis of symmetry that represents the left and the right part of the body. For the movement he used, as main symbol, a rectangle and modifying its color, form and size in relation, respectively, to height, direction and duration of the movement of arms and legs. In addition, he used other symbols to integrate other kinds of steps.

An alternative method is the Benesh Movement Notation, or BMN for short. It was invented in late 1940s by Joan and Rudolf Benesh (Watts, 2015) and it uses abstract symbols based on figurative representations of the human body. It is used by the Royal Academy of Dance to teach ballet: formerly the Benesh Institute, since 1997 it has been incorporated within the RAD (Trevisan, 2017). In the Benesh notation, the symbols are recorded over a five-line staff that will indicate, bottom-up floor level, knees, waist, shoulders and head. It's readable from left to right, indicating the sequence of moves marked on the time. Benesh (Ryman, Singh, Beatty, & Booth, 1984) notation can be displayed alongside and in synchronization with musical accompaniment, because of its similarity to modern staff music notation.

RESULTS: AN EDUCATIONAL GAME TO IMPROVE THE TEACHING OF BALLET DANCE THROUGH THE USE OF MOTION RECOGNITION TECHNOLOGIES

The analysis of educational game theories, learning processes and ballet teaching methods opened up to the definition of the PASSAY as a smart system, intended as a set-up of capturing devices and data analytics as seen in sports since the late 90s (Filippeschi et al., 2017).

The requirements of the educational game

Many pedagogist gave their vision of what a game could be: the differences are useful to understand all the possibilities and values that the project could take into account. Based on Huizinga's theory, "Each game is a free activity standing quite consciously outside 'ordinary' life as being 'not serious', but at the same time absorbing the player intensely and utterly" (2020, p. 13).

While Callois adds that a game is not only uncertain but is also unproductive. This means that a ludic activity, even if does not have any ultimate productive aim, can definitely transmit content and knowledge to the users. One possible first step to successfully design games with educational purposes could be defining a reward-based logic related to challenges with different levels of difficulties. This makes the users learn how to test themselves and to never stop learning or improving their abilities. If the tests are based on the capacities of the player, winning them could be both possible with the right amount of challenge. Another element that limits any learning-by-playing activity, is the voluntary intention of the player.

In this case, dancing is itself a voluntary action that the user executes to gain a sort of pleasure. It is essential to maintain unaltered the joyful factor of it, allowing the players to completely dedicate themselves to the challenges that should not be felt as forced (De Beni, 1997). Last factor could be to design an experience that doesn't make the players perceive that they are actually practicing something. To do this it is important to put the layer of educational content benight a graphical, narrative layer with an involving storyline or a breathtaking game dynamic that hides from the user the real aim of the experience. After having exposed different theories on the theme of the 'game', it is important to classify the types, adopting a reference model producing a summary map. The scheme showed in (Figure 8) is based on two variables: on the vertical axis is represented the number of players and on the horizontal axis there is the difference between

Fig. 9 Zambonini A., photocomposite. An Inertial Sensors (IMU) has been used for recording and analyzing the structure of a jump, understanding whether there is a jump, for a maximum of three jumps and if the toes are pointing correctly during the elevation, 2019.

'*ludus*' and '*paidia*'; two radically different types of games. '*Ludus*' has the characteristic of having pre-designed rules and elements, '*paidia*' is the free expression of a joyful act, a game in which the rules, if existing, are created on the fly by the one that is playing. Introducing the time variable, we can see how this influenced the change of the 'game' experience. We can perceive a shift from a team-based game without rules to a self-centered game with pre-designed rules. Cause of this

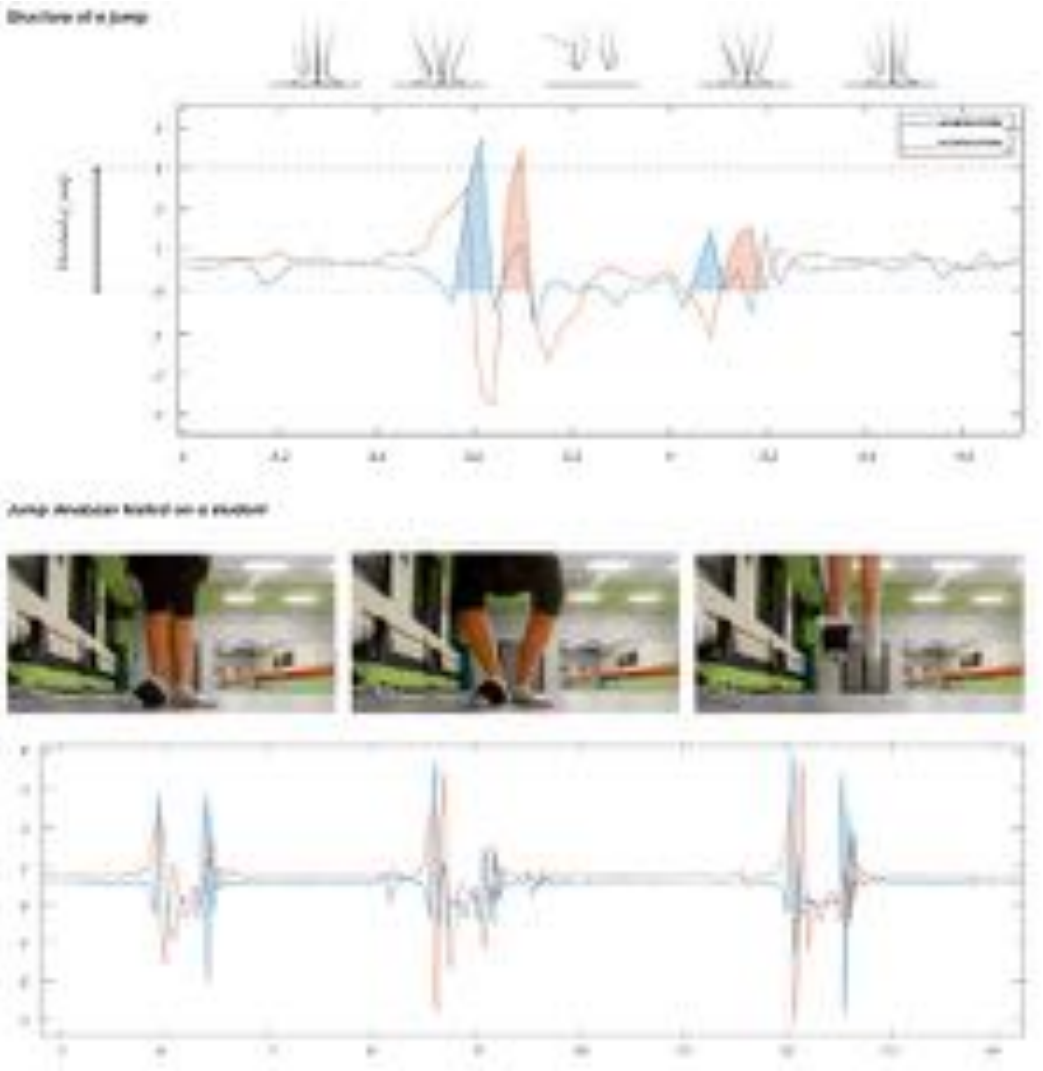


Fig. 10 Zambonini A., photocomposite. Motion capturing technologies and devices have been used for capturing a pose. In the left image the button "Capture pose" will fix the pose of the user. The central image shows the correct position being respected by the user, the image on the right instead is reflecting a possible distraction by the user, 2019.

shift could be the diffusion of mobile videogames and greater accessibility to the masses with the lowering of the costs for VR systems. Now children that keep on playing with physical toys are lessening.

The PASSAY technological layer

Based on the research described before and in order to allow the development of a smart system that could results in an effective educational game, significant efforts were aimed at the definition of the right technologies for tracking motion (Van Der Kruk, & Reijne, 2018), the primary input for merging the real and the digital world. For this purpose, two different technologies have been mainly tested for this purpose, developing two prototype experiments.

An Inertial Sensors (IMU) to record and analyze the motion

For this experiment, it has been used the development platform 'Freedom-K64F' with the compatible shield board 'Freedom STBD AGM04' (Perales, Barrero, & Toral, 2016).

This hardware has been wrapped up over the right foot of the experimental subject (dancers and not) with an elastic band always with the X-axis switched with the Y.

The software used to record the motion using this technology is 'Freedom Sensor Toolkit' (Suma, Lange, Rizzo, Krum, & Bolas, 2011), more precisely the program ran was the 'Out of Box Sensor Demonstrations/ 9 Axis Orientation Sensor demo'. The outcome of the recording is a spreadsheet with information on all the 9 Axis and an indication of the time. The sampling frequency is 36Hz. Following other experiences in sports and the need for a feedback (Kos, Umek, & Tomazic, 2015), the program designed for this experiment is a 'jump analyzer' (Figure 9) that understands whether there is a jump, for a maximum of three jumps and if the toes are pointing correctly during the elevation.

The program was written in Matlab 2019. To define if a jump has been executed with the proper strength, the value of vertical acceleration is around 3G (this value may change based on the subject analyzed). If there was a jump but the energy but it didn't go beyond the threshold, this will not be considered by the program. It was also found a correlation between the values of the Y-axis and of the Z-axis: if the jump goes over 3G, if the values of the Z-axis tend to be similar to the values of the Y-axis, then this can

Fig. 11 Zambonini A., thanks to the application of motion capturing technologies and wearable devices, the PASSAY can provide the dance classes with 3 main features: analysis, feedback and recording, 2019.

Fig. 12 Zambonini A., the Quality Function Deployment QFD matrix based on the users, stakeholders and technologies suggested the best development choices, prioritizing needs, 2019.

be defined as a good jump. This experience made me understand the complexity of programming this kind of tools and the possibility of integration with other technologies. The outcome of the program will be given after the execution and will result in an image indicating the good and the bad jumps.

This method is very useful to have precise information, but the application on the body of the students of at least 14/17 of these could be frustrating and limiting. Maybe the integration with a motion capture technology could optimize the result.

Motion capturing technologies and devices

The second prototype produced was based on a motion capture technology. The aim was to create a platform that could integrate various functionality of the motion sensor, including pose comparison, and recording. For this experiment, it has been used the hardware Kinect V2 SDK (Papadopoulos, Axenopoulos & Daras, 2014) and the software Visual Studio 2017 and Unity 3D. The position in the room of the sensor has been defined by empirical tests.

The final distance chosen was around 2,5 meters away from the user and at a height of 1.5 m.

Based on the Vitruvius SDK (O. F. Ince, I. F. Ince, Park & Song), the aim of the Pose comparison was to prove the efficiency of this state-of-art technology for this kind of application. In the first image (Figure 10), the user is in the correct pose and clicking on the button 'Capture pose' will fix that pose.

The central image shows the correct position being respected by the user, the image on the right instead is reflecting a possible distraction by the user. In this case, the feedback is just visual changing the color of the skeleton.

The buttons below the preview define three different levels of threshold based on the experience of the students. The last part of this application has a function of record and playback three-dimensional motions. This was implemented to have the possibility for both the students and the teachers to re-watch a lesson or a specific choreography.

The PASSAY smart system

Once solved the technological feasibility of capturing movements, the PASSAY features has been developed for improving the teaching of ballet dance altering as little as possible both the dynamics of the classes and the setting of the ballet room. Thanks to the application of motion capturing technologies and wearable devices, the PASSAY can provide the dance classes with 3 main features (Figure 11):

- Analyze: analyze errors in the motion during the lesson by a recreation of a skeletal model of the student

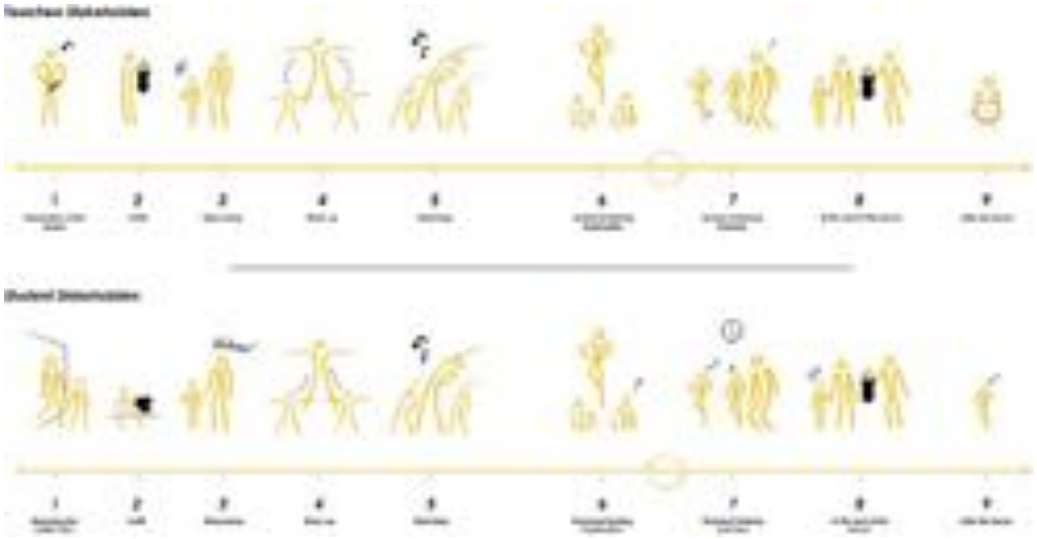


Fig. 13 Zambonini A., the User Journey Maps (UJM) of teachers and students highlights how a proper app development, covering the entire learning process as an educational game, is highly needed, 2019.

and confronting it with an ideal model (motion capturing technologies analyzing data from capturing devices installed in the room – requirements: Kinect Azure).

- Give feedback: the system can send feedback (using graphical elements on screens or by the use of vibrating wearable devices – requirements: PC and wearable devices) directly to the student augmenting the efficiency of the exercise and engaging the student through a more gamified lesson.

- Record: after the lesson, both the student and the teacher could see, in a personal application (requirements: PC, tablet or smartphone), a 3D reproduction of the moves to remember corrections, memorizing choreographies and analyze improvements.

These set of functions could be both use in person, within a traditional dance class improving the effectiveness, or for opening up to an online class, where the teacher can see, real-time, the student and vice-versa. Furthermore, these capabilities can be exploited for the creation of an 'educational-game', where different approaches to the topic, such as learning-by-doing, role-playing and board-game can be applied.

DISCUSSION

The Quality Function Deployment QFD matrix (Figure 12) based on the users, stakeholders and technologies suggested the best development choices. This method was indeed fundamental for better understanding the relation between user needs and technical requirements of the design, in order to avoid common mistakes in the development of final product already seen in other experiences. For instance, valuable commercial product, such as Babolat Play in tennis (Büthe, Blanke, Capkevics, & Tröster, 2016), can result in non-effective selling performances in a market not yet ready for these IoT (Internet of Things) implementations. User needs were analyzed thanks to the involvement of both students and teachers resulting in the following order of importance.

For the students, needs are: (1) reducing the stress time in the lessons, (2) memorizing sequences, (3) being considered enough, (4) watching again corrections at home, (5) not feeling bored during repetitions, (6) playing correct execution at home, (7) physical benefit, (8) learning new choreographies.

While, for the teachers, need are: (1) paying enough attention to students, (2) teaching the discipline in a contemporary way, (3) having constant supervision of improvements, (4) better noticing students errors after the lesson, (5) preparing better lessons.

These are the needs that the PASSAY project tried to answer, balancing them with the technical requirements. In fact, the QFD also highlighted the software and hardware had to be (1) affordable, (2) user-friendly, (3) precise, (4) the UI intuitive, (5) the wearable comfortable, and (6) the whole system had to affect as little as possible the lesson.

Last but not least, it had to offer (7) a record and analyze feature and be installed as a (8) fast and (9) standalone set-up. The QFD analysis showed how important was that final result offered a high-quality of the tracking system to help the teacher and the real-time processing was essential to not alter too much the lesson.

Fig. 14 Zambonini A., mock-up of the graphic interface of the PASSAY educational game: phase "preparation of the lesson", 2019.

In fact, once developed the system on these multiple requirements, it was tested against its using within the User Journey Maps (UJM) of teachers and students (Figure 13), highlighting not only the need for a hardware-software set-up but for a proper app development that could cover the entire learning process as an educational game.

The PASSAY app: an educational game

This paragraph will explain the educational game app step-by-step, as teachers and students will encounter in along their UJM.

1. Preparation of the lesson (Figure 14). The app has a dashboard that allows the teacher to have a general overview of the improvements of different courses, re-watch the last lessons. The teacher can also modify all the classes and their members.

2. Welcoming (Figure 15). When a new student is subscribed to the school, the teacher, before presenting the new member to the whole class, will record the new user in the multisided platform of PASSAY. In this phase, the student will choose which personal 'decoration' he/she prefers. This

illustration (ID) will be applied on the outfit and will work as an identifier symbol for the system to associate the body analyzed to a specific profile of a user.

3. Technical training (Figure 16). During the description of the movement, the teacher will say the name of the movement and this action will be considered by the Kinect as a call to action to wait for this move to be executed by the users. After the description, the students will be divided into groups composed by 3 'players'.

The teacher will ask everybody to execute statically a position. The instructor, when is sure about the position of the student, will say '[name_of_the_student] is ready'. When the three people in front of the sensor have been prepared, the teacher will say again the name of the movement, asking everybody to execute it. During this phase, the instructor will correct the other group. During the exercise, with defined length decided said to PASSAY by the teacher, every time the analyzed ones will diverge from their original state, they will receive vibration feedback, in real time, in the parts of the body holding the wearable. The wearable will react only when the assigned point on the skeleton scheme will go beyond the threshold of error shown in the previous scheme.

Fig. 15 Zambonini A., mock-up of the graphic interface of the PASSAY educational game: phase "welcoming", 2019.

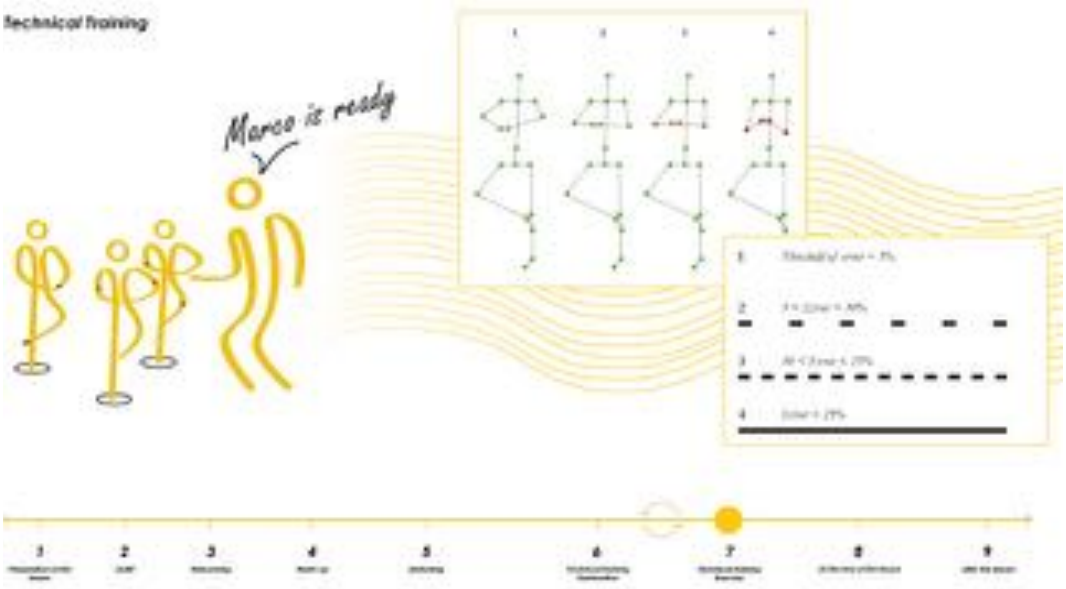


Fig. 16 Zambonini A., mock-up of the graphic interface of the PASSAY educational game: phase "technical training", 2019.

The more the student diverges from the ideal position in the analyzed body part, the more the vibration will be annoying. The more the students will not diverge from the desired state, the more they will gain points that will be summed up with the rest of the team. After the repetitions, another group will be positioned in the same place as the first group. At the end of the lesson or the exercise, the teacher will say 'Stop', then a team leaderboard will be shown with the best three teams. 4. After the lesson (Figure 17). After the lesson, the teacher can watch again the whole class in 3D and check specific clips for every student. In the section of the student, he/she can also see the improvements and highlights.

CONCLUSIONS: ANALOGUE VS DIGITAL TOWARDS NEW POSSIBILITIES

The teaching and learning of classical dance are still faithful to an ancient model, based on the standardization and transmission of knowledge in a mainly analogical meaning. Digital technologies are considerably different from this

concept because they offer a way of transmitting knowledge that is not only handed down but also shared, creating a non-linear learning pattern. However, new technologies provide children enormous potential in terms of motivation, empathy and confidence growth.

Despite these aspects would seem positive, the degree of resistance to the introduction and to the possible use of new technologies for the learning of classical ballet has proved, in the research phase, to be still quite rooted in the beliefs of some teachers. This resistance is not profitable, because the fracture with the current digitalized social context risks making this discipline incapable of attracting students and maintaining them over time: these 'digital natives', who from a very young age possess typical skills and 'forma mentis' of those who use new technologies, prefer a dynamic, personalized and inclusive type of communication.

The technologies integrated with a more traditional methodology, as illustrated in this project, would make it possible to enhance the lesson by making it more effective, certified and at the same time more motivating and satisfying: the typical concepts of game design, in fact, make it possible to expand the scope of the teaching far beyond an hour of lesson in the gym, promoting a real self-regulation in the movement. The role of the teacher remains central to the learning of the student because the technological integration will always be conducted directly by the person who manages the courses and the lessons.

However, there's still room for improvements. The low-resolution digital prototype of the 'Pose matching' algorithm, illustrated above, has been tested on different dancers and dance students. This 'proof of concept' has revealed that there are both some limits and potentialities for this new type of learning. In particular, basing each movement on a single ideal model seems to be restrictive in relation to the conditions of application of the movement; for example, in choreography, the dynamism could prevent us from giving a certain answer on the execution of a particular step of

the sequence. Nowadays, however, artificial intelligence systems, and in particular machine learning, allow us to clearly analyze even dynamic moves without renouncing the personalization of positions. The system, in order for the computer to recognize these steps, needs a very large initial dataset that is gradually enriched by the additional data generated by the users of the system. A further step, necessary to be actually exploit the potential of PASSAY in the best possible way, would be to directly involve early adopters for this technological system. The target could be users very favorable to the use of technologies, i.e. young professionals in the sector, who are interested in improving themselves by exploiting innovative and qualitatively valid products.

The relationship between arts and technology foreseen by this project is indeed so close to the same envisaged by Oskar Schlemmer (Trimingham, 2017), Master of Form at the Bauhaus theatre workshop since 1923 (Schlemmer & Hildebrandt, 1951, p. 36): "If today's arts love the machine, technology and organization, if they aspire

Fig. 17 Zambonini A., mock-up of the graphic interface of the PASSAY educational game: phase "preparation of the lesson", 2019.

to precision and reject anything vague and dreamy, this implies an instinctive repudiation of chaos and a longing to find the form appropriate to our times" (Schlemmer, 1990, p. 43).

After World War I, during his workshop dedicated to dance and acting, Schlemmer developed the famous *Triadic Ballet* (Lahusen, 1986) which was born from the perceived necessity to re-evaluate the figure of the men within the new world, reconciling arts and techniques.

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VISUAL NARRATIVES IN VIDEOGAMES

HOW VIDEOGAMES TELL STORIES THROUGH GRAPHICAL ELEMENTS

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VIDEOGAMES
NARRATION
GRAPHIC ELEMENTS
STORYTELLING

Videogame is a unique and, at the same time, widely diversified medium. The typical elements of oral, written, musical, visual –but also interactive, spatial, environmental– narration are found merged together in different ways creating 'elsewheres' capable of telling stories and generating experiences in ways that other media are hardly able to replicate. Visual and graphical elements can provide great narrative potentials in videogames as they take part in the wider process of meaning and narrative conveyment, both shaping countless possible scenarios and helping players to make sense of them.This contribution addresses the narrative potential of visual elements in videogames by merging the perspectives of game studies and semiotics. The first part will be devoted to the framing of videogames' expressive power within the field of game studies and will deal with specific field-related concepts such as procedural rhetoric and evocative narrative elements. The second will delve deep into the understanding of videogames as texts, following the work of Agata Meneghelli and Espen J. Aarseth on the matter. The last part will deal with how videogames can use their visual elements for narrative purposes, providing a framework of five different visual narratives based upon Henri Jenkins' videogame narrative theory.

EXPRESSIVE VIDEOGAMES

Both the expressive and the rhetorical potential of videogames have over the years become well-established components of game studies discourse. Several scholars have been trying "to develop theories and analytical models to understand the expressive potential of videogame design, how videogames work as texts, giving shape to certain values, behavioural patterns and ideological visions" (Pérez-Latorre, Oliva & Besalú, 2016, p. 1). From the "narratology vs. ludology" debate –synthetic and comprehensive accounts among others can be found in Gonzalo Frasca (2003), Janet H. Murray (2005), Óliver Pérez-Latorre, Oliva Mercè, and Reinald Besalú (2016)– to the discussion around the subtle propagandist elements of games (Wills, 2019), scholarly works on the field attempted to answer or to work around the question "how do videogames convey meaning?" (Pérez-Latorre, Oliva & Besalú, 2016, p. 1). For if it is self-evident that videogames can serve both propagandistic purposes and political aims (Bogost, Ferrari & Schweizer, 2010; Sicart, 2008a; Wills, 2018); can "share some structural traits [with narratives]" and "contain narrative elements" (Juul, 2001); can persuade (Bogost, 2007) and be emotionally captivating (Calleja, 2011), and so on; the way in which videogames effectively convey meaning is worthy of further consideration before proceeding. In particular, in doing so we shall at first explain how videogames can convey meaning due to their very nature of procedural artefacts rather than their possibility to produce meaning via the combined use of other rhetorical devices, i.e. visual rhetorical devices or oral/written rhetorical devices. We will stress on their possibility to convey meaning making use of their defining feature of procedurality.

The aim of this part of the paper is to provide an operational understanding of how videogames can be expressive thus conveying certain meanings using, together with other forms of rhetoric, a peculiar new kind of rhetoric which is proper to software and videogames, i.e. 'procedural rhetoric'.

FOR AND AGAINST PROCEDURAL RHETORIC

We take the concept of 'procedural rhetoric' from Ian Bogost's *Persuasive Games* (2007), in which the author and game designer draw "on the 2,500-year history of rhetoric" to provide an approach to videogames rhetoric. The book begins with the claim "videogames are an expressive medium", and it aims at deepening exactly into video games' expressive power by connecting two key concepts, one concerning expression, i.e. rhetoric and the other concerning the specificity of video games, i.e. procedurality (pp. 3-11). In our attempt to show how videogames can conveying meaning and shape narratives we shall at first, and briefly, follow Bogost's steps in defining rhetoric and procedurality, and then combine them into what he calls the 'procedural rhetoric'.

Since several fields have, over the years adopted a more general understanding of rhetoric, deviating from the original definition and its association to the art of oratory in defining "how rhetoric functions uniquely in software [and] videogames" (Bogost, 2007, pp. viii-ix), Bogost uses Kenneth Burke's 'expanded' definition of the concept, according to which rhetoric is the use of language as a symbolic means of inducing cooperation in beings that by nature respond to symbols (pp. 20-21). By understanding human beings as consumers and producers of symbolic systems, Burke widens rhetoric to include nonverbal domains too, expanding, as a consequence both rhetoric's conception and its domain. Following Burke, it is a matter of fact that "increasing interest has mounted around efforts to understand the rhetorical figures and forms of [...] other, newer modes of inscription that also appear to serve rhetorical ends" (p. 21).

On the other hand, Bogost defines procedurality as "a way of creating, explaining, or understanding processes" and such processes as "the methods, techniques, and logics that drive the operation of systems, from mechanical systems like engines to organisational systems such as high schools to conceptual systems like religious faith (p. 3). Procedural expression must en-

tail symbol manipulation, the construction and interpretation of a symbolic system that governs human thought or action", and this manipulation has to be both enabled by the symbolic system and projected onto the symbolic system by an interpreter, i.e. the user (Bogost, 2007, pp. 5-6). A procedure can be expressive in the sense that it can spur on new behaviours and critical thought via the use of constraints and simultaneously procedures "maintain the edges of certain situations" (think of bureaucracy for example), and stimulate, with the imposition of these constraints, the creation of new expressions (p. 7). In videogames, procedures are expressed and sustained by rules while cases of this kind of novel expression could be found in emergent or subversive play. Game procedures allow "actions and methods of play [and] guide player behaviour, creating interactions" (Fullerton, Christopher & Hoffman, 2004, p. 25): we could therefore define game mechanics, following Miguel Sicart, as "methods of agency within the game world, actions the player can take within the space of possibility created by the rules" (Sicart, 2008b).

Hence, based on these two assumptions, Bogost defines procedural rhetoric as "the practice of using processes persuasively" (Bogost, 2007, p. 3); in other words, procedural rhetoric is "the act of making an expression or argument through a game's processes and rules" (Treanor, Schweizer, Bogost & Mateas, 2011, p. 1), i.e. "through rule-based representations and interactions rather than the spoken word, writing, images, or moving pictures" (p. ix). We can find procedural rhetoric in diverse software including applications, text-editing processors, databases and so on, as well as videogames.

Bogost develops his discourse around the persuasive potential of political, advertising, and learning videogames. Our aim is not to go deep into these three categories nor into the persuasiveness of games. Suffice it for us to say that Bogost's perspective highlights a key feature of videogames and the way in which they communicate, convey meaning, and therefore (can) tell stories and also their use of rules and computation in an expressive, rhetorical way. If videogames, differ-

ently from other visual media, allow users to interact with a set of rules and automated processes, then the fact that these rules and processes can serve as a cradle for the meaning(s) they attempt to convey can be pivotal to understand how videogames themselves can communicate. Before proceeding, it is also worth specifying that, concerning the link between narratives and meaning and as highlighted by Madsen and Johansson, videogames can also construct non-narrative rhetorical meaning, and therefore potentially be "a medium of artistic expression" regardless of their potential narrative power. Following Madsen and Johansson's take, "focusing solely on the narrativity of computer games may result in a limitation of the view of the contribution of computer games to the field of literary expression", because "although it is common to think of computer games in terms of their relation to narrativity, we think it is interesting to consider their expressive powers in terms of the way we think they may construct non-narrative meaning" (Madsen & Johansson, 2002, p. 75).

Limiting oneself to procedural rhetoric in the understanding of how videogames can communicate and mount statements, one runs at least two risks: the risk to "identify play with reason, to control play and guide it to a predetermined purpose", and "to foster the dominant idea of the designer as the provider of meaning for the game" (Sicart, 2011). In highlighting the significance of procedural rhetoric in videogames expressivity we shall consider, therefore, that there is also always an ongoing process of appropriation by the player of that rhetoric throughout the act of playing itself. In *Against Procedurality*, Miguel Sicart focuses his scrutiny on the role of the player. For Sicart, play does not include only the logic of the game or its procedurality, i.e. rules, procedures, and performance of play according to, or counter to, those same rules and procedures; instead, "[it] is a part of [player's] expression, guided through rules, but still free, productive, creative", and therefore "it also includes the values of the player" (Sicart, 2011). One of the defining features of play is precisely its openness, which allows the player freedom to

explore and at the same time to express (as well as to interpret) values, messages, and so on. It is only as long as there is a user that games and technology can be expressive. Users do not only 'activate' and use videogames, but at the same time exercise their personal freedom within them and are free to 'make' their own meaning of the videogame experiences. This is because, rephrasing Miguel Sicart's claim, "[meaning is] intimately and ultimately personal" (Sicart, 2011). Sicart's reading significantly both contradicts a 'designer-dominant' perspective (that could be fueled by proceduralism) and redefines the importance of rules; of course rules structure play but they cannot completely determine it as "they are still subject to the very act of play", i.e. to "an act of appropriation of the game by players". This is particularly evident in the case of abstract videogames, or with subtle narratives. In such cases players have to be smart, interpretative, and think for themselves, actively and effectively co-creating stories (Wills, 2018).

OTHER RHETORICAL DEVICES AND THE EVOKING OF MEANING

Up till now we have considered how videogames can use, by design, their defining feature of procedurality as rhetorical means and at the same time how their production of meaning can only happen throughout a player's personal appropriation of those same designed rules and procedures. Apart from this, the expressiveness of videogames can be channelled through other rhetorical devices, e.g., as already mentioned, for Bogost "visual rhetoric [i.e. visual rhetorical devices] is often at work in videogames, a medium that deploys both still and moving images" (Bogost, 2007, p. 24). Despite the undeniable fact that, as claimed by Galloway, "the game theorist must talk about actions" (Galloway, 2004), it is also worth noting that videogames make use of other rhetorical devices that "simply [do] not account for procedural rep-

resentation" (Bogost, 2007, p. 25) in order to convey meaning. On one hand, it is possible to characterise general processes and videogame processes too, with for example visual images (p. 31) sounds or written words. On the other hand, rhetorical devices such as written discourses, visual images, sounds, music, multi-layered/multi-medial narratives and so on and so forth can also be implemented in videogames to help the player in generating new meaning.

Following Michael Nitsche's *Video Game Spaces* (2008), "evocative narrative elements" (ENEs) are implemented to "encourage players to project meaning onto events, objects, and spaces [in videogames]"; they help players to "infuse significance" and therefore to "form narratives" (p. 44). Such ENEs are defined as "foundational building blocks" (p. 37) at the basis of the structuring of players' comprehension of the game. They "can be anything and any situation encountered" that can structure such a comprehension (p. 37). The aim of ENEs "is not to tell a linear story, but to provide evocative means for the interactor to comprehend the virtual space and the events within it, and generate context and significance in order to make [it] more meaningful. While the reader of a novel is limited to the given text, the player of a game interacts with these evocative elements, *cocreates* them, and changes them." (p. 45). Two remarks are needed here: firstly, like Miguel Sicart, Michael Nitsche too is emphasising the role of the player in the construction of videogame meaning –he stresses elsewhere that ENEs are not stories themselves "but suggestive markings [aimed at triggering] reactions in players in order to help them to create their own interpretations", and as a consequence "[videogames'] stories are never in the piece itself but in the mind of the player" (p. 44). Secondly, Nitsche claims that "such an approach has obvious parallels to semiotics", inasmuch as "[videogames] depend on representation and sign systems" (p. 3): we find it fruitful then to understand ENEs as widely intended rhetorical devices and vice versa –i.e., visual images, sounds and soundtracks as well as written discourses in

pop-up vignettes or dialogues could all be ENEs in Michael Nitsche's sense. Rhetorical devices as ENEs help players to understand and contextualise procedures and therefore form their own meaning of the game.

As an alternative, it is worth mentioning that videogames can also make use of rhetorical devices independently from procedures. Such is the case of cutscenes, as for example videogames such as *Metal Gear Solid 4: Guns of the Patriots*, which features a total of more than nine hours of cutscenes, uses cinematic devices to help players produce meaning apart from gameplay and procedures. Of course, even cinematic narrative has consequences in players' understanding of in-game procedures and mechanics. Thanks to a cinematic, a player can understand what is going on in a certain gameplay section. However, in such cases rhetorical cinematic devices take the player away from game spaces, Michael Nitsche's focus, and relocate him/her in cinematic spaces. If the use of images and visual rhetorical devices during play makes videogames no longer "slave[s] of the image [as] players are free to explore and interact with it directly" (Nitsche, 2008, p. 85), cutscenes and cinematics "are designed and produced much as they would be for film or television", and therefore provide players "a finished, polished, […] movie that is scripted from start to end [in which] all dialogues, music, and other sounds are planned to unfold in a controlled way" (Mitchell, 2012, p. 199).

VIDEOGAMES AS TEXTS

So far, we have highlighted how the subjective dimension of play strongly influences the videogames' possibility to convey meaning and therefore create narratives, both through procedurality and through a number of other rhetorical devices: "procedurality explains the whys and hows of how game technology operates and how games can aspire, as designed objects, to funnel behaviors for reflection. Play, however, is personal, individual, and communitarian, played

with others, for others, in an intensely, deeply personal way" (Sicart, 2011). If we consider interactivity as the main defining feature of play playing a videogame, (Rouse, 2004), and if we admit that interactivity is a player-focused concept, then of course we have to retain players as crucial in how videogames can be expressive and therefore construct narratives.
For our purpose, it is worth linking what we have claimed so far concerning videogames expressivity with semiotics, and therefore with approaches that focus on videogames' textuality rather than on their procedurality. Of course, no approach will question the fact that videogames are playable artefacts, as explained above, and that as a consequence their procedurality is to be considered as essential. With this paper our aim is not to empasise into what a text is or could be. Suffice it to say that for us texts are "meaningful wholes" (Gorlée, 2004), or, as stated by Steven J. DeRose, David G. Durand, Elli Mylonas and Allen H. Renear (1990), "ordered hierarchies of content objects". We refer the reader to more thorough and appropriate literature available in Aston and Savona (1991).

Among others, scholars such as Espen J. Aarseth and Agata Meneghelli suggest that one should consider videogames as texts. Meneghelli claims that videogames are "concatenation between text and practices" (Meneghelli, 2011, p. 25), in which designed texts ('games') aim at generating game practices that in turn can be further understood as texts themselves (both the videogame and the gameplay, according to Meneghelli, are better understood as texts in a classical and semiotic sense) (p. 25). For Meneghelli, of course, "one cannot deal with a videogame without considering game practice within which the text-videogame produces meaning" (p. 26). Accordingly, Aarseth defines videogames as a (relatively) newly born kind of text: a computer-mediated narrative, ergodic and interactive and based upon two distinct technological levels (the surface-level and the level of the codex) (Aarseth, 1997) text. This understanding entails that, just like for any other text, if we interpret videogames

as cybertexts we cannot distinguish between the text itself (the 'game', to use Meneghelli's lexicon) and its readings ('game practices' according to Meneghelli): "on the one hand we need the image of 'the text' in order to focus on anything at all; on the other hand we use the metaphor of 'reading' to signal that our apprehension of a text will always be partial, that we never quite reach the 'text itself,' [in our case: 'game itself', as separated from play, ndt.] a realisation that has led certain critics to question the very existence of such an object" (Aarseth, 1997, p. 20). Rephrasing Umberto Eco's take on Saussure's semiotic theory we could therefore claim that videogame meaning, as of a text, is something that has to do with the activity of individuals (Eco, 1993), i.e. players.

Despite the fact that they cannot deny a certain emphasis on play, procedures, and practices, textual approaches to videogames help us in viewing them as conceivers and producers of sign sequences, enacted by the action of a player. Umberto Eco provides a definition of such emitted signs as images, gestures and objects which, beyond their physical functions, aim to communicate something. It is worth noting at least two defining features about Eco's understanding of such emitted signs, namely intentionality and work spent. We shall briefly delve into these features before we proceed. If we consider an emitted sign as intentional, then we assume that it is bound to certain motivational purposes which push one or more subjects to communicate something (being it an idea, an advice, etc.) using something else (an object, an image), i.e. through the use of the aforementioned emitted sign. Being videogames (at least mostly) designed texts, it is easy to find such sign sequences therein. In *The Witcher 3: Wild Hunt* we may consider as an emitted sign a large number of ENEs, be they a wrecked coach along the road, a set of footprints through the mud, cries for help of someone in danger or a sudden change of tone in the soundtrack. All these cues have been implemented to precisely communicate something to the player, e.g. the fact that a dangerous beast is approaching.

On the other hand, in claiming that an emitted sign sequence does work we acknowledge that every intentional choice of positioning, composing and arranging of that specific sign sequence takes a certain 'physical effort'. This is to say that that coach, those footprints and that soundtrack have been purposely crafted with great effort, implemented, and positioned by someone who has spent a great deal of time and work to do so.

If, as we have seen we aim to consider videogames as texts, then ENEs are to be considered as emitted sign sequences in Eco's sense: they are there to be read, interpreted and activated, and therefore evoke the production of meaning in the reader/player. Videogame developers can implement texts, dialogues, images, animations of three-dimensional models or two-dimensional sprites, sound effects and music as well as procedures with rhetorical meaning with the exact intent to produce a 'meaningful whole', i.e. a 'text' that can produce meaning if appropriated by a 'reader'. In the context of this paper our inquiry will be limited to the use of visual images in videogames, which we may call Visual Narrative Elements (from now on: VNEs), i.e. the graphical representation of characters, environments, objects and spaces with which it is possible for players to interact. All those VNEs, perceivable solely through sight, are to be considered intentionally implemented and positioned by game designers with the aim of communicating a meaning, be it providing information, narrating something or more generally telling something to players. We will therefore exclude unintentional VNEs/signs such as graphical glitches or the like, as well as music and sound effects, spoken dialogues and so on which obviously could have a significant role in communicating to the player too.

On this basis, a further clarification is needed regarding a specific VNE –the representation of a written text. Videogames frequently use written texts as a means to keep the player informed or to form narratives and convey meaning in general. We will, however, only consider visual representations of texts such as signals and texts on the walls. This is

being done because our aim is to distinguish between represented and representational VNEs, following the distinction made by Colombo and Eugeni between game space and HUD (Colombo & Eugeni, 1996).

VISUAL NARRATIVES WITHIN VIDEOGAMES

One of the most interesting frameworks of narrative potential of videogames is found in Henry Jenkins,' *Game Design as Narrative Architecture* (2003), with which the scholar purposefully tried to end the dispute between ludology's and narratology's approaches to game theory. In providing a framework for the various 'interplays' between videogames and narratives, Jenkins attempted to give an intermediate solution to the debate.

It is worth mentioning three preliminary remarks that Jenkins makes before introducing his understanding of videogames as 'narrative architectures'.

Firstly, he calls for the need to step aside from classic, linear understandings of narrative towards a wider view, open to "other kinds of narratives, not only the modernist and postmodernist experimentation that inspired the hypertext theorists but also popular traditions that emphasise spatial exploration over causal event chains or which seek to balance the competing demands of narrative and spectacle" (Jenkins, 2003, p. 3).

Secondly, Jenkins stresses the significance of the role of the listener-player in activating and understanding narrative processes. Thirdly, he remarks that videogames can of course tell stories as a whole but smaller "narrative elements might enter games at a more localised level" (p. 3), making sub-narratives, micro-narratives, or references to other narratives possible.

Non-canonical forms of narrative, active role of the receiver/player and detailed presence of narratives contribute to the narrative potential of videogames. Additionally and

similarly to Michael Nitsche, videogames for Jenkins can be narrative due to their spatiality: they allow players to move, explore and act within designed digital spaces able to convey meaning and evoke narratives themselves.

Henri Jenkins' model also identifies four kinds of narrative in videogames: evoked, enacted, embedded, and emergent. Although this model refers to the videogame text as a whole, in the following paragraphs we shall try to apply these four categories to VNEs in our attempt to provide an overview of how graphical visual images can be used for narrative purposes. Though we have kept them separate for analytical purposes, the following categories are to be considered as intertwined and in dialogue with one another.

Graphic-Evoked Narratives

According to Henry Jenkins (2003), "spatial design can either enhance our sense of immersion within a familiar world or communicate a fresh perspective on that story through the altering of established details" (p. 12). Some videogames are set in imaginaries that players are already familiar with in an extra-ludic sense (Howell, 2016). This can trigger a process of anticipation by players. Jenkins explains this narrative architecture by remembering that the mere fact that a game is called in a certain way, for example *Marvel's Spiderman* recalls, in the player, the previous knowledge of that superhero. Moreover, the fact of being in a digital representation of New York which features fictional buildings made famous by movies or comics –e.g. the Avengers tower, or the Daily Bugle's headquarter (all elements that are only present in Marvel's New York version)– accentuates, through purely visual elements, the sense of being inside a specific story or narrative environment. The same evocative process can also occur in a trans-ludic way, namely evoking an imaginary that is inspired by another videogame, or videogame franchise. This, for example is the case of *Uncharted 4: A Thief's End*, where one may come across a painting representing Guybrush Threepwood, the

Fig. 1 *Uncharted 4:* Druckmann, N. (2016). *Uncharted 4: A Thief's End*, videogame, Tokyo, JP: Sony Computer Entertainment.

main character of *The Secret of Monkey Island* and all the other games of that saga.

Another thing that may happen is if game designers implement divergent elements that propose other possible narratives in order to evoke, in the player a certain imagery yet with a certain dissonance. This is what happens, for example, in *Wolfenstein 2: the new colossus*, in a dystopian reality where Nazi Germany won the Second World War sets a real well-known scenario (the world after the Second World War) but enriched with elements that alter it (the victory of the Reich).

What does it mean, then, to trigger such a process with graphical-visual devices?

In *Wolfenstein 2: the new colossus*, the player visits an American 70s-fashioned town controlled by the Nazi regime. The street is bedecked with swastika drapes and is full of stalls selling hot dogs and people strolling casually. The drapes and swastikas not only have a 'decorative function' (Clark & Lyons, 2004) but are there to evoke in the player a narrative imaginary that, specifically in this example, is strongly inspired by real historical facts while is dissonant from what its surrounding. There is no need to explain what that symbol is: the player immediately recalls previous knowledge about it and re-negotiates it with the context of the game.

Fig. 2 Öjerfors, A., Berg, A., & Afzoud, A. (2017). *Wolfenstein II: The New Colossus*, videogame, Bethesda, MD: Bethesda Softworks.

Enacted Visual Narratives

Although Henry Jenkins does not consider 'enacted' and 'enacting' narratives as two separate concepts, this distinction is useful to understand how this category fits with videogames' visuals. For Jenkins, the concept of enacted narratives refers to how the "story itself may be structured around the character's movement through space and the features of the environment may retard or accelerate that plot trajectory" (Jenkins, 2003, p. 12). This means that the concept is strongly related to spatiality and agency in videogames.

According to Jenkins, a videogame's narrative is composed of two levels that can work in parallel or together. Whilst the former defines the player's main purpose suggested by the game the latter provides the space for more circumstanced narrative elements that Henry Jenkins calls 'localised incidents', or 'micro narrations'. It is the very player who feeds, directly with his action, the pace of the narrative, now activating scripted sequences –for example, by defeating an enemy–, now lingering on actions that do not trigger such sequences.
The concept of Enacted narratives is strongly related to that of spatial action inside a game. How, then, can it be transposed merely in terms of graphics elements?

Graphic-enacted narratives can be considered as all the cases where game designers stage in-game scenarios where players are called to 'solve' the situation by means of creating or perturbing a graphic element (or a set of them) by exercising an "environmental manipulation" (D'Armenio, 2014). This action by the player immediately becomes an integral part of the game world, thus activating a narrative sequence.

In *Crayon Physics Deluxe*, for example, the player has to solve puzzles through the action of 'drawing' the elements necessary to lead a ball from A to B. Although the narrative here is very simple where the story is limited to that of a ball falling from an apple tree and having to reach a certain place, it can only be activated (or, in this case, enacted) through the concrete action of the player, which is aimed at producing a new visual sign (be that a line, a square, or whatever).

Another similar example which is more related to the dimension of perturbing rather than that of creating is Gorogoa. In this game the player is not called to draw or create anything, rather he or she is asked to graphically change the order of the given tiles representing parts of the story and literally creating new visuals that trigger sequences of the story. We shall consid-

Fig. 3 Signal, B. (2017). *Gorogoa*, videogame, Los Angeles, CA: Annapurna Interactive.

er as 'enacted visual narratives' of *Gorgoa* the completed narratives that emerge from players' choices once they order the tiles correctly. As we may notice, 'enacted visual narratives' are visual narratives that occur as a result of intentional choices made by the player in response to a narrative (or procedural) stimulus, i.e. the need to 'get to the other side' in *Crayon Physics Deluxe*, or the need to 'give shape to a meaningful narrative' in *Gorogoa*.

Enacting Visual Narratives

While the concept of enacted narratives focuses more on the player's action and his will to proceed with this action, we would like to try to give to the concept of enacting narratives a different connotation which focuses more on the implications in terms of meaning that certaingraphical elements have and what the gamers do with that. For Henry Jenkins, "The organisation of the plot becomes a matter of designing the geography of imaginary worlds, so that obstacles thwart and affordances facilitate the protagonist's forward movement towards resolution" (Jenkins, 2003, p. 7).

We can describe 'enacting visual narratives' as visually mediated narratives staged by designers that aim at suggesting players' actions to perform or narratives to enact.

An example of this can be found in *The Legend of Zelda: Breath of the Wild*, at the very beginning of the game. Here the player manages to get out from a cave and is faced for the first time with the sight of the outside game world. The game provides him/her with a breathtaking view at the very centre of which is a silhouetted castle surrounded by a weird purple fog. That castle is where the main antagonist of the game is lurking. With a single image, the game provides the player with hints about the mission he/she will have to deal with, indirectly inviting him/her to face an unknown menace and thus 'enacting' the overarching narrative of the game.

The 'invitation' of course is effective, in a narrative sense, only if the players respond to it whilst being engaged in an "actant role" (Greimas, 2000). To have a more complete dissertation about how players can play actant roles, see D'Armenio (2014).

Fig. 4 Aonuma, E. (2017). *The Legend of Zelda: Breath of the Wild*, videogame, Kyoto, JP: Nintendo.

Embedded Visual Narratives

Henry Jenkins (2003) defines this narrative architecture as "an active process by which viewers assemble and make hypotheses about likely narrative developments on the basis of information drawn from textual cues and clues". According to him, game designers can structure two different kinds of narrative approaches: "one relatively unstructured and controlled by the player as they explore the game space and unlock its secrets; the other pre-structured but embedded within the mise-en-scene awaiting discovery" (p. 9).

Graphic-Embedded narratives can be interpreted as those visual elements intentionally positioned by programmers which directly or indirectly 'inform' about the game world, or narrative: clues about the story of the world and hints about characters' backgrounds assume a function that Chopeta Lyons and Ruth C. Clark would define as organising, i.e. they show qualitative relationships between the elements of a system.

The aforementioned example from the *Witcher 3: Wild Hunt* falls in this category. Of course, the message has to be interpreted in such a way that where some players may only see a simple wrecked coach, others may interpret it as a sign, warning about the presence of a beast, others may focus on the

pieces of leather and some tools strewn around and even start wondering about the profession of the coach's owner as a consequence, assuming that he was a shoemaker. Interpretations of embedded narratives are as free as the act of playing itself, though they too are constrained by the videogame text itself.

The difference between embedded and enacted narratives lays precisely in the kind of operation that the player can (or cannot) make when confronted with the graphical stimulus which could lead to the performing of actions and the interpretation of that sign by the player. If the visual stimulus leads to a certain action, then the visual narrative that could emerge is to be considered as 'visual enacted narrative'. If the stimulus leads only to interpretation then the narrative it provides could be seen as 'visual embedded narrative'. Chopeta Lyons and Ruth C. Clark identify this mechanism as the image's interpretative function which implies an active and fundamental role of receiver who is called to give meaning to what he sees.

Emergent Visual Narratives

Ultimately, Henri Jenkins identifies as emergent narratives those narratives in which narrative potential is conveyed by the player's ability to customise or create new elements of the game. For Jenkins, the creation of a house in *The Sims* is not only the creation of a unique space, but also the creation of a new narrative in which the player is the main author and director.

The graphic-emergent narrative therefore concerns all those games that allow the creation of graphical assets by the player which furthermore assume a purely subjective meaning. Games like *Minecraft* which 'allow' players to shape their own game world have the possibility to build houses and cities, to shape the profile of mountains and choose whether to create rivers, lakes... literally anything that can be created.

All this potential allows players to 'craft' not only the game world but also to imagine the potential narrative meanings that each created object could have. For example, creating a house, rather than, let's say, a museum, is already an emergent narrative with a specific meaning.

Fig. 5 Persson, M. (2009). *Minecraft*, videogame. Stoccolma, SE: Mojang.

CONCLUSIONS

The aim of this paper was to provide a general overview of how videogames can deliver narratives especially through their visual features and graphical elements by providing a framework of five visual narratives in games relied on Henri Jenkins' understanding videogame narratives.

In the first part of the paper we considered how videogames can be expressive and therefore convey meaning by taking into account how meaning is ultimately inferred and constructed by players, but triggered, accommodated, and helped by rhetorical devices implemented by design in videogames themselves. By arguing over scholars such as Ian Bogost, Miguel Sicart, and Michael Nitsche, we provided an overview on game studies' understanding of how videogames can help players create their own meaning of the game thanks to (1) procedural rhetoric, (2) other rhetorical devices such as evocative-narrative elements, and (3) other rhetorical devices, (partially or completely) separated from procedures and gameplay. We then considered how videogames can be understood as texts, and therefore as systems of signs, basing upon Espen J. Aars-

eth and Agata Meneghelli's approaches. In the final part, we introduced Jenkins' model of narratives within games, and then provided a framework of five kinds of graphical narratives namely: evoked, enacted, enacting, embedded, and emergent.

Evoked visual narratives refer to those situations where the fact that some videogames are set in scenery/backdrop already known to gamers may ignite a process of anticipation that allows the game narrative context to exercise a greater sense of involvement by evoking what the player already knows about such contexts.

Enacted visual narratives can be considered all the cases where game designers stage in-game scenarios where players are called to 'solve' the situation by means of creating or perturbing a graphic element (or a set of them) that immediately becomes an integral part of the game world, thus activating a narrative sequence.

Enacting visual narratives refer to all those visual elements staged by the designers with the intention to suggest to the players an action with a specific scope.

Embedded visual narratives refer to those visual elements intentionally positioned by developers which contain information about the context of the game.

Emergent visual narrative concerns all those games that allow the creation of graphic assets by the player, such assets assuming that for the person they have meaning within a context of reference absolutely internal to the subject.

Of course, further debate is accepted and welcomed for our present attempt. Since we have limited our enquiry to 'classical' videogames such as console games or computer games, an attempt to apply this framework of visual narratives to VR games or augmented reality games, could be fruitful and could shed light on how different digital spaces use visual-narrative elements differently. Furthermore, it could be useful to use this framework to deepen into specific case analysis, and to see how different visual narratives can be distinguished by both players and designers.

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SEMIOTICA DELLE DISTANZE NEGLI AMBIENTI VIRTUALI E AUMENTATI

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distanza; immersione; isolamento; *augmented reality*; *distant reading*

Introduzione. Dimensione pragmatica e semantica del discorso virtuale

La distanza è un concetto semanticamente complesso: può denotare sia, quantitativamente, la misura di uno spazio interstiziale fra due o più elementi o soggetti della comunicazione, oppure qualitativamente, se inteso come aggettivo, un sinonimo di 'lontano', di 'non vicino', nello spazio, nel tempo e nel senso condiviso. Queste due accezioni della distanza aprono due possibili percorsi di analisi, volti a indagare, teoricamente, la condizione del soggetto-utente nella ricezione di una comunicazione mediata tecnologicamente.

Da un lato è possibile situare la distanza enunciativa, che interessa la dimensione pragmatica del discorso. Essa è intrinsecamente legata anche alla distanza fisico-topologica sussistente tra i soggetti della comunicazione: tale distanza si verifica a partire dal passaggio dalla comunicazione orale a quella scritta in cui viene stabilita una distanza fisica fra il produttore di un messaggio (o enunciatore), che scrive all'interno di un testo scritto il proprio simulacro (*débrayage*) e il destinatario (o enunciatario), il quale svolge la funzione di attivatore della semiosi del testo attraverso strategie di interpretazione e può interagire direttamente solo con il simulacro dell'enunciatore.

Da qui la seconda concezione della distanza, che interessa invece la dimensione semantica dell'oggetto del discorso, ovvero i contenuti visivi di un'esperienza immersiva. Con l'imposizione della distanza enunciativa, quello che prima era l'ascoltatore –ora lettore e utente– si scopre non essere più in grado di risalire immediatamente all'identità dell'autore e attestare una corrispondenza semantica fra oggetto del discorso, referente materiale ed enunciatore (*embrayage*). Questa distanza referenziale, considerando i testi immersivi, si collega a un effetto di senso di veridicità e autenticità del segno rappresentato con tecniche di *image computing*. Si tratta, in entrambe le concezioni, di effetti di senso: nel corso di questo contributo vorremmo prendere in considerazione in particolare i modi in cui, nei media immersivi, l'effetto della distanza semantica –cioè un effetto di non veridizione connesso all'attestazione di non-realisticità dei contenuti– può essere cancellato attraverso strategie enunciative che prevedono la simulazione di una vicinanza enunciativa (annullando, in questo modo, anche l'effetto della distanza fisico-topologica) e come questa cancellazione produca effetti di senso sul piano semantico, affettivo e valoriale. La cancellazione di una distanza referenziale, che si rimedia in un senso di immediatezza con gli oggetti dell'esperienza, e la cancellazione di una distanza fisico-topologica fra emittente e destinatario, che si rimedia invece in una vicinanza enunciativa, creano nel loro insieme l'effetto di immersività, di presenza e di ermeticità coerente dell'ambiente mediale all'interno del quale l'utente si trova virtualmente, e che i discorsi sociali interpretano sia in senso disforico (immersività come isolamento) sia in senso euforico (immersività come incremento esperienziale).

Entrambe le rimediazioni, infine, sono pensabili come risoluzioni di un problema pragmatico della tecnologia della scrittura che, come vedremo, inizia a risolversi già a partire dall'affermarsi del paradigma dell'oralità secondaria con la comunicazione sincronica telematica.

La trappola della distanza cancellata

È interessante osservare il modo in cui, nell'esperienza con i media immersivi, la distanza enunciativa venga cancellata e si traduca, a livello semantico, in un senso di presenza e in una sensazione di immediatezza simulata. Nei media immersivi, l'attualità di un atto enunciativo è simulata facendo leva sulla sincronicità, immersività e geolocalizzazione del testo, e questo porta al manifestarsi di un senso di presenza: tra le varie interpretazioni che vi possono dare del concetto di presenza, una è quella che lo intende come l'effetto risultante da una comunicazione (simulata e apparente come) situata nel qui ed ora, che interpella l'osservatore in prima persona (soggettiva).

Nei media immersivi, l'utente è inserito all'interno di una realtà generata dal computer e fruisce un contenuto, il quale appare non come enuncia-

to antecedentemente alla sua attuale fruizione, come nella scrittura, ma viene percepito illusoriamente come attuale, cioè come se l'interlocutore fosse vicino, nello spazio, nel tempo ed al sistema enciclopedico a cui l'utente fa riferimento, o come se addirittura la sua enunciazione dipendesse da atti pragmatici dell'utente-enunciatore. I media immersivi "simulano nell'enunciato la situazione della sua enunciazione con un effetto di presenza […] e potenziano le nostre capacità percettive, cognitive e corporali, installando delle vere e proprie protesi dell'ascolto e dello sguardo" (Paolucci, 2020, p. 46).

È a partire da queste simulazioni che si possono iniziare ad evidenziare i principali 'rischi' della distanza negata che alcuni discorsi sociali sostengono e denunciano, valorizzando sia disforicamente che euforicamente il senso di immersività. Questo problema era già stato evidenziato dalla preoccupazione filosofica di Baudrillard (1981) per cui tutte le rappresentazioni mediatiche, specie quelle prodotte dai mass media, sono simulacrali, cioè sono da ritenersi frutto di una produzione discorsiva ben precisa che unisce le strategie di narrazione della realtà a quelle tipiche delle logiche discorsive dello spettacolo.

Per quanto riguarda ancora i media immersivi, a livello semantico, la distanza referenziale che viene cancellata non è più solo quella fra segno e referente ma anche quella che interessa la differenza fra la dimensione dell'esperienza virtuale (generata al computer) e reale (fisico-materiale) –che è pur sempre un problema di referenza, ma che per mezzo di un patto di non veridizione chiede di essere ignorata dalla capacità di giudizio dell'utente. Ecco che l'effetto di immersività può avere come conseguenza la perdita della consapevolezza della mediazione e della condizione di immersività in cui si trova l'utente, a partire dall'affermarsi di un'illusione referenziale (Barthes, 1984), che può all'estremo condurre a sviluppare un senso di diffidenza e perplessità verso le esperienze immersive in generale.

L'illusoria cancellazione della distanza nella comunicazione immersiva può iniziare ad essere concepita come un'isotopia tematica che attraversa una serie di discorsi eterogenei, caratterizzati da retoriche altrettanto eterogenee.

Per economia di lavoro, proponiamo in primo luogo il riferimento alle costruzioni narrative che sanzionano un certo tipo di pratiche sociali –considerate come alienanti– e valorizzano disforicamente la condizione immersa e distante dell'utente. Come nell'interazione sociale su piattaforme di social media, l'utente è concepito come confinato all'interno di una 'bolla esistenziale' dalla quale è difficile, se non impossibile, porsi in un rapporto diretto con il mondo reale e l'altro, riconoscere la simulazione della rappresentazione virtuale e la differenza con lo spazio fisico che denota il mondo reale.

A livello dell'espressione, parliamo di una serie di pratiche d'interattività che compongono l'esperienza e che sono ben descritte (linguisticamente e visualmente) in alcuni testi: da fatti di rilevanza socio-psicologica come *The blue whale*, a testi audiovisivi come la serie *Kiss me first*, il cui soggetto è ispirato direttamente a questo fatto di cronaca, da retoriche giornalistiche di tipo 'apocalittico', a *Black Mirror*.

È immediato richiamare i concetti di *filter-bubble* ed *echo-chamber* parlando della condizione di isolamento sociale dentro a una 'bolla' metaforica dell'utente dei media digitali. Il balzo ai media computazionali, rispetto a quelli immersivi, non è casuale: nella sede di questo contributo vorremmo indagare il concetto della distanza, di come si articola nei discorsi e testi sociali e della cultura, e di come venga interpretato, narrativizzato e meta-esperito dal soggetto utente.

È a questo punto che possiamo iniziare a far combaciare distanza (e isolamento) enunciativa dell'individuo dalla realtà sociale (isolamento sociale), con la distanza (e l'isolamento) cognitiva, una condizione che riguarda anche la configurazione di un regime scopico all'interno delle piattaforme di social media, oggi ben più all'ordine del giorno rispetto alle esperienze immersive: ovviamente la protesi percettiva, entità filtrante, predisposta da una piattaforma di social media che l'utente occupa, non coincide con l'individuo in sé isolato fisicamente dalla realtà sociale, bensì con una posizione enunciativa dalla quale si può vedere e sapere. La nostra tesi è che la 'bolla esistenziale' di cui parlano i discorsi mediali in riferimento all'uso di media immersivi e le cosiddette *filter-bubble* ed *echo-chambers* (che sono effetti della comunicazione, ma anche architetture software con una configurazione specifica) condividano una stessa base comune. Si tratta di capire, quindi, in che modo l'isolamento dell'utente all'interno dell'ambiente mediale creato da

un medium immersivo, e incapace di riconoscere la distanza enunciativa, sia semanticamente riferibile a quello creato dai sistemi computazionali e algoritmici che governano le piattaforme di social media, noto come *filter-bubble*, in cui allo stesso modo la cancellazione delle distanze enunciativa e semantica è occultata dalle possibilità espressive della comunicazione sincronico-telematica.
Per quanto concerne i media immersivi, invece, si tratta di capire da un lato, in che modo questi celino e simulino la distanza enunciativa che interessa la dimensione pragmatica, e dall'altro, sul piano semantico, come questa evanescenza venga a corrispondere sia con interpretazioni 'apocalittiche', che la collegano a un senso di isolamento sociale, sia, positivamente, a un senso di coinvolgimento, di empatia e di vicinanza. In questa prospettiva la distanza diventa un valore positivo e persuasivo che invita lo spettatore a fruire di un'esperienza immersiva.
Che si tratti quindi di distanza enunciativa, fra utente e oggetto della comunicazione, o semantica, fra oggetto simulato nel segno e suo referente, la questione si basa su una serie di domande: in che modo si articola il senso della distanza nell'interattività con i media immersivi e pervasivi della realtà virtuale e aumentata, rispetto a quello della scrittura all'interazione con il computer o lo smartphone, che caratterizza la comunicazione nei social media ed il paradigma dell'oralità secondaria (Ong, 1982)? Come viene interpretato l'effetto delle tecnologie immersive sulla percezione da parte dell'utente? E in che modo il modello percettivo (o regime scopico) dei social network, in particolare quello delle architetture delle cosiddette *filter-bubble* (Pariser, 2011) è rimediato e rinnovato in quello dei media immersivi?

Isolamento: il problema dell'oralità secondaria

Rosamaria Loretelli scrive così nell'introduzione all'edizione italiana di *Oralità e scrittura*: "la società orale è partecipatoria e magica, ha difficoltà a separare l'oggetto dal soggetto della percezione; la scrittura realizza questo distanziamento, anche dove l'oggetto della percezione è il sé, la propria psiche" (Ong, 1982, p. 9). La distanza enunciativa fra produttore di un testo scritto e destinatario sussiste, dunque, in ogni comunicazione (o rappresentazione), scritta o articolata per codici digitali, e abilita nell'individuo, sia a livello estetico che semantico, una nuova percezione di sé rispetto a quella della cultura orale, che Ong chiama "senso della precisione verbale e analitica" (Ong, 1982, p. 9).
È forse proprio questa –sempre in rinnovamento– percezione del sé comunicativo che sprona al costante miglioramento delle tecnologie di comunicazione. La tecnologia della scrittura[1], ad esempio, si presta bene alla pratica della lettura solipsistica, ma è problematica la sua efficacia nella comunicazione interpersonale, presentando gradi di latenza elevati. Ong propone a questo proposito l'idea di "oralità secondaria" (Ong, 1982, p. 190) per denotare sia le forme di comunicazione dei mass media come radio e televisione (specie quelle del sottogenere della diretta live) sia, riferendosi al "villaggio globale" di McLuhan (1964), quelle tipiche della comunicazione *peer-to-peer* in ambienti digitali in cui i parlanti adottano schemi linguistici più informali, autorizzati dal carattere sincronico della comunicazione, e che sono in grado di generare senso comunitario.
L'oralità secondaria attiva un processo per cui la distanza enunciativa si rimedia nel senso di presenza scaturente dalla comunicazione sincronica che è in grado di far apparire l'atto enunciativo come attuale, che si verifica nel qui (virtuale) e nell'ora.
Con i media immersivi si realizza il completamento dell'oralità secondaria.
Un'interpretazione a valorizzazione disforica della cancellazione della distanza enunciativa (completamento dell'oralità secondaria) è quella che porta a considerare come isolato, da un punto di vista sociale e cognitivo, l'utente immerso in un'esperienza digitale. L'utente che usa un app di realtà aumentata come *Pokémon Go* in uno spazio pubblico, ad esempio, può essere discriminato con diffidenza dagli individui co-presenti; in questo caso la mediazione, invece di aumentare, impedisce, o almeno compromette, la complessiva presa cognitiva del mondo reale.
Un'altra conseguenza dell'illusoria cancellazione della distanza enunciativa è l'instaurarsi di una distanza cognitiva, che emerge dal progressivo aumento dei processi di delega (Montani, 2014) delle facoltà percettive e cognitive all'istanza tecnica. Con l'adozione di tecnologie contemporaneamente embodied (cioè integrate nell'organismo, in grado di tradurre input motori in istruzioni per la macchina) e locative (cioè dotate di

GPS), è chiaro che l'esperienza tecnologicamente mediata dello spazio reale sia di tipo fenomenologico, e che il processo semiotico di spazializzazione attraverso un corpo aumentato sia inseparabile da quello, sincronico, esperito dall'istanza computazionale (che riattualizza il problema della soggettività nella percezione del mondo).

Vediamo un caso specifico. Applicazioni di realtà aumentata come *Ikea Place* o *Metro* delegano al software di computer vision la facoltà percettiva la quale, operando computazionalmente e profondamente, misura spazi reali e restituisce un output all'utente, il quale nel frattempo è libero di godere dell'esperienza mediale e della sublime esattezza matematica della computazione. Ma l'utente, delegando a un'istanza computazionale le facoltà percettive e operative, può permettere ad essa di anticipare –ad esempio mediante strategie algoritmiche di raccomandazione– i contenuti da esperire, finendo con il produrre un'immagine che si distanzia semanticamente da una rappresentazione del mondo eterogenea ed idiosincratica, e di rifugiarsi solipsisticamente all'interno della propria 'bolla' virtuale: "as Augmented Reality will become ubiquitous, it will likely take over most aspects of our daily interactions with surrounding objects and human beings, making it practically impossible to distance ourselves from this added dimension of future society, much in the same way that most people can no more leave their house without making sure they have their mobile phones on them" (Palermos, 2017, p. 134).

Un processo molto simile è già evidente nella comunicazione dei social network e costituisce il fondamento del paradigma dei social media.

Ed è a questo punto che vorremmo iniziare ad abbozzare la connessione fra distanza semantica dell'utente in VR e distanza cognitiva del regime scopico, installato da una piattaforma di social media, sulla base del fatto che entrambe le architetture computazionali che governano gli ambienti mediali, nei quali l'utente è virtualmente inserito, sono attualmente progettate per isolarlol in uno spazio autoreferenziale e illusorio.

L'osservatore-utente è illusoriamente conscio che l'articolazione semiotica del testo esperito (costituito dall'insieme dei contenuti visualizzati all'interno di una *feed page*) dipenda solo dalle proprie scelte contingenti: l'organizzazione gerarchica dei post che ne consegue sarebbe unica ed in un certo senso irripetibile. Ma non sa (o forse non sapeva, fino a qualche anno fa) che questa articolazione è invece frutto di un complesso lavoro profondo, svolto da algoritmi basati sull'elaborazione di dati, e che dunque è tutt'altro che insussistente la possibilità di imbattersi in rappresentazioni del mondo insufficienti o ingannevoli. Ecco riproporsi il problema della referenza di un'istanza di enunciazione. La presenza di un interlocutore automatizzato e computazionale non solo apre la strada alla post-verità (Lorusso, 2018) ma, da un punto di vista fenomenologico e soggettivo, può provocare l'emersione di sensazioni spiacevoli e disturbanti, che inevitabilmente incidono a livello meta-esperienziale, come la cosiddetta *Fomo*, acronimo di *fear of missing out*, cioè la paura di perdersi un evento importante, o di non partecipare alla discussione collettiva che da questo si sviluppa. In questo caso la distanza è concepita come assenza ed è correlata a un senso di isolamento sociale.

Sempre a livello della dimensione valoriale, possiamo guardare alle conseguenze politiche estreme dell'oralità secondaria che riguardano i rapporti di sapere e potere che si esprimono nel linguaggio algoritmico (Finn, 2017), e che individuano ancora i media computazionali come oggetto del discorso: in questo modo possiamo capire come l'isolamento dell'utente all'interno dell'ambiente mediale, creato da un medium immersivo, incapace di riconoscere la distanza enunciativa, sia semanticamente riferibile a quello creato dai sistemi computazionali e algoritmici che governano le piattaforme di social media, ovvero l'effetto di *echo-chamber*. I sistemi computazionali ed algoritmici che governano il funzionamento delle piattaforme di social media sono stati associati alla produzione di un effetto (Pariser, 2011) di filtraggio e di eco (due effetti che afferiscono a un piano dell'espressione, ma che sono usati in senso metaforico), e questa forma di potere e influenza sulla produzione e controllo dei testi all'interno di uno spazio comune e condiviso può essere associato a quello caratterizzante la teoria del *Panopticon* in Foucault (1975).

Da qui si sviluppa discorsivamente il piano valoriale, attraverso sanzioni sociali verso pratiche mediali alienanti, articolandosi nei valori della partecipazione e della conoscenza collettiva, e manifestandosi come modelli di definizione e abitazione di uno spazio in comune.

Infine, vi è da considerare anche il fattore tecnologico: gli schermi dei visori, come gli occhiali per la realtà aumentata, sono progettati per essere *wearable*, per incarnarsi e occupare lo spazio più prossimo all'individuo, quello intimo, rendendo difficile svincolarsi dalla presa estetica e cognitiva del mondo virtuale, e inaugurare una nuova tipologia di oralità che sussiste fra utente umano, dotato di linguaggio naturale, e istanza computazionale, dotata di linguaggio artificiale.
Il concetto di distanza nei media immersivi, dunque, va inteso in senso enunciativo, e riferito a uno spazio fisico interstiziale fra la coppia utente-testo e il mondo fisico-materiale che lo circonda, ora in senso semantico-referenziale, e riferito a una condizione esistenziale dell'utente che si ritrova solo e straniato, immerso e isolato cognitivamente in una dimensione extra-terrena dalla quale è impossibile riconoscere il mondo reale da quello generato al computer.
È questo il 'problema' dell'oralità secondaria che ripropone il senso della distanza in relazione a fatti, oggetti e individui che, benchè si percepiscano come vicini, sono distanti, o comunque non appartengono alla situazione nella quale sono presenti, non sono *in situ*, e tuttavia si considerano veri al fine di sentirsi immersi. L'immaginario cyber-distopico delle narrazioni di fantasia e la tecno-fobia che si sviluppa a partire da fatti di cronaca realmente avvenuti contribuisce, di giorno in giorno, ad alimentare le preoccupazioni che derivano da questo problema.

Che cosa è ad essere distante?

A questo punto può nascere il dubbio che la cancellazione della distanza enunciativa, che caratterizza i media immersivi (e in generale, dai media computazionali e algoritmici), risulti problematica nella misura in cui porta l'individuo ad alienarsi e smarrirsi, all'interno del proprio spazio intimo e virtuale in cui avviene la ricezione e attivazione di un messaggio (e la conseguente immissione di contenuto informazionale nel flusso di dati). Ma questa valorizzazione disforica della mediazione totalizzante, potremmo dire 'apocalittica' (Eco, 1964), costituisce solo un primo tipo di interpretazione.
La simulazione della situazione di enunciazione all'interno dell'enunciato fa sì che venga a meno la percezione della distanza enunciativa tra produttore e testo (si ha, dunque, la percezione di assistere in presenza alla produzione della comunicazione) e che si manifesti un senso di immersività, ermeticità e presenza. In più, a livello semantico, si verifica una ricongiunzione fenomenica con gli oggetti del discorso, che appaiono come attuali e immediati: questa ricongiunzione ri-alimenta la dimensione affettiva e valoriale dell'osservatore, e mette l'accento sulla spontaneità e la corporeità dell'interazione, rendendo ancora più saldo il legame con il paradigma dell'oralità. I personaggi di un *virtual reality* film appaiono come presenti e attuali, con loro si può interagire in modo naturale ed immediato e questo ha delle conseguenze sul senso di empatia, ad esempio, che lo spettatore può provare (Negri, et al 2018; Arcagni, 2020); in più, a livello tematico, molti dei prodotti di realtà virtuale che prevedono una componente interattiva adottano linguaggi tipici del videogioco e, in questo senso, la corporeità dell'interazione risulta essere l'aspetto più importante dell'esperienza immersiva.
Guardando alle strategie comunicative (e distributive) di applicazioni ed esperienze legate ai media immersivi, è tipico incorrere in interpretazioni della cancellazione delle distanze enunciative di tipo persuasivo, che enfatizzano l'incremento informazionale ed estetico, il recupero dell'esperienza intersoggettiva, il senso umanitario e l'empatia dell'interazione, enfatizzando le possibilità espressive dei dispositivi innovativi e la loro capacità di sviluppare competenze meta-operative della cognizione aumentata del soggetto protesizzato, paragonabili al senso della precisione verbale e analitica di cui parlava Ong.
A differenza dell'interpretazione precedente, per cui il senso di ermeticità scaturente dall'ambiente virtuale portava a una condizione di isolamento sociale e cognitivo, qui è sul senso di immersività che viene orientato il focus, collegandolo alla cancellazione di una distanza affettiva (distanza critica). La prima interpretazione positiva della distanza cancellata va in direzione di un recupero dell'esperienza in presenza, in cui il medium immersivo rappresenta uno strumento di congiunzione tra soggetti, e non di disgiunzione. Il media della realtà aumentata, congiungendo visivamente all'interno del display mondo reale e contenuti virtuali, riloca l'utente all'interno dell'esperienza incarnata e, nel caso degli *alternate reality game*s come *Pokémon Go*, lo pone fisicamente all'interno dello spazio pubblico condiviso con altri giocato-

ri. Il senso della distanza cancellata scaturisce allora sia dal processo di *augmentation* visivo che dal recupero dell'interazione sociale e della compresenza dei corpi: non si tratta più di stare *always on*, di alienarsi in una fruizione passiva, di non "scendere più in strada e non incontrarsi più fisicamente" (Fadda, 2019, p. 21), ma di essere presenti e attuali nel luogo prescritto dalla mediazione al fine di farsi (ri)enunciatori –ad ogni mediazione– di un contenuto geolocalizzato. Tuttavia l'atto enunciativo cancellato, esperito visivamente ed esteticamente (nel senso di sensorialmente), corrisponde, come abbiamo detto, a una sua simulazione: è la simulazione della cancellazione della distanza enunciativa. I giocatori di *Pokémon Go*, in questo senso, sono ancora destinatari di un progetto comunicativo (ed imprenditoriale) anteriore, più o meno conscio da parte dell'utente, che riattualizza le problematiche legate alla distanza topologica e assiologica fra enunciatore e destinatario[2].
Un secondo tipo di interpretazione della distanza cancellata sottolinea invece il carattere evasivo e l'allontanamento estetico dal luogo in cui avviene la mediazione che, specie la realtà virtuale, abilita. Film in realtà virtuale come *Carne y Arena* (Iñárritu, 2017) o videogiochi di esplorazione come *Apollo 11* (IDIA Lab, 2017) sono esteticamente efficaci nella misura in cui sono in grado di 'trasportare' l'utente nella dimensione dell'altrove e del distante, fisicamente e topologicamente, di fargli percepire una realtà altrimenti impossibile da esperire fenomenicamente attraverso il proprio corpo; nel primo caso territori esotici inaccessibili per ragioni contingenti, nel secondo luoghi non più fruibili perché fisicamente insussistenti (nel caso di *Apollo 11*, la distanza è anche temporale: l'esperienza consiste in una sorta di 'viaggio nel tempo' –e questo contribuisce a enfatizzare ancora di più la distanza referenziale dalle leggi di natura che regolano il mondo reale a cui l'utente è abituato). In entrambi i casi ad essere perseguita è un'integrazione della conoscenza fenomenologica ed estetica dell'individuo, che agisce rarefacendo la distanza topologica fra utente e oggetto del contenuto visivo.
Da queste due interpretazioni scaturisce il senso che i media immersivi siano innovativi (valorizzazione positiva) nella misura in cui incrementano la conoscenza dell'utente rispetto a quello dei social media, mettendo proprio l'accento su una riscoperta del valore della presenza e della vicinanza dei corpi nello spazio (reale o virtuale che sia) e tra i corpi medesimi. I media immersivi portano l'utente vicino, sebbene a ciò che è distante e difficile da raggiungere fisicamente.
L'aspetto più importante di queste 'esperienze della distanza', e che è particolarmente evidente con la realtà aumentata, è la capacità dei media immersivi di visualizzare il distante nel qui ed ora, e di trasformare eterotopicamente lo spazio reale nel quale l'*augmentation* visivo si verifica in uno spazio, appunto, aumentato. In questi casi, la (soppressione della) distanza fisico-topologica corrisponde a quella fra il dispositivo e lo spazio circoscritto e predisposto per essere aumentato, ed ha la funzione di facilitare l'accesso alla conoscenza da parte degli utenti (si pensi ai QR code installati in prossimità di un monumento storico o di una fermata dell'autobus): l'emersione di informazione incrementale si verifica nello spazio visivo dell'utente, sul display del proprio device così come sulla retina del proprio bulbo oculare: è vicina, nel senso di immediata, accessibile con un click[3].
Il terzo ed ultimo tipo di interpretazione che vorremmo trattare qui interessa la distanza metafisica tra la dimensione virtuale, ultraterrena, utopica, comunque di proiezione, e la vita reale, fisicamente esperita. Questo è anche un esempio che ripropone in maniera interessante la questione della referenzialità. A febbraio 2020 in Corea del Sud, Jang Ji-sung incontra la propria figlia defunta tre anni prima grazie al progetto *Meeting You*[4], che le permette, indossando un casco di realtà virtuale, di vedere e interagire con la rappresentazione digitale del corpo, della voce e del modo di essere della figlia: la distanza qui non è referenziale, poiché il corpo della bambina e il luogo sono insussistenti (l'incontro avviene in un parco giochi che le due erano solite frequentare, ma l'illusione di presenza della figlia viva conduce a interpretare questo luogo come metafisico), appartiene al dominio del simbolico; ma non è neanche riconducibile alla distanza enunciativa di tipo fisico-topologico, fra due soggetti esistenti nel mondo reale la cui comunicazione è mediata e la cui presenza è simulata tecnicamente. Ad essere in gioco è invece ancora una distanza che, sebbene possa essere intesa come topologica, è da interpretare come distanza metafisica e affettiva, liminale fra la vita e la morte, che nell'interazione decade.

"I defunti, ghettizzati nei cimiteri a debita distanza dal mondo dei vivi, tornano a circolare simbolicamente tra i vivi, risultando essere di nuovo a pieno titolo partner degni di scambio. Si muovono repentinamente dalla periferia del mondo reale al centro di quello virtuale" (Sisto, p. 72).
Per concludere, è chiaro che la cancellazione della distanza enunciativa e referenziale dei media immersivi, che spinge verso un recupero estremo dell'idea di oralità secondaria, non porti solo a un superamento positivo della condizione 'isolata' dell'utente dei social media, ma, positivamente, ad un aggiornamento del senso dello spazio stesso, reale, digitalmente aumentato, e condiviso, così come delle categorie di vicino e di distante che articolano i processi di significazione che si verificano al suo interno.

Visione a distanza, *distant reading* e distanza estetica

Promuovendo un incremento sensibile e informazionale dell'esperienza, antitetico all'isolamento cognitivo, il medium immersivo si può interpretare come una protesi della sensibilità (Montani, 2014), che attraverso cancellazioni della distanza enunciativa, 'aumenta' –e non aliena– la percezione naturale dell'individuo protesizzato.
Il concetto di protesi si può rimandare, in questo senso, a quello di apparato (Foucault, 1975): è possibile quindi considerare il medium di un'esperienza immersiva un fattore che incide profondamente anche sulle formazioni del sé. In particolare, questo promuoverebbe lo sviluppo di una competenza meta-operativa e meta-esperienziale dell'individuo, che concerne la comprensione e l'organizzazione delle relazioni transtestuali fra elementi rilevati all'interno di un ambiente mediale (Montani, Cecchi & Feyles 2018) e che costituiscono, nel loro insieme, l'oggetto dell'esperienza aumentata dell'utente.
È importante sottolineare come, questa volta, non sia la cancellazione di una distanza ad essere determinante, bensì, al contrario, la sua affermazione attraverso l'istituzione di un dispositivo tecnologico interstiziale in grado di supportare l'utente, di dotarlo di un'interfaccia operativa per l'organizzazione dei contenuti dell'esperienza.
Proviamo a fornire una nostra interpretazione del concetto di *Panopticon*, sulla base della teoria di Foucault: esso potrebbe rappresentare la tecnologia o tecnica caratterizzata dall'interposizione di una distanza fra osservatore e soggetto osservato, e che questa distanza sia condizione necessaria all'incremento informazionale dell'osservatore. Nel *Panopticon* di Bentham l'interposizione di un muro, sebbene perforato adeguatamente da permettere la sorveglianza dei carcerati, coincide con lo stabilimento di una distanza necessaria, realizzata concretamente nell'apparato divisorio e strategico: la sua particolarità risiede nella capacità di dotare le guardie di una visione 'a distanza' che permette di sorvegliare più detenuti contemporaneamente. Con le tecnologie digitali si verifica lo stesso processo: con le telecamere di sorveglianza, il sorvegliante è disgiunto dal mondo reale inquadrato dai dispositivi, e deve situarsi all'interno di un centro di controllo per ottenere una visione multi-prospettica dello spazio osservabile. Possiamo affermare che i linguaggi dell'interfaccia, predisposta dall'elemento distanziante, portano allo sviluppo di una competenza meta-operativa che concerne l'organizzazione strategica dello spazio e le formazioni del sé sulla base del funzionamento di alcuni modelli percettivi, prescritti da certi linguaggi artistici, che funzionano nella direzione di uno sviluppo di una competenza meta-esperienziale che concerne la consapevolezza del funzionamento dei processi percettivi propri dell'essere umano (e della situazione di mediazione in generale). Nell'arte impressionista, ad esempio, è necessario collocarsi a una debita distanza dall'opera per essere in grado di cogliere i dettagli visivi che emergono come effetto delle strategie di rappresentazione e, di conseguenza, di cogliere l'ermeticità dell'opera.
Si possono comunque rilevare tendenze opposte scaturenti dall'interposizione di una distanza: nel formato del panorama ottocentesco, la distanza fisica fra spettatore e piano dell'opera collabora a creare l'effetto di immersione e di ermeticità della composizione. In quest'ultimo caso, la qualità della percezione è data proprio dalla distanza, e questo non coincide effettivamente con una competenza meta-esperienziale: l'immersione, per Oliver Grau, è esattamente caratterizzata dalla diminuzione della distanza critica (Grau, 2003, p. 13). Nel *Panopticon*, ugualmente, l'interposizione di un muro, per quanto aumenti la capacità operativa dell'osservatore, diminuisce la quantità di dettagli del soggetto osservato percepibili. Invece, un motivo di successo teorico del *Panopticon* potrebbe essere quindi attribuito a partire dal fatto

che questo apparato riduce il dispendio di energie necessarie all'osservazione di una grande porzione di mondo, e dal senso (in questo caso di potere da un lato e di oppressione dall'altro) che emerge dall'organizzazione strutturale dello spazio. Coniugare il senso di ermeticità ed isolamento scaturente dalla cancellazione della distanza enunciativa, topologica e referenziale, con il processo di aumento di percezioni efficaci e incrementali, non è dunque compito semplice: a questo proposito vorremmo richiamare il paradigma del *distant reading* elaborato da Franco Moretti (2005) nell'ambito della critica letteraria: con questa espressione si intende un metodo di analisi di tipo computazionale dei testi scritti (ma lo stesso si può fare con testi visivi e database), appartenenti ad un'unica corrente letteraria o rimandabili ad un unico autore; un metodo in grado di far emergere isotopie transtestuali ed elementi stilistici ricorrenti nei singoli testi: "distant reading: where distance, *is a condition of knowledge*: it allows you to focus on units that are much smaller or much larger than the text: devices, themes, tropes or genres and systems" (Moretti, 2005, pp. 48-49).

Comprendere in che senso un'analisi meta-testuale di questo tipo possa portare ad un incremento informazionale dell'esperienza di *close reading* (e quindi di immersione) può essere utile per definire meglio il processo di augmentation e capire come funzioni il processo di sviluppo di competenze meta-operative che si verifica, ad esempio, in un'esperienza in realtà aumentata.

L'incremento informazionale della realtà aumentata è interpretabile come un *embrayage* all'interno del testo, che porta una quantità di informazione appartenente alla dimensione extra-testuale a manifestarsi intra-testualmente (nella realtà aumentata si manifesta al di sopra il testo), ma che è comunque e necessariamente legata a livello semantico con le *affordance* degli elementi rilevati nello spazio fisico.

La visione 'a distanza' ottenuta computazionalmente –che vorremmo usare come modello per definire il modello percettivo installato da una tecnologia di realtà aumentata– permette di passeggiare inferenzialmente ed ipertestualmente all'interno della rete di relazioni transtestuali e contribuisce a definire meglio, e comprendere criticamente, la singola unità testuale con la quale il lettore si interfaccia nel qui ed ora.

Sebbene questo paradigma sembri in un primo momento ricalcare la struttura organizzativa del *Panopticon*, in quanto mette in atto un superamento della focalizzazione sul singolo oggetto (della visione, di studio) –una sorta di visione 'tattile' per dirla con Hildebrand– a vantaggio dell'adozione di una visione 'a distanza' che coglie la bidimensionalità e l'ermeticità dell'opera[5], esso se ne distacca per una ragione: il paradigma del *distant reading* prevede che, a fianco dei processi percettivi dell'utente, si aggiunga una seconda istanza osservante, quella computazionale, il cui ruolo è di osservare le qualità di un corpus (più veloce e meglio di come farebbe l'essere umano), di organizzare le sue unità, di meta-testualizzarle, e di restituire infine all'utente una rappresentazione astratta, affinché possa avvalersi di uno sguardo incrementato e arricchito sul singolo oggetto testuale osservato (situazione di immersione).

Infine, l'analisi computazionale allestisce uno sguardo multi-focale, contemporaneamente orientato al particolare ed all'universale, che permette di accedere al singolo elemento soltanto attraverso un passaggio intermedio, quello che si testualizza come un'interfaccia di rappresentazione, organizzazione e spiegazione logica dei contenuti.

Questo passaggio intermedio corrisponde esattamente all'installazione di un dispositivo interstiziale e distanziante. Adottando una visione 'a distanza', l'interfaccia permette di cogliere le relazioni che sussistono tra le varie unità testuali, e rappresenta un'entità ambientale: l'interfaccia è pur sempre qualcosa di prodotto, di enunciato potremmo dire (ad esempio dalla casa di produzione), ma prima di tutto un'entità interattiva e *user-oriented*, che offre all'individuo una serie di strumenti per comprendere e organizzare i contenuti dell'esperienza mediata. Ora, in tutte le esperienze mediali computazionali è presente un'interfaccia che funziona in questo modo: ma, cosa dire a proposito delle interfacce di *multitasking* attraverso le quali controllare le applicazioni aperte, scegliere quelle con le quali operare, e quelle immediatamente accessibili attraverso uno *shortcut*? In quest'ultimo caso, le competenze meta-operative e meta-esperienziali risultano decisive per comprendere ed organizzare a distanza il processo di interazione con l'istanza computazionale.

È in questa prospettiva che può essere immaginato, teoricamente, un modello di esperienza immersiva ermetica (e quindi isolante), immersiva, che attiva un senso di presenza e che è, contemporaneamente, in grado di abilitare visioni del mondo reale 'aumentate' e incrementate da informazioni calcolate da un'intelligenza artificiale.

Conclusioni

L'affermarsi dell'oralità secondaria all'interno del panorama mediatico si è già verificato (ad esempio nei social media) e ha portato tanto ad un arricchimento delle possibilità comunicative quanto ad un isolamento sociale dell'utente, aggravato dalla diffusione di piattaforme in grado di istituire delle *echo-chambers*. Nella sede di questo contributo si sono volute prendere in considerazione specifiche questioni (discorsive, ideologiche, sociali) che riguardano l'impatto di determinate tecnologie immersive sulla percezione ed il rischio di isolamento dal mondo reale, per delinearne i caratteri generali e confrontarli con interpretazioni positive e persuasive del tipo di esperienza immersiva che le tecnologie della realtà virtuale e aumentata abilitano.

Da un lato, l'oralità secondaria rimediata nella comunicazione dei social network, in cui la distanza enunciativa è cancellata, porta a una riattivazione di competenze, norme e schemi tipici del linguaggio orale. Dall'altro lato, nel caso delle piattaforme computazionali, e riferendoci specificatamente sia a fenomeni di comunicazione interpersonale mediata digitalmente sia ad esperienze immersive, il senso di isolamento è problematico nella misura in cui rischia di condurre a uno smarrimento cognitivo dell'utente. Il senso di isolamento emerge di fronte alla constatazione della mediazione, dell'identificazione dell'interlocutore computazionale e del processo algoritmico che genera la visualizzazione gerarchica dei contenuti: l'utente si può dunque pensare come isolato cognitivamente non perché fruisca un'immagine del mondo che non corrisponde a quella reale –problema referenziale– ma perché fruisca un'immagine del mondo costruita *ad hoc* in base al suo 'profilo'.

Questo isolamento, sempre più conscio e problematizzato dalla comunità di utenti, presenta i rischi legati all'abitudine di essere costantemente al centro di un *Panopticon* virtuale (come nel caso dei social network), di osservare e continuamente essere osservati (anche se non è necessario che la relazione sia proporzionale), rischi che sono d'altra parte prontamente occultati da sensazionalistiche strategie di marketing che fanno leva sull'innovazione tecnologica, specie sulla partecipazione degli utenti al dibattito pubblico e l'espressione della creatività individuale.

Un possibile modello futuro di regime scopico nelle esperienze immersive dovrà essere in grado di coniugare l'effetto della cancellazione della distanza abilitata dai media immersivi, che rischia di isolare l'utente nella sua *filter-bubble*, con l'adozione di una 'visione a distanza' mediante l'instaurazione di un'interfaccia che permetta di risalire la distanza enunciativa e referenziale, di valutare criticamente l'oggetto dell'osservazione, di distaccarvisi ma solo per potervisi immergere con una consapevolezza rinnovata.

Ecco che allora nella progettazione di architetture mediali si dovrebbe tener conto e rendere esplicita la situazione enunciativa simulata nell'enunciato, delle informazioni idiosincratiche, delle relazioni transtestuali tra i contenuti in grado di mappare e convalidarne la provenienza.

Il punto focale risiede nel favorire la creazione e la diffusione di interfacce e architetture mediali che promuovano lo sviluppo di nuove competenze meta-esperienziali nell'utente: non solo per quanto riguarda la relazione biunivoca, che sussiste tra utente e sistema computazionale, ma anche per quelle plurivoche fra soggetti sociali e computazionali, in cui non è semplice distinguere una simulazione da un'enunciazione in presenza (almeno nell'ora).

Note

1 È bene sottolineare che la tecnologia della scrittura a cui fa riferimento Ong è prettamente quella che opera per mezzo di supporti materiali e cartacei, non digitali.

2 È il caso di *Pokémon* posizionati strategicamente vicino ad esercizi commerciali.

3 È interessante notare, da una prospettiva socio-semiotica, come la rarefazione della distanza topologica con l'archivio o il database, per definizione topoi della custodia della conoscenza, non coincide con un aggiramento delle istanze di mediazione, bensì con una rifunzionalizzazione dei servizi che queste sono in grado di offrire.

4 http://content.mbc.co.kr/program/documentary/3479845_64342.html (ultimo accesso: 30 Settembre 2020).

5 Sebbene la distanza meta-testuale del distant reading non sia in toto paragonabile alla distanza estetica, è comunque possibile tracciare un collegamento fra le due: Oliver Grau nel suo trattato sulla Virtual Art spiega che "the aesthetic distance always comprises the possibility of attaining an overall view, of understanding organization, structure, and function, and achieving a critical appraisal" (Grau, 2003, p. 202).

'ISOLÉS ENSEMBLE': SIGNALÉTIQUE DU DÉCONFINEMENT ET PARTITION DE NOS ESPACES COMMUNS

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Cercles, carrés, alignés, décalés; lignes, flèches et parcours balisés; semelles et empreintes de pas figées ou en mouvement: les sols des gares, rues, commerces se parent depuis plusieurs mois d'une signalétique plus ou moins respectée, cherchant à visualiser une nécessaire distanciation physique en temps de pandémie. L'apparente évidence de ces signes qu'on rapproche tantôt du marquage au sol industriel, tantôt des peintures d'Olivier Mosset (notamment pour les cercles collés au sol de la plupart des gares françaises), s'inscrit pourtant dans une histoire ancienne de la normalisation des déplacements et de leur notation[1].

Des traités militaires du XVIe siècle aux manuels de danse de société des années 1920, repris par Andy Warhol, de Machiavel au Fox-Trot, l'iconographie du déplacement emprunte une objectivité scientifique qui tend à faire oublier son absence de neutralité et procède d'une même volonté de visualiser un espace partitionné et des proximités calculées, si frappantes aujourd'hui.

Peut-on interpréter ces nouveaux signes de l'espace public au temps du Covid-19 à l'aune d'une histoire de la notation des déplacements, du mouvement et de la danse? Comment distanciation physique et proximité numérique donnent-ils à observer une partition de l'espace familière des danseurs et chorégraphes et dont les modalités de représentation depuis plusieurs siècles informent aujourd'hui notre relation aux autres? S'il ne s'agit pas ici de reprendre une histoire des notations du mouvement, la signalétique contemporaine liée à la pandémie nous invite à penser la matrice visuelle de nos comportements réels et virtuels, une autre proximité née de la distance, et de la conscience, par sa visualisation, du partage d'un espace commun.

Kinesphère et effets de cadre

La signalétique qui nous occupe et qu'une certaine familiarité nous amène désormais à ignorer, donne, sans imposer, des cadres à nos relations quotidiennes, comme une partition spatialisée. La distanciation physique visualisée au sol propose tout autant un cadre pour l'espace de chacun que les différents supports de réunions virtuelles: une grille à la fois échiquier et mise au carreau. Autant de cases, de lignes, de flèches, de points et de cercles qui régissent nos façons de faire et nos manières d'être: une grille qui laissera sans doute une empreinte forte dans les images et les corps contemporains. Distinguons pourtant deux aspects différents à ces effets de cadre: alors que l'écran qui multiplie visages et cases –et donne à voir chez soi une certaine intimité commune à chacun– tient de l'image et rappelle les effets de tableau ou de cadrage, la visualisation d'un espace partition dans la rue ou dans nos espaces publics communs procède d'une transposition d'une perception somatique vers son inscription littérale au sol. C'est justement cette traduction de l'expérience somatique, et par là une certaine prise de conscience de cette expérience, qui nous intéressent ici. De quelle proximité ou distance parle-t-on?

Un cercle ou un carré au sol nous indiquent où nous positionner dans un espace d'attente, une ligne nous donne à voir la limite à ne pas dépasser, plusieurs traits au sol impulsent rythme et distance à notre démarche. Chaque signe matérialise la portée de nos gestes, les limites invisibles de notre corps bien au-delà de la silhouette, jusqu'à la portée de notre propre souffle. Cette signalétique est aussi bien celle de la stase que du mouvement. La signalétique proposée dans de nombreuses gares françaises présente cette subtilité sur laquelle nous reviendrons: un système vectoriel de déplacement qui reprend la signalétique de l'attente et de zones délimitées pour chacun dans des espaces de circulation, comme les traces d'un quadrille[2] en l'absence de ses danseurs. C'est littéralement un cadre, dont seul un fragment serait visible, voire tangible, qui nous incite à conserver nos distances et à en-

visager une proximité problématique. Ce cadre donné à voir, cette 'aura' du corps est aussi celle dont sont familiers les danseurs. Dans les années 1920, Rudolf Laban théorise la kinesphère sous la forme d'un icosaèdre qui correspond au déploiement maximum de nos membres et à la construction de la sphère personnelle par le mouvement, cette "architecture vivante" (Laban, 2003, p. 77)[3]: "Que le corps se tienne immobile ou qu'il se meuve, il occupe l'espace et l'espace l'environne. Nous devons opérer la distinction entre l'espace général et l'espace que le corps peut atteindre. Pour distinguer ce dernier de l'espace général, nous l'appellerons l'espace personnel ou la 'kinesphère'. La kinesphère est la sphère autour du corps dont la périphérie peut être atteinte par les membres aisément allongés sans que le corps sur un seul pied ne se déplace du point de support. Nous appelons ce point de support 'la position de référence'. Nous pouvons dessiner les limites de cette sphère imaginaire avec nos pieds aussi bien qu'avec nos mains. De cette façon, toute partie de la kinesphère peut être atteinte. Au-delà de la kinesphère s'étend le reste de l'espace, qui peut être approché uniquement en quittant la position de référence. Quand nous bougeons en dehors des limites de notre kinesphère initiale, nous créons une nouvelle position de référence et nous transportons la kinesphère à un nouvel endroit. Bien sûr nous ne quittons jamais notre sphère de mouvement, au contraire nous la portons toujours avec nous telle une aura" (Laban, 2003, pp. 82-83).

Cette signalétique qui partitionne l'espace fonctionne parfois comme une visualisation de cette aura: le souffle même se donne à voir puisque c'est aussi lui qui nous importe. Rester hors de portée du souffle de l'autre, définir une proximité qui préserve l'espace personnel de chacun. Cette prise de conscience nécessaire en temps de pandémie constitue un des apprentissages essentiels du danseur, quelle que soit la danse. Rappelons-nous cette scène célèbre, anecdotique, et pourtant juste, de *Dirty Dancing* (1987). Johnny (Patrick Swayze) apprend à danser à Frances (Jennifer Grey) en insistant sur la nécessité de conserver l'espace, le 'cadre' de danse de chacun: "Look, spaghetti arms. This is my dance space. This is your dance space. I don't go into yours, you don't go into mine. You gotta hold the frame". L'apprentissage consiste à conjointement visualiser et incorporer l'espace qui nous est propre. Or la danse, et d'autres pratiques corporelles, auront recours à la représentation de cet espace, sur la page, sur le sol: traités, manuels, voire représentations picturales de la danse, montrent une attention particulière à la visualisation de la kinesphère avant et après sa théorisation par Laban.

Visualisations

Le retour sur quelques exemples d'inscription dans l'espace de notre corporéité déployée devrait nous permettre de saisir les enjeux d'une telle visualisation, outil de normalisation des gestes et des figures, et instrument de l'incorporation des mécanismes de déplacement et de distanciation, médiation de cette paradoxale proximité dans le partage de l'espace. Avant même l'invention de formes de notations chorégraphiques, les traités d'escrime ont déployé plusieurs stratégies de représentation de l'espace des déplacements, contribuant ainsi à définir les cadres d'une discipline par l'image[4].

A partir de 1560, Joachim Meyer (1570), maître d'arme allemand, travaille à la publication d'un traité accompagné de très nombreuses planches, remarquables dans leur traitement de l'espace des gestes. Contrairement à une iconographie telle que celle présente dans les *Trois dialogues du sieur Archangelo Tuccaro dans l'Art de Sauter et Voltiger en l'air*, légèrement plus tardif (1599), où le mouvement est souvent visualisé dans ses courbes et ses lignes que l'on retrouvera chez Laban, Meyer utilise le sol et les dessins du dallage pour représenter le cadre de chaque escrimeur et les lignes de force des mouvements, sans pour autant adopter un mode uniforme que l'on retrouve aujourd'hui au sol des salles d'armes. L'originalité d'une telle représentation tient à l'usage d'un motif classique de la perspective pour associer à la représentation scientifique du combat une dimension didactique des lignes de déplacement. Si une illustration présente plusieurs combats, le pavement sera différent pour les trois couples, ce que l'on observe parfaitement sur la planche C des combats à l'épée longue. Couleurs, textures et lignes alternent pour indiquer les différences d'espace. La planche A présente au sol des disques et des carrés qui semblent indiquer à chaque escrimeur l'emplacement sur lequel il peut s'appuyer.

En outre, la planche K présente directement au sol les lignes directrices des mouvements, insistant sur les jeux de fausse symétrie entre chaque individu[5]. Celui qui semble dominer le combat fait dépasser son bras dans l'espace de son partenaire qui a reculé à tel point qu'il sort du carré principal. Les lignes du sol fournissent ainsi des clés de lecture tout en suggérant aux apprentis la possibilité d'inscrire sur le sol les cadres de chacun - ou plutôt de visualiser un espace personnel à partir des sols, nous y reviendrons. Notons pour l'instant que cet usage du dallage n'est pas sans faire écho à certaines danses à figure du début du XVIIe siècle pour lesquels le sol devait parfois comporter quelques indications scéniques, ce que décrit Flavia Pappacena (2019): "La réalisation de ces figures ne devait pas être très aisée. Le manuscrit *Il Corago o vero alcune osservazioni per mettere bene in scena le composizione drammatiche*, composé entre 1628 et 1637 et attribué à Pierfrancesco Rinuccini, conseillait de tracer sur le sol de la scène un signe. Angelo Ingegneri, quant à lui –pour la mise en place de la tragédie *Edipo Tiranno* de Orsatto Giustiniani au Théâtre Olympique de Vincenza en 1585– prévoyait un pavement de scène réalisé en marbre de différentes couleurs, de façon à ce que chaque personnage ait un point de repère précis dans ses déplacements et lors des pauses" (p. 73).
Le pavement du théâtre de Vincenza est contemporain du traité de Meyer et fournit, dans l'un comme dans l'autre une "géométrie de l'énonciation" (Damisch, 1987/2012, p. 458)[6]. Réelle ou imaginée, l'inscription de la kinesphère dans l'espace à des fins de mémorisation ou à des fins stratégiques dans un combat d'escrime, disent aussi beaucoup de ce recours au signe comme outil de l'incorporation de l'espace. L'apprentissage de l'escrime et le mouvement du corps à partir d'un point d'ancrage nécessitent d'intégrer la portée de son geste, de maîtriser parfaitement le calcul des distances et d'une proximité ainsi médiatisée par le dallage au sol.
La complexité des images de Meyer tient cependant à leur construction même. Comme nous l'indiquions au préalable, Joachim Meyer prend le soin de distinguer les sols des différents combattants, insistant ainsi sur le caractère composite, non réaliste, et didactique de l'image. L'inscription des distances dans le corps, passe par la page et le livre: un processus mental de projection et de va-et-vient entre le sol et la page s'impose alors. Antonella Fenech Kroke (2018) analyse l'iconographie des pratiques sportives de la première modernité et les "processus d'apprentissage des gestes *par* le corps du lecteur-spectateur". "Elles ne transmettent pas seulement des informations et des savoirs mais sont performantes du fait qu'elles produisent des normes relatives aux pratiques corporelles, sociales dans la vie individuelle et collective. […] Les images de ces techniques ludiques jouent la visualité et instaurent un régime de communication qui accompagne et/ou remplace celui du texte. De ce fait elles sont l'expression d'une normativité qui ne peut pas être simplement comprise comme la traduction visuelle des règles d'un jeu. Elles ne transmettent pas seulement des informations et des savoirs mais sont performantes du fait qu'elles produisent des normes relatives aux pratiques corporelles, sociales dans la vie individuelle et collective" (Fenech Kroke, 2018, p. 119).
La production de ces normes est médiatisée par le livre, vecteur de l'incorporation des signes et des images reproduites dans l'espace réel. Nous avons vu jusqu'ici comment les lignes au sol, les cercles et les carrés qui organisent la distanciation physique, rappellent des dispositifs historiques de transmission et de normalisation des pas, expression visuelle du cadre corporel et de la kinesphère, médiation subtile d'une proximité impossible. Ce cadre visualisé, puis incorporé, est parfois complété par une signalétique plus coercitive: des pieds au sol indiquant précisément notre point d'ancrage et non une distance transposable de manière vectorielle.
Certains manuels d'escrime du XVIe siècle ont justement eu recours à cette représentation des empreintes: le corps de l'escrimeur nécessite des transferts de poids d'un pied à l'autre et une dynamique précise dans la position des jambes qui ne se satisfait pas toujours des lignes de sol. Meyer utilise une fois ce type de signes, mais c'est surtout le traité d'Henry de Sainct-Didier qui est le plus complet sur ce point[7]. Les planches gravées sur bois indiquent les silhouettes des pieds, les 'semelles', avec une numérotation sur l'empreinte elle-même. Parfois quelques lignes viennent insister sur le déplacement suivi par les jambes du Lieutenant et du Prévost. Le texte complète l'image en décrivant les mouvements de bras et des épaules associés à ceux des jambes. L'originalité de ces planches (les dix premières fig-

ures) tient non seulement à la présence de ces semelles numérotées, mais aussi à la représentation des gestes arrêtés: une jambe relevée, un pied qui s'apprête à reprendre sa place sur un des numéros indiqués. Comment interpréter la médiation d'un tel signe sur la page ou sur le sol même?

Normalisation, rationalisation

Le dessin des pas sur le sol, comme sur la page, invite à suivre une séquence de mouvements, une dynamique qui n'implique pas d'intérioriser les distances mais de se conformer à une succession de pas. Le mécanisme d'incorporation ou d'assimilation d'une proximité autorisée fonctionne bien différemment. La lecture et l'observation des manuels de danse de société des années 1910-1920 nous permet de mieux comprendre le fonctionnement et les enjeux de la signalétique en temps de Covid-19, notamment par l'analyse de la complexité d'un contexte qui cherche à établir une scientificité de la notation.

Les manuels de danse de société connaissent un succès exponentiel dans l'entre-deux-guerres, mais, ne nous méprenons-pas, leur finalité n'est pas de permettre à chacun d'apprendre à danser de chez soi.

Sophie Jacotot (2013) montre comment ces ouvrages sont avant tout des outils de normalisation des danses et d'imposition d'un droit d'auteur sur des pratiques de dancing plus libérées que celles proposées à la lecture des manuels. Notons que les stratégies déployées dans la diffusion de ces ouvrages relèvent aussi d'une volonté de créer un objet de diffusion de masse associé au succès des cours de danses de société. L'analyse de l'iconographie mécaniste proposée dans ces manuels témoigne justement du développement d'une industrie de la danse. On peut certes relever que la lecture des diagrammes de danse n'est pas aisée, que le manque d'information reste considérable, mais les intentions sont ailleurs : d'abord, assez simplement, dans un contrôle des distances et de la moralité des danseurs, et ensuite, dans la participation à une culture visuelle plus large, celle de l'organisation rationnelle des gestes et du travail dans la société américaine de l'entre-deux-guerres.

Danielle Robinson (2010) s'est attachée à comprendre les mécanismes d'appropriation des danses de société noires par une communauté blanche, aisée, curieuse de nouveautés, mais aussi de danses 'moralisées'. L'opposition, également analysée par Sophie Jacotot, entre les danses pratiquées dans les dancings et la description qui en est faite dans les manuels est saisissante. "Un certain esprit d'invention imprègne le ragtime durant cette période, permettant aux danseurs de composer leurs propres pas et de les désigner par des noms amusants" (Robinson, 2010, p. 180). L'invention et le jeu entre les partenaires sont constitutifs des danses telles que le Fox-Trot. "En revanche, la danse moderne valorise le contrôle, l'organisation, les règles et l'inhibition. Les couples dansaient de manière unie, comme une seule unité et avec la structure rythmique de la musique. Ensemble, les danseurs gouvernaient leur mouvement corporel collaboratif au service de lignes fluides et gracieuses du corps et à travers l'espace. Leurs variations étaient brèves et peu nombreuses, et ne dérangeaient donc guère la maîtrise de soi qu'elles dégageaient. [...] Le ragtime libérait le torse et les membres pour exprimer le plaisir et le désir sexuel; tandis que l'esthétique de la retenue de la danse moderne inhibait le torse et réprimait la sexualité" (Robinson, 2010, p. 183)[8].

L'auteur développe ensuite la manière dont la normativité des manuels de danse exprime une négation de l'individualité au profit d'une conformité des gestes et des pratiques[9]. L'enseignant veille et assure le contrôle de cette conformité, ce qu'affirme Frank Leslie Clendenen dans son manuel de 1914: "Le contrôle est le plus grand point à considérer dans toutes nos nouvelles danses" (Clendenen, 1914, p. 8)[10]. Or si l'on regarde les diagrammes, seuls les pas sont représentés au sol. Quelques manuels indiquent les lignes des épaules mais la représentation des semelles et empreintes de pas, accompagnées de lignes directrices et d'une numérotation parfois confuse, ne disent presque rien des mouvements du buste, des hanches et d'un corps quelque peu rigidifié dans la moralisation des danses. La visualisation des pas permet alors de non seulement mettre en évidence les séquences de mouvement mais aussi de contrôler la proximité, et donc la moralité, des danseurs. On revient, *mutatis mutandis*, au 'dance frame' de *Dirty Dancing*, certes plus libéré que le Fox Trot décrit dans les manuels de Charles Coll. La comparaison avec la signalétique actuelle nécessite cependant d'aller plus loin: ces dia-

grammes de danse nous semblent aujourd'hui relativement évidents dans leurs choix esthétiques et sémiotiques. Le caractère mécaniste des images incite à une certaine prudence dans l'interprétation de cette évidence, commune à celle qui touche la signalétique d'aujourd'hui.

En effet, le développement des manuels de danse dans l'entre-deux-guerres doit aussi beaucoup à l'émergence d'une iconographie nouvelle relative à l'organisation scientifique du travail. Danielle Robinson analyse les stratégies de vente de ces manuels dans un contexte d'émergence de la consommation de masse et du taylorisme. Allons un peu plus loin en nous arrêtant un instant sur cette culture visuelle du taylorisme à laquelle participent certains manuels de danse de société. L'optimisation du travail passe par la suppression des mouvements et des gestes inutiles et inadaptés, il est donc nécessaire d'étudier ces mouvements, de les codifier, les standardiser et les contrôler. La visualisation tient alors un rôle majeur dans ces processus. Sharon Corwin (2003) s'est intéressée à la peinture précisionniste américaine et son interprétation dans ce même contexte de développement de l'organisation rationnelle du travail. Ses analyses éclairent particulièrement bien ces manuels des années 1920, comme les signes contemporains qui nous occupent dans ces pages. En étudiant les 'effets visuels du Taylorisme', Corwin insiste sur le partage d'un même vocabulaire visuel[11] par les artistes et par les ingénieurs. Elle remarque en outre une imagerie qui efface toute présence des corps réifiés, notamment dans les travaux de Gilbreth sur le geste efficace: "la visualisation de l'efficacité dans les études temps-mouvement des Gilbreths nécessitait l'effacement du corps du travailleur, la standardisation et l'abstraction de l'acte de travail". Frank Bunker Gilbreth[12] a observé des escrimeurs, des golfeurs, des travailleurs et théorise ce qu'il nomme "The One Best Way", le geste efficace issu d'une analyse photographique des mouvements et activités techniques selon les pratiques et les métiers. Les images obturent la présence du corps comme une négation commune de l'origine du geste et des individualités.

Gilbreth défend la visualisation –et donc la capacité à représenter– comme l'outil majeur de l'organisation rationnelle du travail. Le principe de visualisation est associé à ceux de réduction et d'abstraction, tout en comportant une dimension hiérarchique soulignée par Scott Curtis (2009, pp. 85-100)[13]: "La visualisation était absolument cruciale pour le programme des Gilbreths, mais elle reproduisait également la hiérarchie entre les gestionnaires et les travailleurs. Selon les Gilbreths, visualiser, c'est planifier, imaginer une solution future basée sur l'observation des détails présents. Mais tout le monde n'est pas équipé pour observer et pour visualiser; seul un œil entraîné pourrait être capable de faire les deux. En fait, la capacité d'observation et de visualisation est précisément ce qui distingue un manager d'un travailleur ou, plus largement, un expert d'un profane". L'auteur cite alors Lilian Gilbreth dans *The Psychology of Management* (1914/1973): "Le meilleur planificateur est celui qui –toutes choses égales par ailleurs– est le plus ingénieux, le plus expérimenté et le meilleur observateur. C'est un art d'observer; il requiert une attention constante. Plus l'observateur observe longtemps et plus il observe, plus il observe de détails, et plus les variations affectent les détails. L'observateur non formé ne peut pas s'attendre à rencontrer un observateur au talent naturel particulier qui a également été formé. Tous les hommes ne sont pas faits pour observer de près, et donc pour planifier. Observer est une condition préalable à la visualisation. La pratique de la visualisation permet d'accroître la faculté d'imagination constructive. Celui qui possède la meilleure imagination constructive est le maître planificateur" (pp. 76-77)[14].

Bernd Stiegler (2017) qui a analysé la documentation iconographique de Gilbreth énonce quant à lui clairement les objectifs d'une telle analyse: "il s'agit de développer des automatismes qui puissent s'accomplir sans qu'aucune sorte de perturbation intellectuelle ne vienne jamais les interrompre" (pp. 150-165).

Si la 'visualisation' représente l'étape première du processus, l''incorporation' des gestes et des mouvements devenus automatismes, en constitue la seconde étape fondamentale. Ces deux volets légitiment la publication de nombreux manuels de danse qui jouent de ce va-et-vient entre l'image et le geste. Nous arrivons alors à la dernière étape de notre analyse. Ce qui nous apparait comme une évidence aujourd'hui porte pourtant en soi une histoire singulière: celle du contrôle des mouvements et des gestes dans un contexte de rationalisation et d'optimisation. Les manuels d'escrime de la première moder-

nité comme les manuels de danse de société de l'entre-deux-guerres partagent une volonté commune d'intégration de pratiques dans un contexte scientifique et technique dominé par la rationalité.
A partir de ces comparaisons historiques, comment envisager la portée de la signalétique actuelle en temps de pandémie et les modalités de son incorporation?

Corps collectifs et savoirs incorporés

Le 8 juin 2020, le *Journal du Grand Paris*, revue professionnelle qui analyse et valorise les grands projets d'urbanisme et d'aménagement de la métropole parisienne, publie un court article sur la signalétique du déconfinement conçue par l'AREP design pour les gares SNCF, et dont voici un extrait: "Des parcours fléchés au sol en blanc, immanquables. Des pictogrammes et des panneaux, de l'adhésivage et des lumières également positionnés et taillés pour que l'on ne puisse pas les ignorer, en veillant toutefois à leur caractère 'amical', doux, non-coercitif. Tels sont les grands principes de la 'signalétique augmentée', conçue par les équipes d'Arep design, pour l'ensemble des gares de France et celles d'Ile-de- France. 'Il s'agit d'oser faire des choses que l'on n'aurait pas osé réaliser avant', résume Isabelle Le Saux, directrice d'Arep design. En l'occurrence, la Covid-19 a joué les accélérateurs de gestion de flux. Car l'agence d'architecture interdisciplinaire a entrepris avant la crise sanitaire, pour le compte de SNCF Gares & connexions, un vaste chantier d'harmonisation de la signalétique des 3 000 gares du pays, et des 380 franciliennes. '[…] Nous souhaitions une signalétique visible, mais non-coercitive, presque ludique', soulignent ses concepteurs. L'idée est de donner aux gens l'envie de prendre le train, et non l'inverse. Et ça marche. […] La signalétique augmentée permet de conduire les usagers à utiliser une trémie d'escaliers jusqu'à présent délaissée, parce qu'un peu éloignée et 'non-intuitive' (Isabelle Saux). Au final, la répartition des voyageurs sur des quais étroits a été améliorée ; les frais de maintenance sont également réduits, en évitant de concentrer les passages, et l'usure, sur les mêmes équipements"[15].
La subtilité de cette signalétique réside dans son caractère non-coercitif et c'est justement là que se justifie pleinement la comparaison entre une signalétique contemporaine et ses échos formels durant les siècles précédents. La signalétique du déconfinement, ou plutôt de la pandémie actuelle, implique un phénomène remarquable d'incorporation des contraintes visualisées, elle fournit littéralement une matrice de nos comportements, pour aujourd'hui et certainement pour un peu plus longtemps. Peu nombreux sont les usagers qui attendent les deux pieds sur un des cercles dessinés au sol et pourtant la perception quotidienne de ces signes imprègne nos actions et régit nos automatismes. Ne négligeons certes pas un faisceau d'autres phénomènes qui incitent à prendre nos distances les uns des autres, en premier lieu la crainte consciente de la contamination, mais la lecture diachronique de ces formes perçues régulièrement nous amène à penser plus précisément les mécanismes d'incorporation de cette matrice nouvelle de nos déplacements. Notons en outre que les ambitions évoquées par la direction de l'AREP design dépassent largement le contexte de la pandémie: une partition de nos ballets quotidiens orchestrés et rationalisés.
Des flèches accompagnent des séries de cercles, dans les zones d'attente comme dans les zones de transit. Les cercles sur le sol des couloirs de circulation interrogent: ils n'invitent certainement pas à s'y stationner, mais bien à se déplacer, à distance les uns des autres, comme le corps de ballet, en lignes ou en quinconce. Peu importe si les formes dessinées au sol, carrés, lignes ou cercles sont respectées, les distances sont visualisées dans leur mouvement. Cette occurrence de la signalétique actuelle montre combien il s'agit avant tout de susciter des automatismes dans les déplacements aussi bien que dans les distances: des distances ainsi vectorisées et encore mieux intériorisées. L'observation de ces matrices inscrites au sol rappelle en outre les diagrammes publiés dans L'art de la guerre de Machiavel en 1520: la visualisation des formations militaires renforce les descriptions du texte et assurent une compréhension par l'œil –et le corps– des théories écrites.
La présence des diagrammes dans de tels ouvrages est encore balbutiante et participe d'une même culture que celle qui incite Henry de Sainct-Didier ou Joachim Meyer à proposer "un dispositif nécessaire pour prêter à l'esprit l'assistance de l'œil" (Hale, 1988, pp. 280-298)[16]. La culture militaire antique est revisitée à la Renaissance et les diagrammes et schémas font leur

entrée dans les nouvelles éditions des traités antiques réédités (ceux de Végèce ou Elien)[17]. La vision des colonnes militaires offerte par Machiavel reste cependant sur la page comme une théorisation des mouvements coordonnés des fantassins. La comparaison avec la signalétique des gares parisiennes pose question: doit-on y voir une puissance d'abstraction des individus doublée d'une force d'incorporation des distances?

Les propos recueillis dans le *Journal du Grand Paris* vont dans ce sens et laissent entendre un désir d'homogénéiser les flux de voyageurs et de contrôler les déplacements sans pour autant les cadrer ouvertement. Ces signes au sol fonctionnent alors comme ces aide-mémoires des danseurs, ces signes du pavement et ces traces décrites dans les premiers paragraphes de notre propos. La matérialisation d'une kinesphère, notamment dans les espaces de circulation, nous incite à être les propres agents de cette homogénéisation des flux. S'il ne s'agit pas ici de remettre en question le bienfondé de la distanciation physique, bien au contraire, il s'agit plutôt de mettre en lumière les mécanismes d'imprégnation d'une telle signalétique sur nos corps au-delà de la pandémie. Négation de la flânerie et de la dérive –cette "insoumission aux sollicitations habituelles" (Debord, 1955/2006, p. 205)– nouveaux outils d'une psychogéographie assurément plus coercitive[18] qu'elle n'y parait, cette iconographie du déconfinement offre un nouvel écho aux théories de Debord[19] dont les alinéas 165 à 178 de la *Société du spectacle*, consacrés à l'aménagement du territoire, résonnent particulièrement bien ici: "169. […] L'urbanisme est cette prise de possession de l'environnement naturel et humain par le capitalisme qui, se développant logiquement en domination absolue, peut et doit maintenant refaire la totalité de l'espace comme *son propre décor*. 172 […] le mouvement général de l'isolement, qui est la réalité de l'urbanisme, doit aussi contenir une réintégration contrôlée des travailleurs, selon les nécessités planifiables de la production et de la consommation. L'intégration au système doit ressaisir les individus isolés en tant qu'individus *isolés ensemble*: les usines comme les maisons de la culture, les villages de vacances comme les 'grands ensembles', sont spécialement organisés pour les fins de cette pseudo-collectivité qui accompagne aussi l'individu isolé dans la *cellule familiale*" (Debord, 1955/2006, pp. 837-838).

Les contextes virtuels, comme les contextes réels et physiques, ont montré ces derniers mois une omniprésence du cadre et des délimitations matérielles de nos espaces intimes, une intimité devenue collective, et un isolement ensemble, que l'histoire des formes, des images et des signes peut aussi inviter à déconstruire, à penser et à apprécier, non sans vigilance.

Notes

1 Les comparaisons potentielles sont relativement nombreuses, on pense également aux labyrinthes d'église dont la forme et les modalités de leur performativité partagent certaines caractéristiques des corpus que nous analyserons ici.

2 Le quadrille est une forme de danse particulièrement populaire sous Napoléon Ier, grâce notamment aux créations de Jean-Etienne Despréaux, maître de ballet qui inventa de nombreux quadrilles, certains comportant plus d'une trentaine de danseurs et prenant parfois le modèle du jeu d'échec. Les partitions de ces danses sont en partie conservées à la Bibliothèque-Musée de l'Opéra dans le Fonds André Jean Jacques Deshayes et font l'objet d'une étude par Irène Feste. Le quadrille s'exporta en Grande Bretagne et trouva une postérité dans les 'Square Dances' américaines, danses de couple en carré et en lignes qui donnèrent également lieu à une vaste iconographie et à de nombreux manuels d'enseignement.

3 "Le mouvement est pour ainsi dire une architecture vivante, vivante à la fois par les changements de position et de cohésion. Cette architecture créée par les mouvements humains est faite de trajets traçant des formes dans l'espace, et nous appelons ces formes des formes-traces" (Laban, 2003, p. 77).

4 Sur l'histoire des traités d'escrime, voir Anglo, S. (2011). *L'escrime, la danse et l'art de la guerre. Le livre et la représentation du mouvement*. Paris, FR: Bibliothèque nationale de France.

5 Girard Thibault d'Anvers dans l'Académie de l'espèe utilisera de façon encore plus précise et détaillée ce dispositif de lignes géométriques au sol. Nous sommes alors à l'aube des développements de la géométrie analytique de Descartes qui aurait lui aussi rédigé un traité d'escrime désormais perdu.

6 On pense aussi à l'usage du sol dans les scènes de bal peintes par Hieronymus Janssens.

7 Henry de Sainct-Didier, Traicté contenant les secrets du premier livre sur l'espée seule, mère de toutes armes, qui sont espée, dague, cappe, targue, bouclier, rondelle, l'espée à deux mains et les deux espées… (Sainct-Didier, 1573).

8 "A spirit of invention pervaded ragtime during this period, empowering dancers to make up their own steps and christen them with playful names […] In contrast, modern dancing valued control, containment, organization, rules and inhibition. Couples danced in a united way, as a single unit and with the rhythmic structure of the music. Together, dancers governed their collaborative bodily movement in service to smooth, graceful lines of the body and through space. Their variations were brief and few and therefore did little to disturb the self-control they exuded. […] Ragtime freed the torso and limbs to express sexual pleasure and desire; while, modern dancing's aesthetic of restraint inhibited the torso and suppressed sexuality" (Robinson, 2010, p. 183).

9 Ragtime dancing needed to be radically changed in order to become saleable to more than a few consumers at a time. Moreover, for this experiment to work, its entire ethos had to be altered from one that valued individuality to one that insisted upon conformity.

10 "Control is the greatest point to consider in all our new dances" (Clendenen, 1914, p. 8).

11 "By the first decade of the twentieth century, the cult of efficiency had moved beyond laboratories and factories to infiltrate American culture at large, and its rhetoric often took on moral and national overtones […] the visualization of efficiency in the Gilbreths' time-motion studies necessitated the erasure of the body of the worker and the standardization and abstraction of the act of labor" (Corwin, 2003).

12 Gilbreth prône un usage de la science mécaniste dans tous les aspects de la vie courante, comme une libération paradoxale de nos gestes par leur efficacité: "Men and women everywhere are realising that the remote science is really the near at hand measurement; that life consists of motions and decisions; that satisfaction and interest, as well as efficiency, come from Thinking in terms of elements of motions; that the great waste of the world lies in the unnecessary fatigue; that 'deadening monotony' is eliminated through interest". Gilbreth dans le chapitre Contrast Between Military and Scientific Management, Applied Motion Study. A Collection of Papers on the Efficient Method to Industrial Preparedness (Gilbreth, 1914/1973, pp. 185-186).

13 "Visualization was absolutely crucial to the Gilbreth program, but it also replicated the manager-worker hierarchy. According to the Gilbreths, to visualize is to plan, to imagine a future solution based on observation of present details. But not everyone is equipped to observe and to visualize; only the trained eye could be expected to do both. In fact, the ability to observe and to visualize is precisely what distinguishes a manager from a worker or, more broadly, an expert from a layman" (Curtis, 2009, p. 93).

14 "The best planner is the one who –other things being equal– is the most ingenious, the most experienced and the best observer. It is an art to observe; it requires persistent attention. The longer and the more the observer observes, the more details, and variables affecting details, he observes. The untrained observer could not expect to compete with one of special natural talent who has also been trained. It is not every man who is fitted by nature to observe closely, hence to plan. To observe is a condition precedent to visualizing. Practice in visualizing makes for increasing the faculty of constructive imagination. He with the best constructive imagination is the master planner" (Gilbreth, 1914/1973, pp. 76-77).

15 Gestion des flux dans les gares et Covid-19: Arep dessine une 'signalétique augmentée', Le Journal du Grand Paris, 8 juin 2020.

16 "A device necessary to lend the mind the assistance of the eye". Sur les usages du diagramme dans les traités militaires de la Renaissance, voir: Hale, J. R. (1988). A humanistic visual aid. The military diagram in the Renaissance, *Renaissance Studies*, *2*(2), 280-298. doi :10.1111/j.1477-4658.1988.tb00157.x, pp. 280-298.

17 Le contexte est aussi celui des développements des ballets équestres et de leur notation par Jacques Callot ou Stefano della Bella: des figures où cavaliers et chevaux ont été remplacés par des points et des cercles abstraits mettant en évidence la symétrie et la perfection d'un corps social uni sous la pouvoir d'un souverain. Sur la portée politique de la notation abstraite des ballets équestres, voir Papiro, M. (2016). *Choreographie der Herrschaft: Stefano della Bellas Radier¬ungen zu den Reiterfesten am Florentiner Hof 1637-1661*. Paderborn, DE: Wilhelm Fink.

18 Sur ce point, voir les analyses de Chamayou, G. (2015, September 21). Avant-popos sur les sociétés de ciblage. Une brève histoire des corps schématiques. *Jef Klak*. Retrieved November 1st, 2019 from https://www.jefklak.org/avant-propos-sur-les-societes-de-ciblage/.

19 Debord était un grand connaisseur des théories de Machiavel et de ces traités militaires qui ont aussi nourri son propos ici.

ON VA REMETTRE LES PENDULES À L'HEURE LES IMAGES DE FAMILLE POUR REMÉDIER À LA DISTANCE CRÉÉE PAR LE DEUIL

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Keywords
distance; deuil; hétérotopie; image de famille; imaginaire

De *Sherlock Jr* (1924) de Buster Keaton, à *Laura* de Shuji Terayama (1974), en passant par le *Vidéodrome* de David Cronenberg (1983) et, plus récemment, par *Leto* de Kirill Serebrennikov (2018), le cinéma expérimental et grand public a exploré les traversées de l'écran pour tenter d'effacer les frontières entre les spectateurs et ceux qui sont représentés. *On va remettre les pendules à l'heure* est une vidéo en couleurs de deux minutes et demie que j'ai choisi d'inscrire dans cette tradition. Dans ce travail, le procédé visuel du split-screen est utilisé pour supprimer les distances, afin de mettre deux personnages –moi, l'autrice, et ma propre grand-mère– face à face. Cette dernière ayant disparu, *Let's Reset the Clock*, constitue une tentative de remédier aux distances créées par le deuil et une réflexion sur la façon dont les images peuvent relier ceux qui sont séparés par l'espace et par le temps.

Remédier à la distance créée par la perte

Il y a l'espace de ce qui était et ne peut plus être, et il y a l'espace de la mémoire. Entre les deux, il y a un sentiment d'absence et, parfois, de perte.

En utilisant des images de famille incluses dans *On va remettre les pendules à l'heure*, je donne forme à mon sentiment de deuil et tente de remédier la distance entre les vivants et les morts. Pour effacer cette distance, je me suis filmée en regardant des images de ma grand-mère qui ont été tournées par mon grand-père au début des années 60. En regardant des images d'elle, j'imite un lien qui n'existe plus, et je crée une nouvelle relation qui ne peut maintenant être trouvée qu'à travers la fiction, dans l'espace d'une œuvre d'art. Sur ce point, *On va remettre les pendules à l'heure* constitue une utopie de voyage dans le temps. Ou plutôt, la vidéo recrée ce que Michel Foucault a défini comme une hétérotopie (1967/1984): un lieu qui existe dans l'espace où réside l'imagination, dans la cabane d'enfant où l'on peut faire '*comme si*' sa grand-mère était encore là. En utilisant des images pour créer cet espace imaginaire, *On va remettre les pendules à l'heure* rappelle le travail de montage de Christian Marclay dans *The Clock* (2010). Dans ce film, l'artiste américain défie les couloirs du temps en assemblant différentes séquences de films plus connus ou moins connus autour d'une horloge qui tourne 24 heures en temps réel. Avec *On va remettre les pendules à l'heure*, je suggère que le jeu avec les images peut combler la distance entre les espaces temporels et spatiaux qui me séparent de ma grand-mère. Pourtant, même dans ce jeu, l'interaction ne fonctionne pas toujours. La vidéo suggère ainsi le processus de deuil suivant : celui de jouer un jeu qui ne marche pas, en se confrontant à quelqu'un qui ne peut plus être retrouvé, même par le biais d'un trucage.

Remédier aux distances grâce aux images

On va remettre les pendules à l'heure constitue également une réflexion sur les images. Elle fait partie d'un ensemble plus large de travaux dans lesquels je questionne mon identité coloniale européenne à travers l'utilisation des images de mon grand-père. Ma famille a fui l'Espagne de Franco pour émigrer en Algérie à l'époque où c'était un territoire français. Je ne connais ce pays et l'histoire de migration qui pour moi l'accompagne, qu'à travers les images des vieux films tournés par mon grand-père. J'ai numérisé ces images qui constituent une fenêtre temporelle vers une époque révolue de l'histoire française et vers une connaissance de mon passé familial. La mise en abyme que j'ai faite en me filmant en regardant ces archives conduit à considérer ces images comme faisant partie de mon propre imaginaire. Par cet acte d'archéologie familiale, je mets en scène mon identité et, dans le même mouvement, que je suis face à la caméra à la fin, je casse la mise en scène et prends de la distance par rapport à cette identité. Sur ce point, la remédiation proposée par *On va remettre les pendules à l'heure* est proche de *La Rose pourpre du Caire* de Woody Allen. Dans ce film de 1985 l'héroïne tente d'échapper à la morosité de son existence en regardant sans cesse le même film jusqu'à en faire partie. La distance offerte par la médiation des images semblerait ainsi nous sauver d'une réalité morose et nous permettrait d'explorer des chemins spatiaux-temporels jusqu'alors inaperçus.

L'IMMÉDIATETÉ ET SON INFRASTRUCTURE CACHÉE: QUAND AMAZON PROLONGE SES DÉLAIS DE LIVRAISON PENDANT LA PANDÉMIE DE COVID-19.

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Keywords
Immédiateté; Amazon; Infrastructure; Livraison; Covid-19

Introduction

"C'est simple, je n'ai jamais vu autant d'activité dans mon entrepôt Amazon", a déclaré en avril 2020, lors de la pandémie Covid-19, un syndicaliste de la Confédération générale italienne du travail employé sur le site de Castel San Giovanni (Émilie-Romagne, Italie) (Malet, 2020). Aux États-Unis, selon une source interne citée par le *New York Times*, les commandes de produits alimentaires chez Amazon ont été 50 fois supérieures à la normale pendant le confinement (Conger et Weise, 2020). Le 30 avril, il a été révélé que les recettes d'abonnement à Amazon Prime ont augmenté de 28 % au premier trimestre par rapport à l'année précédente (Ho, 2020).

Aux États-Unis, Amazon Prime coûte 119 dollars par an et, entre autres services tels que le *streaming* de vidéo et de musique, permet de voir sa commande livrée en un ou deux jours. Mais, pour faire face aux demandes en hausse importante, un volet de la stratégie pendant le confinement a consisté à indiquer de longs délais de livraison (de 5 jours à un mois) pour les marchandises non essentielles en stock, afin de décourager certaines commandes et de relâcher la pression (Del Rey, 2020). Cette stratégie contraste de façon frappante avec le cœur de métier habituel d'Amazon: faire en sorte que la livraison soit toujours plus rapide. Dans un article intitulé "The Uber-All Economy of the Future", Smith souligne qu'Amazon "a toujours mis l'accent sur la rapidité de la livraison, de 1-Click à Prime à PrimeAir à #AmazonCart à PrimeNow. L'entreprise cherche continûment à réduire l'écart entre la commande et la livraison effective. PrimeNow est le service de livraison à la demande d'Amazon, et implique la gratuité de la livraison en deux heures ainsi que la livraison en une heure pour les abonnements Premium, pour les occasions où l'immédiateté est impérative" [my translation from English] (Smith, 2016, p. 386). Amazon travaille actuellement à un système de livraison par drones qui pourrait réduire le délai de livraison à 30 minutes pour les produits de poids léger dans certaines villes.

Cet article vise à remplacer cet épisode transitoire de délais volontairement prolongés de livraison par Amazon dans l'histoire de l'immédiateté comme horizon paradoxal des médiations, telle qu'elle est analysée dans le domaine de la théorie des médias. Les stratégies d'adaptation d'Amazon lors de la pandémie de Covid-19 ne révèlent-elles pas une fois de plus ce que les *Media Studies* avaient déjà souligné: que de nombreuses médiations technologiques, logistiques et humaines sont nécessaires pour remplir une commande en ligne le plus rapidement possible, tangentiellement immédiatement ?

Je présenterai d'abord des éléments pertinents sur l'histoire des stratégies d'Amazon pour accélérer la livraison. Ce désir d'instantanéité sera exploré grâce à l'éclairage donné par les théoricien/nes des médias sur l'immédiateté. Cela permettra de mieux comprendre la stratégie paradoxale d'Amazon qui a consisté à prolonger les délais pendant la pandémie, en s'appuyant ici principalement sur des enquêtes journalistiques et sur les données fournies par Amazon.

En conséquence, je montrerai qu'inscrire l'épisode du rallongement des délais de livraison par Amazon dans l'histoire de l'immédiateté permet de mettre en évidence l'infrastructure habituellement cachée, et en particulier l'importance de la main-d'œuvre humaine, impliquée dans la satisfaction immédiate des désirs par une livraison toujours plus rapide.

Je conclurai par une mise en perspective de ce résultat, en soulignant que de nouvelles considérations sur l'immédiateté émergent lorsque l'on prête attention aux forces économiques qui président aux médiations tout autant qu'à notre perception du temps, du retard, de la satisfaction et de la consommation.

Matériaux et méthodes

Une présentation succincte d'Amazon sera utile pour mieux situer ce qui s'est passé lors du confinement dû à la pandémie de Covid-19. Fondée

en 1995 à Seattle, l'entreprise Amazon est le chef de file mondial de la vente au détail en ligne. Elle a commencé par vendre des livres en ligne, puis des CD et des DVD et enfin toutes sortes de marchandises dans le monde entier, y compris des produits alimentaires aux États-Unis. Elle a développé une stratégie de vente fondée sur l'évaluation des produits par les utilisateurs, sur une *marketplace* avec des vendeurs tiers proposant des marchandises sur la plateforme, et sur des entrepôts où les employé/es et les robots peuvent facilement récupérer ces marchandises grâce à des systèmes de scannage électronique (Galloway, p. 27). Amazon possède 110 bâtiments dans le monde entier, notamment des centres de préparation des commandes, des centres de stockage, des centres spécialisés et des plates-formes d'expédition. Amazon emploie près de 800 000 travailleur/ses, dont la plupart sont employé/es à titre temporaire. En 2019, Amazon a augmenté ses effectifs de 23 %.

Le succès d'Amazon repose en grande partie sur l'énorme catalogue de marchandises qu'elle fournit sur la même plateforme, sur la réduction des coûts des produits grâce à la centralisation et à la *marketplace* (les vendeurs ne font pas payer les client/es pour leur propre infrastructure de vente au détail), et sur une livraison plus rapide que ses concurrents. Entre autres activités, Amazon a également développé un assistant électronique personnel nommé Alexa, qui peut effectuer des recherches sur le web et ajouter des produits au panier. Grâce aux données importantes recueillies sur les habitudes des consommateur/rices, Amazon développe actuellement un service de vente au détail qui contournera le processus d'achat. Les marchandises seront livrées à domicile sans aucun achat, et les produits non désirés pourront être retournés. Galloway (2017) précise que cette tendance relève de "l'attention constante qu'Amazon porte à l'absence de friction dans les achats des consommateur/rices" (p. 33). L'effacement de l'acte d'achat et la réduction du délai de livraison tendent tous deux à effacer la médiation dans l'expérience d'acquisition des marchandises par les consommateur/rices.

Cette veine exploitée par Amazon peut être comprise en référence à un paradoxe que les théoricien/nes des médias ont exploré sous le nom d'immédiateté. Dans une première approche, l'immédiateté pourrait être située à l'intersection de la simultanéité dans le temps et de l'ubiquité dans l'espace. Ce qui va très vite entre deux lieux distincts tend à l'immédiateté (dans le cas d'Amazon, de l'entrepôt au consommateur ou à la consommatrice). Le temps de livraison diminue, donnant l'impression d'avoir dépassé les contraintes spatiotemporelles (c'est-à-dire la distance), et d'avoir fait disparaître les médiations, comme le souligne le préfixe dans le terme "im-médiation".

Des théoricien/nes des médias ont apporté des éclairages intéressants pour comprendre l'immédiateté. Un principe important de la théorie des médias affirme que l'immédiateté est l'horizon paradoxal de toute médiation. La médiation, pour être efficace, doit tendre à s'effacer. Si l'on pense aux fils électriques lors d'un appel téléphonique, c'est que la transmission est mauvaise, et la médiation trop présente. Il en résulte un échec de l'expérience authentique de communication attendue (l'authenticité étant une connotation de l'immédiateté). Mersch (2018) appelle ce principe la négativité du médial et le situe dans le sillage de la dialectique de Hegel (p. 45). Le médium doit faire apparaître les choses, faire circuler les informations et les marchandises, mais ne doit pas être lui-même visible. Krämer parle quant à elle d'approche postale de la théorie des médias: la transmission réussit lorsque le médium s'efface. Elle utilise la métaphore du messager qui meurt en délivrant son message, abandonnant sa propre agentivité pour remplir correctement sa mission (Krämer, 2015, pp. 19-26).

Ce qui est intéressant au sujet de l'immédiateté, c'est qu'elle est la *négation de* la médiation. L'immédiateté ne peut être pensée sans médiation. En effet, pour parvenir à une transmission toujours plus immédiate de l'information et à une expérience supposément authentique, des technologies et des infrastructures toujours plus élaborées sont impliquées. Bolter et Grusin (1999) ont montré que "l'immédiateté dépend de l'hypermédiateté", c'est-à-dire du recours à de multiples médiations qui se "remédient" les unes les autres (p. 6), plutôt que de l'absence de toute médiation. Sprenger a prouvé que, si l'immédiateté remonte aux origines de la médiation, elle a reçu un sérieux coup de pouce avec la maîtrise croissante de l'électricité aux XVII^{e}

et XVIII[e] siècles, électricité qui a ultérieurement permis la télégraphie au XIX[e] siècle (Sprenger, 2012). Ces technologies ont renforcé le fantasme d'une transmission pacifique, globale, instantanée et ubiquitaire, fantasme qui culmine dans la promotion enthousiaste de l'immédiateté par Marshall McLuhan dans les années 1960.

Néanmoins, les effets écologiques, sociologiques, géostratégiques et économiques des technologies de l'immédiateté ont tendance à être négligés, ce qui aveugle les utilisateur/rices et les consommateur/rices sur les conséquences de leur utilisation de médiations en apparence toujours plus immédiates. Starosielski (2015) a décrit avec précision les câbles sous-marins à fibres optiques: par une approche ethnographique, elle révèle "le travail, l'économie, les cultures et la politique cachés qui concourent au maintien des connexions intercontinentales quotidiennes" (p. 2). Plus récemment, avec l'exposition *Le supermarché des images*, Szendy et al. (2020) ont également tenté de contrer l'idéologie de l'immédiateté et de la dématérialisation en présentant des œuvres d'art qui déplient les réseaux et les déséquilibres dans les rapports de force qu'impliquent les médiations techniques. L'exposition présentait notamment *Amazon* (2016), une photographie d'Andreas Gursky qui, par son grand format (4x2m) et son jeu sur les codes des paysages et des marines, présente "un ensemble organique et encombrant qui contredit l'apparente fluidité des échanges commerciaux dématérialisés pratiqués par la plateforme de vente en ligne. Derrière un monde numérique prétendument éthéré se cache une saturation d'objets, détachés de leur fonction et organisés selon une seule classification logistique" (Voss, in Szendy et al., 2020, p. 58).

Peut-on aller jusqu'à dire que le succès d'Amazon repose sur cette dissimulation aux yeux des consommateur/rices des médiations qu'implique chaque achat? C'est ce que pense le journaliste français Jean-Baptiste Malet, qui a travaillé de novembre 2012 à février 2013 dans un entrepôt d'Amazon dans le sud de la France afin de percer les secrets de l'entreprise: "Si les internautes connaissent la page d'accueil du célèbre site Internet, le plus grand nombre ignore ce qu'il se passe derrière leur écran, une fois la commande validée, lorsque l'économie numérique présumée virtuelle redevient réelle" (Malet, 2014, p. 9). Pour contourner le silence imposé par l'entreprise à ses salariés, d'autres journalistes se sont infiltré/es dans des entrepôts (Newell & Foggo, 2008; Cahour, 2019) ou ont dû accomplir un lent travail de rapprochement avec les salarié/es pour recueillir leurs témoignages (Soper, 2011; Löbl & Onneken, 2013). Grâce à son enquête immersive, Malet décrit comment Amazon oblige les employé/es à garder le silence sur leurs dures conditions de travail dans les entrepôts, alors même que cela est contraire à la législation française du travail: "Tous se vivaient comme dénués du droit de s'exprimer". Il conclut: "Dans un monde déclaré ouvert et transparent par la vertu d'Internet, où l'information circule à la vitesse de la lumière, prétendument sans limite aucune, partout s'élèvent chaque jour de hauts murs qui ceignent les zones de production et de diffusion des marchandises" (p. 11).

Néanmoins, pendant le confinement dû à la pandémie de Covid-19, Amazon n'a pas pu garder le cap des achats sans friction, ni de l'immédiateté promise par de courts délais de livraison dans l'expérience d'achat. À l'opposé de la promesse de livraison rapide qui a fait son succès, la firme a mis en place une stratégie visant à décourager les commandes en prolongeant les délais de livraison. Cette stratégie a été mise en place le 17 mars 2020, comme annoncé sur le blog Covid-19 d'Amazon: "Pour répondre à ce besoin et contribuer à assurer la sécurité de nos associé/es, nous avons ajusté nos processus de logistique, de transport, de chaîne d'approvisionnement, d'achat et de vente à des tiers afin de donner la priorité au stockage et à la livraison d'articles plus prioritaires. Ainsi, certains de nos engagements de livraison seront plus longs que d'habitude" (Day One Staff, 2020). Ce qui entre dans la catégorie des "articles de plus haute priorité" est très vaste: "Amazon a défini plusieurs catégories de produits essentiels qui peuvent continuer à être expédiés, notamment les produits pour bébés, les articles de santé et d'entretien ménager, les produits de beauté et de soins personnels, les produits d'épicerie, les produits industriels et scientifiques et les articles pour animaux de compagnie. Les livres sont également inclus" (Hu & Dastin, 2020).

Mais une autre stratégie mérite d'être mentionnée en ce qui concerne l'allongement des dé-

lais de livraison pour les biens non essentiels. Amazon a dû augmenter sa main-d'œuvre en embauchant des employé/es temporaires (en ciblant celles et ceux qui avaient perdu leur emploi précédent dans l'hôtellerie et les voyages), et en maintenant ses employé/es actuel/les au travail en augmentant les salaires de 2 dollars de l'heure. Cette stratégie avait été annoncée le 16 mars 2020 par Dave Clark, le vice-président principal des opérations mondiales d'Amazon, dans un article sur le blog. Selon ses termes, cette stratégie visait à "livrer les marchandises essentielles directement aux portes des personnes qui en ont besoin" (Clark, 2020).

Résultats

En conséquence, je soutiens que l'épisode des délais de livraison prolongés d'Amazon pendant la pandémie de Covid-19 est une énième brèche nous permettant de vérifier et d'approfondir la pertinence du concept d'immédiateté, entendu comme négation paradoxale des médiations. Replacer l'épisode des délais de livraison allongés d'Amazon dans l'histoire de l'immédiateté met en évidence l'infrastructure habituellement cachée qu'implique la satisfaction immédiate des désirs.

Dans l'ensemble, les deux stratégies d'Amazon (allonger les délais pour les marchandises non essentielles et augmenter la main-d'œuvre) suggèrent que c'est la main-d'œuvre humaine, vulnérable au virus, qui a grippé le fonctionnement de l'infrastructure cachée. Ces stratégies étaient un moyen de répondre à la difficulté de maintenir les employé/es au travail alors que leurs conditions de travail n'assuraient pas leur sécurité sanitaire. Weise (2020) a décrit dans un article du *New York Times* le décalage entre la communication d'Amazon sur la protection des travailleur/ses contre la propagation du virus au travail et la réalité de mesures insuffisantes, appliquées avec retard, dénoncées par les employé/es.

En France, cette divergence a conduit à un blocage juridique entre la multinationale et les syndicats français pendant la pandémie. Le 24 avril, le tribunal judiciaire de Nanterre a imposé à Amazon de limiter son activité aux commandes de produits alimentaires, médicaux et d'hygiène jusqu'à ce que l'entreprise ait correctement évalué les risques auxquels ses employé/es étaient exposé-es en raison de la pandémie de Covid-19. Amazon France a décidé de fermer ses sites logistiques du 16 au 20 avril. Le 24 avril, la cour d'appel de Versailles a confirmé, tout en l'adoucissant, cette décision. Les syndicalistes de l'entrepôt Lauwin-Planque, dans le nord de la France, avaient déjà déposé une plainte pour mise en danger de la vie le 31 mars (Vasseur, 2020).

Aux États-Unis, le 3 juin, trois employé/es de l'entrepôt de New York ont engagé une poursuite contre Amazon, accusant la firme de ne pas avoir pris les mesures nécessaires pour protéger ses employé/es contre le coronavirus. Selon eux, Amazon a laissé les employé/es venir travailler même s'ils et elles avaient été en contact avec des personnes dont le test était positif, a découragé le recours aux congés maladie et a continué à exiger des cadences de travail élevées qui ne permettaient pas de prendre suffisamment de pauses pour se laver les mains et pour nettoyer les outils de travail (Statt, 2020).

Le tiraillement d'Amazon pendant la pandémie entre la santé de ses employé/es et le nombre croissant de commandes nous invite donc à reconsidérer l'importance de la composante humaine qui est toujours, comme l'a démontré la pandémie de Covid-19, au cœur des infrastructures cachées de l'accélération technologique.

Amazon tire sa force d'une puissante infrastructure logistique. Pour recevoir des marchandises du monde entier dans ses entrepôts, et pour les envoyer dans de nombreux pays, elle utilise tous les moyens de transport: routes terrestres, routes maritimes, routes aériennes. En 2019, Amazon a élargi sa flotte de fret aérien avec 15 Boeing supplémentaires, et prévoit de posséder une flotte de 70 avions d'ici 2021 (Perez, 2019). La même année, Amazon a obtenu de l'Administration fédérale de l'aviation, dans le sillage d'Alphabet, la société mère de Google, une autorisation d'un an pour tester la livraison par drones aux États-Unis, prévoyant de lancer Amazon Prime Air dans les mois suivants (Dunn, 2019). Début 2016, Amazon a obtenu de la Commission maritime fédérale une licence lui permettant de déployer une offre de fret maritime en vue d'expédier les marchandises d'autres compagnies, obtenant ainsi un créneau dans le secteur du transport maritime (Galloway, 2017, p. 42). Amazon renforce ainsi sa position dans le transport mondial et, parce qu'il est très coûteux pour Amazon de recevoir des commandes

de la part des consommateur/rices, de les leur apporter et de devoir venir les récupérer si ces marchandises ne leur plaisent pas, l'entreprise a développé deux stratégies: recueillir des cotisations par l'intermédiaire d'Amazon Prime et faire payer d'autres vendeurs pour utiliser ses infrastructures, comptant sur le fait que cela leur est bien plus avantageux économiquement que de devoir construire leurs propres infrastructures logistiques (Galloway, 2017, p. 48). Néanmoins, comme l'ont montré une fois de plus l'allongement des délais de livraison et l'embauche de travailleur/ses temporaires pendant la pandémie, au cœur de cette infrastructure se trouvent les humains qui la planifient, l'activent et l'entretiennent. Mais il semble clair dans la stratégie d'Amazon que les robots viendront peu à peu remplacer les humains (100 000 robots sont déjà utilisés), même si la firme met plutôt l'accent sur la collaboration entre humains et robots, et sur l'allègement de la dureté du travail humain grâce aux robots (Fulkerson, 2019). Comme l'explique Galloway: "La raison pour laquelle Jeff Bezos [le fondateur et PDG d'Amazon] plaide en faveur d'un revenu garanti pour les États-Unis est qu'il a entrevu l'avenir du travail et, du moins dans sa vision, cet avenir n'implique pas d'emplois pour les êtres humains. Du moins, pas assez pour assurer un emploi à l'ensemble de la main-d'œuvre actuelle. De plus en plus, les robots accompliront presque aussi bien (et parfois beaucoup mieux) de nombreuses tâches assurées par les employé/es, et sans demandes fâcheuses du type partir plus tôt pour aller chercher leur enfant au karaté" [my translation from English] (Galloway, 2017, pp. 50-51). Aux yeux de Galloway, Bezos pense "qu'il est impossible que l'économie puisse créer, comme elle l'a fait dans le passé, suffisamment d'emplois pour remplacer ceux qui sont détruits" (*idem*, p. 51). En 2012, Amazon a racheté Kiva Systems, une entreprise qui fabriquait des systèmes d'exécution robotisés, et a équipé la plupart de ses entrepôts de robots, obtenant ainsi un gain de temps important dans la préparation des commandes. Les employé/es actuel/les sont censé/es agir comme les robots qui les remplaceront presque totalement dès qu'ils seront moins chers que les humains, comme l'a observé Malet lors de son immersion dans un entrepôt. Faisant référence aux employé/es qui vont chercher les articles sur les étagères, il écrit: "Les *pickeurs* sont des femmes et des hommes meilleur marché et plus efficaces que des robots. Avec eux, aucun entretien technique n'est requis puisqu'ils sont pour beaucoup intérimaires. La direction d'Amazon peut aisément les remplacer quand ils sont épuisés ou ne font plus l'affaire en allant simplement puiser dans l'immense armée de réserve que constituent les chômeurs" (p. 44). Son travail dans l'entrepôt de Montélimar lui a permis de comparer la répartition des fonctions en tâches hautement spécialisées et séparées (*eachers* et *stowers* pour la réception; *pickers* et *packers* pour la préparation des colis) avec le travail en usine. Les humains deviennent un outil parmi d'autres dans ce processus industriel hautement informatisé, et ils seront remplacés dès que possible. Tout est déjà numérisé grâce aux systèmes de scannage, dont il décrit la duplicité: ils sont censés optimiser les opérations de stockage, de préparation et d'emballage des employé/es, mais ils servent aussi à surveiller chaque mouvement que les employé/es font dans l'entrepôt et à exercer une pression accrue dans la course à la performance. Pour Malet, les travailleur/ses sont censé/es devenir des machines s'ils et elles veulent conserver leur emploi: "chaque être humain doit se discipliner afin de mécaniser son corps et son esprit" (p. 36).

Discussion

En ayant recours à l'immédiateté, outil conceptuel emprunté aux *Media Studies*, en vue d'analyser les stratégies de vente au détail d'Amazon lors de la pandémie de Covid-19, j'ai confirmé sa pertinence pour comprendre les conséquences concrètes des promesses d'annulation des distances et des médiations. De nombreux niveaux sont impliqués: la santé des travailleur/ses et leur bien-être au travail; l'organisation de la circulation des marchandises dans le monde, qui repose sur des entreprises privées disposant de réseaux logistiques de plus en plus puissants et qui implique des trajets de longue distance qui ne sont pas soutenables écologiquement pour la Terre; le rapport des sociétés au temps, au retard, à la satisfaction et à la possession.

Les théoricien/nes des médias et les historien/nes de la perception ont montré que les médiations participent à moduler la distance physique et la perception du temps. Ils et elles ont

débattu de ce qui vient en premier: les médiations changent/elles notre perception du temps et de l'espace, ou les sociétés changent/elles et créent/elles en conséquence de nouvelles médiations pour satisfaire leur besoin croissant de vitesse (Koselleck, 1976; Rosa, 2003; Tomlinson, 2007) ? Mon détour par Amazon suggère que ce débat pourrait être enrichi, c'est-à-dire déplacé, en prêtant attention aux forces économiques en jeu. On ne peut pas nier que notre perception du temps, de l'attente, de la distance, de la présence, est remise en cause par les médiations, mais il est intéressant de se demander quel rôle jouent les entreprises à but lucratif comme Amazon pour soutenir les orientations vers la rapidité et, tangentiellement, l'immédiateté. L'énorme infrastructure d'Amazon, qui dépend encore de l'humain pour être planifiée, activée et entretenue, doit être volontairement dissimulée afin que les client/es ne réfléchissent pas trop aux conséquences des médiations humaines, technologiques, logistiques et législatives nécessaires à la réception des produits qu'ils et elles ont achetés. Mais cette infrastructure cachée est clairement révélée en temps de crise, comme l'a été le confinement dû à la pandémie de Covid-19, et comme l'avaient été les grèves des employé/es, qu'il s'agisse de protester contre leurs mauvaises conditions de travail ou de dénoncer l'impact dévastateur d'Amazon sur l'environnement (Massiot, 2020).

Conclusion

Pendant le confinement dû à la pandémie de Covid-19, celles et ceux qui étaient équipé/es d'ordinateurs ou de *smartphones* ont largement utilisé la plateforme en ligne du chef de file mondial du commerce électronique Amazon pour surmonter leur éloignement d'avec les marchandises dont ils et elles avaient plus ou moins besoin. Parce que la promesse d'une livraison immédiate n'a pas pu être tenue pour de nombreuses marchandises non essentielles, l'infrastructure cachée qui soutient cette promesse a été une fois de plus révélée. La notion d'immédiateté, développée dans le domaine des *Media Studies*, nous a permis de comprendre les conséquences problématiques d'une telle dissimulation.

En retour, en faisant porter notre attention sur les stratégies d'une entreprise qui promet de réduire au maximum les délais de livraison et qui tente de dissimuler aux consommateurs et aux consommatrices toutes les médiations humaines, technologiques, logistiques et législatives nécessaires à la livraison des marchandises, nous avons pu mettre en évidence un aspect sous-estimé des médiations: l'importance des facteurs économiques dans la formation de nos sociétés, où la réduction des distances spatiales par le rapprochement toujours plus rapide de choses séparées est économiquement rentable malgré des conséquences désastreuses (sur les conditions de travail, sur l'organisation globale de la distribution et de la circulation des marchandises, et sur l'environnement).

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