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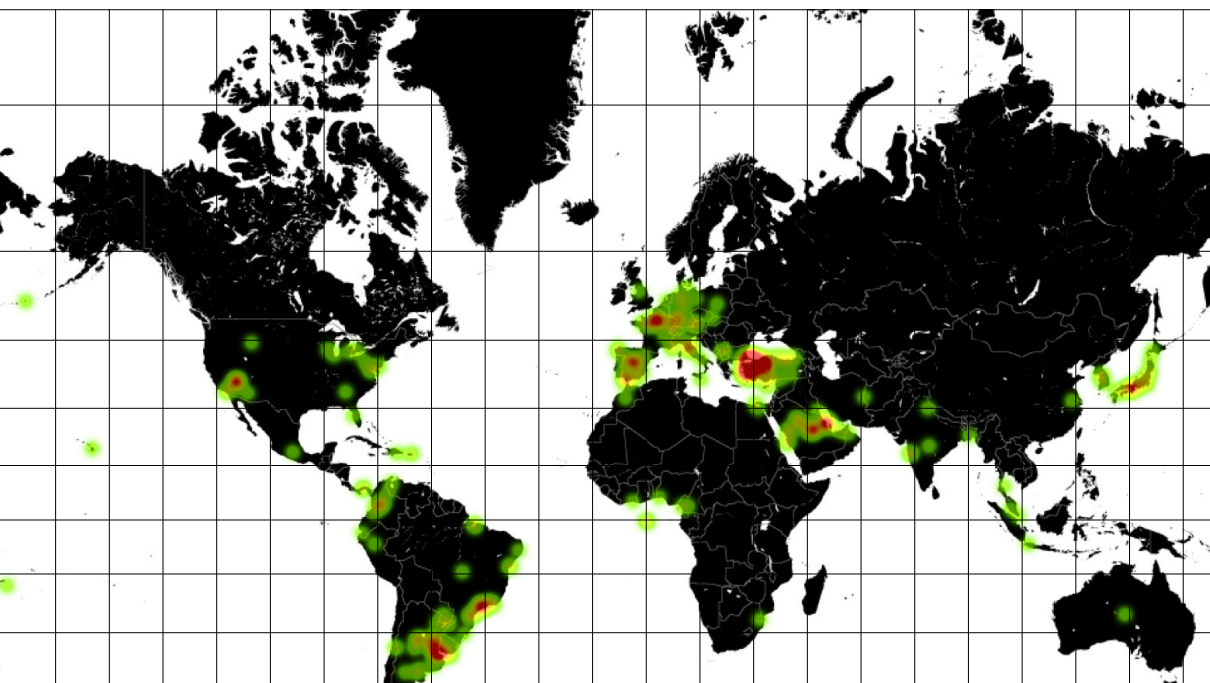
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This issue is dedicated to the memory of Salvatore Iaconesi (1973-2022), remembering and valuing the rich heritage of art, beauty, thoughts, words and actions that represent the fullness that remains after his departure. The design community rallies around Oriana Persico with the aim of generating new rituals for contemporary human beings.

Cover image
One Million Dreams,
Salvatore Iaconesi
and Oriana Persico



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Domestication, Design and Technological Objects: Affordance and the Challenge of the Virtual

Rosa Chiesa

Università Iuav di Venezia

rchiesa@iuav.it

ORCID 0000-0001-6007-3998

Paola Proverbio

Università Cattolica del Sacro Cuore

paola.proverbio@unicatt.it

ORCID 0000-0001-6742-4412

Abstract

In its relationship with technological objects, design has historically used aesthetic, stylistic and symbolic devices to tame what was perceived as wild. Drawing on the ideas offered by the framework of domestication, this paper addresses the issue of the relevance of the relationship between user and technological object in an era characterised by the rapid transformation of physical objects towards dematerialisation.

Does it still make sense to speak of affordance in the face of a shift from the physical plane to the virtual in the user-object relationship? And what happens to this relationship when technology loses its materiality and becomes ephemeral?

Keywords

Domestication

Technologies

Affordance

User experience

Designing the Relationship With Things

To distinguish between “thing” and “object” and to unravel the question of the autonomy-biography of things, or of the existence of their soul and memory, the philosopher Remo Bodei (2009) clarified that “the meaning of ‘thing’ is broader than that of ‘object’, since it also includes people or ideals and, more generally, everything that interests and is dear” (p. 22). Design has attributed to objects - we will later see how - values, symbols and semantic characteristics that have accompanied the transition from “object” to “thing” of artefacts already loaded with “investments and disinvestments of meaning, positive or negative” (p. 23) by each individual who makes them an expression of his or her personality.

While some scholars, such as Ariès, believe that contemporaneity has eroded the ability to contemplate objects (Caforio, 2012), reducing them to mere soulless commodities to be consumed — a characteristic feature of our times —, there is a growing trend in the opposite direction, which encourages the construction of narratives around objects — storytelling —, including them in systems of relations and multiplying the possibility of having them live several lives, to “out-last our oblivion” as Borges (1971) would say, through practices such as upcycling.

While the commodity is involved in the process of aestheticization (Lipovetsky & Serroy, 2013), the symbolic factor complements the user value of an object by adopting the logic of economic exchange. On closer inspection, this process, which is characteristic of contemporary design, does not differ from the natural phenomenon that leads to the above-mentioned transition from “object” to “thing”. The difference then lies in placing the commodity at the centre of a new system controlled by the laws of the market, a design system defined as the “economy of the imaginary” (Carmagnola, 2009, pp. 134-135) in which symbolic value becomes a dimension of economic value (Branzi, 2007, pp. 9-15).

Design has always shown a strong vocation for the construction of imagery because the design of an artefact, as Husserl (2005, p. 355) argues, has to do with subjective perception: “the object is never given in its entirety, every perception always inevitably refers back to memory and imagination”. In other words, we (users or designers) invest objects with affects and values that resound within our own imagery of reference.

In the case of the relationship with technological objects in particular, ever since technical objects entered the domestic sphere, the practice of design has been concerned with implementing certain correctives, mainly from a communicative-semantic point of view, to the synthesis between form and function (which has long represented an essential dialectic in the design of utilitarian objects) to tame or mediate the relationship between man and technology, which is often difficult to understand and accept.

In 1852, Gottfried Semper, talking about the progress of the art industry compared to its predecessors, wrote: “In spite of the progress of technology, both from the point of view of form, and even from the point of view of convenience and functionality, we have remained far behind them”. He also warns against “an excess of means”, or more appropriately against “a deficiency in the ability to master them” (Pasca & Pietroni, 2001, pp. 195-196).

Design and Domestication: A Mode of Mediation

Since its inception, and faced now with the more recent disappearance of form-function determinism which has opened up to the “symbolic consumption of objects” (Carmagnola, 2009, p. 114), design has used aesthetic-stylistic (particularly since the 1980s) and symbolic (from the 1990s onwards) expedients, integrating the functionality of artefacts to tame technology, bringing closer what was perceived as foreign, wild.

Semper recounts this effectively when discussing the introduction of gas lighting: “What an extraordinary invention gas lighting is! Regardless of its importance in everyday life, what a lustre it brings to our celebrations! And yet in living rooms people try to hide the gas sockets, so that the tubes look like candles or oil lamps” (Pasca & Pietroni, 2001, pp. 195-196).

For example, throughout the history of design, one of the methods used to satisfy the need to tame technology so that it might fit into everyday life, was the formal-imitative process, applied to early industrial objects (the car inspired by the carriage is just one example). Despite their significant inventiveness, they sacrificed formal innovation by hewing to the copy of similar handcrafted objects (Riccini, 2012, p. 23).

As Enzo Frateili points out when reflecting on the relationship between functional and formal values in the history of design, there is also a direct correlation between the prevalence of expressive values (sometimes relying on forms from the past, the natural model, etc.) over functional ones, which denotes moments of economic recession or a crisis in the system of social and cultural values (Crachi, 2001, p. 118).

In the sociological research on the processes of appropriation and incorporation of media technologies into domestic contexts, the term domestication¹ was introduced at the end of the 1980s with the aim not only of investigating the social and cultural factors influencing the choice and use of new technologies, but of understanding the consequences of their adoption as well.

Domestication, a term borrowed from the Latin *domesticus* to indicate the taming of a wild animal, is proposed as a new interpretative frame for the study of media, their adoption and use, in their dual *status* as objects and media and in their dual belonging to the economy and culture.

Thus, the technological object is studied here following a symbolic-interpretive approach that considers technologies as “social constructions” (Qualizza, 2013, p. 188), in the duality of their physical and social functions (Faulkner & Runde, 2009, p. 443).

What is significant for us, and which relates to the numerous findings deriving from domestication, is to understand how design has intervened and influenced, through design requirements, the domestication of “foreign” technological design objects within the process of their acceptance (incorporation²) into the domestic unit and the daily habits of the users (objectification³).

1

The concept originates from research conducted by Roger Silverston starting in 1987 (Brunel University and University of Sussex).

2

Embedding: how objects are used and how they fit into everyday habits and what functions they perform (Qualizza, 2013, p. 196).

3

Objectification: the physical arrangement of objects and their use in the domestic environment (Qualizza, 2013, p. 195).

Design, Metaphors and Affordances

The identification of some categories can be useful to map the panorama of the evolution in the relationship between user and technological object, and to subdivide the “aesthetic-stylistic and symbolic expedients” to which the designer has resorted in hard design.

Reference will be made to iconic cases as well as to other lesser-known but emblematic cases in this process of domestication, bearing in mind that, based on Gibson, all the metaphors mentioned here express a close link with the affordance of the object, and in some cases correspond to the stylistic dictates of certain periods. For example, after the 1980s, the adopted metaphors often have mere aesthetic value.

The sphere of technical objects, historically the most functionalist, has been involved in a global design process, in part because of its obsolescent nature par excellence, that has increasingly emphasised the emotional potential of the artefact over and beyond its actual performance, in a perspective that could be defined as anti-functionalist⁴.

4

Vitta, dissenting on *The Forms of Objects and Aesthetics*, reiterates how “short-sighted” the identification made by Modernism, regarding the concept of functionality of an object of use with its instrumental value alone or at the limit with the notion of functioning, was, which sought to deny the aesthetic experience to the functionality of things. (Vitta, 2016, pp. 224-225).



Fig. 1
Achille and Pier Giacomo Castiglioni, radio-phonograph rr126, Brionvega, 1965 © Brionvega.

The playful register, which in some cases involves the addition of ornamental elements (see the floral decoration on the Singer domestic sewing machine) with an almost animistic intent, finds an emblematic expression, among many other cases, in the renowned *rr126* radio-phonograph (1962) designed by the Castiglioni brothers for Brionvega Fig. 1, and in the equally famous *iMac G3* by Jonathan Ive for Apple (1998). The first device is a sort of music robot, given the physiognomic character imprinted by the designers, who notoriously entertained a special syntonic relationship with the genesis of the technological project. Nothing has been taken away from the clarity of the interface to facilitate its use, and the *rr126* thus becomes an example of formal innovation and attention to detail (for example, in the graduated arcs that “mark the return to circular indications, after a long period in which they were linear” (Polano, 2001, p. 225)), which stands between the lesson of Ulm - whose rules it seems to follow, while ignoring its spirit - and the tradition of automata. A skilful mix that decreed its particularly positive response. The evolution of domestication, which reached a turning point in the combination of technological object and friendly approach (affordance), was embodied by the *iMac G3* project (Rawsthorn, 2013, p. 101): a masterly technological synthesis of a computer’s essential components and a disorienting formal and material configuration, which relied on the transparency of the casing to “display” the technological components inside. Like a “Trojan horse” entering the home, it inaugurated the era of “dialoguing interfaces”.

There was a renewed interest in those years in materials and their substance in relation to the emotions they are able to arouse through colour (in the case of the *iMac*, the “favourite colour”) as well as tactility, which some have labelled “material strategy” (Branzi, 1996, p. 418).

Playfulness — genuinely serious as Frateili intended it — emerges again as the key to interpreting the *LC10* emergency light designed by Luca Meda for Girmi in 1982: the small domestic emergency lamp and portable torch, to be used in the event of a power failure, is characterised by a rigorous formal aspect that contrasts with its playful choice of name, *Lucetta*, a nickname for an unfamiliar newborn object that has now become part of the everyday life of our homes.

The same metaphor is found in Marco Zanuso’s project for the *Rancilio Z8* coffee machine, as well as in designers such as Aldo Rossi who apply it to artifacts such as *La cabina dell’Elba*, Molteni.

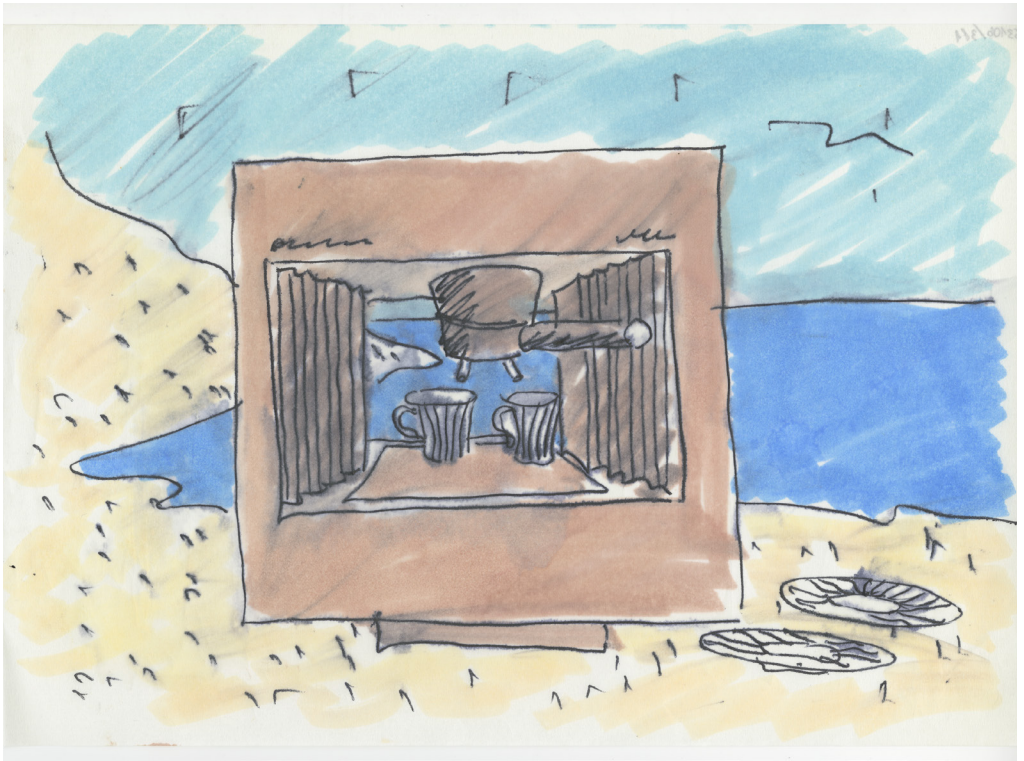


Fig. 2
Luca Meda, *CF32*
Caffèconcerto, Girmi,
1983 © Archivio Progetti
luav.

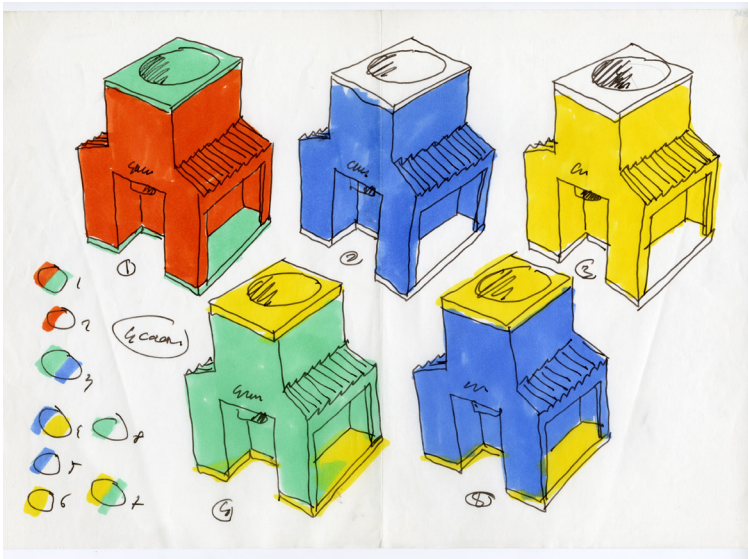


Fig. 3
Luca Meda, *La Granita*,
Girmi, 1988 © Archivio
Progetti luav.

The use of architectural metaphors, with a clear reference to miniaturisation⁵, is a second effective stratagem that designers have used in some cases.

It is sometimes the shape or the name that unequivocally evokes the subject, while in other cases it is the citation of an archetypal figure, chosen for its capacity to remain in memory as a shape, going beyond the original design intention, or used to stimulate the capacity to recognise shapes (a capacity that is innate or based on culturally-rooted skills). In the electric coffee machine *CF32 Cafféconcerto* (1983) Fig. 2, Meda resorts to a morphological structure that is not bound to the original design intention based on tradition: as the name states, the object becomes a metaphor for theatre, and becomes the place where the coffee ritual becomes performance. In *La Granita TR10* (1988) Fig. 3, the designer chose to give an archetypal form (the house) and a bright colour to an ice-crushing machine, departing from established formal models to give it a playful meaning.



The *Rialto* telephone Fig. 4, designed by the architect Bandini Buti (at the time a collaborator of the Design Group studio) and launched by Italtel in 1979, unmistakably recalls the famous Venetian monument, both in its name and in the original bridge shape that adapts to the configuration of the telephone receiver.

The tendency to imitate organic forms is another widespread design expedient that some scholars have interpreted as typical of periods of uncertainty and transition, when it becomes necessary to rely on the pleasant reassurance offered by familiar forms.

In contrast to the prevailing rationalism, the recourse to naturalness is also a matter of ideological choice, as in the case of the Eames who, showing great scientific interest, achieve a sort of

Fig. 4
Bandini Buti and Design
Group, *Rialto*, Italtel, 1979
© Archivio Fondazione
Isec.

artificial organicity for example in refining the technique for steam bending plywood. In a sort of uninterrupted *unicum* within their rich and varied design production, in 1946, having developed a specific division in collaboration with Evans Products to experiment with bent plywood with an eye to mass production, they designed a birch and ash shell for a radio, *Radio Enclosures*, which was produced for different companies through 1952. The soft form, but above all the choice of warm natural woods, both for the outer shell and the front panel (shaped for structural purposes with the same ashlar pattern used in the *Case Goods storage system* and later in the *Eames Storage Units collection*), give the appliance a domestic character.

The natural metaphor goes beyond the banal imitation of forms to expand to the analysis and reproduction of operating mechanisms in many technological products designed by Marco Zanuso, which express “a controlled organicity adapted to the new technological resources” (Burkhart, 1994, p. 29). In the *Grillo* telephone, produced by Sit-Siemens, Zanuso repropose the theme of organicity, understood like Dorfles to be “a happy harmony of forms [...] in the sense of a natural and spontaneous quality of the constructive line” (Dorfles, 1971, p. 11), without neglecting the aspect of transformability inferred from the biological world. The *Grillo* and the Brionvega portable radio (*TS 502*, 1964) Fig. 5-6 express the idea of the composition of mobile parts arranged in different configurations, shifting the object from the state of non-use to that of use, in other words associating the concept of ‘on’ with the opening of the object, and ‘off’ with its closure.



Fig. 5
Marco Zanuso and
Richard Sapper, *radiocubo*
TS 502, Brionvega, 1964
© Brionvega.



campagna pubblicitaria del telefono GRILLO

per presentare al pubblico italiano il nuovo telefono - Grillo - è stata predisposta una campagna pubblicitaria che si articola in diversi mezzi e che viene attuata nel corso dei mesi autunnali. Nelle immagini seguenti sono sintetizzati alcuni dei motivi ideati per questa campagna che fanno da cornice allo slogan - Grillo, il telefono in palma di mano -.

manifesti

numerosi manifesti murali ci presentano questa immagine femminile, i cui capelli dorati sono posti in evidenza dal controllo, che per quasi faccia uscire il Grillo — in palma di mano — incontro al passante.



Fig. 6
Marco Zanuso and
Richard Sapper, Advertising
campaign of the
telephone *Grillo*, Sit-Sie-
mens, 1965 ©Archivio
Fondazione Isec.

Harbouring the same intention of softening the impact of harsh technology and giving it a poetic dimension, designer Oki Sato designed the *Hanabi* lamp (2006) for Nendo, in which the petals that make up the diffuser, made of shape-memory alloy, open up when heated by the light source. The lamp, which changes its morphology as a result of the heat, enters into a relationship with the user and with space mediated by the dimension of time, underlining the narrative-transformative aspect of the object that evokes a harmonious relationship between inanimate things and natural processes, giving technology a magical aspect.

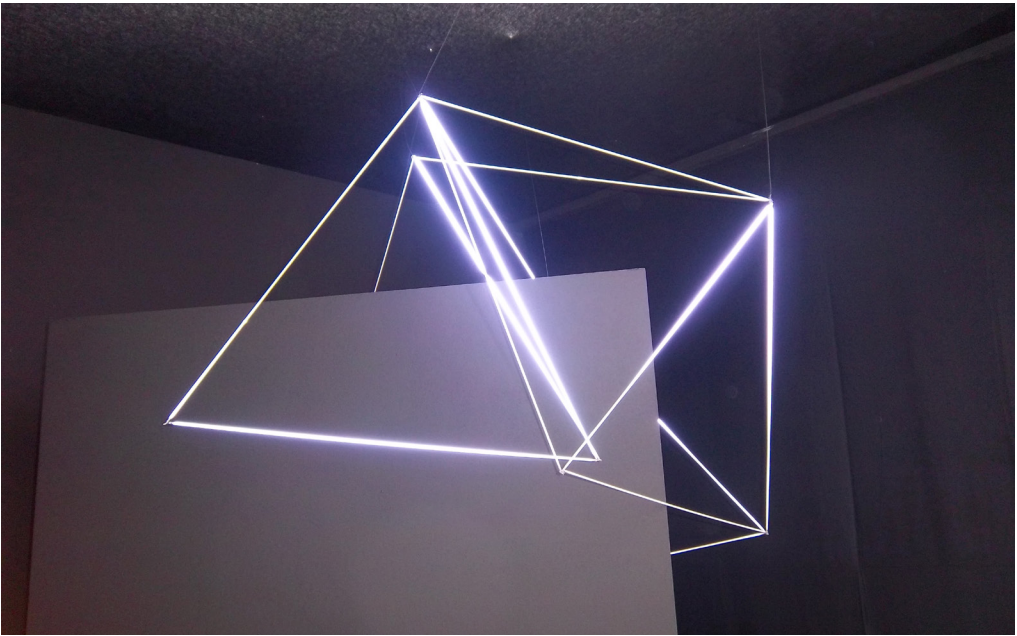
Technological-magic and futuristic imagery are the *leitmotif* of Denis Santachiara's entire oeuvre. The designer has always used an incandescent mix of different technological and sign contexts (for all his projects) - think of his first important exhibition-manifesto *La Neomercé. The Design of Invention and Artificial Ecstasy* (1985), but also *Principia. Rooms with the Riches of Upcoming Art* (2011) with which he sought to underline the criteria that govern disciplinary territories and types of creativity, all related to technology. Fig. 7-8-9



Fig. 7
Luca Pozzi, *Raymond's Three*, exhibited at *Principia. Rooms with the Riches of Upcoming Art*, curator Denis Santachiara, Milano 2011 © Miro Zagnoli.



Fig. 8
Manel Torres, *Fabrican Spray-on Fabric*, exhibited at *Principia. Rooms with the Riches of Upcoming Art*, curator Denis Santachiara, Milano 2011 © Miro Zagnoli.



The same futuristic point of view was taken into account for the children's camera (1958) designed by the Castiglioni brothers and commissioned by the Ferrania company: guided by a direct "fantastic allusion to the world of science fiction" (Polano, 2001, pp. 139-140) to give life to an unusual form and more favourable advertising feedback, the device nevertheless failed the market survey test and never went into production. The *Black ST201* television (1969) by the duo Zanuso-Sapper Fig. 10 was more successful. Balanced between a techno-futuristic approach and aesthetic *camouflage*, its cubic configuration responded exactly to technical engineering requirements, while its reflective acrylic surfaces made it an enigmatic object when turned off, enveloped in an *aura* of surreal perfection, camouflaging itself to the point of disappearing into its surroundings.

Fig. 9
Carlo Bernardini, *Ecliptic Orbit*, exhibited at *Principia. Rooms with the Riches of Upcoming Art*, curator Denis Santachiara, Milano 2011 © Miro Zagnoli.

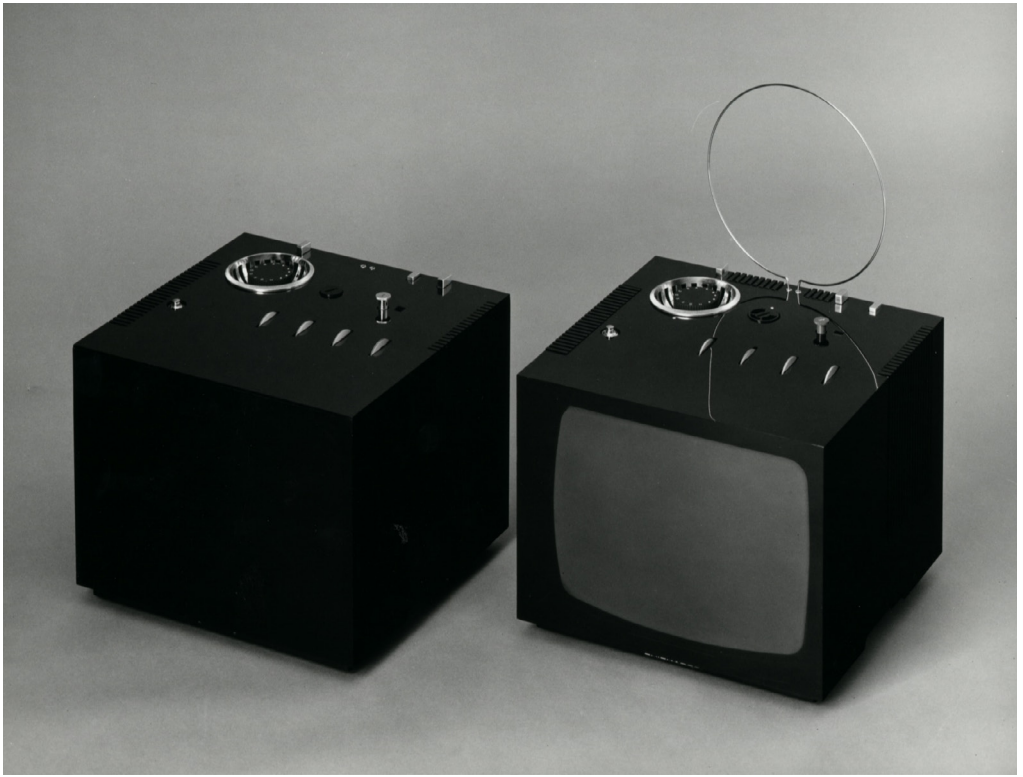


Fig. 10
Marco Zanuso and Richard Sapper, *Black ST201*
television, Brionvega,
1969 © Brionvega.

The act of exhuming forms and materials from the past (mostly related to the universe of craftsmanship) to disguise extraneous elements in the domestic sphere (for example the first radio cabinets and televisions built into consoles) is rather common, but the appeal to memory, understood as a reference to persistent forms drawn from a collective container of archetypal images, is certainly a more subtle stratagem, briefly mentioned in the previous analysis of the architectural metaphor.

The manipulation of archetypes that underlies the work of Naoto Fukasawa and Jasper Morrison in *SuperNormal*, for example, represents an attempt to strip the superfluous from the object in search of authentic form, based on the mechanism of *déjà vu*. The design process that investigates the structural construction of objects - which display a contemporary language in their final form - is well expressed in the wall-mounted CD player designed by Naoto Fukasawa for Muji (1999). Fig. 11



We might evoke the poignancy of simplicity associated with an instinctive or unconscious affordance which the designer has defined as a response “without thought” : based on the similarity between the rotation of a CD in a player and the rotating blades of a domestic extractor fan activated by pulling a simple cord, the designer has configured the CD player as a unit very similar to traditional domestic air extractors, which can also be activated by pulling a cord, inviting the user to repeat a gesture she has already learned with other household appliances. The tendency of a certain type of design to reinvent the past by voluntarily combining different elements to produce a sort of “emotional archaeology” based on the imagination, on the “nostalgia effect”, with the purpose of provoking a short-circuit of memory, a false recollection, is also related to this method. This is the case with certain household appliances, such as Smeg’s collection of refrigerators inspired by the 1950s or Roberto Pezzetta’s Oz refrigerator for Electrolux Zanussi (1998), which adopt the softness of organic forms in an attempt to mitigate the impact of household appliances in the home through the evocation of iconic scenarios.

Domestication and Virtual Technologies

As Umberto Eco writes: “When I perceive a shape I react to a geometric structure, and on the basis of the phenomenon of primary iconism I am able to grasp a similarity with other objects of the same kind of which I have already had experience or of which a cognitive type has been transmitted to me in an exact way” (Eco, 1997, p. 342), meaning by cognitive types constructions based on culture, conventions but largely on the determinations of the stimulated field. From the perspective of Gibson’s (1999) ecological psychology, what we grasp of the object are those traits that directly excite the nerve endings, so it is the object itself that offers us a vision of its preferential aspects. This stimulus could be considered as a sort of affordance, more or less intentionally incorporated by the designer or the craftsman, in order to send messages within the object-user relationship.

But what happens when technology loses its materiality to become ephemeral, when it is no longer concerned with geometric structure and sensitive elements? Does it still make sense to talk about affordance when the user-object relationship shifts from the physical to the virtual plane?

As the domestication framework shows us, talking about technologies certainly means considering their objectivity but also their nature as a medium.

The answer to these questions can be provided by interaction design, which shifts the focus to the interface and to the usability of technologies, no longer considered as physical prostheses but as tools that can dialogue with the user. After all, as Norman (1988, p. 19) argued back in 1988, one of the fundamental principles for an effective interface, especially in the digital sphere, is the use of a “metaphor” (supplemented today by idiomatic paradigms) that refers directly to an action to be performed.

Fig. 11
Naoto Fukasawa, CD
player, Muji, 1999 ©
Hidetoyo Sasaki.

Rosa Chiesa

She is RTDb Researcher in Design at Università Iuav di Venezia. Architect, she obtained her Ph.D. in Design Sciences at Università Iuav di Venezia in 2012. She is a member of AIS/Design, the Italian Association of Design Historians, and a member of the scientific committee of Fondazione ISEC, the Institute for the History of the Contemporary Age.

Paola Proverbio

She has a Degree in Architecture and a Ph.D. in Design Science. She teaches courses in design theory and history at the Università Cattolica del Sacro Cuore. A member of AIS/Design, the Italian Association of Design Historians, she is also Associate Editor of the online magazine *AIS/Design. Storia e Ricerche*.

In this perspective, technological objects acquire a new status based on their performance and on the experience they provide to the user, which is increasingly concerned with the user herself (user-driven innovation) (Faulkner & Runde, 2009, p. 454).

Interaction with new technologies, contrary to what was initially postulated in the interpretative model of domestication, is no longer concerned with the domestic sphere, as technologies cross the boundaries of private space and pervade every temporal interval.

Considering that the field of interaction is constantly expanding, the reflections expressed herein are intended to stimulate further exploration of how the experience of “domestication” may potentially prove useful in projecting interaction design beyond the concept of affordance, whether understood *tout court* or as perceived affordance, typical of digital interfaces.

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The Open Debate section in issue No. 77 features a selection, curated by professors Erik Ciravegna, Valentina Gianfrate, Roberto Iñiguez Flores, and Laura Succini, of the most interesting and innovative works presented at the 8th International Forum of Design as a Process *Disrupting Geographies in the Design World* held in Bologna in June 2022.

It has been 15 years since the constitution of the *Carta di Torino* Manifesto and the foundation of the Latin Network for the Development of Design Processes. 15 years of intense effort to promote the culture of systems and processes as a “different scientific outlook” compared to the culture of the industrial product destined to the capitalist consumer market.

Emptiness is just as important as fullness
(Salvatore Iaconesi, NOT Nero, May 2002).

This issue is also dedicated to the memory of Salvatore Iaconesi (1973-2022), remembering and valuing the rich heritage of art, beauty, thoughts, words and actions that represent the fullness that remains after his departure. The design community rallies around Oriana Persico with the aim of generating new rituals for the contemporary human beings.

Flaviano Celaschi

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