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AUTHOR'S DECLARATION

This text represents the submission for the degree of Doctor of Philosophy at IUAV, University of Venice in Design Sciences. I confirm that the work presented here is my own. Where information has been derived fromother sources, I confirm that this has been indicated in the thesis. During the period of registered study in which this thesis was prepared the author has not been registered for any other academic award or qualification. The material included in this thesis has not been submitted wholly or in part for any academic award or qualification other than that for which it is now submitted.

Melani De Luca

ABSTRACT

This research is positioned in the field of graphic design and seeks to investigate the working processes in visual identity projects and their augmentation through Machine Learning (ML). It defines identity as the visual elements that, together, create an atmosphere around a client, involving its values and views of the world and society. Through a deep focus on the creative process, this thesis proposes functional approaches to integrate the designer's perspective on the development of new digital tools. My study reveals fruitful ways to augment identity design through ML rather than replace designers through automation.

Since its blooming during the Industrial Revolution, visual identity remains the highest-order project in the discipline of graphic design. The parallel evolution of graphic and information technology has undergone numerous phases in which visual identity structures have become more dynamic, and its impact on society has grown along with the designer's responsibilities. Increasing integration of automation into graphic design in the twenty-first century, as well as potential future developments in ML, represent new challenges for professionals and researchers. Investigation into the intersection of ML and graphic design has been led mainly by computer scientists, leading to misplaced assumptions of creativity. At the same time, research into graphic creative processes is limited. My research addresses these deficiencies, and the gap in the existing literature on the conjunction between graphic design theory and practice, by involving practitioners in the evaluation and proposal of novel design tools. Moreover, it creates a direct link between software development and the actual needs of graphic designers. The novelty of this research lies in the intersection of design methodology, visual identity and ML. Research on design processes is well established in other areas like architecture, industrial design and software development. An understanding of tools and concepts from these fields helps to investigate the possibilities of integrating ML into the design process. Three main questions are addressed in the research:

- Is it possible to find coherent working methods in visual identity projects?
- What are the most critical phases for the designers in visual identity projects?

– How can these be augmented through ML?

To answer these questions, I utilize grounded theory methodology, complemented by literature review, to construct a conceptual framework rooted in the expertise of practitioners. By conducting semi-structured interviews with a sample of twenty graphic design studios, I confirmed that they employ consistent and coherent working methods and that ML has the potential to help augment critical phases in the visual identity process. My findings are further explored via non-participant observation that, in conjunction with the interviews, has led to a primary hypothesis subsequently tested through a within-subject design survey. My findings collectively provide a series of propositions that constitute the basis for a concrete ML implementation proposal. The definition of a replicable conceptual framework that incorporates the shared semantic cognition of design teams into an ML recommendation system constitutes the main contribution to the knowledge offered by my thesis.

KEYWORDS

visual identity, design methodology, AI, ML, design process, augmentation, automation

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Before delving into my research, I find it necessary to establish a premise regarding the technological aspects it encompasses. My research began in the autumn of 2020, right before the advent of mainstream AI generators in the creative domain. Considering the release dates of some popular text-to-image generators (*DALL-E*, first released in January 2021, *Midjourney*, first released in July 2022, *Stable Diffusion*, first released in August 2022), it becomes evident how the subject of my thesis evolved during the course of my work. An even more prominent game-changer has been the recent integration of generative AI into applications specifically aimed at graphic designers, such as *Figma* and *Photoshop*. *Figma* started integrating AI plugins in October 2022, whereas *Adobe* first released *Photoshop AI* in May 2023. As a result, AI tools now serve both professionals and amateurs, enabling diverse creative endeavours such as the generation of images and visual art (Nairn & Matthews, 2023). While I had anticipated that the convergence of graphic design and AI would gain importance in the coming years, innovations in the field are occurring at a rate faster than ever before (Tang et al., 2020). These developments have immediate implications for my work that must be considered while reading it.

Particular consideration needs to be taken when reading the interview chapter, as it expands during a timeframe that took place from October 2021 to May 2022. During that period, AI in creativity was beginning to gain relevance on a bigger scale, with many designers either unaware of it or lacking personal experience in this domain. This is refiected in my interviews, in which only two studios were already actively working with AI. This contrasts with a recent study by *Adobe*, which reports that only 19% of the surveyed designers indicated that they have not yet employed generative AI tools in their work (Offerman, 2023). The majority of the designers in the Adobe study have used image generators such as *DALL-E, Runway ML, Stable Diffusion or Midjourney.*

To avoid infiuencing the designers during my interviews, I deliberately kept from asking about AI directly. Instead, I inquired about their vision for the future of graphic design, the aspects of the design process they would like to improve, and the tools they foresee as necessary or desirable for the future. The insights I gathered – which sometimes touched upon AI directly and sometimes indirectly – aided me in establishing the appropriate con-

nections with the latest technological advancements in the field. My research generated specific insights into AI that might have been differently addressed if it had been conducted more recently. Nonetheless, as previously mentioned, my primary focus was on comprehending what changes designers desire within their process, rather than directly obtaining their opinions on AI. Additionally, it is important to consider that due to the novelty of the field, the ramifications of introducing AI into graphic design are still a subject of speculation and exploration. The boundaries of appropriate technological intervention in creativity continue to be debated (Nairn & Matthews, 2023). My thesis aims contributes to the exploration by providing direct insights from graphic design practice. It places particular emphasis on practitioners who would ultimately use AI, an aspect that has received comparatively less attention so far (Meron, 2022). While I account for the latest developments in generative AI, the insights I have generated in this thesis go beyond specific AI tools and approaches, to maintain relevance for graphic design practitioners into the future.

I

THE CONTEXT

Chapter 1 introduces the context of this research. An overview of the current state of visual identity is presented, alongside literature on the intersection of visual identity and ML technologies. The literature review privileges problematics and the latest developments in identity design, with particular reference to graphic design practice. Reviewing the existing literature in the field reveals two significant gaps: one between graphic design theory and practice, and another in the lack of studies on ML technology from the designer's perspective. These gaps delineate the angle of my research, which aims to address these deficiencies. The chapter ends with a clarification of the main terms used in this work (graphic design, visual identity, artificial intelligence (AI), machine learning (ML), augmentation and automation) through an extensive glossary.

1.1 Introduction

The research in this thesis derives from my graphic design career and interest in questioning existing working processes within the discipline. It presents an analytical investigation framed around the practitioner's perspective, aimed at improving the process in visual identity projects. A basic assumption of this analysis, grounded in the perspective of 20 practitioners and contemporary design theory, is that parts of the process can be augmented through Artificial Intelligence (AI), more specifically Machine Learning (ML).

Graphic design was born from a convergence of industrial processes and mass media communication (Zhang, 2022, Sinni, 2018, Cabianca, 2016, Henrion & Parkin, 1967). Its evolution around the rapid growth of corporations in the Industrial Revolution made visual identity (also known as corporate identity, brand identity or branding) its primary project category until today (Dziobczenski & Person, 2017). Choosing visual identity as the centre of this research has therefore been an instinctive choice that aims to realistically represent graphic design practice. A widespread fascination with visual identity and its artefacts led to numerous works that describe it and critically analyse it. In 1967, Henrion and Parkin described visual identity as:

> [...] the context of a specific corporation that is visualized by

> a totality of pictures, ideas or reputations of a corporation in the mind of the people who come into contact with it. People build up their idea of the corporation from what they see and experience of it. An image is therefore an intangible and essential, complicated thing. (Henrion & Parkin, 1967, p.7)

While this description is still accurate today, and the basis of identity design has remained the same over the years, the introduction of new media adds new layers. In the last 20 years, identities have become more dynamic and there has been a shift from print to digital media (Guida, 2014). According to Felsing (2010), the shift towards more dynamic identities reflects the fast-changing context of our society. Flexible identities can maintain coherence, as the constant aspect provides stability, while the changing variables provide dynamics and adaptation. Increasing automation in graphic design, especially recent developments of algorithmic augmentations through generative AI, represents new challenges for the profession (Meron, 2022, Armstrong, 2021, Giaccardi & Redström, 2020, Kaiser, 2019, Cook and Robyn, 2019). More specifically, these technologies grant a generative system a degree of creative autonomy by framing the interaction between the user and the system as a co-creative process (Berns et al., 2021).

Design scholars argue that the lack of a coherent graphic design discourse around the matter may be obstructing the integration of AI and ML research into graphic design (Stoimenova & Price, 2020). Research that intersects AI and ML in design has been led mainly by computer scientists (Meron, 2022). From a designer's perspective, the shortage of scholarly engagement by graphic designers in AI and ML research has resulted in computer scientists defaulting to purely functional approaches to design (Meron, 2022). Moreover, potential users of ML applications in design, who are domain experts, have limited involvement in the process of developing these tools (Amershi et al., 2014). Graphic design is known to be a relatively new field with an underdeveloped research corpus (Meron, 2021, Harland, 2011). A lack of engagement with the possible augmentation of the design process through AI and ML increasingly weakens the field and leaves practitioners unprepared for future developments in their industry. These arguments are additionally reinforced by my personal experience working as a graphic designer. I observed that while graphical artefacts can adapt to the latest media, the creative process has remained

rather artisanal and unchanged through the years. The discussion around the future of graphic design is not part of the daily studio life of the graphic designer, due to time constraints. By personally exploring these issues, I found particularly fertile conditions offered by the inquiry of the relatively recent discussion of inserting AI and ML in the visual identity process.

Moreover, with the goal of minimizing human labour, AI tools have generally been designed to work autonomously (Dafoe et al., 2021) without explicit human interventions, which revives the old debated on whether a machine can be a viable substitute for a designer (Masure, 2023). Scholars argue that even tools labelled as interactive may not consistently provide designers an active role in the design process (De Peuter et al., 2023). Instead, they propose a shit towards design tools operating as assistants, collaborating with and supporting designers while still empowering them to actively participate and control the design process (De Peuter et al., 2023). This research therefore has the purpose of supporting graphic design practice, and is based on a deep understanding of design as an activity of inquiry and action. By approaching the epistemology of practice, it recognizes the tacit knowledge of the graphic designer in order to foreground internal process structures, procedures and activities. To better support designers' work and to develop new collaborative technologies, my research wants to understand how the collaborative practices of designers enable creativity in their daily practice (Vyas et al., 2013). The aim of my research, and its essential contribution to knowledge, is to offer a conceptual framework that explores efficient ways of introducing ML into the visual identity design process. My framework contributes to both the academic discourse and the future development of graphic design tools. It furthermore gives an overview of the insights, preoccupations and expectations of some of the major design studios in the Western hemisphere. It distils these insights into a set of practical guidelines that provide clarity on ongoing developments at the intersection of the two fields under consideration.

Rather than focusing on AI and ML as a technology, my thesis investigates the visual identity design process to provide insights into the needs and perspectives of designers. My research contributes to the field of graphic design while also serving as a guide for computer scientist and developers to create new ML tools that address designer's needs. A deep analysis of the process unveils

which parts are best suited for augmentation. Moreover, my research contributes to bridging the gap between design theory and practice through the integration of direct knowledge from practitioners and literature review.

1.2 Terminology

In the previous section, I located the primary focus of my study – the integration of ML into the field of visual identity. I presented an overview of the content and current state of research of the topics under investigation. In this section I proceed by suggesting a definition of the main terms that are most relevant in my research: *graphic design, visual identity, artificial intelligence (AI), machine learning (ML), augmentation' and automation.*

1.2.1 Graphic Design

This research focuses on the process and active engagement of graphic design practice, respectively my definition will delve into these core aspects of the discipline. However, this is not straightforward as graphic design is widely recognized for its diverse artefacts, spanning from book layouts and road signs to cereal boxes and smartphone interfaces (Falcinelli, 2022). These artefacts are embedded in the visual culture of everyday life, infiuencing the appearance of products we use and the format of the information we consume (Barnard, 2008). Consequently, lacking the specificity of a medium, graphic design is frequently identified by its tangible results rather than the process or sense of disciplinary practice (Blauvelt, 2003; Harland, 2011).

Considering Julier's statement "No one definition of design is enough" (Julier, 2017, p.2), for this research, I embrace a two-part definition of graphic design, encompassing both its activity and scope: In this research, graphic design is considered an activity that involves using intuition, also defined as purposeful pattern recognition, to solve unique design problems. It imposes order and structure on the content by transforming concepts, text and images into visually structured forms across media. While graphic design is essential for effectively conveying a message, it equally demands to set itself apart from other contents, adding a distinctive and unique quality to the communicated message.

My definition relies on the term 'purposive pattern recognition', coined by Langrish and Abu-Risha (2008) to describe decision-making in the design process. In their paper on 'The Nature of Visual Choice in Graphic Design' they argue that neurons in the human brain can activate muscles before the subject is consciously aware of the decision. As a mechanism for coping with quantities of sensory information, the brain utilizes remembered data and then presents the conscious mind with experience. They summarize this mental activity applied to finding graphical solutions as pattern recognition.

The concept of design patterns was introduced in the field of architecture by Christopher Alexander et al. (1977). They developed a collection of architectural problems that frequently occur and described the core solution to these, problems. This collection of patterns serves architects from the continuous rediscovery of principles (Lakshmanan et al., 2020). Experienced graphic designers undergo a comparable process, drawing on their accumulated expertise to intuitively make graphical choices. With a vast store of knowledge regarding the general requirements for their designs, they recognize patterns the moment they formulate a design problem (Langrish & Abu-Risha, 2008). The ability to abstract or idealize allows for addressing new situations of the same type (Pavlidis, 1980). Recognizing the significance of this aspect, I explore it further in Chapter 4.3.4.

Defining graphic design through its process and management of patterns in graphical problems establishes a direct connection with ML systems. This is fundamental for this research which aims to augment the design process with ML. At its core, ML is a process of building models that learn from data to recognize patterns (Lakshmanan et al., 2020). Pattern recognition in ML applies to anything that can be catalogued and distinguished from another. According to Fieguth (2022), it involves establishing a specific identity, referred to as the pattern 'class', based on measured information. The whole purpose of pattern recognition consists of assigning an object to a class. However, what ML calculates is not an exact pattern but its statistical distribution (Pasquinelli, 2019).

Similarly, through their experience, graphic designers recognize patterns in their work, establishing a classification system in their minds. This allows them to draw connections through experiences. However, it is essential to note that every design project ultimately needs to have distinctive qualities that complement the communicated message. ML, as well, aims to generate future

content that reflects the relationship between the initial content in the dataset and their associated labels (Pasquinelli, 2019).

Despite these parallels, it is crucial to acknowledge that no matter how autonomous ML agents might become, as digital machines they are completely different from humans. Consequently, they possess qualities that cannot be entirely compared with the processes employed by graphic designers (Korteling et al., 2021).

Within my definition of graphic design, I emphasise the importance of order and structure to optimize content. I base this on Ambroses et al.'s (2020) interpretation of graphic design. They emphasise that the effectiveness of conveying a message to the audience largely depends on the structure created by designers. White further elucidates this:

To design means to plan. The process of design is used to bring order from chaos to randomness. Order is good for readers who can more easily make sense of organized messages (White, 2002, p. 1). This draws another parallel with the functionality of ML, which, in turn, focuses on determining hierarchical structures underlying a given collection of objects (Ryatard S. & Robert E., 1981). Structuring and training datasets is considered a laborious and delicate task, as it constitutes the most crucial parameters that control the algorithm (Pasquinelli, 2019). An example is the nine years of manual labour that was necessary to label the 14 million images of the training dataset ImageNet, which was created in collaboration with Google, Amazon, Princeton, and Stanford universities. In recent years, the process of creating datasets has seen significant automation and acceleration through techniques such as transfer learning and fine-tuning (Mueller et al., 2020).

The second part of my definition focuses on the scope of graphic design, emphasizing its objective to convey messages and effectively differentiate them from other content. To delve into this further, I rely on Hollis' (1994) proposal of three basic functions of graphic design that have been consistent over time. First, identification – graphics defining something. Second, information and instruction, which stand for graphics, create structures between elements, emphasizing hierarchies and meaning. The third function is representation and promotion, where graphic design is employed to create visuals that capture the attention of spectators and make a message memorable. These functions emphasize the core activities of graphic designers, the transformation of concepts and ideas into visual, structured representations.

Hollis's first function, Identification, emphasizes how graphic design can provide a clear identity to define something. This aligns with societal norms, as Foucault (2007) notes in The Order of Things, we are accustomed to categorizing the diverse profusion of things around us to distinguish between "the same and the other". Graphic design adds an additional layer to reinforce this distinction. It achieves this by giving character and establishing clear communication boundaries, adding a mental categorization of things for individuals. Each graphical choice stands for a set of values that are meant to be interpretable by the audience.

To better understand this aspect, it is crucial to consider that graphic design, to a large extent, involves both the commissioner and the audience. They are therefore encoders and interpreters of messages in the communication process. Designers act as mediators between corporations and their consumers. As the anthropologist McCracken (2013) explains, designers are cultural interpreters who acknowledge the culture and the social world in which they work. For this purpose, they are valuable to corporations since they enable communication with consumers. Furthermore, as sociologist Remotti (2017) points out, identity is not a given but an acquired attribute, it is made recognizable through the delimitation of boundaries. In graphic design, these boundaries are the choices that designers make from font weight and size, colours, images, the positioning of the elements and so on. In that sense, Kinross (1985), argues that graphical choices cannot be neutral, and pure information exists only in abstraction. He continues by saying that as soon as a designer begins to give a concrete shape to an artefact, a process of infiltration begins. Nonetheless, there is a distinction in the amount of character an artefact can have, for example, the difference between design for information, like train timetables, and design for persuasion, like identities or advertising above all. Kinross argues that the distinction between different categories of graphical artefacts is not a clear one.

This brings me to Hollis' second function of graphic design – information and instruction. This aspect involves structuring and creating hierarchies within a message, which holds particular significance in information and instructional design. Despite Hollis' categorization, structuring and organizing content constitutes the basis of graphic design and applies to every graphical function. Graphic designers are simultaneously message and form builders. As Meggs points out, this task involves forming an intricate com-

munication message while building a cohesive composition that gains order and clarity from the relationship between the elements (Meggs, 1997).

Hollis' third function of representation is particularly relevant for this research and focuses on design to captivate attention, as is the case in the context of visual identity. This aligns closely with the emphasis on innovation in graphic design as highlighted in my definition above. The persuasion aspect involves more than just conveying a message; it requires making the message stand out by infusing it with distinctive and innovative qualities. It is the process in which the source attempts to share or change the attitudinal state of the receiver (Krampen, 1965).

This perspective gains significance when considering that graphic design originated during the Industrial Revolution. In the nineteenth century, graphic design became a mass medium, infiltrating various aspects of life such as shops, theatres, trains and all goods and their advertising (Jobling & Crowley, 1996). The birth of graphic design as a profession stems from the separation of craftsmanship from typographic activities, such as the distinct roles of the designer and the printer (Falcinelli, 2022). It also emerged as a necessity to differentiate products. As Sinni (2018) highlighted, objects rarely possess sufficient self-identity to stand out independently. The brand thus serves as an extension that addresses the limitation of the object as a commodity. As Henrion and Parking (1967) asserted, in the era of mass production and the expansion of corporations, corporations necessitated effective communication for their products in an increasingly crowded marketplace, leading to the expansion of graphic design into a more prominent active role. Boorstin and Will (1992) explain that this led to an increasing importance of the image with each decade of the twentieth century. Images in this sense are more than a trademark, a design or slogan as they expand to studiously crafted personality profiles of individuals, institutions, corporations, products or services. These images – which include visual or corporate identities – have an overshadowing power; they can be more successful and 'cover up whatever may really be there' (Boorstin & Will, 1992, p. 187).

Since the 1980s, graphic design, particularly in the form of corporate identity, has become an integral aspect of commercial goods (Julier, 2017). This evolution has required coordination between physical attributes of products, emotional values and digital

presence. This creates what Julier (2017) calls the 'cultural circuit' of capitalism. Regarding the relation between the tangible and intangible aspects graphic design stands for, I rely on Julier's explanation of the phenomena:

> [...], there is a constant exchange between tangible and intangible assets, and this is where design must be understood in three corresponding ways. First, it helps to shape those fixed, tangible resources to add value. Second, it plays a symbolic role in pointing towards sources of future value – things whose worth can be leveraged. Third, design is employed in the actual systems and technologies that facilitate processes of financialization. (Julier, 2017, P. 10)

Given the complexity of today's economic system, design is used to add value and simplify interaction through all the stages of the purchasing process. As Julier explained, graphic design involves tangible and intangible assets. Nonetheless, corporations are mostly portrayed through images that may not closely align with their activities. Consequently, these images contribute to the construction of abstract reputations with minimal direct connections to the corporations (Boorstin & Will, 1992). This has been problematized through the years, for example by Methahaven (2010) who contemplates the absence of real substance behind identities, defining them as 'uncorporate identities'. The primary challenge arises as images extend beyond merely representing products and delve into intangible values that surpass the products' significance. In many cases, this creates an absence of a real, tangible counter-value to the image, making it a currency in today's economic system.

Julier also highlighted the symbolic role played by graphic design. This helps to enhance explainability through signs and symbols that are understandable to humans. Symbols and icons are powerful visual elements that play a significant role in graphic design. They can convey meaning, facilitate understanding and transcend linguistic barriers (Riyanto, D. Y. & Sutikno, 2023). Symbols and icons serve as vehicles for cultural representation, enabling designers to communicate complex ideas and emotions that resonate with specific audiences (Agmeka et al., 2019). Peirce held that knowledge relies on the ability to manipulate signs, and it is the repeatability of the symbolic systems of classifying and relating that allows for the intelligibility of the thoughts of others

(De Villiers, 2007). This concept relates to AI and ML systems. Early AI pioneers asserted that symbols are fundamental to intelligent action and should thus play a central role in the design of AI (Santoro et al., 2021). Today, despite significant advancements, achieving a complete replication of human proficiency in using symbols with machines has not yet been realized (Santoro et al., 2021). Kambhampati et al. (2021) argue that AI systems need to develop symbolic representations that are interpretable to humans. Their motivation is that human-AI interaction should be structured for the benefit of humans – thus, the communication should be in terms that make the most sense to humans. Symbolic reasoning could therefore help solve explainability because humans communicate with signs and symbols (Prentzas et al., 2019).

1.2.2 Visual Identity

My definition of graphic design has incorporated various considerations related to identity and its societal role. It highlights how the visual representation of companies plays a central role in their existence and contributes to enhancing their value. Within graphic design, visual identity stands out as the primary project typology (Dziobczenski & Person, 2017, Sinni 2018), and is the focus of my research. As clarified above, the connection between visual identity and graphic design can be traced back to the inception of the discipline, which aimed to communicate and establish identities for commercial goods.

The concept of identity is explored in various fields, including philosophy, sociology, anthropology, psychology, marketing and design, each offering unique perspectives (Sinni, 2018). However, the concept of visual identity is very distinct, and the visual components of identity have been acknowledged as the most dominant factors since they represent the tangible share of identities (Simões, 2005). Visual identity is recognized through various terms, including corporate identity, brand identity or branding. Every variation of the term holds a distinct meaning and addresses a slightly different aspect of the task. Furthermore, the existence of multiple interchangeable terms has confused the industry and decelerated research in the field (Corazzo et al., 2020; Simões, 2005).

Given the complexity of defining visual identity, it will be an ongoing process in my thesis, since simply selecting one term over another will not address the issue accurately. I dedicate an entire section (see 4.3.1) to discussing the meaning of visual identity in comparison with other terms, with professional graphic designers. However, to provide an initial working definition or problematization, I refer to Martins et al. (2019), who created a classification of some of the terminology in use. They distinguish between three different concepts: corporate identity, which stands for the set of values that an entity assumes as its own; corporate image, which stands for the mental image of an entity by the public; and visual Identity which stands for the representation of the corporate identity through the use of visual signs. They furthermore introduce the term visual identity system to define how these visual signs are used together to achieve coherence and unity. This classification is particularly useful as it establishes relations between terms and demonstrate their interconnections. According to their definition, visual identity is integral to both corporate identity and corporate image, as the values of corporate identity are visually expressed. Meanwhile, corporate image also encompasses the visual aspect. In contrast, visual identity distinctly sets itself apart from the other two, focusing solely on the visual representation of identity. This perspective, centred on the visual aspects of identity, omits other components like behaviour or the more general communication around it (Simões, 2005).

While this perspective simplifies the understanding of visual identity, it may be overly simplistic. Depending on the studio or graphic designer, the term visual identity might be used, while being engaged also in the strategic communication aspect (4.3.1). I thus formulate my own definition of visual identity, considering the preceding discussion. For the purpose of this research, visual identity refers to all the visible elements of an organization used to represent it, which may or may not be connected to a broader corporate communication system. Additionally, I refer to Dowling's list of elements used in graphic design to establish an identity:

> [...] the organization's name, its logo or symbol, the tag line which often appears under the company name and logo, the house typeface, and the organization's colours. (Dowling, 1993, p.105)

Moreover, identities are often complemented by additional elements such as images or illustrations, ensuring a consistent and

coherent style. A case study displaying visual identity elements can be found in the cheFare identity system created by Parco Studio in 2023. Fig. 1 The visualization contains all the mentioned elements, and it provides examples of their interaction in some illustrative cases, such as posters or banners.

While the elements that constitute a visual identity have remained constant over the years, the manner in which these elements are managed has evolved. For instance, in the past, visual identity elements were treated statically, with the logo as the main focal point (Guida, 2014). In the last few decades, a more fluid and expressive visual language has emerged in which the graphical elements are organized within flexible systems (Felsing, 2010; Martins et al., 2019). As highlighted by Lorenz (2021), merely having a distinctive visual identity is no longer sufficient today. What is essential is the requirement for flexible visual systems to ensure coherent and efficient communication across various media. This also better relates to the expression of identity itself, which tends to evolve over time as the organizational context changes (Gioia & Corley, 2000).

Furthermore, today visual identities are mostly communicated through screens which enables images to be animated, made interactive and automatically adapted to the format, device, content and user (Lorenz, 2021). In many visual identities, nonetheless, the dynamism begins with the logo, which has a primary version but can be modified with different elements. While keeping the visual identity's essence, dynamic logos are able to generate complicity with the audience (Lelis et al., 2022). An example is Mudec's (Museo delle Culture di Milano) logo, created by Studio FM in 2015. Fig. 2

Mudec's logo has a primary version, but according to the context, additional elements can be added to create versions for various applications. Even in dynamic visual identities, the primary focus has historically been on the logo (Lelis et al., 2022). However, more recently, there has been a noticeable shift where equal attention is being accorded to other elements, making them dynamic as well (Martins et al., 2019). An illustrative case is Studio Dumbar's 2019 identity for Amsterdam Sinfonietta, where generative design was employed to visually represent music, rhythm and patterns. The dynamic content was used for posters, Fig. 3 business cards and the concert programs. Fig. 4 This example showcases a shift from logo-centric dynamic identity to one where the entire

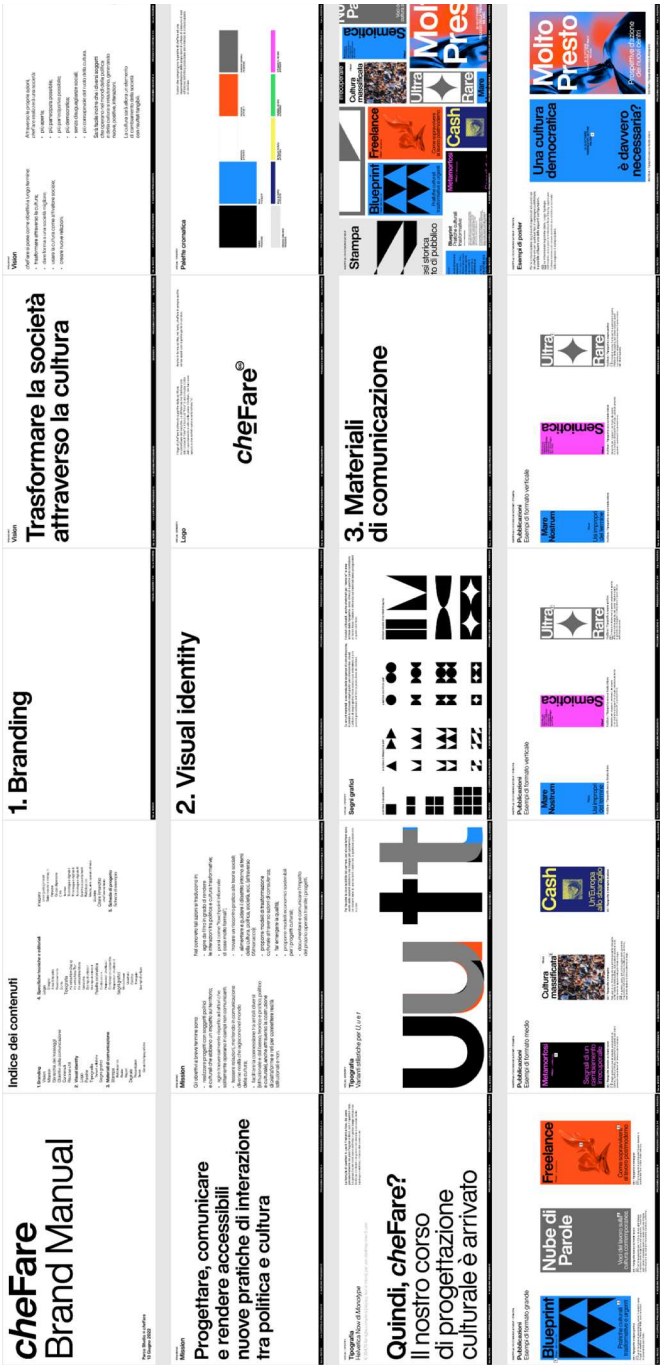

Fig. 1
cheFare identity guidelines,
Parco Studio 2023

content is dynamically engaged. The dynamic content was used for posters, business cards and the concert programs. This example showcases a shift from logo-centric dynamic identity to one where the entire content is dynamically engaged.

In such identities, the logo holds equal significance as any other element (Martins et al., 2019). Currently, the execution of dynamic identities primarily involves the development of generative design tools (Conrad et al., 2021). Generative design goes hand in hand with dynamic identities, and it involves designers crafting their tools or programs to explore different iterations of a design, surpassing the limitations of traditional design tools (McKnight, 2017). It is commonly used to bypass repetitive manual tasks and rapidly generate numerous similar design variations, offering diverse options. Thus, many designers become programmers crafting their tools (Rheiner & Eggmann, 2005).

This phenomenon is gradually being supplanted by generative AI, a technique capable of generating new content based on its input data (Feuerriegel et al., 2024). Designers are starting to integrate AI and ML tools, specifically those based on generative adversarial networks (GANs) to generate images for mood boards and other creative purposes (Chacón et al., 2021; Yadav, 2024). The enhanced dynamism in contemporary visual identity provides a fertile ground for further integration of ML tools into the design process.

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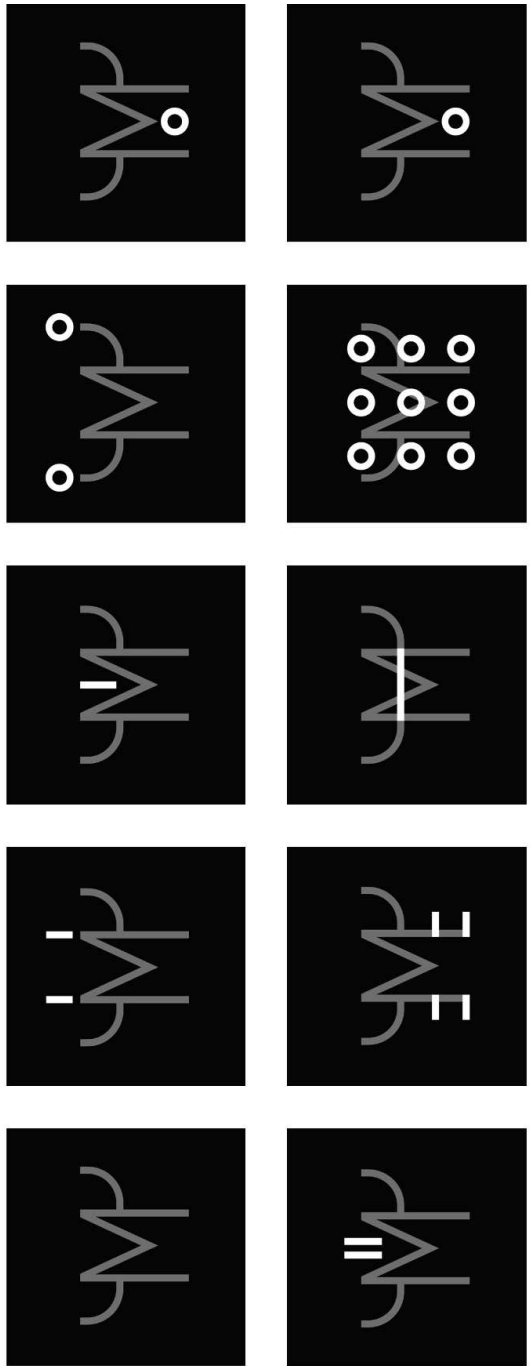
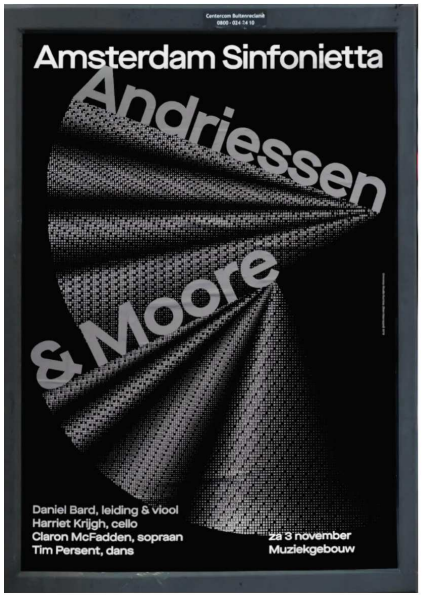
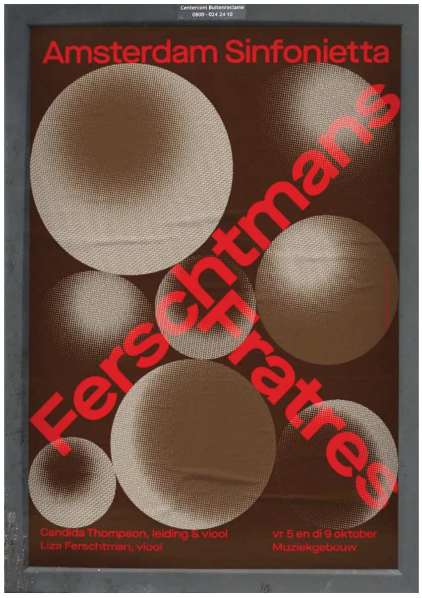


Fig. 2
Mudec (Museo delle Culture di Milano) logo, Studio FM 2015

Fig. 3
Amsterdam Sinfonietta, poster series
Studio Dumbar, 2019





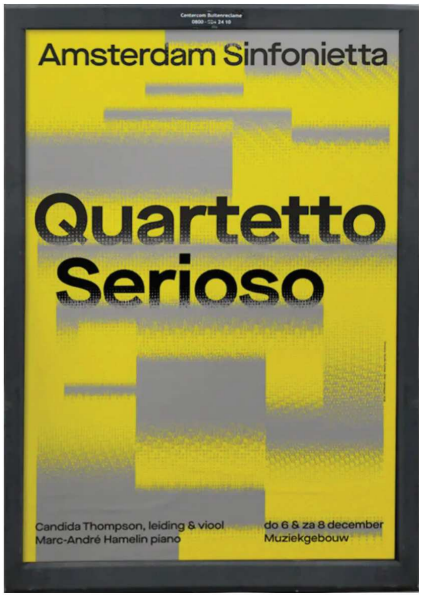


Fig. 4
Amsterdam Sinfonietta, concert program
Studio Dumbar, 2019

ground for further integration of ML tools into the design process.

The integration of AI, particularly ML tools, into dynamic identities holds significant potential for fruitful outcomes. By leveraging ML algorithms within dynamic identity systems, designers can enhance their ability to adapt and evolve visual representations in response to changing contexts and user interactions. While existing ML tools are not explicitly created for graphic design or visual identity projects (Meron, 2022), a re-evaluation of the graphic design process from an ML perspective can amplify the potential to replicate the process of natural selection. Only recently, more appropriate and tailored tools are being created for graphic design (Iram, 2023). This capacity enables and facilitates the creation of dynamic content through ML. Generative ML models have the potential to increase the variety of content and personalize content based on user preferences (Inie et al., 2023).

1.2.3 Machine Learning

In the preceding definitions of graphic design and visual identity, I observed favourable conditions for the intersection of these disciplines with Machine Learning (ML). ML is a subfield of AI, and it can be defined as the process by which algorithms are thought to recognize patterns in the world, through the automated analysis of extensive data sets (Greenfield, 2018). Fieguth (2022) describes pattern recognition as a process by which some inputs are measured, analysed and then classified as belonging to one of a set of classes. As mentioned in the graphic design section, this also occurs when designers are involved in perceptual processes where they sense, analyse, and recognize sensory inputs (Fieguth, 2022; Shih, 2010).

ML involves three fundamental operations: training, classification, and prediction, each intrinsically linked to pattern analysis. During the training phase, a pattern abstraction occurs, in which the algorithm learns to associate input with a certain output. Classification can be understood as pattern recognition, where new inputs are assigned to the corresponding output label. Finally, prediction can be understood as pattern generation (Schabacher, 2023). This process can loosely be linked to the way designers elaborate and develop content in their workflow. They begin by gathering input from clients and sources of inspiration, then elaborate on this information to visually represent concepts and ultimately create the final design output. Furthermore, as indicated

by Papanek (1988), designers attempt to rationalize their design process by developing rules, taxonomies, classifications and procedural design systems. He also highlights that in contrast, to machines designers also integrate intuition, sensations and feelings into their work process.

In ML, the recognition of patterns is:

> [...] considered to be the detection of feature complexes, which are (after a training phase) automatically assigned to certain categories. Pattern recognition is thus always accompanied by tasks of classification. However, it does not only concern the assignment of objects to already existing classes, but also the assignment of feature complexes to different classes, which are thus created in the first place. (Schabacher, 2023, p.131)

Pattern recognition in ML is applied to a broad set of problems such as object, text or face recognition. The most relevant for graphic design and visual identity is pattern recognition on images, which has improved dramatically in the last few years (Brynjolfsson & McAfee, 2017). Moreover, since the visual system is so dominant in human perception, a great deal of pattern recognition focuses on image related problems (Fieguth, 2022). The specific subfield of ML that primarily focuses on image classification is Deep Learning (DL) (Li, 2020). In Image classification and recognition, a DL system, characterized by an advanced neural network structure with enhanced learning capabilities, is seen as emulating the way the human brain responds to images and thereby analyses image data more comprehensively (Janiesch et al., 2021). To visualize the hierarchical relationship between those terms, I rely on Janiesch et al.'s. (2021) Venn diagram. Fig. 5

In ML, the algorithm improves its performance with accumulated experience in a specific task (Misilmani & Naous, 2019). This is achieved by applying algorithms that iteratively learn from task-specific training data. It enables computers to uncover hidden insights with complex patterns without being explicitly programmed (Janiesch et al., 2021). The process of correlating actual images with stored ones is fundamentally a human capacity that has been transferred to machines through research aimed at teaching computers how to see (Fahle, 1994). Research conducted by Fahle (1994) indicates that the learning process in humans takes place at different levels of pattern recognition with different time con-

stants. Object and pattern recognition, primarily based on memory, constitute the central factors in the learning of stimulus-specific features (Poggio et al., 1992).

To gain a deeper understanding of the ML structure, it is essential to distinguish between three types: supervised learning, unsupervised learning and reinforcement learning. Most applications on the market use supervised learning (Brynjolfsson and McAfee 2017). Supervised learning is also the primary focus of my research as it represents the main category of ML under consideration. As described by Dhanaraj et al. (2020), in supervised learning, an algorithm's learning process is completed with an instruction dataset. These algorithms are designed to learn through examples and labelled data. During the training process, the algorithm searches for the pattern in the input data to correlate with the desired output data. After the training process, the algorithm will take previously unseen data inputs and determine which label the new inputs will be classified as, based on prior training.

The objective of a supervised learning model is to predict the correct label for the newly presented input data (Jain et al., 2021). This is particularity valuable for my research, given the emphasis on understanding designers' knowledge and working methods. With supervised learning, there is an opportunity to shape an algorithm to mimic the preferred patterns in designer's working methods to foster fruitful collaborations with ML – this is the aspect of ML I target through my in-depth investigation of designers' working methods. However, training data for ML systems is considered a scarce resource since their production is labour, time and computationally intensive and therefore costly. For this reason, the same benchmark datasets tend to be used repeatedly (Schabacher, 2023). This becomes problematic if we consider that there is currently no accessible, specialized graphic design dataset available for training. This would necessitate creating a suitable dataset from scratch.

The other two types of ML require less human labour, as they deal with unlabelled data. As indicated by Jain et al. (2021), in unsupervised learning, the user does not need to teach or supervise the model. There is no correct output; the algorithm learns from the input data and discovers patterns and information to learn and group the data according to similarities. In this case, algorithms remain their very own product to help the user find the patterns that are contained in the dataset (Dhanaraj et al., 2020).

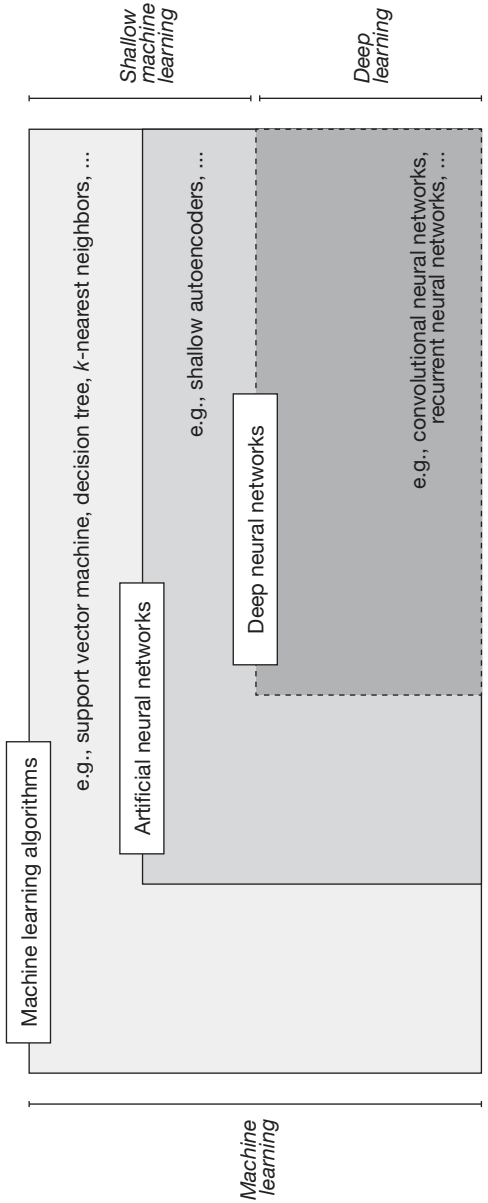


Fig. 5
Machine learning and deep learning
Venn diagram of machine learning concepts and classes

While this approach provides advantages in terms of time and costs, it is not suitable for my research as it relinquishes control over the outcome. My research aims to do the opposite and integrate the designers' perspective into ML.

A similar problem arises with Reinforcement Learning, the third type of ML. In this approach, the algorithm is feedback-based and learns to make decisions without relying on labelled data. The algorithm learns from experience, using a trial-and-error process (Jain et al., 2021).

Text-to-image generation, a supervised learning component, is significant in my research. It enables the conversation between textual and visual domains through labelled datasets with natural language that connects images and their descriptions (Gafni et al., 2022). Primarily employed for the generation of images based on textual descriptions, this process is linked to text-to-image synthesis and computer vision. Various ML models, such as generative adversarial networks (GANs), employ this capability (Agnese et al., 2020). These datasets offer the advantage of encompassing the classifications and descriptions provided by designers, aligning with their design conceptualization.

Visio-linguistic datasets were among the first that helped drive research in ML. They were usually created by having crowdsourced workers provide captions for images (Srinivasan et al., 2021). While explicit human-based captioning helps ensure the quality, the resulting datasets have been recognized as insufficient given that they are relatively small and expensive to construct (Elliott et al., 2017). Over the past few years, various alternatives have been explored to enhance the expansion of visio-linguistic datasets. An alternative method for the construction of such datasets involves the integration of Conceptual Caption datasets. This approach leverages caption text for images sourced from the web, resulting in significantly larger datasets than their predecessors (Srinivasan et al., 2021). An example is the Wikipedia dataset, linking images to substantial amounts of descriptive and explanatory text. A second alternative is fine-tuning, an approach to transfer learning in which the weights of a pre-trained model are trained on new data (Quinn et al., 2020). These strategies to enhance the creation of visio-linguistic datasets are valuable alternatives to human-based captioning and will be explored further in later stages of the research (see chapter 7).

This type of dataset is especially valuable in bridging the

intricate relationship between image properties and their verbal descriptions (Takmaz et al., 2024)–a daily activity in graphic design practice. Hence, visio-linguistic datasets, as my research will explore, hold particular significance for graphic designers who routinely classify and describe visual content. Additionally, establishing a common ground and consistent understanding of design representation is fundamental for productive collaboration. Without this shared understanding, collaboration among studio members by hindered, potentially slowing down work processes (Pei et al., 2011).

A further aspect of ML that must be addressed is the presence of various forms of bias that are integrated in the training data and the algorithms. Schabacher lists three levels in which biases can be found:

> Firstly, the implementation of already existing stereotypes in the AI systems (world bias), then the way the training data is produced (capturing, formatting, labelling) and, for example, whether it includes older (more conservative) taxonomies to save costs (data bias), and finally computational errors and "information compression" that make already existing inequalities even more unequal (algorithmic bias). (Schabacher, 2023, p. 132)

The implementation of world bias is particularly evident, especially considering that ML heavily relies on data generated by humans or collected via systems created by humans. Consequently, any biases present in humans are likely to be part of datasets (Ntoutsi et al., 2020). Data collection often suffers from biases that lead to over or under-representation of certain groups. Especially in big datasets that have not been crated with rigour or statistical study, but are the by-product of other activities with different goals (Barocas & Selbst, 2016). When these datasets are predictively used to aid decision-making, it can have real-life consequences that may disproportionately harm Minorites (Barocas & Selbst, 2016). Consequently, there is a growing body of literature dedicated to understanding and addressing the issue of bias (Fu et al., 2020).

ML biases create another intrinsic connection with graphic design. As pointed out by Pater (2016), a design cannot be separated from the values, assumptions and ideologies in which it was created. Communication is therefore a volatile process, prone to misinterpretation due to cultural biases. Recognizing that communication is not neutral, but infiuenced by cultural and the de-

signer's personal biases, helps understand why graphics can often be misunderstood. The convergence of ML and graphic design can pose challenges when the inherent biases of both disciplines intersect, potentially leading to weaker or more generic design outcomes. It is furthermore crucial to consider that ML is perceived by humans as sociotechnical systems, associated with biases that extend beyond the computational level (Schwartz et al., 2022). Schwartz et al. (2022) suggest that human factors such as participatory design techniques and multi-stakeholder and human-in-the-loop approaches are important for mitigating risks related to ML bias. However, in this research I will explore how biases can also be leveraged as an advantage to foster unique design perspectives within ML.

1.2.4 Artificial Intelligence (AI)

The terms Artificial Intelligence (AI) and Machine Learning (ML) are often used interchangeably, even though ML is a subset of the broader category of AI. AI is the general term for the science of artificial intelligence (Zhang & Lu, 2021). It is an expression that was coined in 1955 by mathematician John McCarthy. In his proposal for summer study at Dartmouth College, he advanced the hypothesis that if every aspect of learning and other features of intelligence were precisely described, a machine could simulate them (McCarthy et al., 1955). The proposal contained the notions of 'automatic computers' as calculators that could be programmed to simulate machines, as well as 'self-improvement' wherein intelligent machines engage in activities to enhance their capabilities. This builds on Turing's publication from five years earlier, in which he explored the question: Can machines think? and proposed a viable approach through his imitation game. He devised a scenario in which a machine and a human would engage in a conversation. He argued that if a third party, through suitable means of communication, could not distinguish between the human and the machine, then it would be reasonable to conclude that the parties were equal about the property in question (Turing, 1950). The criterion that he used to empirically ascertain whether a machine possesses intelligence, would be its capacity to fool the third party – a human being – into believing that it is human too (Fetzer, 1990).

The concept of intelligence is a subject of discussion within AI definitions. Some scholars argue that AI doesn't necessarily aim at the notion of intelligence, but is more directed towards achieving human-like behaviour (e.g., Joshi, 2020). Ganascia (2010) describes shift in the focus of AI over the years. AI was first understood as an attempt to reproduce consciousness or reify the human mind in a machine. This implies that the mind and consciousness are nothing more than a sum of mechanisms that can be quantified and simulated by a machine. This is referred to as classical symbolic AI, which defined AI as the activity of manipulating symbols according to definite rules (Brandom, 2008). The concept of symbol manipulation is connected to Turing's Imitation Game and debated through the years. As pointed out by Penco (2012), scholars argue against Turing, suggesting the idea that understanding does not merely entail symbol manipulation.

Over the years, AI has adopted a second, more pragmatic significance, serving as a scientific discipline that investigates whether and how intelligence might be deconstructed into various components and reproduced by machines. In the second approach, the affinity of AI is more evident, highlighting its objective to address human tasks such as problem-solving rather than human thinking per se. The second approach aligns with my research, as I seek to investigate and deconstruct the designers' working process to identify areas that might be effectively augmented with machines. I therefore rely on Misilmani and Naous's (2019) concise definition of AI:

> Artificial Intelligence (AI) is the art of enabling machines to perform tasks that require human thinking abilities, such as learning, decision-making, and problem-solving. (Misilmani & Naous, 2019, p. 600)

From this perspective, AI refers to machines capable of emulating human behaviour, rather than replicating human intelligence.

In her Atlas of AI, Crawford (2021) argues that AI is neither artificial nor intelligent because it depends on human labour and natural resources. She furthermore asserts that AI shapes knowledge, communication and power, intervening at an epistemological level in our social, cultural and political infrastructure. This perspective proves valuable for my research by emphasizing the practical ramifications of AI, which extend beyond broad-scale impacts, such as its significant contributions to shaping contem-

porary information society and driving the Fourth Industrial Revolution (Ganascia, 2010). Even thought, Crawford (2021) offers a critical perspective on AI she introduces it from a practical standpoint, examining its mechanisms and the human labour behind it. A practical epistemological approach to AI aligns with a pragmatic viewpoint, which serves as an intersection between my approach to AI and graphic design in this thesis.

Pragmatic epistemology underscoring design is customary. Dewey saw art and design through a process lens by conceiving human action as a productive effort (Murphy, 2017). A similar outlook on AI has been developed by Brandon (2008). He focuses on what he calls AI-functionalism through a pragmatic perspective, as long as two conditions are met: First, the problem can be algorithmically elaborated into an autonomous discursive practice. Second, every element in that set can be understood to be engaged in, exercised or exhibited by something that does not engage in an autonomous discursive practice (Brandom, 2008). These two conditions constitute the optimal setting for augmenting a designer-led process. The emphasis is on integrating AI into a human-driven process, rather than completely replacing humans with AI.

Brandom's approach aligns with the role of designers in using the algorithm, as they serve as a non-autonomous, human component of the process. However, Brandom also implies that everything should be comprehensible for non-autonomous entities. This poses a challenge, as AI and ML algorithms are often not fully transparent and understandable, given their black box qualities: Black boxes map user futures into classes without explanation, because the decision model is not comprehensible to stakeholders or scientists (Pedreschi et al., 2019). Moreover, designers typically have a limited, non-technical understanding of AI, which prevents them from comprehending the algorithm.

Analyzing AI and graphic design through a pragmatic perspective in my research involves concentrating on their practical outcomes. However, epistemologically speaking, an analysis of how AI systems and designers acquire knowledge is an important comparison for the connection of the disciplines. Raina et al. (2019) argue that AI agents learning from human behaviour would create the most effective synergetic problem-solving approach. This combination harnesses the versatile problem-solving strategies of designers alongside computational capabilities for large-scale data manipulation. The epistemological connection between the two disciplines also encounters challenges, particularly regarding the communicative inputs necessary for learning in both domains. Today's AI systems often rely on neural networks inspired by biological brains and can exhibit behavioural and neural aspects of perceptual and linguistic processing that resemble those of humans (Caucheteux & King, 2022; Gweon et al., 2023). However, a big challenge for AI is to simulate not only the phonemic and syntactic aspects of mental representation but also the semantic aspects (Giovagnoli, 2013).

A connected issue is the difficulty of creating communication channels from machines to humans (Gweon, 2003). To overcome these challenges, bridge the representational gap between humans and machines to improve mutual understanding. As I will elaborate later in the thesis, this factor is highly relevant for the communication between AI and graphic designers (see Chapter 5). Scholars are confident in AI's learning and improvement capacities, particularly due to its ability to tacitly learn from examples. While often discussed in a negative light, the black box effect also has positive aspects, as it enables AI to learn without following pre-specified rules (Strauss, 2023).

Another important aspect in the designer AI collaboration is the balance of agency between the two entities. As Moruzzi (2022) concluded in her study, there is still apprehension regarding the application of AI systems in the creative sector. These systems are often perceived merely as tools rather than co-creative partners. Moruzzi proposes a shift in perspective, suggesting that instead of asking whether an artificial actor can be agentive or creative, we should inquire about how agency and creativity are distributed in the network of actors contributing to the process. She advocates for a more holistic view of agency and creativity, wherein creativity is situated within a specific process rather than attributed solely to individuals as exclusive originators of creative artefacts. This is an approach that I integrate in my research, focusing on all agents in the creative process of visual identity design. This perspective considers the contributions of both designers and AI systems, recognizing the interconnectedness and collaborative nature of creative endeavour.

Crawford (2021) highlights the importance of AI in shaping knowledge, communication and power dynamics. With its recent integration into the creative realm, AI holds the potential to redefine professions like graphic design. In this thesis, I highlight

the importance of harnessing this power to benefit designers. I stress the involvement of the design industry in shaping and choosing how to deploy AI (Strauss, 2023).

1.2.5 Augmentation and Automation

To conclude this section on terminology, it is essential to outline the specific meaning attributed to the terms 'augmentation' and 'automation' within the scope of this thesis, as they are applied in the context of ML. These two concepts are not mutually exclusive entities and are best explained simultaneously.

Alongside AI, the concept of augmentation emerged. Engelbart introduced the term in his 'conceptual framework on developing new technologies to augment the human intellect'. He stressed that his objective was not to increase humans' native intelligence, but to create an intelligence system in which human beings are the central component (Engelbart, 1962). He furthermore believed that computers could enhance human potential by serving as an extension for human thinking, representation and associations in minds (Pieters & Winiger, 2016). More recently, researchers have expanded the scope of augmentation beyond the vague notion of 'intelligence'. In the contemporary context of this research, I adopt the definition of augmentation proposed by Yan et al.:

> Augmentation refers to enhancing and elevating a human's ability, intelligence, and performance with help from information technology. A key aspect of augmenting intelligence involves human-machine collaboration in which "machines perform what they do best (e.g., computing, recording, and doing routine, repetitive work) to aid humans in doing what humans do best (e.g., abstract reasoning, creating, and making in-depth discoveries about people and the world). (Yuan et al., 2022, p. 428)

The term *automation* on the other hand has undergone various interpretations of its definition over different periods. The contemporary meaning associated with the term was introduced in the early 1950s by the Ford Motor Company, when automation became associated with the substitution of human efforts and decision-making by any artificial (mechanical, hydraulic, electric and electronic) devices (Nof, 2009). It implies operating or acting

independently without human intervention. In my research, automation is defined as:

> [...]humans [that] hand over the task to a machine with little or no further involvement. The objective is to keep humans out of the equation to allow more comprehensive, rational and efficient processing." (Davenport & Kirby, 2006, p. 21)

Simply put:

> Automation is reducing human interaction in operations[...] (Sarker, 2022, p.157)

In connection to AI and ML, the terms augmentation and automation are frequently juxtaposed and confronted. Scholars argue that augmentation cannot be neatly separated from automation and vice versa. Both approaches are interdependent and one can mutate into the other over time (Raisch & Krakowski, 2021), and many definitions explain one term in opposition to the other:

> Augmentation is not the same as automation: Where automation promises to "free us from inhumane tasks", augmentation aims at strengthening our capabilities. It is the notion of raising the collective human potential, not replacing it. (Pieters & Winiger, 2016)

> At the macro level, AI appears to be capable of replacing humans by undertaking intelligent tasks that were once limited to the human mind. However, another school of thought suggests that instead of being a replacement for the human mind, AI can be used for intelligence augmentation. (Hassani et al., 2020, p. 143)

A critical notion to emphasize in the context of augmentation is the central role that humans play as decision makers in the process. As a solution, it lies halfway between the entirely human and entirely automated capabilities of machines.

> Augmentation implies that human decision-makers remain active in the decision-making process, whereas automation entails replacing the human role in a task with technology.

(Leyer & Schneider, 2021, p. 9)

The concept of augmented systems can be efficiently described through the H-Metaphor, from the field of intelligent vehicles. This metaphor employs the analogy of the relationship between humans and horses. The horse is endowed with sufficient intelligence to alert the rider to changes according to the environment setting, to infiuence his behaviour, to widely take over control in non-critical situations, and maybe even react on its own to critical situations. Transferred to the vehicle, an intelligent automation can act likewise (Flemisch et al., 2003).

> By becoming increasingly capable due to technical improvements, automation-systems are getting more and more 'intelligent' up to the point where they can actively affect the driver's behaviour and release him in situation where he is overstrained. Therefore, both the driver and the automation need to interact with each other on a cooperative basis. [...] An essential aspect thereby is that the driver and the automation are simultaneously involved in the driving task, acting parallel to each other. Both perceive the environment separately, generate an intention based on this perception and try to put this intention into practice by affecting the vehicle, the driver or accordingly automation. (Damböck et al., 2011, p. 377)

In the H-Metaphor, automated processes are employed to augment the driving task. Rather than suggesting that the vehicle completely assumes control, its capacity to manage the vehicle is harnessed to assist humans. It can intervene when necessary, much like horses, and offer its own inputs while leaving human drivers in control. Nevertheless, the automated vehicle could potentially drive on its own. The participation of human capabilities becomes a matter of choice rather than a requirement. So we have a scenario in which automation promotes augmentation. The preceding discussion of self-driving vehicles could be generalized by substituting 'operating' for 'driving', and 'system' for 'vehicle'.

Augmentation may enable a transition to automation over time (Langley & Simon, 1995). Augmentation is a co-evolutionary process during which humans learn from machines and machines learn from humans (Rahwan et al., 2019). In this iterative process, humans and machines interact to learn and create models and improve them over time. This close collaboration allows for the identification of rules and models that either optimize a function or come close enough to an optimal solution to be practically useful. If these models are sufficiently robust, they can be subsequently used to automate a task (Raisch & Krakowski, 2021; Russell & Norvig, 1995).

Augmentation and automation are therefore not necessarily contradictory. In most cases, however, companies and literature employ them as counterparts and select either approach to tackle a specific task at a given point in time (Raisch & Krakowski, 2021). Within this research I primarily centre on augmentation, specifically envisioning collaboration between designers and ML. Nonetheless, I acknowledge that the concept of augmentation is closely intertwined to that of automation, as discussed.

II

OBJECTIVES

My objectives directly align with the research questions of the study, which centre on enhancing weaknesses in the visual identity process through augmentation with ML. I formulated these objectives as active statements about how the study will provide answers to the questions (Farrugia et al., 2010). This research merges a study of working processes in identity projects with advances in ML technologies. In doing so, it delves into literature from relevant fields, including graphic design, human-computer interaction and software development. It draws inspiration from other design fields, with more established research on methodologies, like architecture, industrial design and software development. Hence, my objectives target different groups and can be categorized into different sets. Firstly, my overall aim is to contribute to the academic advancements of the graphic design field. Secondly, my research is positioned as about and for design, with the primary objective of innovating graphic design practice. My third and final set of objectives aims to contribute in bridging the communication gap between designers and ML experts.

2.1 Academic objectives

It is widely recognized that despite an expanding body of research (Buchanan, 2001; Ross, 2018) graphic design remains an underrepresented field in academia (Corazzo et al., 2020; Jacobs, 2017; Kolaric et al., 2020; Meron, 2021; Walker, 2017). The interdisciplinarity of graphic design has caused it to become an increasingly imprecise professional practice (Corazzo et al., 2020; Meron, 2020). Additionally, the graphic design literature has a limited focus on critically investigating professional practice, contributing to the continued separation of theory and practice in the field (Jacobs, 2017). Hence, one of the primary objectives of my research is to contribute to the enrichment and refinement of graphic design literature.

Corazzo et al. (2020) analysed publicly available data to evaluate the topics and quality addressed in the content of academic graphic design publications. The analysis revealed the absence of clearly formulated research questions and a lack of familiarity with the current discourse in the field. The inconsistent usage

of terminology made it particularly challenging for the team to effectively map and analyse the contents. Terminology in graphic design research seems to be applied without any apparent consensus about professional practice. Moreover, the inconsistency in terminology is prominent to the extent of becoming part of research content and discussion (Groys, 2010; Meron, 2021; Wong et al., 2019). I observed these trends through my preliminary literature review concerning the current state of the arts in graphic design and visual identity. Considering these circumstances, my academic objectives involve building a strong connection between academia and practical expertise by directly intertwining literature review with knowledge and opinions from practitioners. By employing grounded theory, I prioritize practitioners as the primary voices in my research, establishing them as the central thread that ties together the topics under discussion (Charmaz, 2006). I integrate literature from related design disciplines that hold relevance in the context of graphic design. To avoid ambiguities, I focus my research on visual identity projects, to make a distinct contribution to a well-defined niche within the field. Another secondary objective within this category is to establish a comprehensive overview over terminology, aligning the design vocabulary I use with both existing literature and practitioners' viewpoints.

2.2 Design practice/innovation objectives

The main goal of this research is to inform innovation within the graphic design field. By encouraging designers to analyse and reconsider their working process, my objective is to find effective means of integrating ML into visual identity. This objective confronts concerns surrounding the growing relevance of AI in the graphic design industry (Kaiser, 2019) and its perceived potential to render professionals obsolete through complete automation (Doehling, 2019; Peart, 2016). As remarked by the designer and researcher Meron:

> [...] the implementation of AI features within graphic design software enables practitioners to automate many design processes. However, this threatens to deskill the profession and created a second tier of 'non-professional' designers [...] (Meron, 2022, p. 1)

Despite concerns about full automation in graphic design, the field continues to progress. Many scholars share the view that ML can be a prominent enhancement, contributing to solutions that evolve alongside designers rather than opposing them (e.g. Stoimenova & Price, 2020).

ML within professional graphic design software currently focuses on automating tedious and repetitive tasks – something that creatively-driven professional graphic designers welcome (Meron, 2022; Nolan, 2018). However, the literature foresees human-AI collaborations that go beyond mere task automation, encompassing mutual goal understanding, co-management, and shared progress tracking (Wang et al., 2020). The innovation objectives in my research align with the latter predictions. Human-AI collaboration is not a new concept. In *Man-Computer Symbiosis*, Licklider introduces the concept of *symbiotic computing* with its two main goals:

> 1. to let computers facilitate formulative thinking as they now facilitate the solution of formulated problems, and 2. to enable men and computers to cooperate in making decisions and controlling complex situations without inflexible dependence on predetermined programs. (Licklider, 1960, p. 4)

Despite these predictions, the precise nature of such collaborations between graphic design and ML remains unclear (Van Der Burg et al., 2023). Moreover, the progress in this field predominantly originates from computer science, often resulting in misconceptions about graphic design (Meron, 2022). This leads to data collection, feature selection, model development, parameter tuning and final assessment of a model's quality without consulting the end-user on how they will interact with the resulting system (Hughes et al., 2021). My objective is therefore to foster innovation by integrating ML in the intricate human workflow to align with designers' preferences, rather than demanding designers to adjust their process to the technology. Building on existing literature, I explore a collaborative approach to involve designers in communicating the structure and processes of their creative work (Feldman, 2017). When considering previous research and advancements in the field, it becomes evident that a primary objective of design inquiry is to examine the principles, practices and procedures of design (Cross, 2001). A substantial part of design research has developed theo-

retical approaches, methods, tools and techniques aimed at supporting designers in their practice (Stolterman, 2008). Criticism has been raised concerning the success of these contributions however, since the results are not always useful for practitioners. Some of these approaches have been defined as too difficult to implement, too abstract or theoretical, or do not lead to desired results when used in practice (Stolterman, 2008). As pointed out by Rogers (2005), the problem seems to be the gap between the demands of doing design and the way theory is conceptualized. Scholars generally argue that research aimed at supporting or improving design needs to be grounded in a deep understanding of the nature of design. Otherwise, the attempt to improve the design process will be counterproductive and no longer provide desired design outcomes (Stolterman, 2021). In connection to ML and design, Feldman (2017) proposes that creative systems need to augment designers' work process as designers see fit, rather than demanding designers to adjust to their process posed by technology. The strength and originality of my research come from formulating guidelines through a comprehensive understanding of designers' working methods for shaping new ML-powered solutions. Following the principles of grounded theory, one of my objectives is therefore to formulate theory that is useful to practitioners in graphic design as an under-researched field (Robson, 2011).

2.3 Interdisciplinary communication objectives

In 1989, Muriel Cooper recognized that:

> The valuation models of a scientific community do not easily mesh with those of the art community, although they avowedly seek the same grail. [...] the cultural and language differences among the groups is both a challenge and a dilemma, and a microcosm of the challenge that faces our culture. New conventions for communicating the qualitative nature of the making of art and the quantitative requirements of science and technology need to be forged. (Cooper, 1989, p. 20)

A decade later, interdisciplinary designer John Maeda (2000) highlighted the same communication challenges between designers and engineers. Nonetheless, interdisciplinary collaborations provide promising opportunities for advancing fields and generating unforeseen solutions. Dunne and Raby define these collaborations as *an almost utopian dream* (2013 p. 52) and realize that conventionally either the artist is helping the scientist communicate the research, or the scientist is technically assisting or advising the artist. Design can involve almost fundamentally opposite goals and preconditions to the scientific approach. Stolterman (2008) indicates that in design practice, the aim is to create something distinct, unique and particular, while science seeks to uncover overarching general principles. While both approaches can lead to valuable results, Gaver (2012) warns that without shared assumptions about the correct way to approach a field, an individual researcher must establish the rationale behind their approach from the basics every time they seek to contribute.

In the current context of the intersection between graphic design and ML, Meron (2022) highlights that given the lack of a broad canon of academic literature to draw upon, many computer science AI articles have drawn from graphic design practices' most visible functional or aesthetic outputs. Alternatively, they might have drawn inspiration from well-established design research practices such as in architecture, UX or product design. He furthermore suggests that AI scholars and their research may benefit from collaborations with graphic designers. In turn, if graphic designers wish to preserve and assert their practice's creative, conceptual and organizational aspects, embarking on AI research and nurturing interdisciplinary partnerships could prove beneficial (Meron, 2022). Another issue arising from disciplinary division is the limited engagement of potential users – who are often domain experts – in the development process of ML applications (Amershi et al., 2014).

This final set of objectives thus foresees providing a solid grounding in graphic design practice and processes that go beyond the generation of artefactual outcomes of the profession (Meron, 2022). By conducting an extensive analysis of the visual identity process through the perspective of professional graphic designers, my objective is to provide valuable insights that can offer a deeper knowledge of creative work. Furthermore, I contribute to bridging the communication gap between graphic designers and ML experts by structuring and listing designers' expectations and viewpoints on ML within a conceptual framework. A collection of guidelines serves as a reference and source of inspiration for ML experts to develop future applications.

III

METHODOLOGY

My research starts by asking three main questions:

1. Is it possible to find coherent working methods in visual identity projects?
2. What are the most critical phases for the designer in visual identity projects?
3. How can these be augmented through ML?

These questions emerged from personal knowledge of professional practice, supported by literature trends. In this chapter, I present the methods that I adopt to answer the research questions. I begin by introducing my research position as being for and about design, with the intention to understand the human activities of design and create knowledge for professional practice (Zimmerman et al., 2010). I discuss how I critically explore the grounded theory study that I use to uncover new theories about the designer's working methods in visual identity. Within grounded theory, I adopt semi-structured interviewing and non-participant observation. I explain how these methods have the purpose of generating theoretical ideas, concepts, and hypotheses around the research questions. I continue by delving into the quantitative sequential contribution to my predominantly qualitative research. To further test the results of grounded theory, I employ a within-subject survey design, and analyse its results through a paired sample T-test and Repeated Measures ANOVA. These methods are subjected to a 'pragmatic' research paradigm, which emphasizes an action-oriented theory of knowledge (D. Morgan, 2020), and thus reflects the specific needs of my topic.

3.1 Research about and for design

Design research can be categorized into three primary typologies: research about, for and through design (Frayling, 1993). My thesis touches upon the first two. Research about design is the most frequently employed method, and it prioritizes the design process and understanding of human design activities (Zimmerman et al., 2010). My thesis aligns with research about design through a deep exploration of the visual identity working process and a central

emphasis on comprehending practitioners' knowledge of graphic design practice.

My study furthermore conforms with the research for design approach, which has as its main objective the improvement of design practice. As is common for this research stream, my outcomes are targeted towards helping designers reframe problems they encounter in their practice (Stolterman, 2021). My specific focus falls on the augmentation of critical visual identity process phases through ML. As mentioned by Stolterman and Pierce (2012), outcomes of this activity include frameworks, philosophies, design recommendations, design methods and design implications. Research about and for design both rely on knowledge established in other disciplines (Zimmerman et al., 2010). In this study, knowledge drawn from architecture, industrial design and software development form a foundation for the creation of a conceptual framework.

3.2 Pragmatic Grounded Theory study

Working methods in visual identity are under-explored (Corazzo et al., 2020). The adoption of a grounded theory study is therefore ideal, since it is best applied in areas that present a lack of theory and concepts (Robson, 2011). As is common for studies based on grounded theory, my inquiry starts with a set of questions, and it develops a series of hypotheses through the collection and evaluation of data over time. The grounded theory study adopted in my research is connected to a 'pragmatic' research paradigm. Taken together, these approaches ensure: (1) the use of abduction to create imaginative interpretations of observations, (2) reliance on prior beliefs, (3) requirement of interpretations of tentative conclusions for theoretical sampling, (4) pursuit of knowledge claims through an ongoing process of verification (D. Morgan, 2020). This framework is oriented toward practical problem-solving in the real world (D. L. Morgan, 2007), which is coherent with the matter of my inquiry. Moreover, it aligns with the core principle of my research, which is to produce practical and implementable knowledge (Kelly & Cordeiro, 2020).

Pragmatism replaces induction used in classic grounded theory with abduction, leading to hypotheses that can account for observations (D. Morgan, 2020). Abduction is also defined as cognitive logic of discovery (Reichertz, 2007), creating 'a new rule or category in order to account for a case present in the data that cannot be explained by existing rules or categories' (Frost, 2011, p.19). As suggested by (D. Morgan, 2020), my data collected throughout the research is interpreted into hypotheses using abduction. I take into consideration that this process is highly constrained by my prior beliefs and experiences (Kelle, 2005) in the field of identity design. Pragmatism as a research paradigm is rooted in the proposition that knowledge and reality are based on beliefs and habits that are socially constructed. It assumes that people are active and creative, and meanings emerge through practical actions to solve problems (Charmaz, 2006). Through its emphasis on knowledge as experience, it supports the analysis of organizational processes as it provides a deeper understanding of practice (Kelly & Cordeiro, 2020). Moreover, as a paradigm, pragmatism rejects the traditional dualism of positivism and interpretivism, allowing the two perspectives to coexist in the same research (Robson, 2011). This allows me to integrate a supplementary quantitative approach to validate the core qualitative research method I employ (Morgan, 2014).

There has been criticism and misunderstandings regarding engagement with existing literature in grounded theory studies. Glaser and Strauss, two of the main exponents of grounded theory, agree that researchers cannot enter the field as a tabula rasa (Heath & Cowley, 2004). Nonetheless, they disagree on how to use literature review throughout the study. For Glaser (1978), initial literature review should be avoided and occur only when emergent theory is sufficiently developed to function as additional data. Strauss (1987), on the other hand, advises the introduction of literature as an early influence to stimulate theoretical sensitivity. More recent researchers suggest that avoiding any knowledge of existing literature is inappropriate and almost impossible (Morgan, 2020, Bryant, 2017, Giles et al., 2013). Furthermore, over the years, it has been recognized that it is necessary to engage with literature in order to identify the area of focus and justify the research questions (Timonen et al., 2018). Following this school of thought, my research questions emerged from both literature and personal knowledge of professional practice. Additionally, I make use of literature throughout my interviews and data analysis. During these phases, I seek to identify empirical studies which relate to findings from the interactive process between data collection and analysis (Bryant, 2012).

Open-ended data collection methods are characteristic

of grounded theory studies. Among these, I adopt semi-structured interviewing and participatory observation, while simultaneously applying the constant comparative method (described below) to analyse the data. Since I started my inquiry based on prior knowledge and literature review, semi-structured interviews were the most appropriate method to answer my initial research questions. Subsequently, to test the interviews' results, I engaged in participatory observation. This gave me the possibility to observe some of the emergent trends in my interview data and put them to question.

3.2.1 Semi-structured interviews

As indicated by Foley et al. (2021), semi-structured interviews are suitable for a grounded theory study when the researcher has identified focus areas that have already situated the inquiry, which interviewing can then begin to expand upon. My semi-structured interviews are conducted individually (apart from some exceptions due to particular requests), and they focus on designers from different studios across Europe, the UK and the USA. The decision to include an international sample aligns with my divers design experiences across various countries. Additionally, an international sample offers the advantage of providing a contribution with increased universalistic contribution (Cash et al., 2022).

The concepts and hypotheses that emerge from the interviews are then merged with theory from literature to guide the research towards more specific questions, and eventually to theoretical saturation. It is relevant to remain open to new data but also search for key processes and patterns, and edit the interview questions if necessary (Foley et al., 2021). As pointed out by Foley et al.:

> The goal of any grounded theory study is to reach theoretical saturation of the data – the point at which all key categories are fully contextualized and dimensionalities to substantially explain the emergent theoretical construct. Theoretical saturation in all variants of grounded theory necessitates fiexibility, creativity and refiexivity in the interview process in order to build concepts, categories and theory. (Foley et al., 2021, p.2)

3.2.2 Theoretical and convenience sampling

Pragmatic grounded theory relies on theoretical sampling, which is not bound by the limits of prior selection. Rather, theoretical sampling requires the combination of data collection and analysis to decide what data to collect next (Conlon et al., 2020). This allows me to move back and forth between observations and gathering new data, without limiting myself to a prior selection of interviewees (Conlon et al., 2020). As specified by Charmaz, (2006), the purpose of theoretical sampling is to obtain data that helps explicate the emerging categories. The difficulties of this method lie in the initial phase, which relies on convenience sampling, since there is no data to build upon. I, therefore, started sampling by locating convenient cases for my research, selecting those who responded first to my requests (Robinson, 2014). As suggested by (Charmaz, 2006), I established some criteria that allowed me to enter the field – these criteria are detailed at the start of the next chapter. The sample size increased organically over time until 'theoretical saturation' has been reached, assuming that further data collection will not bring incremental benefit to the theory in construction (Corbin & Strauss, 2008).

3.2.3 Constant comparative method

To reach theoretical saturation for theory and hypothesis construction, grounded theory logic presupposes the comparative method of data analysis (Charmaz, 2006). Together with theoretical sampling, it constitutes the core of qualitative analysis in grounded theory (Boeije, 2002). It is a process that foresees that interpretations and findings are compared with other findings as they emerge from the data analysis (Lewis-Beck et al., 2004). The main intellectual tool is comparison; as suggested by (Tesch, 1990), I used it to establish categories, find contrasting evidence and discover main patterns. The initial analysis of data involves coding interview transcripts to identify the main categories, while later stages show the relationship between these categories (Lewis Back et al., 2004). According to Charmaz, a reasonably homogeneous sample should provide a solid basis for generalizing the concepts and relations represented by the phenomenon in question (2006).

3.2.4 Coding process

To analyse my data, I followed the principles of grounded theory, which involve identifying and categorising patterns and themes

through several sequences of codings (Bryant, 2012). The coding procedure entails dividing the data into units of meaning, which are then labelled or tagged for analysis (Amsteus, 2014). In short, data are broken down, compared and placed in a category (Walker & Myrick, 2006). Data analysis in grounded theory is accomplished through an elaborate set of coding processes (Walker & Myrick, 2006). Open coding (1) is applied to begin the analysis, axial coding (2) establishes relationships among codes, and lastly selective coding (3) creates connections and uncovers core concepts (Salinger & Prechelt, 2008). In order to examine the outcomes of my research questions, I implemented initial, or open, coding (Douglas, 2003), for an exploratory analysis. I applied three generic, initial codes to the material, which correspond to the content of my research questions: 1) Process structure, 2) Shortcomings in the process, and 3) Augmentation through ML. It is worth noting that I employed these codes across all the data, regardless of whether the content related directly to the research question. This allowed me to explore the information more comprehensively and identify patterns that may have otherwise gone unnoticed. Moreover, following my pragmatic approach (Bryant & Charmaz, 2019), I integrated existing literature into the analysis of my data to support and question the emerging arguments made by my interviewees.

To analyse my interview data, I employed Strauss and Corbin's grounded theory coding method. It consists of three partially parallel coding rounds: 1. Open coding, is used to begin the analysis and describes the data by its main concepts. 2. Axial coding identifies relationships between the concepts described by the initial codes. 3. Selective coding extracts a subset of the concepts and relationships found and formulates them into a coherent category (Salinger & Prechelt, 2008).

3.2.2 Non-participant observation

Once I gathered my first results from the interview analysis, I supplemented my data through non-participatory observation (FitzGerald & Mills, 2022). As is common for grounded theory, I initially conducted my study around the subject to get a complete picture of the phenomenon. Only in the second phase of the research, I decided to compare and put my data into question by looking at the design process from the inside (Charmaz, 2006). Grounded theory relies on interviews as the primary method for data collection, but observation offers an additional means of capturing daily life realities in a specific context (Laitinen et al., 2014, Babchuk & Hitchcock, 2013, Bonner & Tolhurst, 2002).

Observations are made of people in the context of their normal environment, and consist of gathering impressions of the participants' behaviour by looking and listening (Bonner & Tolhurst, 2002). Moreover, grounded theory and ethnographic research, both using observation, share common roots in pragmatism (Bryant, 2009). Compared to ethnographic observation, grounded theory places greater emphasis on the phenomenon under investigation and less on social interactions within the phenomenon, resulting in a more confined perspective (Fathi Najafi et al., 2016). For my research, the observation provides a deeper understanding of the design process and helps me create a direct comparison between what the designers said about their process and their actual process (Laitinen et al., 2014). In combination with my interview data, the non-participatory observation supported my aim of theoretical abstraction necessary to elevate conceptual categories (Birks & Mills, 2011). Furthermore, it facilitated deeper analysis and testing of specific emerging theories in my codings.

As defined by Dewalt and Dewalt (2002), there are *passive*, *moderate*, and *active* levels of observation. For my inquiry, I opted for a passive level of participation in which I limited myself to observing, not being part of any studio action, and interacting with the observed as little as possible (Sandiford, 2015). This decision is related to my working experience that gives me the ability to relate to the design process and understand working situations in graphic design studios. I therefore did not deem it necessary to actively intervene with the studio's dynamics. Thus, I tried to be as non-intrusive as possible and not interfere with the studio's routine. Furthermore, as Lipson (1984), suggests, recognition of patterns is difficult to identify when the behaviour is so familiar and taken for granted. An over-familiarisation with the setting through participation can cause assumptions without seeking clarifications (Bonner & Tolhurst, 2002). Nonetheless, as pointed out by Schwartz & Schwartz (1955), even passive observers are an integral part of the situation they are observing, linked with the observed in a reciprocal process of mutual modification. It is well-established that the mere presence of the observer can have an impact on the unfolding of events (Schwartz & Schwartz, 1955). To mitigate these effects, I maintained a reflexive and critical po-

sition by continuously examining my assumptions about data collection and analysis (Bonner & Tolhurst, 2002). As part of grounded theory, I applied the same analytical methods to my observations as I did to my interviews. The collected data underwent constant comparison throughout the observation, and after its convolution, the analysis followed the three coding stages (as previously explained), employing abduction (Laitinen et al., 2014).

3.3 Within-subject design survey

My grounded theory study is qualitative, as typical for this research method. It investigates working processes in visual identity to find the most fruitful ways to integrate ML into the designer's process. I used two data-gathering procedures: semi-structured interviews and participatory observation, which were both analysed through the grounded theory methods. As a result, I arrived at a conceptual framework that consists of a series of hypotheses on how to best integrate ML in the designer's process. I then assess and validate the most promising hypothesis from grounded theory through a sequential quantitative contribution. Conventionally, theory testing and validation is a quantitative research exercise (Newman & Benz, 1998), and is usually excluded from qualitative studies. By adopting pragmatism as my research paradigm, I benefit from its epistemological position which rejects the metaphysical debates between purists and situationalists regarding quantitative and qualitative research approaches (Newman & Benz, 1998, Kelly & Cordeiro, 2020). It recognizes that neither research tradition is independent of the other, nor can either encompass the whole research process (Onwuegbuzie & Leech, 2005). I therefore integrate a sequential quantitative contribution as a follow-up to grounded theory (Triola, 2014). As pointed out by Morgan (2014), 'sequential contributions explicitly use the results of one method to enhance the effectiveness of another' (p.11).

For my follow-up inquiry, I chose a within-subject survey design, suitable for exposing a sample to two different treatments. The intention is to investigate which syntax (designer- or ML-generated) is more effective for graphic designers in their daily practice of communicating and giving feedback to their team. The dataset, Typo/Graphic Posters, is the source of descriptions for 8 meticulously selected posters. These encompass a diverse range of styles and design approaches, providing survey participants with a varied and distinctive selection. A set of descriptions were then contributed by two designers and generated by two prompt-engineering ML tools. Successively, a sample of 58 designers took part in a survey to rate the descriptions. Quantitative data are measured on numerical scales and are presented as values or points on continuous scales (Soyemi, 2012). In the survey, I employed a 7-point Likert scale (Allen & Seaman, 2007), to measure and compare the usefulness of human and ML-generated descriptions. Rating scales offer various advantages, including providing a structured format for multiple responses, standardizing the participants' answers (Smith Jr. et al., 2003), and including neutral responses through midpoint options (Krosnick, 2018).

In line with the within-subject experiment approach (Charness et al., 2012; Greenwald, 1976), I presented each participating designer in my survey the human- and ML-generated descriptions. I take into consideration that within-subject designs can lead to spurious effects, through respondents expecting to act in accord with some pattern. As specified by Charness et al. (2012), this is known as the 'demand effect', according to which participants in experiments interpret the experimenter's intention and change their behaviour accordingly, either consciously or not. Nonetheless, within-subject experiments are also known for their benefits, such as internal validity, their natural alignment with most theoretical mindsets and the substantial increase in statistical power they offer to most frameworks (Charness et al., 2012).

To evaluate the performance variation between the two description typologies, I undertook a direct comparison through quantitative data (Howell, 2010). This is best explored through inferential statistics, which are used to infer from the sample group generalization population (Marshall & Jonker, 2011). These statistical tools do not only describe the data but also enable conclusions to be drawn about the population from which the sample are taken. In my case, they are applied to compare the two treatments that underwent my sample, as well as relationships between the variables (Marshall & Jonker, 2011).

3.3.1 Convenience sampling

For my within-subject design survey, I use convenience sampling. I contacted easily accessible cases for the research and selected all respondents (Triola, 2014). Convenience sampling is a nonprob-

abilty sampling technique that researchers use to choose a sample from a population (Etikan, 2016). The main assumption associated with convenience sampling is that the members of the target population are homogeneous and that there would be no difference in the research result obtained from other sample strategies (Etikan, 2016). Literature warns of possible drawbacks of this sampling method, that can result in lack of generalizability in the study due to the bias of the sample (Emerson, 2021). To limit these disadvantages, I hand-picked a set of participants who matched the needs of my experiment (Emerson, 2021)), to create a sample that is still representative of the larger population (Stratton, 2021). Furthermore, my survey is carried out in the specific context of graphic design, which infiuences as well as strengthens the sampling homogeneity (Leeuw et al., 2008).

3.3.2 Statistical analysis

Statistical experiments are used to evaluate the extent to which an observed experimental outcome is similar or dissimilar to the experimental expectation (Wampold et al., 1990). Qualitative hypotheses distinguish themselves from quantitative ones, and hypothesis testing is conducted by setting up a null and alternative hypothesis (Soyemi, 2012). Based on my observation and analysis, as discussed in Chapter 5, I suggest that human design descriptions offer designers greater value than ML descriptions.

Research design and statistical analyses are related yet conceptually distinct. The hypotheses inform the choice of research design, which successively guides the selection of the appropriate statistical analyses (Ellis, 1999). As pointed out by Wampold et al. (1990), each statistical test should be directly tied to a specific research hypothesis, and the results of the experiment should be used to make decisions about statistical tools. Following these instructions, I first developed the research design, and only after collecting the data, I selected the most suitable statistical procedures. The within-subject survey, in which I chose to compare human and ML descriptions, necessitates a statistical analysis that explains the variation in measurements. As my participants were exposed to both treatments, both factors are considered repeated measures, resulting in a repeated measure factorial design (Ellis, 1999).

3.3.2.1 Repeated-measures ANOVA

The data collected using the Likert scale resulted in ordinal variables. Despite non-parametric analyses being recommended for ordinal data, my study uses an experimental design with two factors (posters and description type), making non-parametric tests unsuitable for analysis. Moreover, to limit the probability of a Type one error, I refrained from conducting many tests of significance (Goeman & Solari, 2010; Keselman et al., 2002). Therefore, a repeated-measures ANOVA with posters (from 1 to 8) and description type (ML and designer) was conducted.

ANOVA is a common inferential data-analysis technique used in various sectors ranging from psychology to clinical development to social sciences (Kaufmann & Schering, 2007, Rojewski et al., 2012). Repeated measurement occurs due to measuring the participants under more than one experimental condition (Ellis, 1999). In my survey, participants were exposed to both human and ML-generated design descriptions and were asked to rate them on a Likert scale. The procedure involves the separation of the total observed variation in the data into individual components attributable to various factors (Kaufmann & Schering, 2007). For my study, these factors are discussed in Section 6.1.3. As highlighted by Field (2020), this variance is not contaminated by the experimental effect because whatever manipulation is carried out has been done on different people.

For my experiment, this enables me to compare the performance of designer- and ML-generated descriptions while also examining the performance of each poster under both conditions. If most participants score higher under one condition rather than the other, it is suggested that the difference is not due to chance, but rather attributed to the distinct conditions (Field, 2020). Based on the results of these comparisons, conclusions can be drawn about the differences between the groups (Rojewski et al., 2012). Furthermore, in ANOVA the p value (probability and measures) is calculated for the null hypothesis that the population means are equal, and any discrepancy between the two samples' means is due to chance. A 5% chance is a convenient convention. A p value smaller than 0.5 ($p < .05$) indicates that a significant difference exists between the groups, and therefore the null hypothesis can be rejected. In the opposite case, there is 'less than' a 5% chance that the difference was discovered by chance (Soyemi, 2012).

3.4 Semi-structured written interviews

The methodology I have applied thus far has resulted in the development of a conceptual framework proposing the integration of ML into the visual identity design process. Hence, this accomplishment aligns with the objective of my research. Moving forward, I validate the framework with its target group, ML developers, using semi-unstructured written interviews. These interviews are exploratory in nature (Dahlin, 2021) and open a new discovery phase in which qualitative attitudinal data is produces including people's thoughts and beliefs (Rosala, 2022).

The primary reason I chose to engage in written interviews and not guide the developers through a face to face interview is that I sought technical input about the framework, an area that is not within my expertise. I decided to conduct this round of interviews via email, an alternative qualitative method. Unlike real-time interviews, participants can respond to emails at their convenience. This approach provides them with more control and the opportunity to prepare their answers thoroughly (Bowden & Galindo-Gonzalez, 2015; Hawkins, 2018). However, scholars argue that interviews in written form could deviate from truly context specific responses (Bihu, 2023). To avoid that, I ask two concise but open-ended questions (which are typical in written interviews (Dahlin, 2021)) about their opinion on the technical feasibility of my framework.

3.4.1 Convenience and snowball sampling

For my last round of interviews, I again employed convenience sampling (see 3.3.1). I initiated the sampling process by contacting respondents through existing networks. However, as I lack familiarity with the population of interest, ML developers, I transitioned to snowball sampling. This method also referred to as chain sampling, allows for the intersection of individuals through contact information provided by others in the network (Noy, 2008). This sampling method still produces a convenience sample, since neither the initial subjects nor the subsequent waves are randomly selected (Heckathorn & Cameron, 2017).

3.4.2 Thematic Coding

The data gathered from the semi-structured written interviews of ML developers undergoes thematic analysis. This method draws from different fields as HCI or UX research (Brown, 2018). It is a systematic method of breaking down and organizing rich data from qualitative research through codes to facilitate the discovery of significant themes (Rosala, 2022). It is furthermore a generic approach and is not linked to a particular theoretical perspective (Robson, 2011). Thus, it does not contrast the pragmatic paradigm of my research and the other methods I applied so far. As Rosala (2022) highlighted, thematic analysis is particularly effective when dealing with rich data containing extensive details and diverse viewpoints among participants. The analysis consists of labelling the data, codes with the same label are bounded together as themes. The themes then serve as a basis for further analysis and interpretation (Robson, 2011).

IV

INTERVIEWS

In the previous chapters, I introduced literature on visual identity and design methodology. I also pointed out the main methods that I adopt, to develop my theory construction through a pragmatic grounded theory study. This chapter is dedicated to the interviews, the core element responsible for the overall development of this research. Interviewing in my research is developed simultaneously with data analysis and literature review. Emergent concepts in the data are used to guide the collection of further data through the selection of different participants; they might also lead to changes in structure and research direction. Through my semi-structured interviews, I address my research questions.

4.1 Sampling strategy

In grounded theory studies, theoretical development turns on theoretical sampling. Here the researcher collects new data to check, fill out and extend theoretical categories (Bagnasco et al., 2014). Following this approach, my sample does not aim to be statistically representative, nor it could be. Given the large number of graphic design studios and how inconsistently they are recorded in different countries (Filek & Weber, 2018), I rely on convenience and theoretical sampling. These were used to get an overview of the researched phenomena, to identify major components and trajectories (Bryant, 2012).

As suggested by Bryant (2012), excellent participants for grounded theory interviews are subjects that have been through or have observed the experience or phenomena under investigation. I therefore selected a range of graphic design studios with the intention to interview one or more designers with different job titles. I aimed to cover different design roles (Middle-weight, Senior, Art/Creative Director) in order to gain an overarching perspective on working methods, from different points of view involved in the design process. It was important that the interviewed designers had enough experience and consolidated knowledge to share; Interns and Juniors have therefore not been included. In my sample, there is a predominant number of Art/Creative Directors (16 of 20), in most cases also founders of their studios. This selection happened spontaneously, since it is common for the founders to

act as frontmen. My respondents were selected through the following criteria that helped me narrow down the field:

All the contacted studios are 1) listed on *Studio-Index*, a global directory of graphic design studios; and 2) developed a multitude of identity projects for different sectors. The remaining studios were selected manually with the aim of providing the most realistic perspective of the different expertise related to visual identity design. Within the sample, I ensured a range of different studios and agencies. The main difference between a studio and agency lies in the organizational structure and size. As pointed out by Posch (2017), most studios are characterized as niche companies focusing on specific services: branding, web design etc. Agencies tend to have a larger team, allowing most of the work to be handled in-house, rather than outsourcing it to a third party as a studio would do. Most of those firms maintain offices in various countries, which makes the good candidates for international clients.

I consciously selected participants across different western countries (Europe, UK, USA), considering the context and the implications this has on my study (Morse & Richards, 2002). This choice was influenced by my graphic design career, which has so far developed around different European countries and Australia. By restricting the sample to the context I am familiar with, I can ensure access to different studios and a correct interpretation of the context and cultural factors that influence the design work, since this is not a cross-cultural ethnographic study. As my sample size grew, I switched to theoretical sampling following the first results of data analysis (Robinson, 2014). I contacted a total of 86 studios and agencies over 6 months and had a response rate of 40%. Of these, ultimately 20 participated in my study, 7 of which I interviewed in person and the others by video conference.

4.2 Presenting the sample

The interviewees in chronological order were:

1. *Francesco Scagliarini*, Middle-weight Graphic Designer at *Studio FM*, Fig. 6 Milan, Italy. Francesco became a Senior and Partner throughout my research, but he will be considered as a Middle-weight, since that was his position during our conversation.

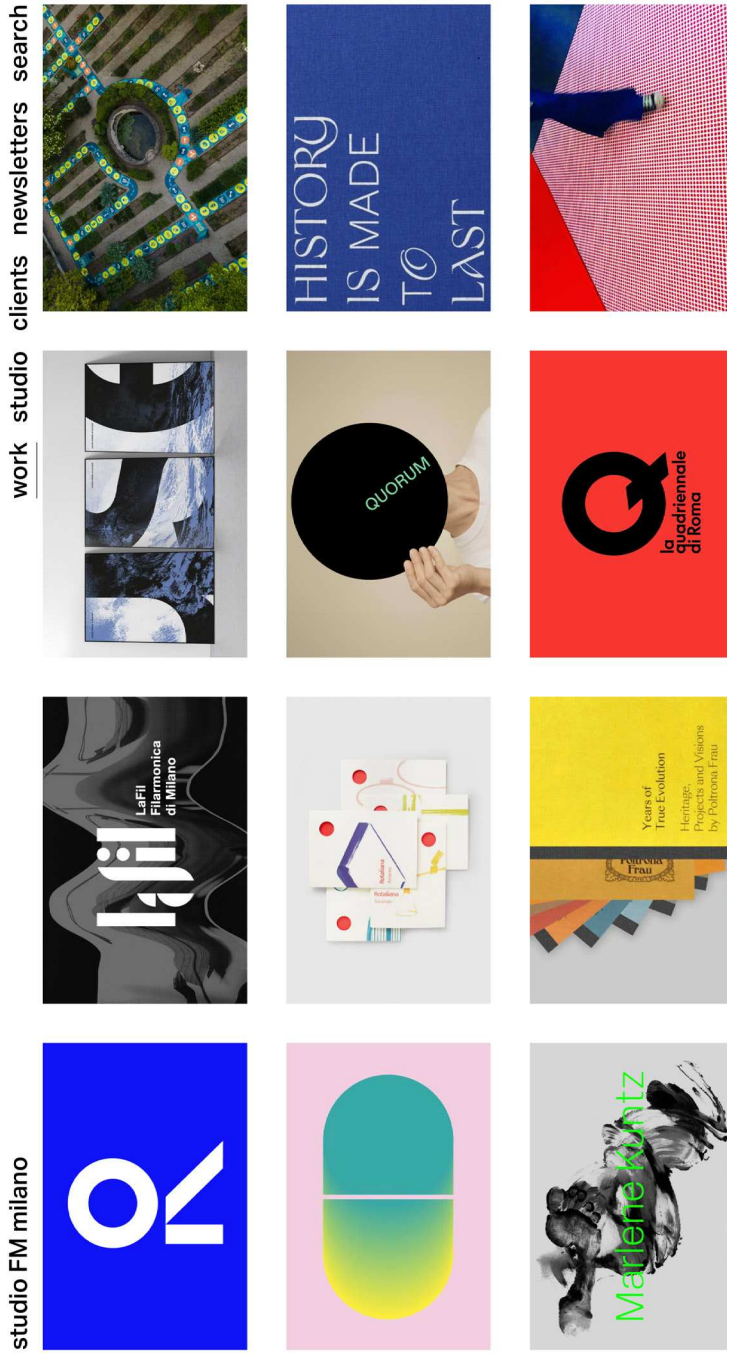


Fig. 6
Studio FM, Website

2. Amadeus Malmin, Co-founder and Art Director at *Serious Business*, Fig. 7 Munich, Germany.

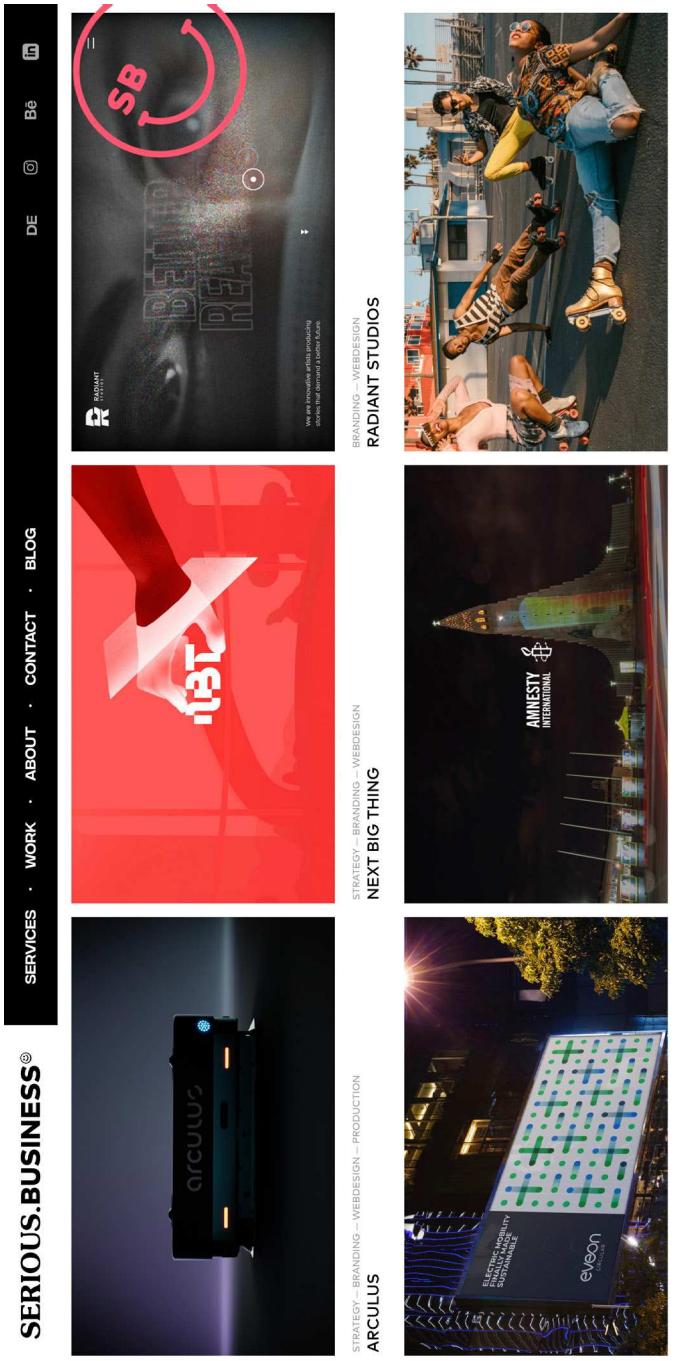


Fig. 7
Serious Business, Website

3. Johannes Von Gross, and Markus Lingemann Founders and Art Directors of *Off Office,* Fig. 8 Munich, Germany.

Fig. 8
Off Office, Website

4. Sebastian White, Co-founder and Art Director at *Kellenberger-White*, Fig. 9 London, UK.

Fig. 9
Kellenberger-White, Website

5. Guido Gregorio Daminelli, Co-founder and Art Director of *Studio Temp*, Fig. 10 Bergamo, Italy.

Fig. 10
Studio Temp, Website

6. Patrice Barnabé, Co-founder and Art Director at *Zaina*,
Fig. 11 Paris, France.

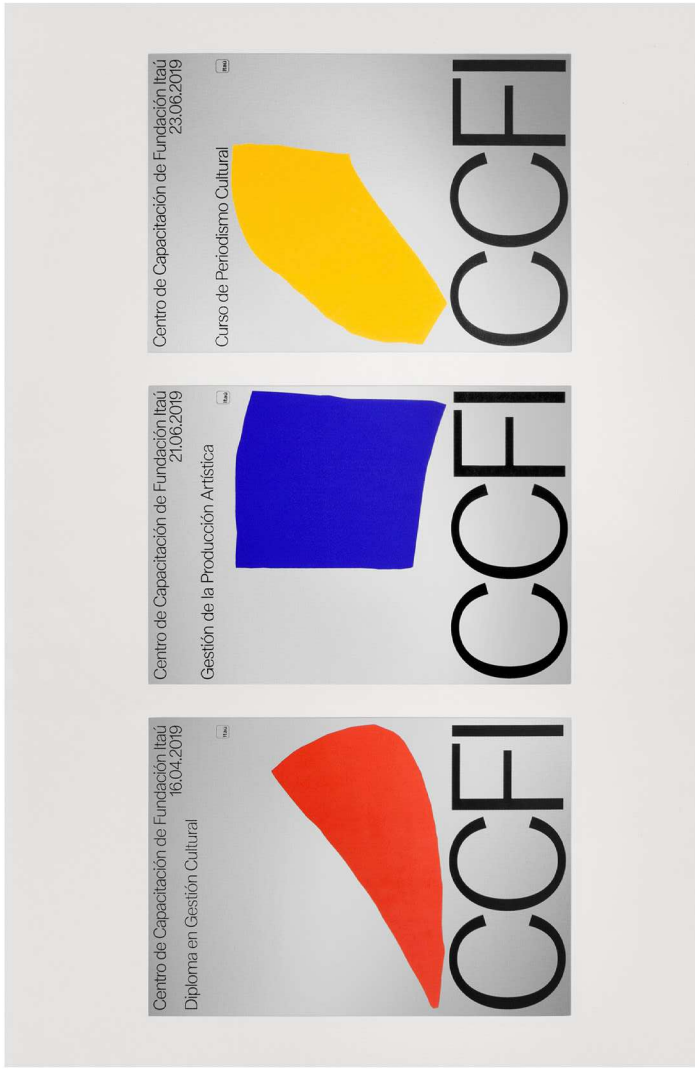


Fig. 11
Zaina, Website

7. Katarzyna Nestorowicz and Marcin Nowicki Founders and Art Directors at *Post Noviki*, Fig. 12 Warsaw, Poland.

Fig. 12
Post Noviki, Website

8. Loredana Bontempi and Emanuele Bonetti, founders and Art Directors at *Parco Studio*, Fig. 13 Milan, Italy.

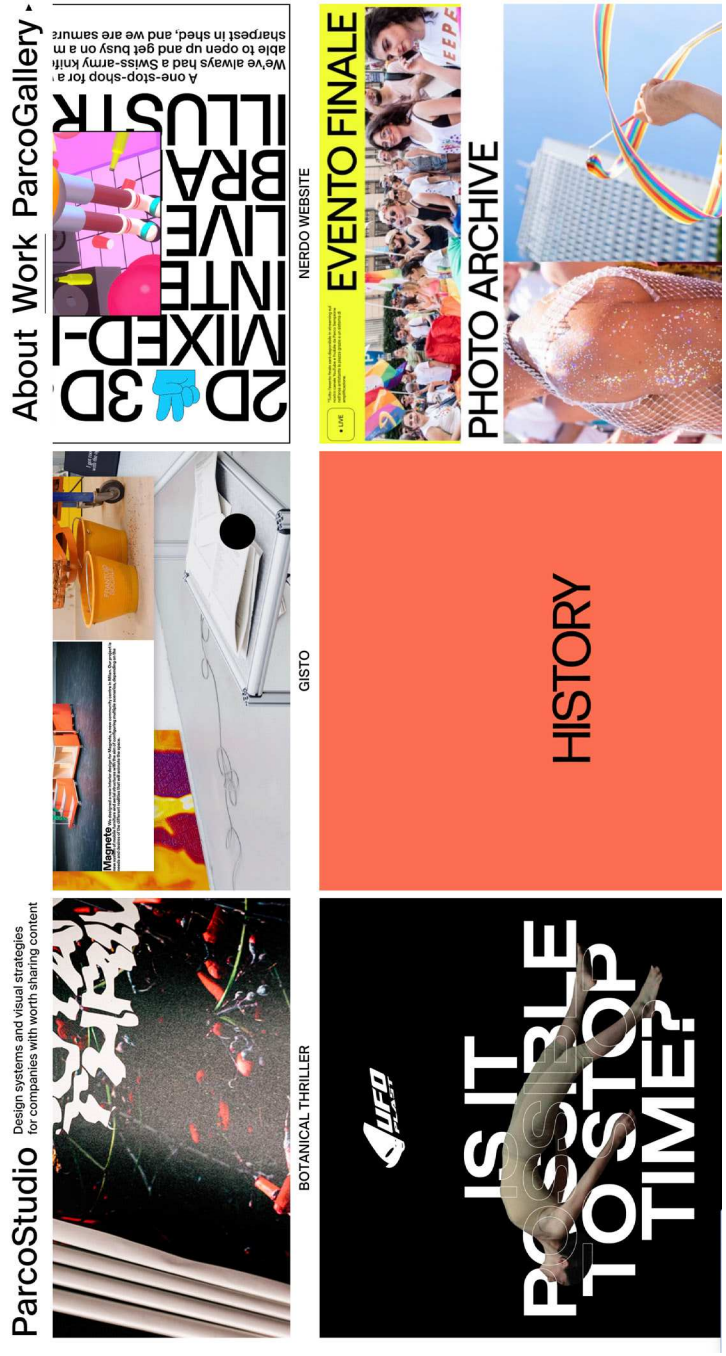


Fig. 13
Parco Studio, Website

9. *Matteo Bologna*, Founder and Art Director at *Studio Mucca*, Fig. 14 New York, USA.

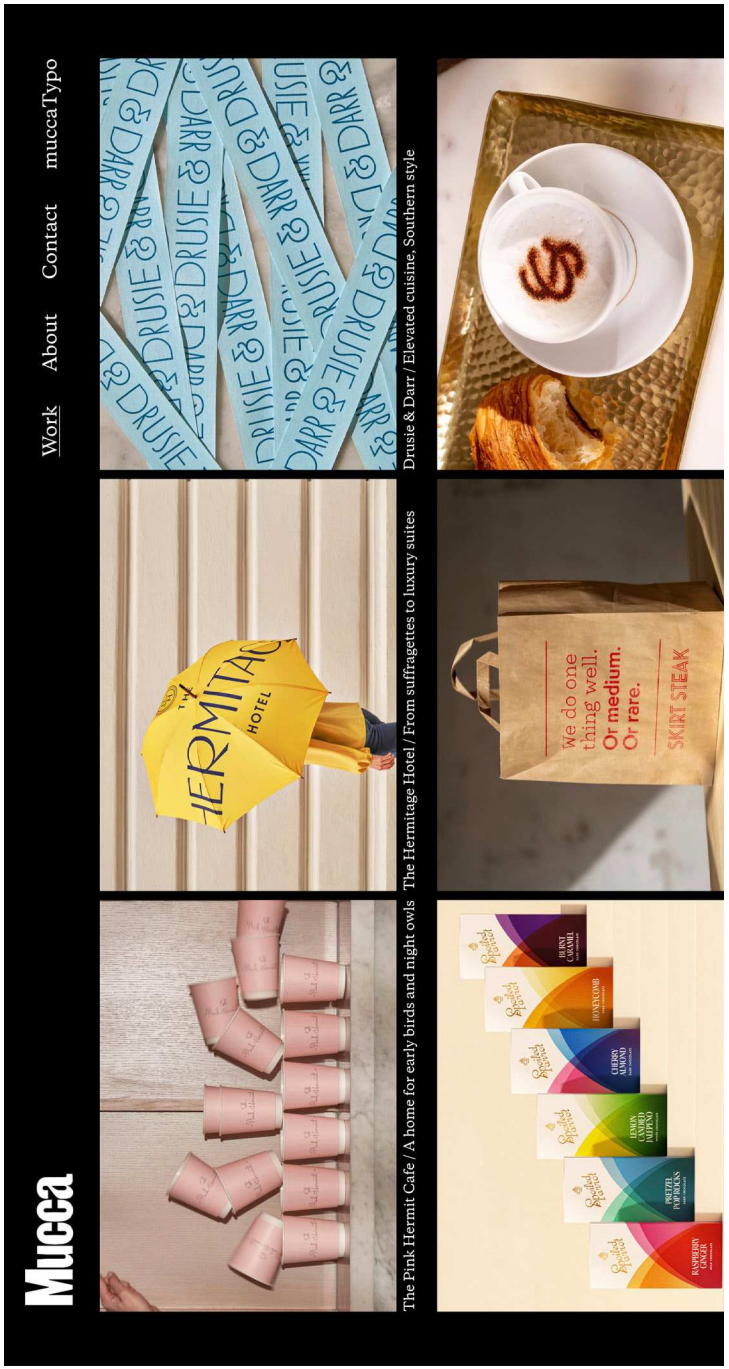


Fig. 14
Studio Mucca, Website

10. Merijn Van Velsen, Senior Designer at *Studio Dumbar*,
Fig. 15 Rotterdam, Netherlands.

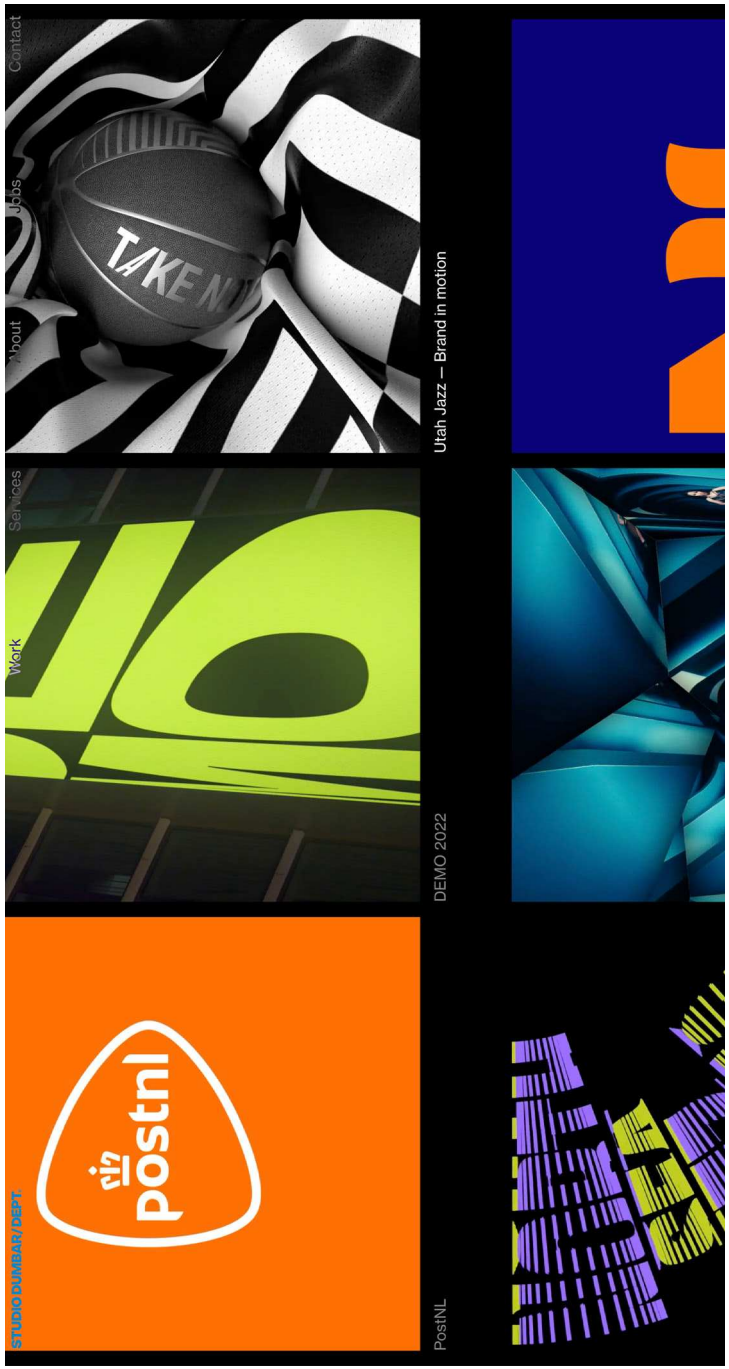


Fig. 15
Studio Dumbar, Website

11. Geoff Cook, Director of Growth and Partner at *Base Design*,
Fig. 16 New York, USA.

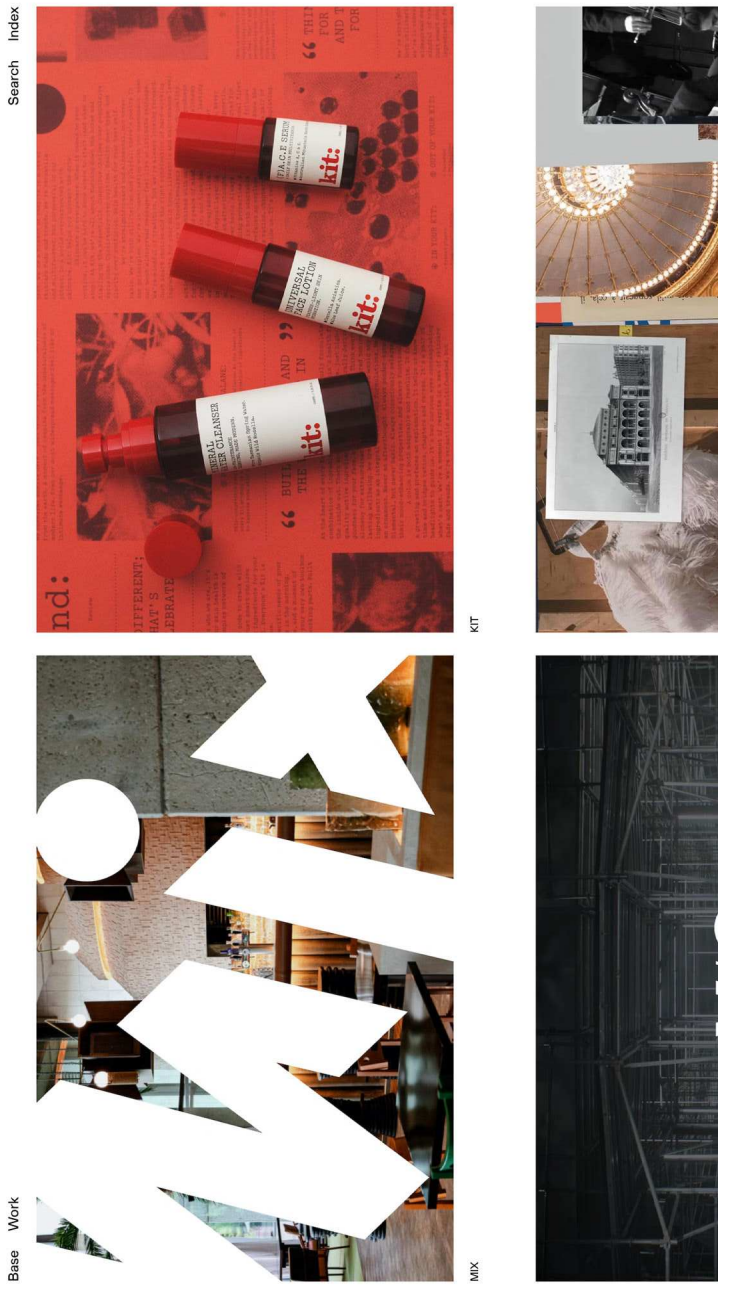


Fig. 16
Base Design, Website

12. Bel Diví, Senior Designer for *Aktiva*, Barcelona, Fig. 17
Spain.

Fig. 17
Aktiva, Website

13. Andrea Braccaloni, Co-founder and Art Director at *Left Loft*, Fig. 18 Milano, Italy.

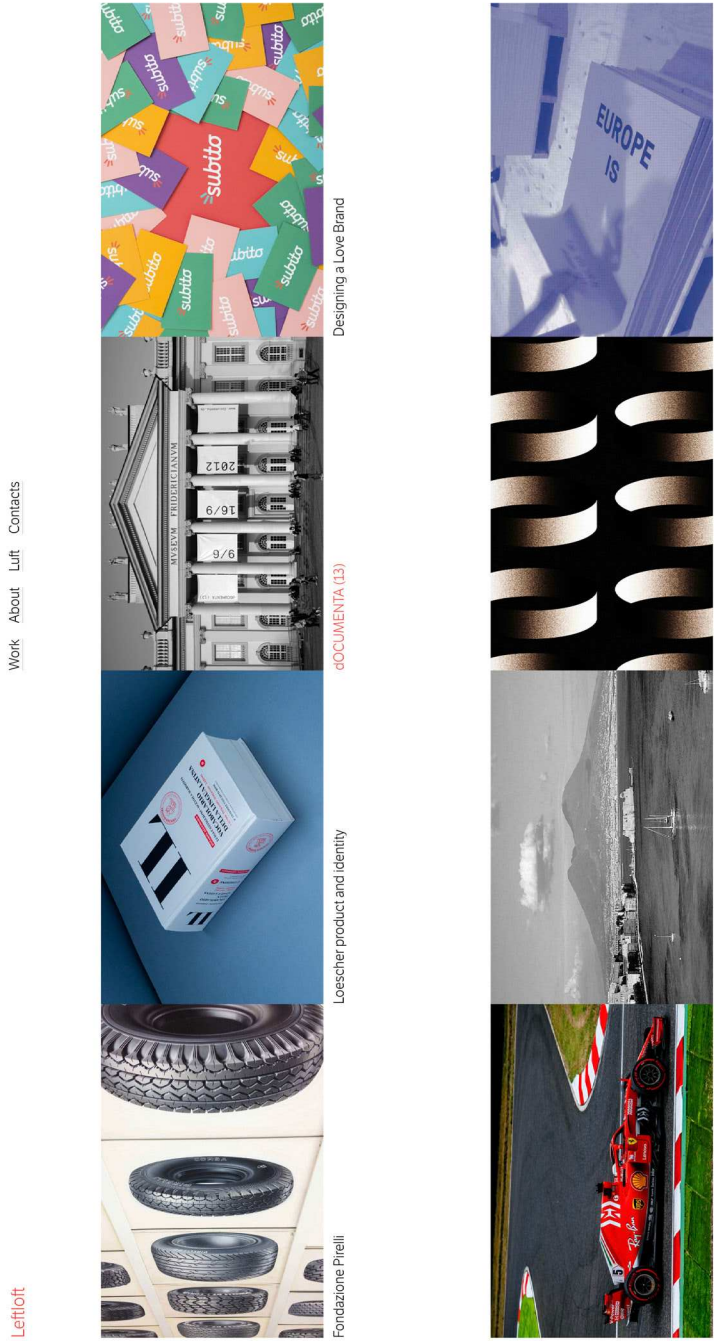


Fig. 18
Left Loft, Website

14. Mads Elleberg Petersen, Founder and Creative Director at *e-Types*, Fig. 19 Copenhagen, Denmark.

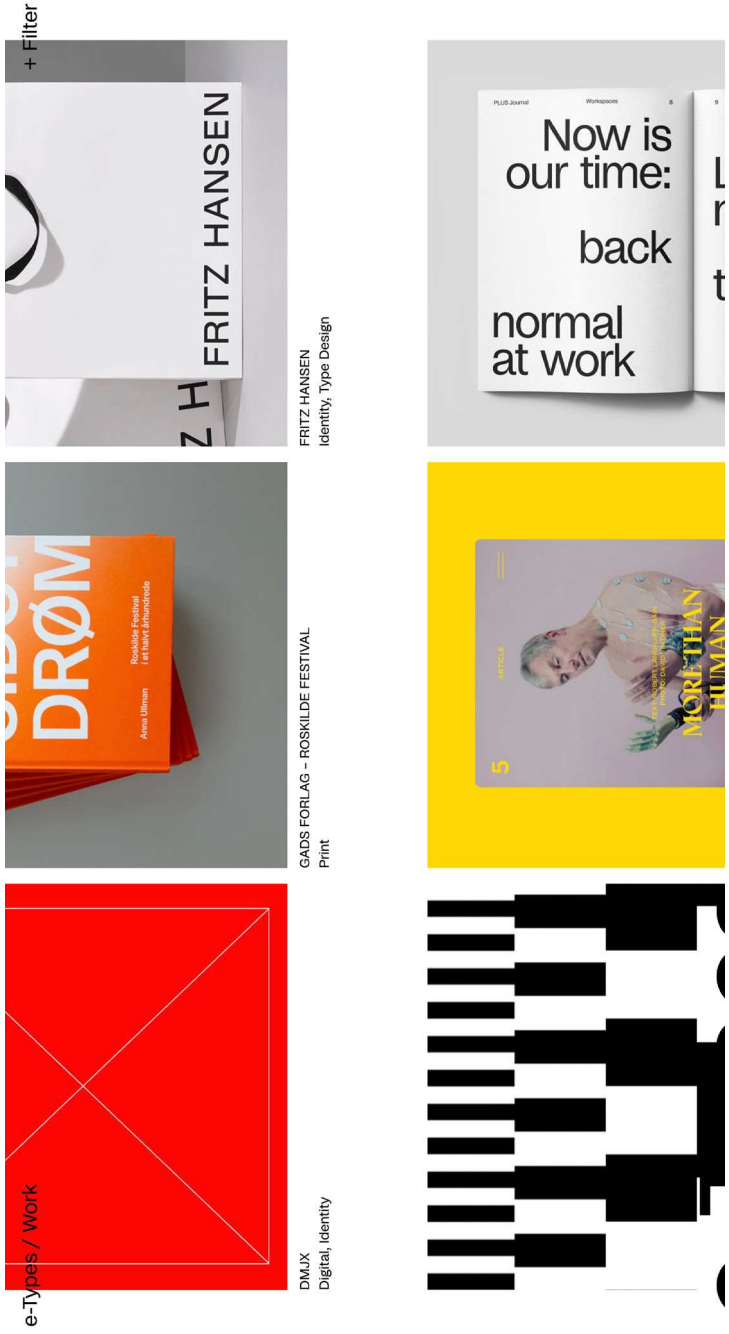


Fig. 19
E-Type, Website

15. *Svein Haakon Lia,* Founder and Creative Director at *Bleed Studio,* Fig. 20 Oslo, Norway.

bleed

about

→ Nothing less than pure
Straight from the Austrian alps.

→ Cars are Schysst
Drive my car.

→ Frend, your new BFF
A full-service IT partner on a mission.

Fig. 20
Bleed Studio, Website

16. *Jack Llewellyn*, Senior Designer for *Pentagram Partner Hudson Powell*, Fig. 21 London, UK.

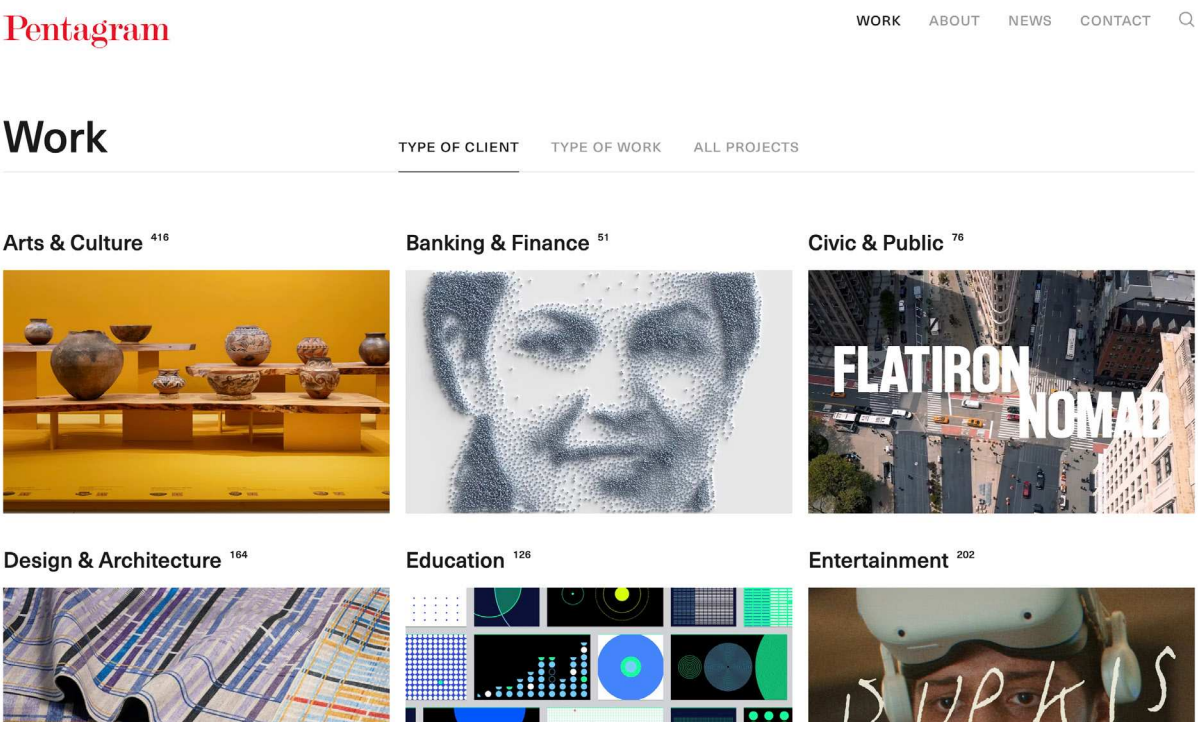


Fig. 21
Pentagram, Website

17. Xander Marritt, Art Director for *Field Systems*, Fig. 22 London, UK.

Fig. 22
Field Systems, Website

18. *Leslie David*, Founder and Art director at *Leslie David*, Paris, France.

Fig. 23

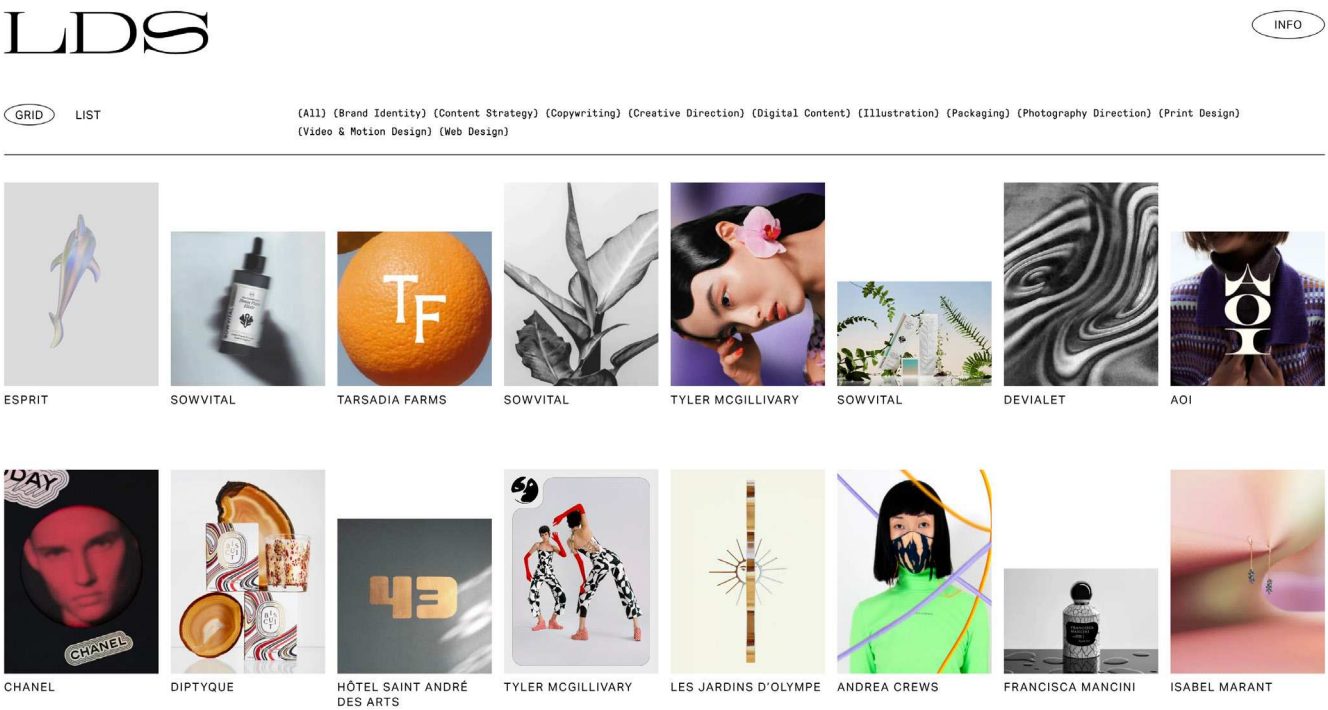


Fig. 23
Leslie David, Website

19. Gary Fogelson, Co-founder and Art director at *Other Means,* Fig. 24 New York, USA.

Fig. 24
Other Means, Website

20. Roosje Klap, Founder and Art director at *ARK (Atelier Roosje Klap)*, Fig. 25 Amsterdam, Netherlands.

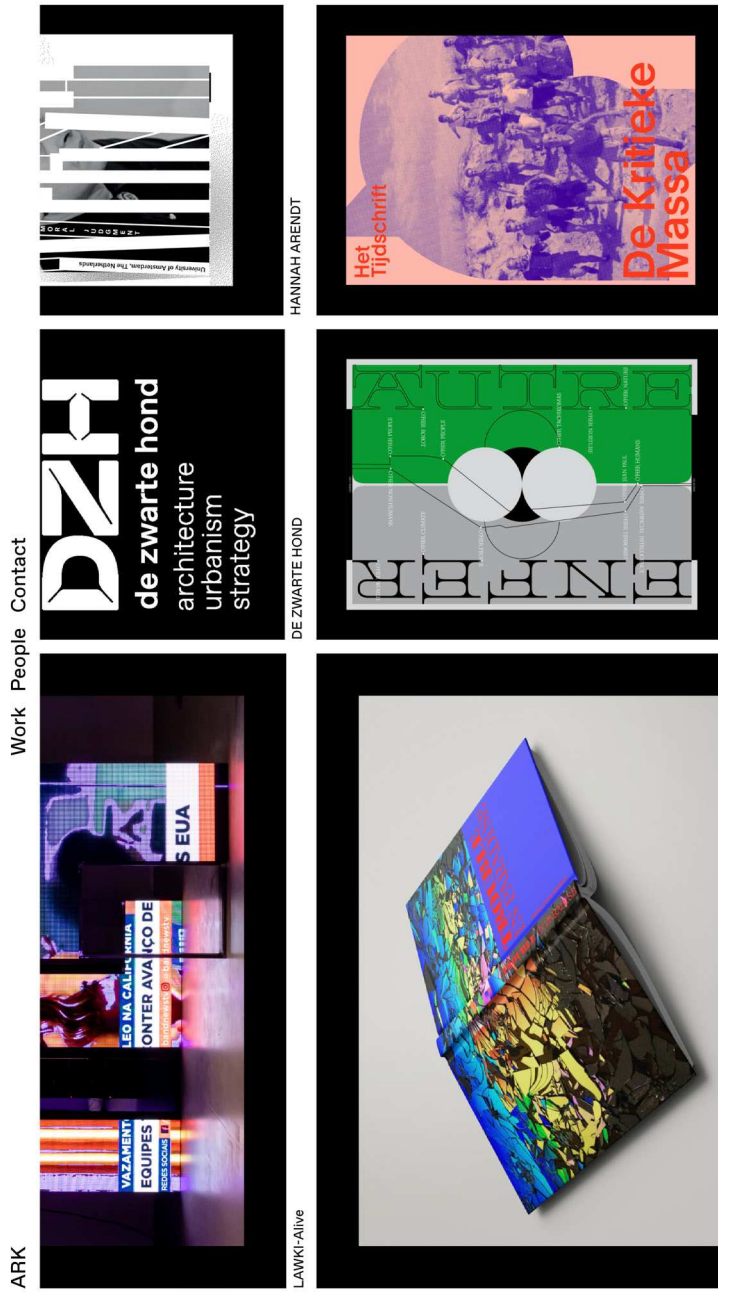


Fig. 25
Other Means, Website

The remainder of this chapter is organized by coding schemes, followed by my pragmatic analysis that implies: (1) an emphasis on actionable knowledge, (2) recognition of the interconnectedness between experience, knowing, and acting, and (3) inquiry as an experiential process (Kelly & Cordeiro, 2020).

As my interviews progressed, some of my questions changed, as common in grounded theory (Charmaz, 2006). This was "aimed at understanding...how key events...and processes in the data are shaped by context(s) and are constructive of categories" (Foley et al., 2021, p.2). Throughout the process, I remained open to new data, I saw every new interviewee as a new set of data that would either agree with or challenge the current set of beliefs (Foley et al., 2021). The theoretical saturation of data occurred when there started to appear clear patterns in the answers to my main questions.

4.3 RQ1 Working methods in visual identity

In this section, I explore the differences and similarities in the identity design process. I asked my interviewees to tell me how they approach the challenge of designing an identity project, through questions related to their specific project phases, tools and timing. I begin this section by elucidating different terms and how designers use them to describe their practice. I continue by systematically presenting the answers of my interviews with coding schemes and related analysis. During the initial coding phase, the importance of research in the studios' design process emerged. This led to a deeper investigation of that phase, while I still remained open to all possible theoretical directions of my data (Charmaz, 2006). In later stages of focused coding, other salient categories such as the design process structure, and the related tools, emerged.

4.3.1 Terminology

My first question aims to deeper understand how designers select their vocabulary. The introductory literature review highlighted a discontinuity in the terminology used for identity projects by designers and other specialists in the field. I asked my interviewees what terms they use and why. My attempt was to understand firsthand what the selection criteria are and what design approach follows. The assessment – as in the literature – highlights a bigger

problem, which is a lack of coherence in the use of terminology. Different terms not only increase the difficulty for researchers in the field, but also create confusion within the industry itself. Graphic design has in fact been accused of lacking theoretical refiection, as well as including several ongoing debates as to what its practice comprises (Meron, 2022, p.10). One of these is that practitioners themselves are unable to agree on what terms to use (Meron, 2021). On the other side, identity design has grown in complexity over the years (Guida, 2014), leading to numerous necessary sub-terms.

My question was specifically addressed to the main term, to understand the preferences between identity and branding. The main question was: What term do you use to name identity projects? 7 of 20 studios replied with 'identity', 6 with 'branding', 4 with 'brand identity' and 4 with 'visual Identity'. One studio replied with both visual and brand identity. Hereby are different definitions for identity, branding, brand identity and visual identity, and their perception:

> We don't use the term branding, because branding for us is something more corporate, and we hardly ever design identities for such products. *Nowicki M., Post Noviki*

> I think we use visual identity when it's typically for non-profits, like cultural institutions, where they are more sensitive to the word brand. So for example, for museums, we always say visual identity, not brand identity, but at least in our mind, is fairly interchangeable. *Cook G., Base Design*

> At Hudson-Powell, we would call ourselves a branding agency. And the reason why I'm saying brand identity rather than overall brand, rather than identity, or rather than visual identity, is that I feel there is a split between brand projects, where you would include elements of strategic investigation, that would take into account the wider company structure, wider audiences [...] *Llewellyn J., Hudson Powell, Pentagram*

Some designers pointed out that the amounts of terms can be confusing and counterproductive:

> It's confusing because different designers use different terms. *Malmin A., Serious Business*

For many designers, it seems clear that the terms in question are interchangeable or synonymous:

> I have worked for different studios, also as a freelancer, and everyone calls it differently. But it's always the exact same thing. *Diví B., Aktiva*

> We tend to deal with identity or branding projects the most. These terms are almost synonymous, to be honest. *Braccaloni A., Leftloft*

In addition, different terms are used for internal and external communication:

> Internally, we call them identities. *Bontempi L., Parco Studio*

> Externally, we refer to it as visual systems, because we apply the same rules to complex systems like websites as we would apply to an identity system. *Bonetti E., Parco Studio*

> In our portfolio, we call them identity. But we are sometimes making corporate identities, brand identities, visual identities, or we are making a logotype. Officially we call it identity, but it keeps changing. *White S., Kellenberger-White*

> Visual identity is the term we probably use most, but internally we just say identity. *Van Velsen M., Studio Dumbar*

Another aspect to take into consideration is that meaning can change depending on country, culture and language:

> In the US they more likely call it branding, while here in Europe it's mostly called visual identity. *Diví B., Aktiva*

> For Italian clients progetti di identità visiva, for non-Italian clients, visual identity or brand identity. *Daminelli G.G., Studio Temp*

> When I'm talking about branding in French though, I rather say identity, otherwise it's not always understandable. *David L., Leslie David*

> Visual Identity. It's not necessarily a conscious choice, I think. That also depends on my clients, most of them are Dutch, and in Dutch, we would call this identiteit, not visual identity. *Klap R., Atelier Roosjie Klap*

In other cases, it has been pointed out that meaning persists in either language in question:

> Visual identity, in Polish, it means the same. *Nestorowicz K., Post Noviki*

> For most studios, the terminology is connected to the way they want to be perceived, in particular by clients: That's something that we thought about quite a lot. The straight answer would be identity, just identity. Then the alternatives would be brand identity or visual identity. *Barnabé P., Zaina*

4.3.1.1 Analysis

As in literature, among the interviewees, multiple terms are used for the project category in question. Although there appears to be a common understanding of the interchangeability of terms, most designers still make a conscious selection between identity and branding. An important element to emerge is that agencies favour branding or brand identity. There also seems to be an overall agreement about these terms being used most by agencies. Among studios on the other hand, terms are used more inconsistently. Branding and other connected terms are avoided when dealing with the cultural sector because of the strong commercial connotation that comes with these terms. This is connected to a larger and historical debate since the appearance of the 'First things first' manifesto by Ken Garland in 1964. A plea to reposition the design industry from commercial to social and cultural work (Garland, 1993, Ball, 1999). Responsible for controversy and contra-statements, the manifesto was updated in 1999 and countersigned by "a new generation of designers who hadn't seen much progress from the time of his original" (Walker, 2019).

It is noteworthy to mention that for some interviewees, the main difference is that branding, as opposed to identity, includes strategic investigation and positioning. Both elements are connected to the discipline of marketing and not necessarily related to

visual elaborations of the project. In opposition to that, smaller, cultural-oriented studios that supposedly favour the term identity work on strategy as well: "In the last two years we've been doing strategy within brand identity, beyond the visual, giving guidelines about how you speak your mission statement". White S., Kellenberger-White (2022, January 13).

According to the interviewed designers, the term identity is perceived as more loose, and fit for cultural projects. Visual identity seems to refer specifically to graphic elements of a project, and is often used as a sub-term. Branding and brand identity seem to contain elements of strategic investigation, and are therefore associated with bigger commercial projects. They were also connected to a more specific, fixed way of structuring a project, for example through the creation of a brand book. Even though the designers helped me highlight the 'terminology problem' from different points of view, I conclude this section without a clear resolution. A more coherent usage of terms would help the field of graphic design to advance on an academic level, and would also make the industry more approachable to outsiders. But it seems irrelevant and impossible to select one term over the other at the moment. Also, even though the matter is connected to my research, it does ultimately not answer my research question.

I conclude this part by underlining that the primary function of the different terms seems to be positioning studios and agencies differently to appeal to clients from different sectors. For my research, I will continue to use the term 'visual identity' that – as confirmed through the interviews – focuses on the visual parts of the project.

4.3.2 Research and strategy in visual identity

To my question: What is the first thing you start with when dealing with an identity project? The most common answer was research, or synonymous terms like analysis and investigation. A few designers also replied with strategy. Similarly to my terminology question, in this case, different terms were used to define the same or similar activity. In the designer's explanation, it seems clear that once the managerial parts are taken care of, an exploratory phase begins. My findings indicate that designers are using 'soft' sources of information; empirical research is not necessarily part of their decision-making process. Depending on the studio and the project, the clients can be involved directly or indirectly in this phase. There can be workshops, interviews and other activities that ensure participation on both sides. Clients are the primary investigation subject, and this phase is used to exchange and establish common grounds between designers and clients.

> We try to find out as much as we can about the client and the topic we are dealing with. *Daminelli G.G., Studio Temp*

> There is a preliminary phase in which we analyse the case, first alone, then with the client. *Bontempi L., Parco Studio*

> We start by intensively analysing the client, we personally try to understand how the client positions himself in his field. We are also trying to understand how the client sees himself and how realistic his perception is. We can control this through certain questions we ask. The client's reflection emerges through these questions. *Von Gross J., Off Office*

In some cases, the research/strategy phase is not directly connected to the design phase, which might be executed by another team.

> The first step is always orientation and strategy. That means getting to know the clients and their needs. The strategy department does the first steps through interviews and putting a strategy document together, and from that, there's new positioning of the brand. *Van Velsen M., Studio Dumbar*

To avoid confusion due to terminology, I asked a second question that suggests that all of my interviewees are engaged in research, regardless of what they call it. I asked: Do you collect information for the project? And all replied positively.

> Yes, we usually start with research. *Fogelson G., Other Means*

> Yes, it's the most important phase of the project. *Diví B., Aktiva*

> Yes, the research phase is quite important for us, it's where we try to understand the project. *David L., Leslie David*

> Yes, we have an initial research phase. *Lia H. S., Bleed Studio*

My interviewees highlighted different types of research, executed in different stages of the project. Distinctions between client information and visual references were made.

> Yes, we collect information about the client, its origins, self-image. We also collect information about the competitors. *Lingemann M., Off Office*

> Yes, I collect two kinds of content: theoretical information about the company and information about form, visual shapes, logos, grids and so on. *Scagliarini F., Studio FM*

> ...we do multiple things with our research. We always interview the key stakeholders, the key people in the company. We do research on documents or analytics that the companies provide us. And I think that from that research, we form certain hypotheses. And then, from there, it's taking those hypotheses that trigger the ideas, the concepts that serve for whatever we're doing for the brand. *Cook G., Base Design*

One studio, in particular, also uses research internally to try out new tools and develop new ways of working on identity projects.

> There is research that is more about the client. The other research we do is an internal one based on technology. We try to find new ways of creating identities by trying new tools at least once every two weeks. We have a group where all the designers, motion designers, creative coders, are there to use new programs and try to make stuff with it. *Van Velsen M., Studio Dumbar*

I continue to investigate the designer's research process through my next question, focusing on the tools used in that stage: How do you collect information for the project?

> If it's a project that is well-founded, we can do customer interviews. Customer research, if it's not well-founded, could be just desktop research. *Bologna M., Studio Mucca*

My next question concerns the amount of time spent on research. For most of my interviewees, this is strictly related to the client and the project's budget.

> It depends on the project, usually a couple of weeks. *Bontempi L., Parco Studio*

> We do different degrees of research depending on the needs of the client or also the budget of the client. *Llewellyn J., Hudson Powell, Pentagram*

> It should be 2 to 4 weeks, I feel like we are kind of slow, but that's usually because we are juggling a lot of work at the same time. We are probably not working on it for 4 weeks straight, but we can maybe just put one day to it per week. *Fogelson G., Other Means*

Answers can be very contrasting:

> Normally, I like to spend at least half a day, or four hours, on research. It always depends on the project's complexity. *Bel Divi B., Aktiva*

> Sometimes even a couple of months. When we can, we like to alternate the more intense working phases with research. *Nestorowicz K., Post Noviki*

> Of course, it differs for every project, but it can be from 2 to 4 weeks. *Petersen M. E., e-Types*

4.3.2.1 Analysis

All interviewees affirmed their engagement in research or strategy, a phase in which they collect relevant information for and about the client. There also seems to be consensus about the importance of this phase, and the overall impact it has on the project. None of the designers seem to explore design theory or build upon existing foundations in literature. The methods used for research are similar but not identical; every studio uses a different combination of methods, the most common being desk research and extensive discussion or interviews with clients. Field research, client workshops and mood-boards were also mentioned often. Before analysing their methods further, I dwell on the different types of re-

search the designers mentioned. Initial research is mostly an exploration of the client and its context, which is most important since the design problem typically originates with the client and its need for assistance in solving it (Haug, 2015). It has also been recognized that clients and designers inhabit different design worlds, making communication challenging (Cornish et al., 2015). Also, the aesthetic of the client plays a main role in conditioning the designer's process and visual choices (Laing et al., 2017). Exploring the client's context is therefore all the more important to establish a common language between client and designer.

In the research stage, there also seems to be a difference between research and strategy. The latter goes beyond visual analysis and can be executed by a specific team, like at studio Dumbar for example: "The first step is always orientation and strategy. That means getting to know the clients and their needs. The strategy department does the first steps through interviews and putting a strategy document together, and from that, there is a new positioning of the brand." Van Velsen M., Studio Dumbar (2022, February 1). This does not mean that designers do not do their own investigations. They usually build upon the strategy with visual-oriented desk research. "For this part, we collect information from their website, social channels, and everything we can find online. We collect everything we can find about themselves and their competitors, and pay attention to what visual language they use." Van Velsen M., Studio Dumbar (2022, February 1). In studios with smaller teams, it is more likely that designers develop all stages of the project themselves, including research and strategy.

The second type of research is an exploration of references and inspirations that help the designers define their graphical choices. As recognized in literature, visual research is an important part of the design process, in which graphic designers search for inspiration and references (Dziubak & Bunt, 2018). It also helps designers to provide a visual framework and better evaluate their ideas (Miller & Bailey, 2014). Also, in this case, desk research is the most common way to find references. There is discordance about what platforms to look at; the main problem with references seems to be the homogenization of trends:

> There are times when you need to get out of the internet and look at old signs, books, printed references and physical materials. Otherwise, you just get inspired by the same things over and over again. We are quite conscious about not replicating trends in our work. *Barnabé P., Zaina*

For reference research, my interviewees mentioned the following sources of inspiration and platforms:

1. Behance
2. Books
3. It's nice that
4. Pinterest
5. Books

Notion was mentioned as management tools to organize the research input. Dissonant opinions were associated to their relevance and usage:

> Everything is in my Pinterest folders. I use Pinterest for saving my research and inspiration that comes from other channels, and I also research through Pinterest. *Diví B., Aktiva*

> We don't use Pinterest, that's a rabbit hole. *Nestorowicz K., Post Noviki*

There seems to be an overall preference to look at books or other non-digital materials, but to what extent depends on the project size and budget.

> If I have time I like to research with books, but most of the time I use the web such as Pinterest, Font in use, It's Nice That, Behance, but the problem is that most of those projects are too similar. *Scagliarini F., Studio FM*

The designers also mentioned different existing methods they integrate into their research process. To some extent, these are personalized and adjusted to specific needs.

1. 5W's, a model of communication based on 5 questions (Who, What, When, Where, Why), whose answers are essential for information gathering and problem-solving. This model is often used in journalistic research (Kovach & Rosenstiel, 2021).

> For the activities we do during the workshops, we use different methods and exercises. Some we invented, others are taken from here and there, for example, the 5w or the Google sprint. *Braccaloni A., Leftloft*

2. Creative toolkit, a "collection of physical elements organized for participatory modelling, to inform and inspire design" (Martin & Hanington, 2012, p. 48). Creative toolkits are a qualitative method that helps people to engage in creative expression through facilitated participatory exercises. They help picture communication patterns and emotions otherwise hard to articulate (Martin & Hanington, 2012). The brand Lego predesigned specific kits for their guided workshops 'Serious Play' for building metaphors and facilitating communication for adults and creatives (Lego, 2022).

> I do something quite joyful in my workshops: I have a massive set of Lego, and I play Lego together with the clients. *Klap R., Atelier Roosjie Klap*

3. Design workshops, a co-design method organized to gain input from stakeholders and clients through activity-based research (Martin & Hanington, 2012). In the research and exploration phase, "workshops can consist of techniques such as collage, mapping or diagramming, targeted at gaining understanding of the user's world and establishing design implications" (Martin & Hanington, 2012 p. 62).

> We collect information through workshops and interviews with the clients, stakeholders in the company. *Malmin A., Serious Business*

4. Interviews, a method for direct contact with participants to collect personal accounts of experience, opinions, attitudes and perceptions. The questions asked during the interview vary depending on the nature of the design inquiry (Martin & Hanington, 2012).

> One of the most important things we do in this phase is interviews with the clients. *Braccaloni A., Leftloft*

5. Mood boards, a collage of collected pictures, illustrations or brand imagery that can be used to visually communicate essential descriptions of targeted aesthetics, style, audience, context (Martin & Hanington, 2012). According to Marting & Hanington a mood board is usually created after the designer or design team decided on a general focus or aesthetic. Furthermore, these collages facilitate the communication between designer and client.

> Our main work phases are: Dialogue, research, mood boards, sketching and applications. *Lingemann M., Off Office*

> We use mood-boards and when we started doing them, we noticed that they are important for connecting with the clients. *Bontempi L., Parco Studio*

6. Personality sliders, an exercise used to position the client through a set of opposing adjectives from which they have to choose. The particularity lies in sliders that indicate the amount of an adjective quantitatively (designsprintkit.withgoogle.com, Retrieved May 10, 2022).

> One exercise we do with the clients is giving them a set of opposing adjectives, and they need to position themselves between them. For example: luxury vs. mass market, and they have to position a dot between this words so that we can understand visually where they see themselves. *David L., Leslie David*

7. Questionnaires, survey instruments created for collecting self-report information from people. The way questions are structured will define the type of response and analysis. For example, open-ended questions usually generate deep responses, whereas closed-ended questions are more likely to create numerically analysable answers (Martin & Hanington, 2012).

> We work with questionnaires. They are for understanding how the clients envision the brand. It's a list of questions like where you see yourself in five years, and so on. There are different topics, and it's for us to understand how they think about themselves and who they think their competitors are. *David L., Leslie David*

8. Round Robin exercises, is the simplest scheduling algorithm, in which the processes are given turns at running, one after the other in a repeating sequence, and each one is pre-empted when it has used up its time slice (Anthony, 2016). It can also be used as a brainstorming tools for generating ideas without being infiuenced

by other group members. This method ensures that everyone gets an equal say in the idea-generating phase (Mindtools.com, 2022).

> It's mostly dialogue with the clients. Some of the exercises we do in the workshops are more like round-robin exercises, to specify things within each target group. *Lia H. S., Bleed Studio*

9. SWOT analysis, a process of exploring the internal and external environments of an organization to extract concepts based on its strengths, weaknesses, opportunities and threats (Ghazinoory et al., 2011). As pointed out by Ghazinoory et al., SWOT does not have a strictly defined structure and is, therefore, more artistic than scientific, but nonetheless a rigorous analysis tool (2011).

> Once we've done all of those interviews, we make something we call a SWOT, that's strengths, weaknesses, opportunities, threats, you might pull all of that interviews together. This structured research allows us to identify problems and successes. *White S., Kellenberger-White*

A third, internal research method was mentioned by a couple of studios only. For that, designers test new technologies and try to implement them as tools in their design processes.

> The other research we do is an internal one based on technology. We try to find new ways of creating identities by trying new tools at least once every two weeks. *Van Velsen M., Studio Dumbar*

It can also result in direct tool development:

> We do have a process that is maybe unique to our team, and we work a lot with building tools. *Llewellyn J., Hudson Powell, Pentagram*

Tool testing and creation innovate the field of graphic design and the designer's way of working. It is a niche movement connected to the appropriation of programming languages by graphic designers (Conrad et al., 2021). As pointed out by Conrad et al. (2021), the major trends that have emerged so far are the introduction and usage of platforms like Processing, open Frameworks, and generative design more generally. Furthermore, predictions around augmentation of the design process through AI and ML are increasingly relevant (Cook and Kwon, 2019, Meron, 2022). Since at the moment there is still a lack of design discourse around AI, having two studios in my sample that persistently experiment with new technologies is extremely relevant for my further research.

This section illustrates that all the interviewed designers start their projects alike. Research is the first step of the process, and it analyses the client and its context. A second type of research concerns a collection of references that serve as inspiration. From the sample, two design studios emerged for a third type of research that is self-referential as it engages with the experimentation and creation of new tools for the design process.

4.3.3 Working Process in visual identity

My next series of questions intends to reveal similarities and differences in the process of identity projects. The question: How is your process structured? Intends to reveal similarities and differences in the process of identity projects. A defined pattern of affinities appeared in the way the designers answered this question. The design process is described as organic and likely to adapt to different projects. Yet almost all designers follow the same process stages:

1. Talks with client
2. Client workshops
3. Research about the client
4. Research for visual references
5. Conceptual Routes
6. Brand/concept construction
7. Sketching/Different Routes
8. Presentation
9. Client's feedback
10. Rounds of adjustments
11. Client's approval
12. Implementation, assets and guidelines

> First, we have the insight phase, then we have the strategy phase, then concept, sketching, then we have presentations, feedback and adjustments. This is our framework, but then

on the micro-level, the path to reach the end goal can be very different. *Petersen M. E., e-Types*

It's relatively precise. First, the client talks, then workshops, then I gather more specific information from the client, then sketching that flows into the presentation. I have three stages and three types of presentations I make. The first presentation is the sketch/design, the second presentation is the preliminary design, and the third presentation is the final design when everything is pixel perfect and ready to go. *Klap R., Atelier Roosjie Klap*

Feedback emerged as a ubiquitous activity that operates as a link connecting the different process stages. In particular, client feedback is essential, as it carries significant weight in determining the outcomes of the project.

We make a presentation for the client and based on the client's feedback we define the final version. *Bontempi L., Parco Studio*

We never work alone on a project, we all need feedback and exchange. The feedback from someone who wasn't looking at the work for the past hour is indispensable. The moment you see your design through the eyes of the other person, you already have a different perception. *Lingemann M., Off Office*

To better understand the fiexibility of the process, I asked my interviewees if their procedures are rather linear or intertwined. Most designers confirmed that their process is linear but organic. The process steps the designers follow can overlap and fade into each other. A minority of designers perceive their processes as intertwined, even though they follow specific process phases.

We have realized how the process is always changing. Not to say that it's unstable, but it's very much a work in progress. There are a lot of challenges and interesting things to develop. Visual identity projects are almost a living thing. *White S., Kellenberger-White*

There is a schedule and logical order, but the way we are working is quite organic. *David L., Leslie David*

It's linear, but there is a lot of overlap. I think the tricky thing with identity projects is that you can propose a bunch of ideas at the beginning and once you start making things they might not work out – you might not have the right idea, and it's hard to go back. That's why we try to approach strategy as a visual strategy where we are coming up with ideas but also have to make them work because we can't go in and say this is what we think this should be about until we feel like we can actually translate it into something that will work great. *Fogelson G., Other Means*

4.3.3.1 Analysis

With these questions, I explored the similarities and differences in the visual identity process stages. I was particularly interested in unveiling what steps the designers follow and how rigorously they follow them. The answers confirmed vast similarities in the macrostructures and differences in the management of details. Even though all designers follow similar process stages, there are differences in the order of execution and the exact procedures and methods applied within the process. One way to get an insight into creativity is by studying the process adopted by practitioners, and then embed the best practices in tools that can emulate those processes (Resnick et al., 2005). In literature, graphic design is commonly described through its outcome materials. Only in recent years, the necessity to better understand the discipline created a shift, making diagrams to depict theory and make research more accessible (Harland, 2015). Graphic design research often borrows principles from the study of design methodology, which from the 1960s onwards analysed the process of disciplines such as architecture, industrial design and software development (Cross, 1984). Through the years, a substantial cumulus of models and diagrams that illustrate the design process of various disciplines came together (Dubberly, 2004, Design Council, 2007). It is therefore recurrent that research on design adopts many perspectives. Since design is 'far too complex for understanding the whole of design in one step' (Cavallucci, 2014, p. 7) different approaches are seen as a positive sign, which indicates a discipline in development (Chakrabarti & Blessing, 2014). According to Dubberly (2004), reflecting on the design process and consciously applying a structure is favourable to increasing the repeatability of success. Process models in par-

ticular are useful to rationalize creative work (Wynn & Clarkson, 2018); they are an abstraction of reality, a simplified and schematic representation of the essence of a theory (Chakrabarti & Blessing, 2014).

I observed a general awareness of the process from the interviewed designers. They follow specific steps, without rigidity, allowing an organic development of their projects. This degree of fiexibility makes it impossible to simplify the design process far enough to find a standard but detailed representation of it (Design Council, 2007). Taking this into account, I analyse and structure my findings according to commonalities in the process, using an existing model as a guide. I rely on the Double Diamond diagram, which is generic enough to contain the whole design process. Created by the Design Council in 2007, it is based on a qualitative study of design procedures of eleven world-leading companies: Alessi, BSkyB, BT, Lego, Microsoft, Sony, Starbucks, Virgin Atlantic Airways, Whirlpool, Xerox, Yahoo (Design Council, 2019). It is a standardized description of the process divided into divergent and convergent phases: Discover, Define, Develop and Deliver. Fig. 26

Although the Double Diamond is meant to be generic, the Design Council suggests that it can be customized to fit each project's characteristics (Gustafsson, 2019). Through its systematic but universal categorization, it is able to contain the processes described by my interviewees. Fig. 27 One studio in particular mentioned the Double Diamond diagram as an abstract version of their overall process:

> A more abstract definition of our process would be then so-called Double Diamond. Basically, in our process there is a part of opening the diamond, this is an exploration done by the studio, and then there is the synthesis part which is done with the client. *Bontempi L., Parco Studio*

It is important to underline that this adaptation of the diagram is the average process of all interviewees combined. As mentioned before, the order of execution can vary not only depending on the designer, but also on the project. Each project could therefore have its own detailed process representation.

Feedback emerged as an omnipresent activity throughout the different process stages. It is considered to be advantageous, as it usually directs the whole development of a project (Schut et al., 2022). Additionally, it assists designers in gathering external per-

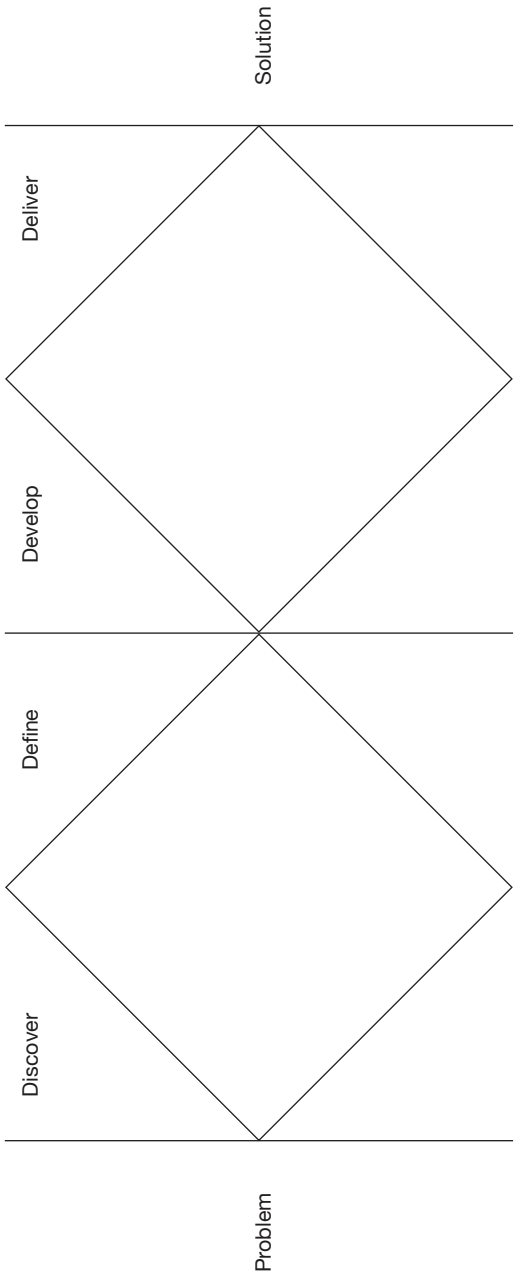


Fig. 26
Double Diamond Diagram (Design Council 2019)

spectives to enhance their work and can be provided by peers, mentors, clients, and users (Krause et al., 2017). Research indicates that feedback holds importance across various stages of the process. Dannels and Martin (2008), refer to feedback as the most central aspect of common presentation in the design discipline. In their study, they categorized various types of feedback sessions that take place in design studios, including judgmental feedback, process-oriented feedback or brainstorming feedback (Dannels & Martin, 2008).

From this section, I conclude that the designers follow very similar project phases that can be encapsulated in an average process diagram, such as the Double Diamond. The process can vary not only depending on the designers, but also on the projects.

4.3.4 Visual choices

With my next question: How do you translate concepts into visuals? I tried to get at the core of visual decision-making in the identity process. So far, the importance of the initial Discovery phase emerged. With this question, I go one step further, trying to understand the practical connection between the insights gathered during the discovery phase and sketching. The attempt is to understand how inspiration and concept influence visual choices, and if there are similar approaches between different designers. Of all of my questions, this one seemed to be the most challenging to answer. For many designers, it was difficult to put this part of the process into words, since it has been referred to as highly intuitive.

> That's a good question. And that's also where it gets difficult. We really want to avoid that it becomes a matter of personal taste, so we always spend a matter of time defining the tone of voice. *Petersen M. E., e-Types*

> We always have a red thread behind our identities. We always start with the strategy because it makes the design work defensible. For the rest, and I guess, it's not going to be very helpful, but that's the magic of it. *Cook G., Base Design*

> There's no magic behind it. At least in my case, and probably for most designers, it's just hard work. I start with the first idea, and try as many ideas as possible. It's just trying, trying, and trying. *Van Velsen M., Studio Dumbar*

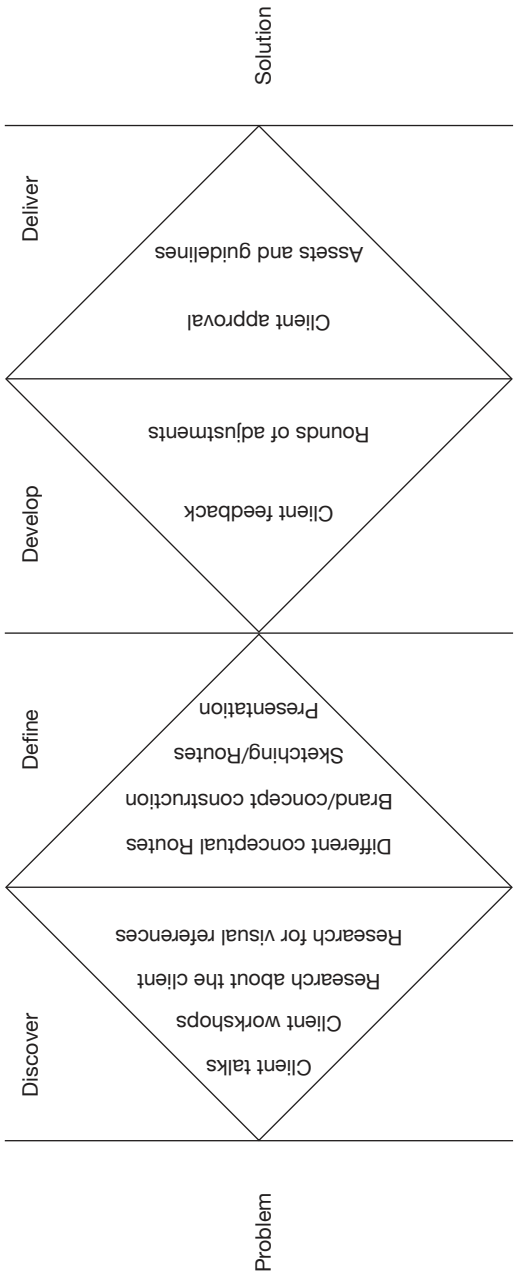


Fig. 27
Customized Double Diamond Diagram
(Average process of interviewed designers)

> I don't know if I can put that into words, but I guess it's like a blender. You kind of put all of those references and ideas into a blender and whatever comes out of it is a synthesis that we think should make sense. How exactly it translates is hard to answer. *Barnabé P., Zaina*

> Our projects are mostly constructed around one main idea, which plays the main role in the design decisions. All the decisions related to a project reflect the content without trumping the main idea, it's a delicate balance. *Von Gross J., Off Office*

The client plays an important role in finding the idea and defining parameters within the project.

> Sometimes it's obvious, sometimes it's quite abstract. It depends so much on the client. We want the clients to come to us if they won't stand out in a category. This means that they are usually a challenger in the category. *Lia H. S., Bleed Studio*

> The parameters are connected mostly to the client. With "low level" clients, we try to find simple visual references, with "high level" clients, we try to find connections that are not that direct. Those choices are more subtle. Sometimes you even have to go against existing iconography. *Scagliarini F., Studio FM*

Another important role is played by market and company's sector.

> By understanding the company and their business model very well. The foundation lies in the research. The most common way is to separate the company from the others. *Malmin A., Serious Business*

> This is why I research, I need to know what's happening in the world. Through the research, I understand what's important for the specific product I'm working for, or what the communication of that product could be. *Bel Diví B., Aktiva*

Most of my interviewees underlined the non-scientific, but rather intuitive nature of their creative work.

> At the end of the day, creative practitioners are creative practitioners. Working with a too procedural process – at least for me – is not the best solution. If there was literally just a method that you follow, you could get anybody to follow that method. I do think that we spend not all of our time, but some of our time, making instinctual things, work or decisions or progress. *Llewellyn J., Hudson Powell, Pentagram*

> This is a very difficult question. A bit might be instincts, then of course also the visual culture that has been assimilated over time. *Braccaloni A., Leftloft*

4.3.4.1 Analysis

Through this question, the intuitive aspects of design work emerge. Even though the designers are aware of their process, visual translation of concepts was of utmost difficulty for them to put into words. It is known to be "a difficult task to achieve for designers [as a] challenging issue for researchers to analyse and later describe." (Leblebici-Basar & Altarriba, 2013, p. 296). As the outcome of the intuitive process is principally tacit, the intuitive cannot give account of how they arrived at the results. (Dörfier & Ackermann, 2012; Grigg, 2020; Van Der Burg et al., 2023). Such complexities are associated with knowledge that exists principally as tacit knowledge of designers. Hence, tacit knowledge is probably the hardest and most ambiguous part of knowledge but at the same time the most valuable (Yazici et al., 2022). This is furthermore mirrored by the limited amount of research on creative processes and intuition in graphic design (de Rooij et al., 2021, Dörfier & Ackermann, 2012). The designers in my study explained that relying on their professional knowledge, experience and research is of utmost importance. To be familiar with the latest developments in visual identity, constant research is necessary, which in turn becomes an essential part of what intuition is based on. Furthermore, as suggested by de Rooij et al., (2021) intuition might come from external stimuli, memory, or subconscious concerns and emotions.

> Ideally, we hear something in a conversation, somebody gives us an idea of how to translate that into form. A lot of it's connecting the dots, something that feels intuitively right for us based on what we have learned. *Fogelson G., Other Means*

As confirmed by both the literature and my interviewees, visual identity and graphic design generally evolves around decisions taken at different points of the process (Da Silva Vieira et al., 2011).

> It's a series of conscious decisions that narrow down the attitude of the project and how it is going to present itself." *Nestorowicz K., Post Noviki*

Decision-making in identity unfolds around value-driven judgments and prioritizing certain values over others (Da Silva Vieira et al., 2011). The designers speak of one core idea that represents the fundamental value around which decisions are made. They referred to it as:

> [...] a great idea that is the DNA of the project *Petersen M. E., e-Types*

> [...] a red thread behind our identities. *Cook G., Base Design*

> [...] that very top-level statement. That becomes almost like [...] our North Star of all the work that we then produce underneath it. *Llewellyn J., Hudson Powell, Pentagram*

In contrast to intuition, reinterpretation of references and trial of different ideas were also mentioned as a procedure to create visuals based on concept. Importance was given to how inspiration and references are reinterpreted. Imitation is seen negatively, whereas combining different elements and referencing in a new way as positive:

> We are always referencing in a contemporary way, not imitating but reinterpreting. *Barnabé P., Zaina*

> Usually I create an idea in my mind and I try it out. I think that part is very organic, it's pure creation, and it's hard to explain. But I guess I try to combine elements that I like or that I have in my mind and I see if they work together. *David L., Leslie David*

The importance of the client is another aspect taken into consideration by the interviewees. As a co-author of design projects

(Falcão & Almendra, 2017), they are an essential component of decision-making in identity projects:

> We establish concepts together with our clients, and then our ability is to transform that into something visual and tangible. Something that the client is usually not able to do by himself. *Braccaloni A., Leftloft*

As explicated by several designers, the client dictates many parameters on how to translate the concept into visuals. On the whole, the answers were particularly consistent, evidencing that the creation of visuals is dependent on factors such as intuition, research, references, clients, prior knowledge. This part of the process is described as a delicate balance between the mentioned factors. The designers agree on the visuals, standing for one main idea that is reflected throughout the project. Different perspectives emerge on the importance and balance of the different factors. For example, intuition plays a more prominent role for some designers than others.

4.3.5 Tools in the visual identity process

With my next series of questions, I explore the tools used to construct visual identities. My attempt was to detect similarities and differences among the designers, and their reliance on computers as opposed to manual work. When asking about their tools, the most common answer is Adobe Suite. Other mentioned programs are:

1. Figma
2. Sketch
3. Processing
4. Cinema 4D
5. Glyphs

> We use various tools for various phases. We use the Adobe Suite, Figma for the digital stuff, Glyphs for Type, then Sketch, Cinema 4d, and so on. *Braccaloni A., Leftloft*

> The Adobe suite, mostly. When we deal with type-related projects, we use Glyphs. *Barnabé P., Zaina*

> All the typical stuff for the graphics. We're using the Adobe

Suite. On the digital side, we're using Figma, Sketch. *Cook G., Base Design*

I think we are kind of standard in terms of tools. We use the Adobe suite, we use Figma. *Lia H. S., Bleed Studio*

A minority of designers mentioned management tools as an integrated part of their design process:

1. Miro
2. Slack
3. Basecamp
4. Notion
5. Standard Notes
6. Dropbox

We use Notion for project management. We are using Slack, we don't like it, but we are using it. *Fogelson G., Other Means*

For workshops that are done digitally we use Miro, we have used Basecamp for a while. *Braccaloni A., Leftloft*

Tools are also seen as an opportunity to experiment and overcome creative boundaries.

It's interesting to change and experiment with tools. A few days ago, I was trying to design something in PowerPoint for a client, and it's a completely new tool for me. It's refreshing, and you cannot do all of your tricks, maybe it's good to change once in a while. *Nestorowicz K., Post Noviki*

Since an obvious prevalence of digital tool emerged, I asked further questions to understand if there are still parts of the process that are executed analogically. To my question: How much of your process depends on computers? All designers confirmed that most of their process is executed digitally.

Almost everything, if not everything. I personally almost never use paper and pencil, I always start already at the computer. *Van Velsen M., Studio Dumbar*

Most of it. *David L., Leslie David*

I've never worked manually in my life, I'm from the very first generation of computers. Our designers obviously work on the computer most of the time, that also depends on their position within the studio. *Braccaloni A., Leftloft*

We are probably on the computers, usually each day. *White S., Kellenberger-White*

Within this human-computer interaction, talent and decision-making power are primarily attributed to humans.

I think nothing is really depending on the computer, the computer is a hammer. We need to do stuff on the computer, but everything is based on what a designer can do and of course, everyone has a computer. It's all about the designer status and different tools. *Lia H. S., Bleed Studio*

Most of our work is done on the PC, but it's mainly head work. It's not necessarily the great magic that happens on the computer, but rather in the head. There is constant transfer between the computer and head. *Von Gross J., Off Office*

In singular cases, entire stages of the process are executed digitally and analogically.

In my opinion, we carry out all the phases both on the computer and analogically. For example, when I think it always helps to write down things, or draw schemes. I often need paper and a pen. *Bontempi L., Parco Studio*

The final drawing is definitely done on the computer, maybe not the sketch, though. Lori taught me that you hardly get the idea of staring at the computer. *Bonetti E., Parco Studio*

I continued by asking how much of the designer's process is not dependent on computers. With this question, I was able to verify that even though there is a digital prevalence in the process, there are some activities like sketching that are still executed manually by a minority of designers. Hand sketching seems to take part

mostly in the initial phase, right after research. It is described as a quick and efficient way to visualize ideas before reproducing them digitally. Furthermore, time without the screen can be seen as a relief.

> The moments where you can avoid the screen are perhaps during the research stage, where we can look at books or do some field research like going to stores to interact with products. *Barnabé P., Zaina*

> I'm old school, so I still sketch, but not that much. I usually start sketching after the research phase and when I have something that I might like, I implement it on the computer. *Bel Diví B., Aktiva*

> Not much, actually. We draft some logos by hand sometimes, but not always. *David L., Leslie David*

> I'll write notes and make the crudest sketches just to get ideas out of my head. But then, almost everything is digital. *Fogelson G., Other Means*

> In the idea-finding phase, I still sporadically use pen and paper. *Bologna M., Studio Mucca*

Dummy construction was also mentioned as analogical activity. Used for printed matter, it has a big impact on the final outcome and can lead to changes in the design.

> The dummy constructions are completely analogically. What I definitely notice is that when you bring things back to reality, through print for instance, it looks completely different. Sometimes we change things shortly before the end, once we made print tests. *Lingemann M., Off Office*

For one studio, in particular, analogical work becomes an opportunity to experiment and create their own aesthetics.

> We've done things with ceramics, last year, in Darby in a metal factory. And we were developing typography in sand cast process, where you make a mould in the sand and pour metal into it. And we've been looking at different ways machines can make fonts, and then develop fonts that way. We've got loads of different pens and brushes and spray cans... *White S., Kellenberger-White*

4.3.5.1 Analysis

Tool selection appears to be the aspect with the most commonalities among the designers. The Adobe Suite is the primary software for identities, followed by the collaborative web application, Figma, bought by Adobe in 2022. Apple and Adobe count as primary companies that develop graphic design tools synonymous with the production of graphic design and the identity of the designers themselves, leading to standardization of the industry (Hartnett, 2017). A study conducted by Jonson (2005), speaks in favour of standardization since he suggests that tools are not always used in isolation, and sketches might be consulted by other designers whilst at the computer screen. This leads to effortless communication between designers and a more unified industry. On the other hand, according to Hartnett (2017), extreme standardization brings concern about the designers being excluded from the development of their new digital tools. Despite Adobe's monopoly, in my interviews, some designers saw their tools as interchangeable:

> I think that in the digital realm, tools change all the time. We try to follow the trends...we are open-minded to whatever new tools might come out. *Lia H. S., Bleed Studio*

In contrast to this, designers may approach one tool with habits or preconceptions of another (Stones & Cassidy, 2007). All in all, both designers and literature recognize the importance of tools since they strongly affect courses of action and thought processes (Resnick et al., 2005).

Even though the designers concur on the majority of the process being executed on the computer, there is a minority of designers that engages in manual sketching after the exploration phase. The freehand sketch has traditionally been seen as the primary conceptual tool in the early stages of the design process (Stones & Cassidy, 2007, Jonson, 2005). It is still recognized for its importance in the designers' thinking process, and vehicle to reach ideas (Rodríguez et al., 2014). Designers that still use man-

ual sketching report that they switch to the computer very quickly, reinforcing the digital prevalence of work in visual identity.

> I often start by sketching by hand because I love to do that. But then it quickly goes into the computer. *Klap R., Atelier Roosjie Klap*

Another interesting aspect of standardized tools, as acknowledged by some of my interviewees, is the shift of focus towards the designer's talent. When everyone uses the same tools, the main difference is given by who is using them:

> I think nothing is really depending on the computer, the computer is a hammer. We need to do stuff on the computer, but everything is based on what a designer can do and of course, everyone has a computer. It's all about the designer status and different tools. *Lia H. S., Bleed Studio*

> Most of our work is done on the PC, but it's mainly head work. It's not necessarily the great magic that happens on the computer, but rather in the head. There is a constant transfer between the computer and head. *Von Gross J., Off Office*

Tools proved to be the biggest similarities among the designers. Adobe is the primary software that creates a distinct standard for the graphic design industry. The main difference lies in how every single designer engages with it. It also emerged that a minority of designers still uses manual sketching at the beginning of the creative process.

4.3.6 Discussion, answering RQ 1

Responding to my first research question, based on my interviews, I can confirm that it is possible to find coherent working methods in identity projects. Working methods are mostly coherent on a macro level, since the designers follow a very similar project structure. By analysing the details within the process, we discover how every designer personalizes his methods. My interviews confirmed the following analogies in the process of visual identity projects:

- Every interviewed designer starts a project with research, primarily about the client and visual references.
- The designers follow a project structure which is very similar, with the same process phases that can be executed in different order.
- Each described process can be contained by the double diamond diagram.
- Visual design outcome is based on research and concept. Most projects are built around one main idea that is reflected in all graphical decisions.
- Translating concepts into visuals is a demanding task for which the designers rely on intuition, research, references, input from the client and prior knowledge.
- Design work is executed almost exclusively on the computer through the Adobe suite.

A minority of designers stood out for particularities in their process:

- Pentagram and Studio Dumbar extend their research on the design process, experimenting with new technologies and customized tools.
- About half of the designers sketch manually before working on the computer.

The following divergences in the design process of visual identity projects emerged:

- The designers were inconsistent with the use of terminology, which is a general problem in the graphic design industry. In my interviews, this was emphasized by the difference between studio and agency, their size, country and cultural context.
- The designers rely on different research methods for extrapolating information from the client. They also rely on different platforms to find visual references.
- There are contrasting opinions when it comes to the creation of multiple routes from which the client can choose. Most designers create more than one route, whereas a minority of designers prefer to present only one option.

4.4 RQ2: Deficiencies in the visual identity process

My next section is dedicated to identifying potential weaknesses in the process. Particular relevance was given to unveiling process phases that have improvement potential. The following questions

aimed at detecting what parts of the process can be problematic or disliked, therefore (when possible) delegated to other designers, e.g, juniors or interns. These process phases will then be considered for possible augmentation through ML.

4.4.1 Areas for improvements

To my question, Which parts of the process would you like to skip or delegate? the designers answered primarily with manual and repetitive tasks, creating assets, and researching images. Bad client communication and relationships were mentioned as well.

> I hate researching images, because I have a clear idea in my head and I cannot always find it. *Scagliarini F., Studio FM*

> Fortunately, I get to delegate some of my work and the bits that I always delegate is the collection of references. Once we went through the stage of defining what needs to be achieved, we have to find a method of visualizing that for the clients before we actually do the work. The reason I don't like it is that we naturally went through this process when we are discussing the idea in the first place, but then we have to have this week of actually collecting it. *Llewellyn J., Hudson Powell, Pentagram*

The final implementation or production phase also counts in the process phases that designers delegate when possible.

> My least favourite part has to be the last production part, where we are just doing work. When we are not necessarily designing or making out something new. Just doing what was set before. *Marritt X., Field Systems*

> Doing little adjustments after the client's feedback. Mechanical things like exporting files. Because I feel that I'm not using my time in the best way. *Malmin A., Serious Business*

> Personally, I really don't like creating guidelines. So the final phase, where you have everything there and need to write down the rules. This is an extremely significant phase for the client, but not so much for the designer. *Van Velsen M., Studio Dumbar*

In some studios, the final production phase is kept to a minimum to avoid long and repetitive implementations.

> I don't think there is any. We don't want to get bored, we also do little production in general, we mostly deal with new identities. We intentionally don't have long tail clients. We don't want to get stuck with the same client for 10 years doing their production. *Lia H. S., Bleed Studio*

Problematic interactions with clients were also brought up as disliked moments in the process.

> I guess it would be chasing the client for content, making sure you have all you need on time and that it all makes sense. *Barnabé P., Zaina*

> Sometimes the clients are showing the presentation to a lot of people, and then they come back with strange feedback from grandmothers or friends and family. Other times there are clients who are having a hard time to take decisions, which I totally understand because I think that it's super difficult. *David L., Leslie David*

> I think that the team, in terms of less favourite part of the working process, would answer when brands don't trust us. Because when we compromise, we know that the potential is reduced. *Cook G., Base Design*

I continued by asking my interviewees what part of the process could, in their opinion, be improved. My intention was to uncover potential process stages that – given their problematics – might be improved through augmentation. The designers mentioned difficulties in creating new, original content that goes beyond the references. According to the designers, the biggest issue in the industry seems to be the homogenization of trends through internet propagation of design artefacts.

> It's important not to always replicate what we see. I think it's really difficult to break graphic design that's new if all you are doing is looking at graphic design. *White S., Kellenberger-White*

I think that if we all use the same tools in the end, all the designs will look the same, and they will have the same standards. *Klap R., Atelier Roosjie Klap*

It is difficult, or rather impossible, to invent something from scratch. We are always reworking something else or translating from one context to another. *Bonetti E., Parco Studio*

4.4.1.1 Analysis

The range of answers to my questions are consistent regarding, in particular, the unpopularity of tedious and manual tasks such as collecting images, creating assets, guidelines, or social media content. My interviewees seem to be in favour of skipping these tasks since they are not creatively challenging. When impossible to delegate, they are executed forcedly, with less enthusiasm compared to other phases. As the majority of my interviews were with senior designers, these responsibilities are typically assigned to junior team members.

It's mostly the same content in different formats. I make it, but under protest. *Klap R., Atelier Roosjie Klap*

As confirmed in literature, many tasks associated with identity design are repetitive and follow predefined rules (Cleveland, 2010). Automation of these tasks would therefore free designers to take on more creative rather than manual work (Cleveland, 2010). Even though automation of manual and repetitive tasks in graphic design has been researched for several decades (Rigger & Vosgien, 2018), it is a continuously developing field. Most such research is done from an engineering perspective, (Verhagen et al., 2012, Willner et al., 2016), and as Bolognini et al., suggest, there is a further gap between the understanding of practitioners and software vendors in comparison to advances of design automation methods available in the academia (2012).

An emergent theme is a common resentment towards image and reference collection. On the one hand, this activity has been described as frustrating; on the other, the propagation of images and design content online leads to a homogenization of trends, according to the interviewed designers. Goree et al., argue that similarities, especially in web design, arise through online

libraries, frameworks and templates that make it easy to create predefined aesthetics (2021). Designers warn about overexposure to design artefacts and how this could potentially lead to difficulties in creating unique and original content. Cross (2001) writes about fixation in design – the possibility that designers use features of existing designs, rather than exploring the problem to generate new ones. Depending on whether there is a fixation on an idea or a general principle, fixation can however have both positive and negative aspects (Cross, 2001). In contrast, Laing & Masoodian (2016), for example, suggest that graphic design literature frequently encourages designers to expose themselves to examples to support their creative process. However, scholars warn that the integration of generative AI for final outputs risks perpetuating the homogenization of trends (McCormack et al., 2020). I discuss this further in Section 4.6.2 and 6.2.

Client interactions can also be challenging and improvable. The designers mentioned different aspects of client behaviour that can be problematic for the working process, such as mistrust, lack of clarity in the brief, and tardiness in delivering contents. Since the primary role of designers in identity projects is the translation of client information (Swanson, 2020), their relationship is critical to the creative process (Bruce & Docherty, 1993). Bruce & Docherty suggest that "in order to manage such a relationship, designers and clients feel that a rapport and empathy has to exist between them for a successful working relationship to develop." (1993, p. 406).

Relevant answers were also given through a previously discussed question: How do you translate concepts into visuals? As mentioned before, this question touched upon decision-making, the core element in the visual identity process. Most designers had difficulties articulating the importance of this step since it is based on a mixture of intuition, research, references, client interaction, and prior knowledge.

That's a good question. And that's also where it gets difficult. [...] We always try to come up with a great idea that is the DNA of the project. *Petersen M. E., e-Types*

I don't know if I can put that into words, but I guess it's like a blender. You kind of put all of those references and ideas into a blender and whatever comes out of it is a synthesis that

we think should make sense. How exactly it translates is hard to answer. *Barnabé P., Zaina*

This is a very difficult question. A bit might be instincts, then of course also the visual culture that has been assimilated over time. *Braccaloni A., Leftloft*

I therefore identify this phase of the process as an area for improvement, since according to my findings, it is the most inexplicable. This is connected to the unpredictability of creative ideas (Boden, 2004) and the inability to precisely define design creativity (Cascini et al., 2022; Karaata, 2018). Nonetheless, various processes in graphic design have been developed to trigger creativity and trace its process (Karaata, 2018). A clear identification of the links and patterns that constitute visual outcomes is needed for both the designer and the client. Moreover, an explicit connection between concept and visual outcome could strengthen the overall identity project.

4.4.2 Answering RQ 2

My second research question can be answered as follows: The most disliked phases for designers in visual identity projects are manual and repetitive tasks, maintaining a trusting, harmonious client relationship. The most critical and complex phase is translating concepts into visuals. The following tasks were mentioned to have improvement potential:

- The designers would like to accelerate the production phase and more generally manual and repetitive tasks, since they are not creatively challenging.
- Particular disliked tasks are collecting images and references, creating assets and guidelines, creating content for social media, and doing micro corrections.
- Research of images and references has also been mentioned in connection to a larger problematic concerning innovation in the field.
- The translation of concepts into visuals is described as the most unconscious and obscure part of the process.

4.5 RQ 3: Suggested improvements

This question explores possible future tools and scenarios in visual identity. The interviewees were asked to imagine tools they would like to work with in an undefined future, without being restricted by realism or current technological limits.

This aligns with design futuring approaches like speculative design or design fiction, in which futures are envisioned, and alternative possibilities explored (Kozubaev et al., 2020). Even though design futuring is not necessarily used to solve immediate problems (Kozubaev et al., 2020), it promotes discussions about possible, plausible, probable and preferable futures (Howell et al., 2021). The emphasis of my question was on understanding how designers envision working in the future and how open they are for changes in the process. In addition, the intent was to mirror the last two questions that uncovered challenges in the working process, and to elicit answers targeted at addressing them.

4.5.1 Solutions through automation and augmentation

The previous questions uncovered several phases in the visual identity process that have room for improvement. When asked about potential solutions, the designers were open to changes and proposed different possibilities to accelerate and enhance those phases of the process.

Maybe something that accelerates the more technical parts. *Bontempi L., Parco Studio*

I'm quite obsessive with mistakes and spotting errors. It would be nice to have something that bulletproofs everything you do. *Barnabé P., Zaina*

Some answers are targeted at improving existing programs.

Lately, we have been using Figma and what is nice about it is that you can work simultaneously in the same file. In most other programs, you cannot interfere. It would be nice if this feature could be extended to every program. *Van Velsen M., Studio Dumbar*

I guess it would be one program that does everything, so that

we don't constantly have to jump between Photoshop, InDesign, Illustrator and so on. *David L., Leslie David*

Pentagram's Hudson-Powell team is currently using generative systems for creating assets. This feature substitutes the final manual implementations and is a valid solution for the problem concerning manual and repetitive work, mentioned above.

A big turning point was a project we did a number of years ago, called graphical. For the first time, we made a digital application that anybody from a company can use by inserting certain values and the application will produce a creative asset that can be downloaded and used. That's a principle we try to apply to every client now. It's a tool that we use to produce visual assets, but we still need to create certain guidelines. *Llewellyn J., Hudson Powell, Pentagram*

At the moment we do both, purely generative parametric stuff, and we don't actually do Machine Learning in the house, but we collaborate with a studio called Counterpoint. We collaborate with them relatively regularly. *Llewellyn J., Hudson Powell, Pentagram*

When asked about what tools he would like to have, for the future, Llewellyn proposed a step-by-step implementation of new technologies, starting with visual asset generators.

I would find something very useful whereby I could give the tool the graphic territory and I could output the visual assets that I need, dependent on format, context, or message. That's kind of unambitious, and the reason is that at least for now I still like to think about ideas the way I already think about them. If I said to you, I want something that could synthesize different thoughts or imagine certain visuals based on narratives that I'm writing, that would be really cool, but I want to get there step by step. *Llewellyn J., Hudson Powell, Pentagram*

A similar scenario is presented by Field Systems, who actively create their own tools to improve their process.

We always try to find quicker ways to get to something. This

definitely happens a lot with code. We use whatever tools we can build to do what we need to do. We experiment with tools in different ways to find good results. *Marritt X., Field Systems*

A second series of answers addresses the potential use of AI in the visual identity process. Many designers imagine that AI will be a relevant tool in the future of graphic design, even if at the time of interview it did not necessarily seem targeted towards it.

I think that there is plenty of opportunity to use AI to create stuff, but a lot of the tools out there right now are not the best. They are very specific for doing a certain thing and not necessarily made towards design. But I think that there are a lot of opportunities to make things that do. *Marritt X., Field Systems*

I can think about all sorts of things related to Artificial Intelligence, Machine learning, or other automated tools. Which probably in the end would still need defining and cleaning up. *Klap R., Atelier Roosjie Klap*

I also believe that AI will probably help a lot in the future, especially in the production phase that we are not doing ourselves. It's interesting, but it needs to be used in the right context. *Lia H. S., Bleed Studio*

Further proposals address the release from manual work through technologies.

It would be nice to work with voice controls. *Nestorowicz K., Post Noviki*

It would be nice to tell a program what style you have in mind, which typography, colour palette, upload some references and the content builds itself. Without any manual work at the computer. *Nowicki M., Post Noviki*

One thing that is really important for us is to get the pictures that everyone gets in his head when thinking about an idea out of the head. We especially try to get these pictures out of the head of our clients. The perfect tool would be for visualizing what's in the mind of the clients, that would be great.*Petersen M. E., e-Types*

This final question goes to the core of my thesis, touching on the issue of how to augment parts of the visual identity process through ML. By asking the designers an open question about what tools they would like to use, AI and ML were directly addressed as potential future instruments. Other answers ranged from generative and automated solutions to scenarios in which voice control and mind translators could release designers from manual work.

A set of answers addresses the automation of manual and repetitive tasks mentioned above. The solutions that enter this category are currently feasible and already used by some studios, for example Field Systems and Pentagram's Hudson-Powell. Their tool 'graphical' produces "... a creative asset that can be downloaded and used." Llewellyn J., Hudson Powell, Pentagram (2022, February 24), eliminating the manual work of asset production. Programming languages are used in design practice (Siripurapu & Ashu, 2021), a phenomenon described by Conrad et al. (2021), in 'Graphic design in the Post-Digital Age'. It consists of designers programming or collaborating with programmers "to create a series of new tools on their trade." (Conrad et al., 2021, p.10). However, the adoption of this practice remains limited, primarily due to its associated implementation costs: "It remains clear that in order to develop tools that can compete with commercial applications, the economics remain the main challenge. Currently, clients do not systematically fund the development of a given tool... Accordingly, a designer must find another way to absorb the cost of the development." (Conrad et al., 2021, p. 18).

This is reflected in my interview sample, in which only 2 out of 20 studios relied on self-developed tools for their visual identity projects. On the other hand, the rapid propagation of generative AI and ML algorithms in creative practices (Anantrasirichai & Bull, 2022) could obviate the necessity for coding, especially with numerous open-source programs providing extensive support for graphic design practice.

In parallel to designers' customized tools, scholars and engineers have been developing software targeted at accelerating and improving graphic design tasks. (Guo et al., 2021, Zheng et al., 2019, Cleveland, 2010). Tools like Canva by Perkins and Design Scape by O'Donovan cater to non-professionals or inexperienced designers who struggle with creating layouts (Meron, 2022, O'Donovan et al., 2015). These products, which use AI generative technology, are template-driven creative tools (Meron, 2022). However, as revealed by my interviewees, they are not considered part of the professional software suite. A different approach is taken by the creators of EvoDesigner, which reinterprets existing layouts to automatically create numerous similar graphical solutions (Lopes et al., 2022). The particularity of the program lies in the editing alternation between the human designer and the machine (Lopes et al., 2022).

My interviewees highlighted the Adobe suite as the most widely used set of programs (see tool section 4.3.5), followed by Figma, which was introduced to the public in 2016. A significant shift in the graphic design industry occurred as both Figma and Adobe began integrating AI and AI plugins into their software. Since October 2022 a range of Figma plugins with diverse automation functions has emerged. These include features like layer naming, custom icon generation, various text to image functions, and automatic wireframe creation (Chandak, 2022). Adobe launched its Photoshop and Illustrator generative AI features in May 2023 (Di Leva, 2023). The program enhancements primarily target efficiency improvements through capabilities such as Generative Fill, which allows users to generate images in select areas (Di Leva, 2023). Furthermore, Adobe announced Firely, a creative generative AI model focused on image and text (Martell, 2023). While a recent study by Adobe indicates an increase in content demand since its introduction of AI features (Dammann, 2023), the long-term impact on the design landscape is yet still to be fully measured.

Other answers directly address AI and ML as potential future visual identity tools. A minority of designers already use existing AI tools or create their own in collaboration with experts in the field:

> One interesting thing we did is we used AI style transfer (definition in 6.2) to create some visuals. We were making some images, and we found that certain ones were working, and certain others weren't. So we took the ones that weren't working and fed them into an AI. It generated an unexpected result.
> *Marritt X., Field Systems*

> [...] we don't actually do machine learning in the house, but

> we collaborate with a studio called Counterpoint. *Llewellyn J., Hudson Powell, Pentagram*

A minority of the interviewees perceive AI as the tool that has the potential to redefine graphic design practice. Nonetheless, current AI implementations targeted at creativity are not seen as fit for graphic design.

> [...] a lot of the tools out there right now are not the best. They are very specific for doing a certain thing and not necessarily made towards design. *Marritt X., Field Systems*

> It's interesting, but it needs to be used in the right context. *Lia H. S., Bleed Studio*

While graphical AI and ML tools are evolving rapidly, they are just starting to adapt to graphic design practice. According to literature, the scepticism expressed by some designers is well-founded. This is because AI tools for creativity, along with much of the literature on AI and graphic design, are almost exclusively driven by computer science (Meron, 2022). This entails oversimplifications and misunderstands of the creative process and nature of design (Meron, 2022). As recognized by the designers, this can result in AI tools that fail to truly capture nuances and complexities of design and creativity. AI tools for creativity that focus on technical aspects and neglect the designer's perspective can miss important elements of the design process such as intuition, research, client interaction, and prior knowledge, as mentioned above. Furthermore, many existing creative AI tools, like text-to-image generators, focus on producing end products or at beating humans at specific tasks (McCormack et al., 2020). This approach reduces the interaction between the graphic designer and AI and is opposed to supporting human creativity (McCormack et al., 2020). D'Inverno and McCormack refer to it as 'Heroic AI': "systems designed to produce art autonomously without the direct intervention of the artist..." (D'Inverno & McCormack, 2015, p 2439). They argue that a substantial amount of AI research has been directed towards creating autonomous systems, and instead suggest a shift towards developing tools by prioritizing the creative process (D'Inverno & McCormack, 2015). Following this assertion, my research is grounded in practical experience and focuses on the visual identity process of

professionals. Adobe and Figma, in contrast to the approaches mentioned earlier, leverage their experience in the design process. They have integrated AI functionalities directly into their programs, actively enhancing and supporting the design process. However, at present their tools primarily focus on automating certain aspects of the process with the primary goal of time-saving (Di Leva, 2023), rather than exploring new avenues for designer-ML collaborations.

An additional insight to arise from my interviews is that the designers are confident that their role will persist in the future. Instead of envisioning a future dominated by AI (Kaiser, 2019), they see collaboration between human and machine:

> I can think about all sorts of things related to Artificial Intelligence, Machine learning, or other automated tools. Which probably in the end would still need defining and cleaning up. *Klap R., Atelier Roosjie Klap*

My research highlights the crucial role of designers' imagination in envisioning future AI applications in visual identity. My interviewees emphasized the importance of tools tailored specifically towards design practice, which enhance the designer's role rather than replace it. As AI continues to advance, it is vital to not only assess its current capabilities but also anticipate its future potential (Long & Magerko, 2020). Imagining the future of AI opens up discussions on ethical values, and encourages a critical examination of long-terms effects on society (Long & Magerko, 2020). The insights gathered from my interviewees were in part speculative and focused on future possibilities:

> The perfect tool would be for visualizing what's in the mind of the clients [...] *Petersen M. E., e-Types*

> It would be nice to tell a program what style you have in mind, which typography, colour palette, upload some references and the content builds itself. *Nowicki M., Post Noviki*

Envisioning future tools and scenarios, with the help of AI, aligns with the regular process that designers undertake in their daily work. As the creators of future products, designers continuously switch their attention between the present and the potential future (Celi & Formia, 2015).

When thinking about the future role of graphic designers, both my interviewees and scholars propose scenarios in which ML does not replace designers as key actors, but rather supports them by offering new action possibilities that can lead to improved productivity and workfiows (Verganti et al., 2020, Trocin et al., 2023). Interviewees and literature also concur on the potential for automating tedious and repetitive tasks through ML in the near future: "ML can be particularly valuable for transcribing handwritten annotations, analysing transcriptions, identifying patterns invisible to human eyes, providing suggestions, checking the requirements, and making suggestions for multiple layouts, colours, and others." (Trocin et al., 2023, p.2). These enablers can improve the creative process and the design quality while leaving graphic designers in charge (Trocin et al., 2023). The predominant strategic response suggested in the literature argues for a shift from technical skills and giving form to curation and ensuring the product's appropriate quality (Matthews et al., 2023).

By anticipating and speculating about future developments of technology, it is possible to gain a better understanding of the trajectory it is likely to take and how it may impact society (Lukens & DiSalvo, 2011). However, it is important to consider that not all speculation is accurate, and it is generally infiuenced by a variety of factors such as biases and incomplete perspectives. As suggested above by Jack Llewellyn from Pentagram's Hudson Powell, it is important that technology develops step by step, leaving room for adaptation:

> If I said to you, I want something that could synthesize different thoughts or imagine certain visuals based on narratives that I'm writing, that would be really cool, but I want to get there step by step. *Llewellyn J., Hudson Powell, Pentagram*

4.5.2 Discussion, answering RQ 3

My research so far has determined that the definition phase in visual identity projects is one of the most critical working phases for designers. Furthermore, this phase has been identified as the most suitable for augmentation through ML. Through my further inquiry and supportive analysis, I can build upon these findings and answer my third research question, *How can these critical phases be augmented through ML?* as follows:

Critical phases in the visual identity process can be overcome through augmentation with ML. Through the development of tools that prioritize the creative process and aim to support human creativity rather than replacing it, designers can be liberated from tedious tasks, allowing them to concentrate on the more creative aspects of their work.

This goal can be reached best through a step-by-step implementation that allows the designers to adapt and evolve with their new tools. Specifically, in the context of the definition phase, ML has the potential to shed light on the intuitive and subjective aspects of the creative process. By doing so, it can establish a more tangible connection between conceptual ideas and their visual manifestation. The following scenarios were introduced:

- A minority of designers mentioned ML as a potential solution for critical process phases. It is important to recognize that these responses only refiect a single moment in time. While conducting my research, the topic of AI and creativity gained significant attention in various media, which may have since raised awareness of the potential benefits of ML in visual identity among the designers of my study.
- Two studios in the sample already use ML and work with experts in the field to create customized ML tools.
- Existing ML tools were criticized for their insufficient ability to effectively support the design process.
- The designers envision future ML tools that would improve their creative process while still requiring a human designer to make the final decision. As such, they are willing to delegate a significant amount of work as long as they can retain their role in creative direction and have the final decisive authority.
- A gradual approach to implementing ML is beneficial and allows designers to adjust along the way.
- Future-driven solutions that speculate on future development of ML were envisioned.

4.6. Interviews discussion

In this section, I will summarize the findings of my research, which have led to the formulation of a series of hypotheses that form the

basis of my emerging theory. In the following pages, I will elaborate on the answers to my research questions to hypothesise desirable prospects of implementing ML in visual identity. In order to render explicit the unfolding of my research, my findings are organised around codings and the relationship between them. Through the assessment of these relationships, I establish the foundation for the development of concepts and descriptive categories that are integral to the emergence of a conceptual framework.

4.6.1 Coding process

After the interview phase, I continued with focused or axial coding (Gorra & Kornilaki, 2010), where I aimed to identify relationships and subcategories among the initial codes. As a result of this process, I was able to refine my categories by dividing them into more specific subcategories.

In the subsequent focused coding phase, as described by Douglas (2003), I established direct relationships among the codes. This involved relating all categories derived from axial coding to a main code, either directly or indirectly (Douglas, 2003). Given that the results of my second and third research questions were complimentary, I combined the codes into a single category to directly highlight how shortcomings in the identity design process can be improved through ML. Additionally, I identified a second code that played a critical role in my analysis. Without the second code, which captures the average process by the designers, the first code would lack a necessary foundation. Without a well-established average design process, any proposal for integrating ML into the workflow would not be feasible. By retaining this code, I aimed to ensure that the proposals for ML augmentation remained grounded in the existing visual identity process and aligned with the overall goals of the study. As a result, I obtained a series of hypotheses that respond to my research questions and form the basis of my conceptual framework. My research has affirmed that:

- Project structures are homogeneous enough to be generalised.
- The designers' approach is coherent enough to propose solutions that can apply to different studios.
- Feedback sessions are a ubiquitous element that links all stages of the process together.

My research furthermore implies that:

- ML can shed light on intuitive phases of decision-making that rely on tacit knowledge.
- Inserting ML in the decision-making process, rather than just the outcome, will enhance creative practice.
- Avoiding ML for final outcomes could prevent further homogenization of trends.

4.6.2 Findings summary

The evidence gathered from my research suggests that ML has the potential to enhance the working process in visual identity. My extensive analysis of the visual identity design process incorporates insights from both practitioners and existing literature. As a result, I observed that designers share a consistently coherent approach that provides a basis for proposing common solutions. This allows me to present alterations of the process that could potentially be implemented by all the designers and studios I interviewed. Given that the biggest similarities in the process are at the macro level, my framework will allow for customization and modification on a micro level.

Following the designers' process deficiencies uncovered through the first and second research questions, I can state that the definition phase offers the most potential for augmentation. More specifically, the intersection of concept construction and sketching. This is the most creative moment in the process, as it entails the earliest visual outcomes. It is also the moment in which the research and elaborated concepts get translated into graphics. Nonetheless, this part of the process relies heavily on intuition and is therefore hardly interpretable. Inserting ML in this phase of the process might enhance indecipherable decision-making and shed light on intuitive procedures that rely heavily on tacit knowledge. Moreover, the designers envisioned maintaining their roles as art directors and preserving decisive power over the outcome. Literature provides examples on how this can be achieved, for example, as pointed out by Trocin et al. (2023), through the automation of tedious tasks, designers gain the opportunity to dedicate more time to their creative activities and take on a more prominent role, such as art directors (Trocin et al., 2023). Additionally, ML can assist designers in creative activities by enhancing the input information

and providing multiple suggestions (Mikalef & Gupta, 2021).

Considering these aspirations and the numerous arguments in literature cautioning against 'heroic AI' (Meron, 2022, McCormack et al., 2020, D'Inverno & McCormack, 2015) it seems appropriate to avoid employing ML for the final, graphical outcome. In addition, the ongoing homogenization of trends addressed by the designers presents yet another argument against using ML to generate outcomes. The proliferation of design artefacts on various online platforms provides a convenient source of inspiration; however, it also makes it increasingly challenging to create truly innovative designs. The adoption of a generative tool, particularly by a considerable number of designers, could aggravate this problem and result in an amplification of similar outcomes.

Another valuable insight that emerged is the critical role of feedback throughout the design process. By participating in feedback sessions, designers gain valuable insights into how their work is perceived, which enables them to make informed decisions about the design direction. Client feedback is particularly important in graphic design. It allows designers to gain a deeper understanding of the client's needs and preferences, which in turn helps to guide the design process. Lastly, based on my data analysis, it appears that a gradual instead of an abrupt implementation of ML would be profitable for the designers, allowing them to adapt and evolve alongside their new tools.

In this chapter, I addressed my three research questions 1. Is it possible to find coherent working methods in visual identity projects? 2. What are the most critical phases for the designers in visual identity projects? 3. How can these be augmented through ML? by gaining insights from 20 design studios through semi-structured interviews within a grounded theory study. An in depth exploration of the visual identity design process helped me answer my first research question and revealed homogenous working methods that can be contained in a Double Diamond Diagram. During the process exploration, feedback sessions surfaced as a connecting element across all stages of the process. The interviews also addressed the second and third research question, revealing that manual and repetitive takes were the most disliked aspect of the process. Simultaneously, the definition phase was highlighted as the most complex part of the process. To address the challenges, posed by the critical phases of the process, the designers suggested the automation of tedious tasks, and the potential of ML has been evaluated for enhancing the overall design process. Additionally, the limitations of current AI and ML technologies have been addressed. Designers and literature converge on the idea that the optimal use of ML augmentation occurs at the initial stages of the process, particularly during the Definition Phase, where it functions as a creative collaborator rather than being employed for generating finished outcomes.

V
NON-PARTICIPANT OBSERVATION

In this chapter, I detail my observation study. I begin by connecting my initial findings with my intentions to build upon them. I continue by explaining the connections with the chosen method and justify my non-participant observer position. After a systematic elucidation of my research decisions and data collection process, I conclude by analysing my material through the grounded theory methods detailed in the Methodology chapter.

5.1 Feedback sessions

During my interviews, the designers mentioned client feedback as a crucial aspect that drives the creative process further and guides the overall design direction. Feedback generally emerged as a fundamental link between the various work stages. Additionally, the definition phase (see 4.4.3.1) – the first sketching and materialization of the concept – stood out for having the most potential for augmentation through ML. As previously discussed, the definition phase is critical because it depends on intuition and tacit knowledge. The designers' thoughts in this stage are hardly intelligible by other designers, and even more so by outsiders. This is related to the unpredictability of creative ideas and the inability to precisely define creativity in design (Cascini et al., 2022; Karaata, 2018). Nonetheless, this phase goes to the heart of the creative process and is a relatively unexplored and ambiguous, yet highly valuable form of knowledge (Yazici et al., 2022).

Even if the definition phase would benefit from augmentation through ML, the integration process is not straightforward. The structure of many ML models take inspiration from processes in the human mind (Turing, 1950). Similarly to human creativity, ML has its own version of tacit knowledge, which is the complexity in an algorithm that often cannot provide insights into their behaviour and thought processes, resulting in a 'black box' (Gilpin et al., 2018; Moruzzi, 2020). First steps towards creating explanation mechanisms are currently being researched (Geng et al., 2022).

Scholars have been inquiring about the possibility of crafting ML models which are precisely tailored to individual values and aesthetic preferences to shed light on the creative process (Van Der Burg et al., 2023). While this insight provides valuable context,

my research sets itself apart by delving into the collaborative dynamics between graphic designers and ML within a precise phase of the design process. Researchers believe that reaching absolute transparency in both human and ML creative processes is improbable and not needed (Moruzzi, 2020). As highlighted by Masure (2023), unobservable processes that occur within a black box are not only impossible but also unproductive to be researched. To propose an integration of ML into the definition phase, the factors discussed above need to be taken into account.

As a next step, I will delve deeper into the creative process by analyzing feedback. Through feedback, I can gain insights into other phases, such as the definition phase. Compared to other work phases, feedback is exceptional as it occurs throughout the process and involves discussing design decisions with the team. It provides a valuable opportunity to examine the underlying motivation behind the designers' choices without exerting any interference in their work.

To get a deeper understanding into the creative process and provide a more detailed answer to my third and last research question: *How can the critical phases of the process be augmented through ML?* I decided to observe feedback sessions to gather a deeper understanding of the articulation of design decisions. Feedback is therefore examined to understand the motivation that lies behind design choices. Non-participant observation is well-suited for this inquiry, as it uncovers and reveals the meaning and realities behind people's actions (Jorgensen, 1989).

The intention of my observation is to deepen my understanding of the process and enhance the answer to my third research question through further qualitative data. Therefore, I selected a studio that I previously interviewed, based on their contribution to the subject. My observation took place at Studio Off-Office in Munich, from August 23 to 24, 2022. The studio founders Markus Lingemann and Johannes von Von Gross manifested a deep interest in reflecting on their working process. Additionally, their feedback commentary provides a solid starting point for my further investigation into the subject.

> The feedback from someone who wasn't looking at the work for the past hour is indispensable. The moment you see your design through the eyes of the other person, you already have a different perception. *Lingemann M., Off Office*

During my observation, two other designers were part of the team. I opted for a non-participant observer position, without any interactions with the subjects (Ciesielska et al., 2018, Urquhart, 2015, DeWalt & DeWalt, 2002). This has multiple reasons. As previously discussed in the Methodology chapter (3.3.2), my background in graphic design provides me with the necessary understanding of the dynamics in the studio. As pointed out by Kemp (2001), an observer with insufficient skills requires instructions and hence interferes more with the group process. Furthermore, designers cannot actively work on feedback, instead it spontaneously emerges in different project stages. Another factor has to do with the challenges of the observation itself. I aimed to avoid adding additional tasks to my workload, as my main focus is carefully observing and documenting the conversations and corresponding attitudes around feedback (Kawulich, 2005). Lastly, even if it is known that "the researcher can never be 'neutral' in the sense of indifference to the studied people and observed situations" (Ciesielska et al., 2018, p. 40), literature advises the observer to be as insignificant variable as possible (Kemp, 2001).

The observer is known to have a relatively low level of control over the field of study (Ciesielska et al., 2018), I, therefore, gave particular thought to the preparation of the observation protocol, which I structured into a set of questions for myself that investigates different aspects of feedback:

1. Who is asking for feedback?
2. Who is giving feedback?
3. How many people are giving feedback?
4. In which identity process phase is the feedback requested?
5. What is the designer asking for feedback on?
6. What is the goal of the feedback?
7. Why does the designer ask for feedback?
8. In what form is the feedback given?
9. In case of verbal feedback, what kind of language is used?
10. In case of visual feedback, what kind of visual material is used?
11. What is the designer's reaction to the feedback?
12. What is the feedback-giver's attitude?
13. What kind of effects has the feedback session on the studio?
14. How is the interaction between feedback giver and

feedback receiver?
15. How long is the feedback session?

To save time in the field, I structured the answers as a multiple choice checklist, leaving space for notes. Moreover, the protocol works as a reminder and guide for the observer (Lofiand & Lofiand, 2006), to stay aligned with the objectives of the research. I decided to use a printed version of the protocol to move around freely in the studio and take notes quickly without being too obtrusive (Jorgensen, 1989). I followed Jorgensen's (1989) instructions on recording observations immediately in the greatest possible detail.

I spent two days at the studio, observing feedback sessions from opening to closing. Most of the feedback was provided online, either through calls or videoconferences, and the team agreed to conduct all sessions using loudspeakers in order to involve me in the process. This interference inevitably affected the hosts' behaviour (Kemp, 2001) and changed the studio atmosphere. In a few cases, overhearing feedback involved other team members that were not meant to be part of a certain session. Despite avoiding direct contact with the designers during working hours, they often called me to their desk whenever they anticipated feedback sessions.

During my two days at studio Off Office, I observed 17 feedback sessions. Fig. 28, Fig. 29, Fig. 30 Out of these, in 10 cases, feedback was exchanged among designers, and in 7 cases, feedback was provided by clients. Feedback was given in the sketching phase (5 out of 17), during rounds of adjustment (5 out of 17), and final implementations (6 out of 17). One session deviated from the norm as it revolved around the concept development of a project in its initial stage. More than half of the sessions (12 out of 17) were executed online, through calls or videoconferences, while less than half of the feedback was exchanged personally in the studio. In both cases, the average session lasted about 15 minutes. All sessions integrated verbal and visual feedback, with participants gathered around a screen to discuss the project. During online feedback, the screen was shared.

I can address my initial questions within the observation form with this data. Starting with my first question, *Who is asking for feedback?*, during my observation, the two designers in the studio were the most active in seeking feedback. They primarily sought guidance from the founders and art directors on proceeding with their work. Subsequently, both designers and art directors sought

feedback from their clients. This is mirrored by the results of the second question, *Who is giving feedback?*, which resulted in 7 feedbacks given by the founders and art directors, 6 by clients and 4 by the designers. On average, 1 designer is providing feedback during a session. In 4 instances, there were group sessions involving 2 to 3 designers giving feedback to the client or to each other. This addresses my third question, *How many people are giving feedback?*

The answer to my fourth question, *In which identity process phase is the feedback requested?*, is as follows: during my two days at Off Office, most feedback was exchanged in the implementation phase, during sketching (definition phase), and layout adjustments. In my next question, *What is the designer asking for feedback on?* I focused on the content of the feedback, which revolved around two main categories. The first addresses more technical issues, as type sizes, file compression, colour values, typographical adjustments and so on. The second category focuses more on the perception of graphical choices and semantics. It contained feedback around of the selection of image typologies, perception of different compositions, and typographical variations. In some cases, these categories were intertwined, meaning that a technical issue influences the perception of the graphics and vice versa. My next question focuses on reasons behind the feedback sessions: *What is the goal of the feedback?* In most cases, the objective of feedback is to obtain insights and approval from colleagues, particularly clients and art directors, in order to conclude a specific task and proceed to the next.

With my next question, I go more into detail, investigating the particular reason for which the feedback was requested: *Why does the designer ask for feedback?* In 10 instances, feedback was sought when designers felt positively about their work and wanted confirmation from their superiors to conclude their task. In few cases, feedback was requested to dispel doubts or to brainstorm new ideas. My eight question concerns the feedback's form: *In what form is feedback given?* Since the majority of session were online (12 out of 17), the predominant mode of communication involved a combination of verbal and visual exchange. During discussions about potential changes, all parties involved focused on the screen, manipulating elements within the design or even sketching on the spot. Occasionally, print materials within the studio were discussed.

My next question seeks to analyse the language used during verbal exchanges: *In case of verbal feedback, what kind of language is used?* The language employed by the designers was notably de-

scriptive, characterized by the extensive use of adjectives. Additionally, they utilized specific insider terminology that created a shared understanding among the studio members. Furthermore, technical terminologies specific to the graphic design industry, such as typography and colour values, were commonly used. The verbal feedback was predominantly complemented by the visual material in the discussion. I therefore further investigated this aspect: *In case of visual feedback, what kind of visual material is used?* The visual material under discussion was presented on the screen, facilitating and expediting communication among the participants.

The data gathered for my subsequent question, *What is the designer's reaction to the feedback?* revealed that it predominantly had a positive impact on the studio, enhancing communication and unlocking the creative process. Two distinct sessions stood out because of disagreement among the designers. The question *What is the feedback-giver's attitude?,* delves into the opposite perspective.

In the majority of cases, the feedback giver exhibited a positive and encouraging attitude, aiming to motivate fellow designers and pleasing clients by incorporating their requests into the design. When there was disagreement, the feedback giver carefully elucidated the design's issues and expressed doubts. Instances of frustration arise in rare cases of disagreement from the feedback receiver. In general, during my observation, feedback had a positive impact on the studio atmosphere, stimulating exchange among the designers. This answers my questions regarding the feedback effects: *What kind of effects has the feedback session had on the studio?* Finally, with my fifteenth question, I investigated the interaction between feedback giver and receiver, exploring the dynamics of their engagement: *How is the interaction between feedback giver and feedback receiver?* The interactions were predominantly positive and collaborative, fostering the implementation of satisfying and effective solutions. In conclusion, I took track of the length of the feedback sessions: *How long is the feedback session?* Most feedback sessions lasted over 10 minutes, with the longest sessions lasting approximately half an hour.

5.1.1 Analysis and literature review

Jorgensen (1989), suggests that participant observation generates concepts and generalizations formulated as interpretive theories that may be used to critically examine existing hypotheses. In this

analysis, I compare my findings from the observation with the findings from the interviews and support the emerging concepts with relevant literature. The aim of the analysis is to discover relevant findings that answer my research question: *How can the critical phases of the process be augmented through ML?* During my interviews, the designers mentioned client feedback as a crucial aspect that drives the creative process further and guides the overall design direction. The observation confirmed this notion, while also stressing the importance of feedback among designers. Additionally, I gathered salient insights into different feedback typologies and the related syntax.

Within client and designer feedback, two categories emerged, semantic and technical feedback. The latter is related to functional aspects of graphic design, in which solutions related to font legibility, color values, and typographic size appearances are discussed:

> [...] full red, desaturated red.
> [...] a point smaller [...]

This kind of feedback occurred with and without clients and was most common during the final stages of implementation, allowing refinement of details. I found similar distinctions in literature. Bartram (1981), describes the properties of typefaces by placing them into two main subcategories: 'functional' and 'semantic'. He continues by elucidating that the functional properties are related to: "type size, boldness, contrast and aspects of form" (Bartram, 1981, p.38).

Conversely, semantic feedback describes the expressive qualities of the graphics. The studio uses this feedback typology to discuss how graphic choices can evoke specific emotions and perceptions. Semantic properties provide an implicit context within which the message of the graphics is understood (Bartram, 1981). Bartram (1981) points out that whereas in spoken language we can modify the cadence of the words, in graphic design this needs to be created by the physical properties of the project through layout, typefaces, colors, etc. Design properties are chosen to evoke emotional and cognitive processes in viewers, forming the essence of current design practice (Demirbilek & Sener, 2003). It is important to take into consideration that every user has a unique interpretation of signs, depending on culture and knowledge (Isherwood,

2009). Accordingly, it is not easy for designers to determine the relationship between the interpreter and the graphics. (Isherwood, 2009). Sinico (2019) emphasizes that expressive qualities convey subjective perception and capture the unique essence of the observed items. Hence, objective interpretation of graphical artefacts or any other entities are not possible.

I observed that studio Off Office paid particular attention to the visualization of values and concepts. Feedback among the team helped to align to conformities and compare different perceptions of a certain graphics. In addition, while giving semantic feedback, the designers used a personalized *studio language* that was partially informal, but fully understood by every member. Their expressions encompass shared cultural references, analogies and synaesthetic elements. Hereby, a list of examples:

[...] modern but serious [...]
[...] old school, Gameboy style [...]
[...] anti-edgy [...]
[...] Looks like a compromise between commercial and artsy [...]
[...] Logo bar from hell [...]
[...] Seems relaxed [...]

This phenomenon is studied by Dong (2005), who affirms that language is a facilitator to bridge gaps of knowledge between individual team members as they construct a social consensual representation of design artefacts. The semantic coherence of a studio's language-based communication is a metric for the consistency of their construction of joint knowledge (Dong, 2005). Furthermore, Lawson's (2009) study, inspired by Schön (1983), highlights the importances of evocative language in designer communication. Off Office appears to have a predominantly homogeneous view on the perception of design artefacts, reflected in their customized verbal communication. Their feedback syntax is rich in adjectives and qualitative descriptions. Regardless, verbal feedback is always complemented and facilitated through visuals. When a team member suggested an improvement, the most effective demonstration was modifying the graphics while others watched the screen. Even with the teams' analogous communication skills, design content remains challenging to express in words only; in many situations, visual material allows to communicate the 'unpronounceable' (Vyas et al., 2013). Visuals proved particularly

beneficial in facilitating communication with clients, who are usually less familiar with graphical artefacts.

The teams' shared understanding of graphic design led to a positive and productive atmosphere during feedback sessions. Only in two distinct sessions, there were extended discussions due to initial disagreement among designers. Another exception is an online feedback session in which the atmosphere became slightly tense as the client expressed the desire to change something they had previously agreed upon. Literature suggests that shared semantic cognition leads to better team processes, which in turn leads to positive design outcomes (Dong, 2005, Cannon-Bowers & Salas, 2001).

5.1.2 Coding process

Based on my observations, I established two subcategories through axial coding (2): technical and semantic feedback. In particular, semantic feedback, which emphasizes values and perceptions of graphical artefacts (Bartram, 1981), revealed valuable insights into the studio language and group dynamics. Through my analysis, the significance of feedback syntax became apparent, and emerged as a central and final code through the process of selective coding (3). Within feedback syntax, I gathered the following insights:

- The designers use a personalized vocabulary rich in adjectives and qualitative descriptions.
- The team collectively shares semantic cognitions on design perspectives.
- Despite using a personalized and refined feedback syntax, the most effective communication is achieved through multimodal feedback by combining verbal and visual elements.

5.2 Discussion and findings

The gathered insights hold significant value in relation to ML, as they contribute to providing a more comprehensive response to my research question: *How can the critical phases of the process be augmented through ML?*

Current ML applications are often operated through natural language prompts, which directly bias the model toward gen-

erating the desired outputs (Zamfirescu-Pereira et al., 2023). As highlighted by Ebbecke (2022), these programs employ an abstract and low-level syntax optimized for computers rather than humans, creating a significant disparity with the syntax used by designers but interpreted for higher-level human-readable text. The interpretation of visual materials is a demanding task depending on prior knowledge, socio-cultural background, usage purpose, and contextual background of the user (Markowska-Kaczmar & Kwasnicka, 2018). In addition, my observation indicates that designers use a personalized vocabulary rich in adjectives and qualitative descriptions within a collectively shared semantic cognition on design. This further divides the syntax employed by ML models from that used by designers. A successful ML implementation in visual identity should be capable of adjusting to the studio's unique semantic cognition.

In connection to images, the so-called text-to-image generators have a limitation in that they can only interpret the desired output based on linguistic expressions (McCormack et al., 2020). The understanding that text-to-image systems have of images is literal since they are built upon millions of formal descriptions of visual material, where words or descriptive phrases capture the characteristics of elements present in an image (e.g. 'a red flower in a vase'), as well as some general stylistic features (e.g. 'still life') (McCormack et al., 2023). Furthermore, current research has revealed fundamental limitations in existing datasets, as they are often filled with repetitive and purely descriptive patterns, rather than covering the broad range of linguistics required by the task (Bowman & Dahl, 2021). These datasets are mostly created through crowdsourced human workers who resort to a limited set of writing strategies for speed, at the expense of diversity (Gururangan et al., 2018). Despite the best efforts of their creators, datasets therefore have strong built-in biases (Torralba & Efros, 2011). While biases can enter at any stage of the ML development pipeline, models are particularly receptive to mirror biases of the datasets they are trained on (Esser et al., 2020).

As pointed out by McCormack et al. (2023), as a consequence, the images produced by these systems can only reflect the content of prompts literally, omitting any further meaning, intention, or encoded information assigned by a specific textual construct, be it metaphorical or culturally charged. They mirror the biases present in the dataset. Controlling the outcome becomes

even more challenging, considering the statistical association between words and images. Linguistic terms in language-image association tend to prioritize the most prevalent interpretations based on the dataset (McCormack et al., 2023). Additionally, the training data is 'backward-focused' in that it learns only from existing imagery in the dataset (McCormack et al., 2023). As suggested by Barz and Denzler (2021):

> The meaning of an image cannot simply be described by enumerating all objects contained therein and defining their spatial layout. Humans are able to extract a plethora of diverse and complex information from an image at first glance, such as events happening in the depicted scene, activities performed by persons, relationships between them, the atmosphere and mood of the image, and emotions transported by it. Many of these concepts exclude textual descriptions and are best communicated visually. (p. 245)

Effective prompting strategies require identifying the context in which the communication error with ML arises and devising prompting strategies to overcome them. Given the complexity of this task, one current solution has been creating a specialized subdomain named 'prompt engineering' (Zamfirescu-Pereira et al., 2023). Further solutions include using other AI applications such as language models *(e.g. ChatGPT)* to generate prompts, or Clip interrogators – given an image, the latter infers prompts to generate similar images (Udo & Koshinaka, 2023). AI-generated prompts are meant to be applied exclusively by other AI applications (Udo & Koshinaka, 2023), resulting in a literal writing style that in turn generates figurative and literal images (Udo & Koshinaka, 2023). This issue is connected to the widely-discussed concept of the semantic gap (Markowska-Kaczmar & Kwasnicka, 2018). Smeulders et al. define the semantic gap as:

> [...] the lack of coincidence between the information that one can extract from the visual data acquired from an image and the interpretation that the same data has for a user in a given situation (Smeulders et al., 2000, p. 1353).

In short, it manifests as the difference between user intent and the content of returned images (Markowska-Kaczmar & Kwasnicka,

2018). Image captioning was originally intended for image-retrieval (Desai et al., 2021), the system that uses information from images to help users find them based on their contents on the web (Gudivada & Raghavan, 1995). The problems associated with the semantic gap have now shifted from image retrieval to image generation. Even though content-based image retrieval has made astonishing progress over the last decade, the associated semantics remained behind. This makes scholars question whether the recent progress is primarily attributed to more generic image retrieval scenarios (Barz & Denzler, 2021).

Several approaches have been proposed in the literature to address the problem – for example, skilful indexing of images, search and retrieval of images based on semantic criteria, and the use of contextual information as image labels (Papadopoulos et al., 2009). Scholars suggest that it could be beneficial to use multi-modal search with visual and linguistic sources to reduce content-based access to information retrieval (Markowska-Kaczmar & Kwasnicka, 2018). Nonetheless, the most significant recent advancements in bridging the semantic gap are enabled by ML and with outcomes depending on large amounts of labelled data (Markowska-Kaczmar & Kwasnicka, 2018). However, the problem persists, especially with so-called fuzzy terms that cannot objectively be connected to a single property (Ebbecke, 2022). Off Office effectively employed natural language syntax characterized by such ambiguous terms. Their language played a crucial role in creating and improving their designs, while simultaneously strengthening the team's sense of belonging.

The definition phase in the visual identity design process provides adequate conditions for augmentation through ML. They are process stages in which the design is challenged for potential improvement. ML could support these moments in multiple ways by giving feedback, or alternately supporting or challenging human feedback. It represents a moment in which humans and algorithms could collaborate on improving design artefacts, rather than the algorithm creating final outcomes.

Through my feedback analysis, I found that vocabulary and syntax play a significant role in shaping designers' collaboration and infiuencing design outcomes. These verbal descriptions hold significant value, as they articulate design decisions and motivations that are challenging to express in words. They help gather insights into the intuitive and subjective aspects of the work. The designers'

syntax serves as a key entry point to comprehend the definition phase. Nonetheless, currently, the utilization of such semantic and fuzzy language poses challenges for ML.

As research endeavours to address the semantic gap and incorporate customized datasets, there is potential for the integration of designer syntax into ML datasets in the near future. Intentionally utilizing studios' semantic cognitions as dataset biases could extend the designers' distinct understanding of design artefacts to ML tools and create a more homogeneous communication between both parties.

5.3 Answering RQ 3

Through my interviews, I initially answered my third research question, *How can the critical phases of the process be augmented through ML?* as follows:

- ML can play a crucial role in improving the critical phases of the visual identity process by developing tools that prioritize the creative process and aim at supporting human creativity rather than replacing it.
- A step-by-step implementation of ML would be beneficial for designers and allow them to develop alongside their tools.
- ML can bridge the divide between the intuitive and subjective elements of the creative process, establishing a more tangible connection between conceptual ideas and their visual representation.

By integrating the latter findings from my non-participant observation, I can provide a more detailed answer to my research question:

- By incorporating the shared semantic cognition of design teams into ML datasets, a recommendation system could be developed to provide customized support for designers' distinct requirements, thus amplifying the effectiveness of natural language prompts in the design process.
- Systems that leverage multi-modal search, combining visual and linguistic sources, would be particularly advantageous for the specific requirements of design work in the definition phase.
- During feedback sessions, designers step back from their

work to analyse and enhance it. ML could be instrumental in this phase by providing additional feedback or directly suggesting potential improvements.

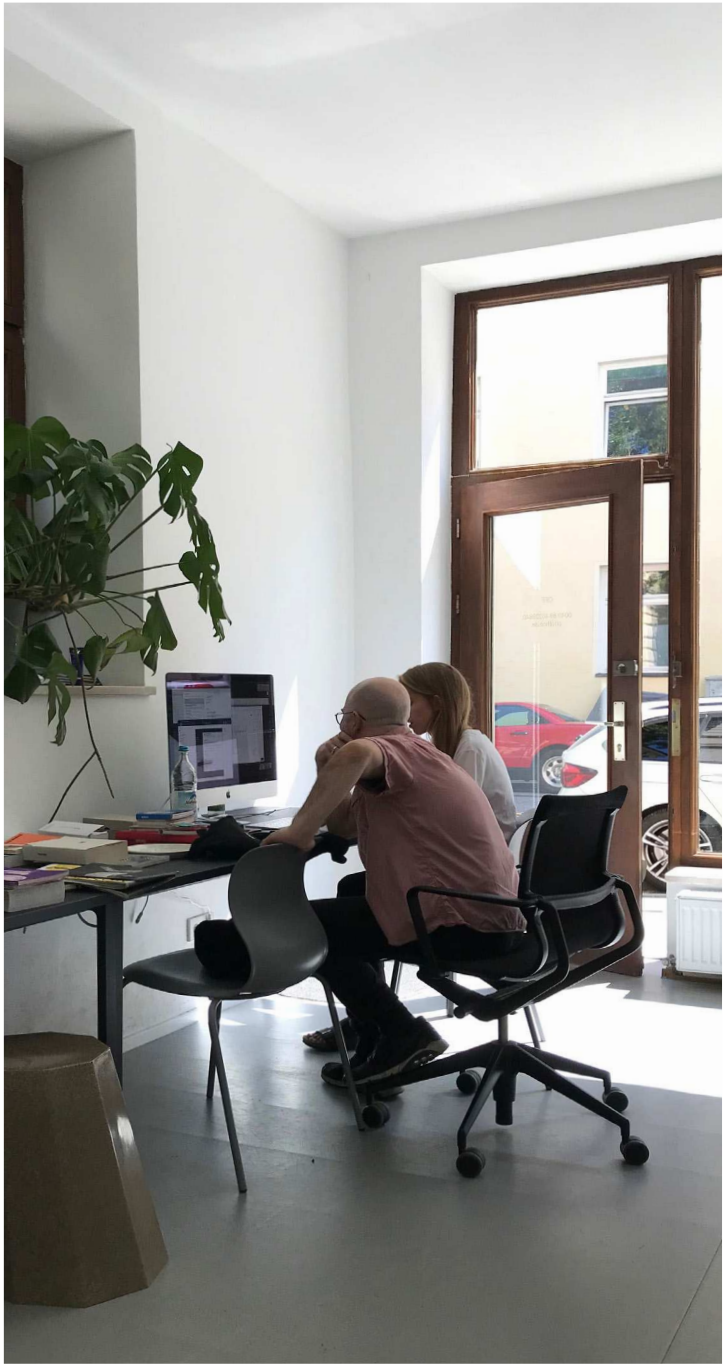


Fig. 28
Feedback session, Studio Off Office Munich, 23.08.2022

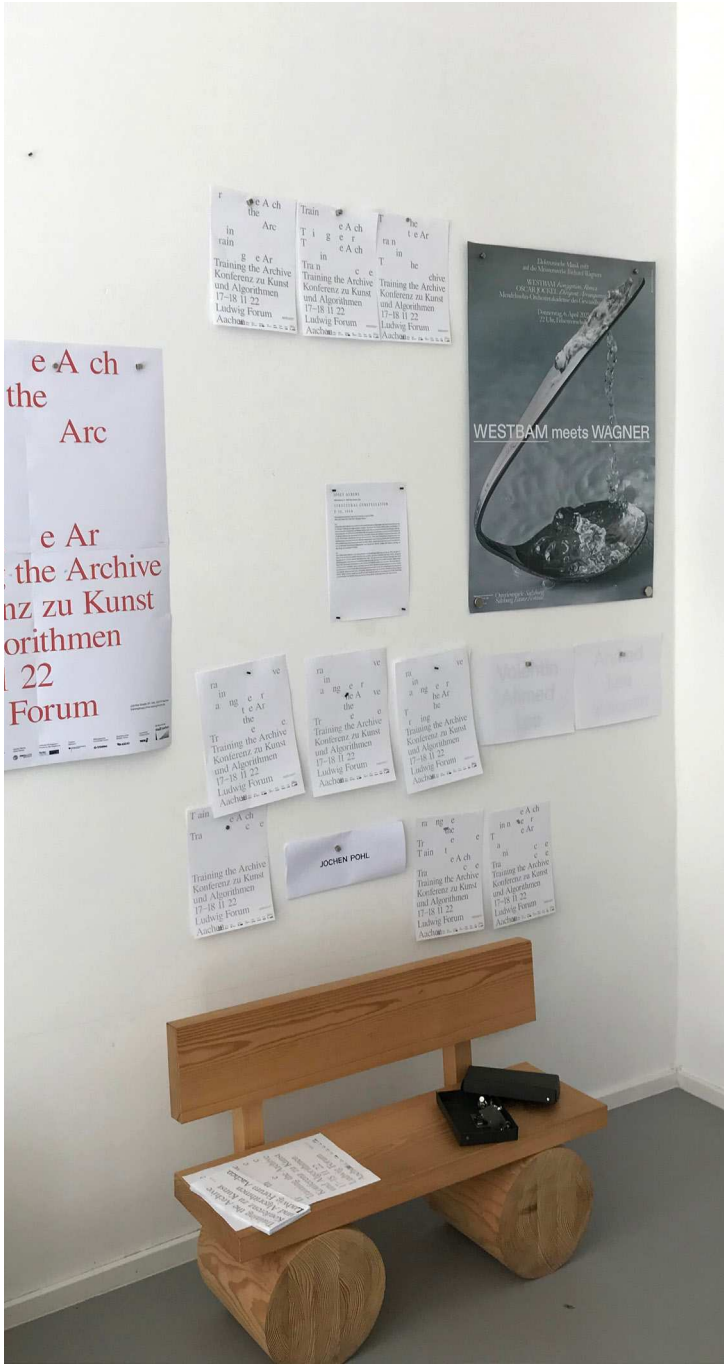


Fig. 29
Feedback session, Studio Off Office
Munich, 24.08.2022

Fig. 30
Feedback session, Studio Off Office
Munich, 24.08.2022

VI

WITHIN-SUBJECT DESIGN SURVEY

This chapter outlines the within-subject design survey and corresponding statistical analysis. The outcomes derived from grounded theory lead to a new hypothesis that designers might find the graphical descriptions they use in their daily practice more useful than the descriptions generated by ML. This hypothesis is tested through a survey that evaluates graphical descriptions of posters sourced from an archive. The sample is first introduced, and the statistical analysis is detailed. Findings are supported by relevant references from the fields of graphic design and ML.

6.1 Poster descriptions

During my interviews, the definition phase – when designers initially transform their concepts into visuals (see Section 4.4.3) – emerged as the most suitable for augmentation through ML. I further investigated my findings through non-participant observation to gain a deeper understanding of how ML might interact with this phase. Observing and analysing designers' syntax and verbalization of design decisions helped me give a more detailed answer to the third research question, How can the critical phases of the process be augmented through ML? ML could provide a more tangible connection between conceptual ideas and their visual representation. Incorporating the designer's syntax in ML datasets would strengthen the efficacy of the usage of natural language prompts in the design process. By incorporating the shared semantic cognition of design teams into ML datasets, a recommendation system could be developed to provide unique support for designers. Instead of relying on generalised datasets intended to fit every designer, studios or groups of designers could tailor datasets to align with their unique design perspective. However, current ML datasets employ a concise and purely descriptive language, which is incompatible with the fuzzy language employed by designers.

Following these insights, I hypothesize that designers find the graphical descriptions they use in their daily practice more useful than the descriptions found in ML datasets and prompts. The text-to-image communication among ML applications is therefore currently below its full potential. This hypothesis is tested, to

gain a more decisive answer on the effectiveness of designer and ML descriptions, and offer new insights into the convergence of these two syntaxes. Additionally, further exploration uncovers novel methods to improve the interaction between designer and ML applications.

To test my hypothesis, I created a survey that compares the usefulness of designer and ML descriptions of graphical output. The dataset is a selection of posters from the archive Typo/Graphic Posters, which was generously made available for my research. Curated by designers André Felipe and Flavia Menezes, the archive contains typographic and graphical posters since 2008. My research centres on visual identity, and posters are a good medium for the display of identity since they function "as an abstract" (Dalen et al., 2002, p. 79) by containing all the necessary elements to communicate a brief message. As autonomous entities, posters can display the core elements of an identity, or possess their own unique identity. Furthermore, having been used for more than two centuries, they endure as one of the most permanent forms of visual communication (Guffey, 2015). I acknowledge that visual identity extends beyond the elements contained in posters, as demonstrated in section 1.2.2, encompassing various outcomes and applications. The posters used in the survey are thus not intended to represent the entirety of visual identity artefacts. Nonetheless, to construct a cohesive survey, I required comparable graphical artefacts, and posters, given their capacity to incorporate multiple graphical elements, were the most suitable choice.

In my survey, I carefully curated a selection of eight posters to ensure a diverse assortment. I specifically chose posters that portray a diverse usage of typography, font selection, and colours. Half of the posters (n=4) are integrated into broader visual identities, while the remaining half stand alone as individual works. As for the imagery featured in the posters, my selection encompasses photographs, abstract and figurative illustrations, 3D renderings, and collages incorporating emojis and other internet/digital-related elements. In the context of my survey, this meant assessing my hypothesis across various design styles. Additionally, I aimed to ensure that participants treated each poster individually. To curate this diverse selection, the posters feature varied backgrounds and serve different purposes.

Poster 1 Fig. 31 is based on the visual identity for the 2018 version of the Sonic Acts Academy festival in Amsterdam and was created by The Rodina. The identity was extended throughout the whole festival and was used both in digital and physical applications.

Poster 2, Fig. 32 created by Mikhail Lychovskiy in 2021, pays homage to the Swiss designer Karl Gerstner. It replicates stylistic elements used by Gerstner but is not associated to a specific visual identity.

Poster 3, Fig. 33 designed in 2023 by Skala Design, was a component of the identity for the exhibition Game Design Today at the Museum für Gestaltung Zurich. The identity encompassed way finding, informational elements, as well as the exhibition's catalogue and other printed materials.

Poster 4 Fig. 34 is loosely based on the visual identity of Strelka Institute for Media, Architecture and Design, located in Moscow (temporary closed). It is part of a larger series of posters created through the years by designer Anna Kulachek in 2021.

Poster 5 Fig. 35 was created by Rodrigo Sommer in 2015, for improvised and experimental concerts. It is not part of a visual identity.

Poster 6 Fig. 36 was designed as part of the visual identity for Instagrampier an online exhibition that encompasses also a physical copy of a book. It was created by Michele Salati in 2022.

Poster 7 Fig. 37 is part of a larger series of posters created by Paul Voggenreiter in 2022. It accompanies the visual identity, website and various digital applications for the UBU Ensemble for new concert performances.

Finally, poster 8 Fig. 38 created by Matěj Moravec in 2022 for 40 Rave, stands alone without a visual identity behind it.

The selection was first described by two designers each from two different studios, FIELD Systems, London, UK, and Serious Business, Munich, Germany. For comparison, ML de-

scriptions were generated using two prompt engineering tools, specifically clip interrogators by Hugging Face and Pharmapsychotic. These tools employ OpenAI's CLIP (Constastive Language-Image Pre-training): given an image, the model can predict the most relevant text description for that image (Kafritsas, 2022)), to analyse an image's content through various artists, media, and styles. These styles are often derived from color or texture patterns found in style images applied to content images. Additionally, they can mimic the artistic style of illustrators or painters such as Van Gogh, for example. The target style representation is reconstructed based on the semantic correspondence between real world photo and painting, which enable the perception guidance in style transfer (Ma et al., 2018).

Results are combined with a BLIP (Bootstrapping Language-Image Pre-training) for unified vision-language understanding caption to suggest prompts for generating similar images (Li et al., 2022). I created a valuation system to directly compare the two descriptive approaches, using a 7-point Likert scale to measure the perceived quality of the descriptions (Allen & Seaman, 2007), as follows:

1) Not useful at all
2) Slightly useful
3) Somewhat useful
4) Moderately useful
5) Useful
6) Very useful
7) Extremely useful

Following prior research, I used a broad-ranging scale to enhance data collection (Allen & Seaman, 2007). I added an optional open-ended question to enable the participants to freely express their opinion or other thoughts on the descriptions: If you don't find any of the above descriptions useful, please add your own. The open question is only optional because, on average, respondents typically take longer to answer these, and they present a lower level of uniformity (Krosnick, 2018). However, open-ended questions are known for greater reliability compared to closed questions, and have been found to perform well in studies of validity (Krosnick, 2018).

The selected posters were described as follows:

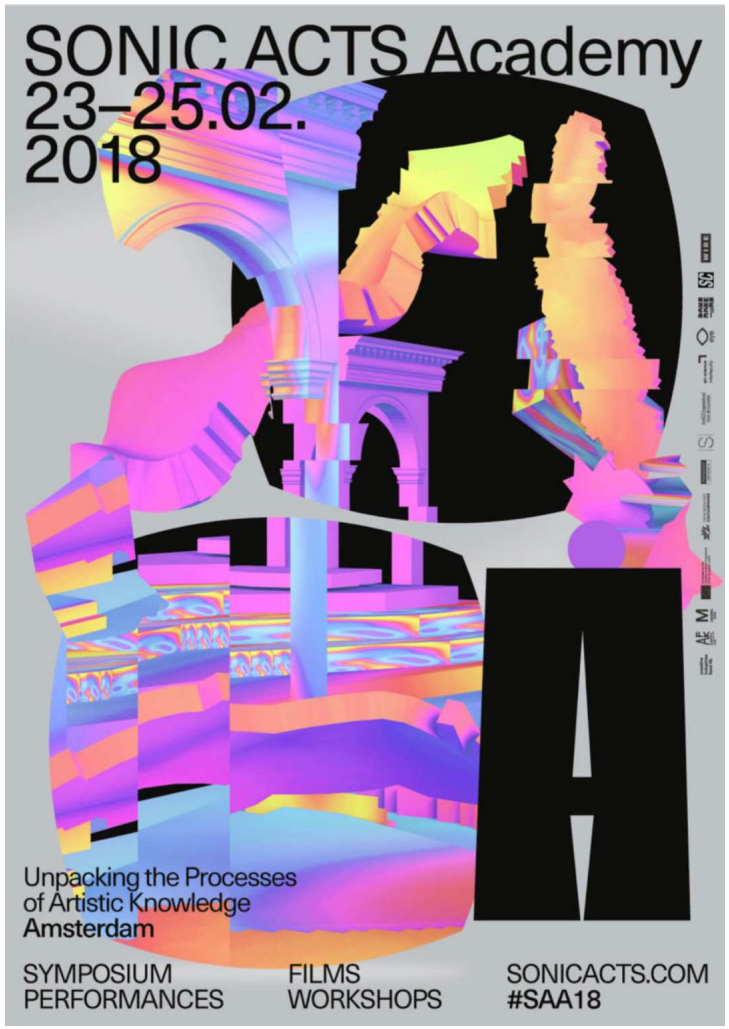


Fig. 31
Poster for Sonic Acts Academy festival
The Rodina, 2018

POSTER 1 DESCRIBED BY ML:
- A poster for sonic acts academy
- The letter A

POSTER 1 DESCRIBED BY DESIGNERS:
- Neoclassical architecture and abstract shapes
- Metaphysical, dreamy

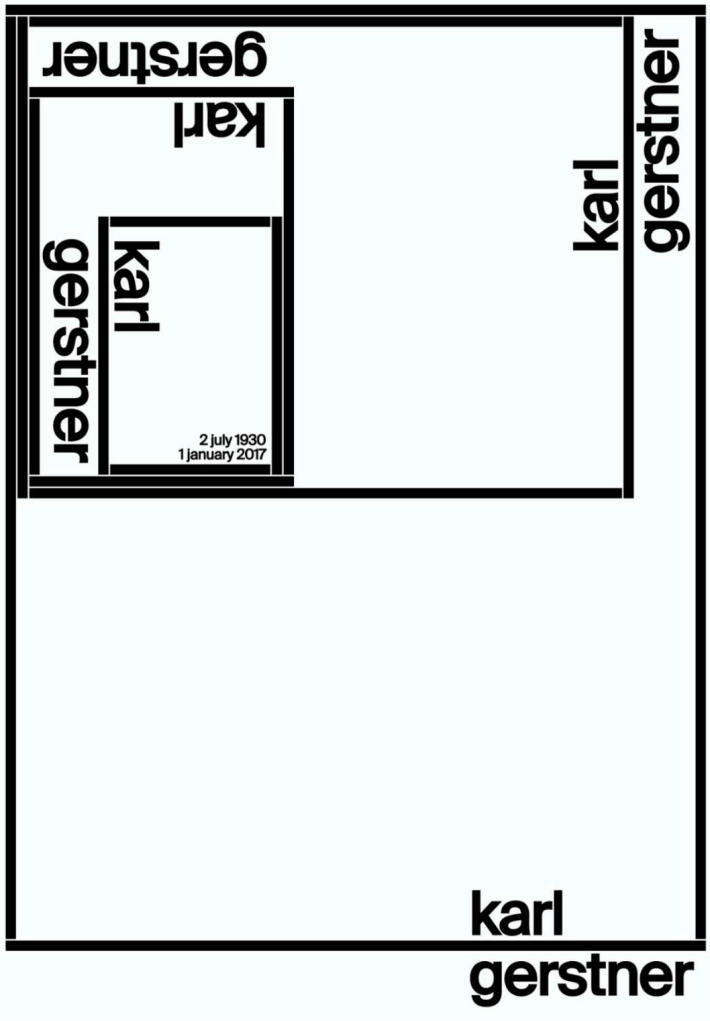


Fig. 32
Karl Gerstner Poster
Mikhail Lychovskiy, 2021

POSTER 2 DESCRIBED BY ML:
- A wireframe diagram
- Barycentric subdivision

POSTER 2 DESCRIBED BY DESIGNERS:
- Rigorous, structured, monochrome space
- Minimalistic brutalism

Fig. 33
Poster for Game Design Today
Skala Design, 2023

POSTER 3 DESCRIBED BY ML:
- Abstract design
- Ambient occlusion render

POSTER 3 DESCRIBED BY DESIGNERS:
- The future of gaming and consoles, embedded into human bodies
- Masculine 3D Tech style

Fig. 34
Poster for Strelka Institute for Media
Anna Kulachek, 2021

POSTER 4 DESCRIBED BY ML:

- A close up of a red square on a white background
- Extra-details

POSTER 4 DESCRIBED BY DESIGNERS:

- Contemporary, artistic
- Repeated text that creates a dynamic pattern

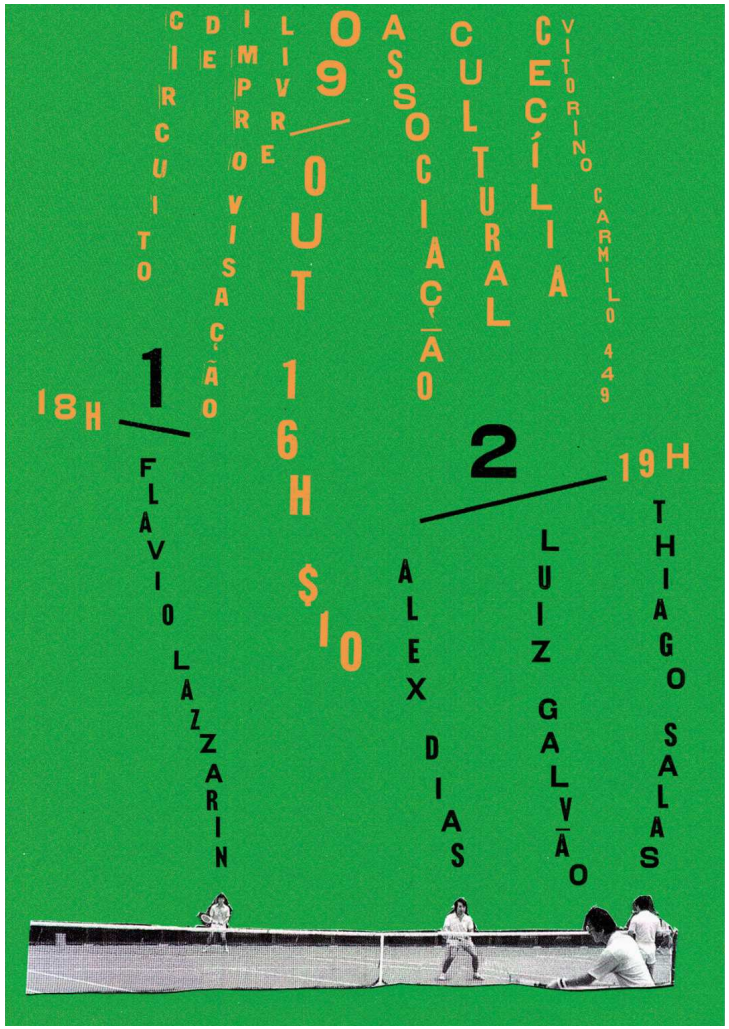


Fig. 35
Poster for Improvised and experimental concerts
Rodrigo Sommer, 2015

POSTER 5 DESCRIBED BY ML:

- A couple of men standing on top of a tennis court
- A poster

POSTER 5 DESCRIBED BY DESIGNERS:

- Experimental graphic design from the 80s / 90s
- Bold, clashing colours

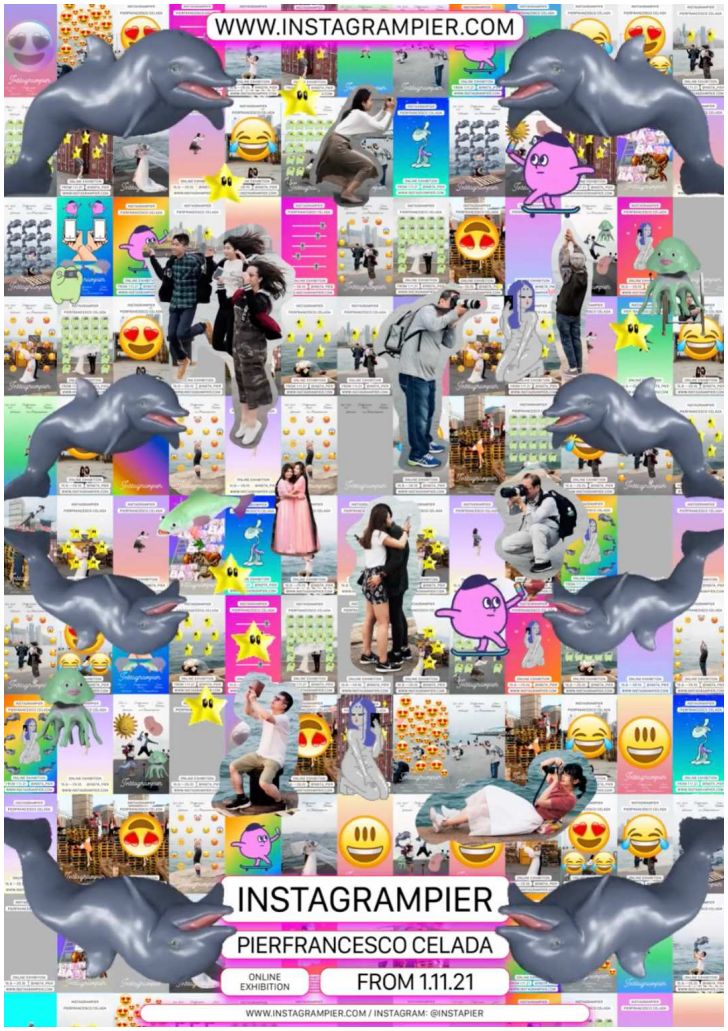


Fig. 36
Poster for Instagrampier
Michele Salati, 2022

POSTER 6 DESCRIBED BY ML:
- A collage of images of people and animals
- Emoji

POSTER 6 DESCRIBED BY DESIGNERS:
- Internet aesthetic, Digital collage
- Use of different visual languages: memes, emojis, stock photos, cartoon and video game references, lo-fi 3D

Fig. 37
Poster for UBU Ensemble
Paul Voggenreiter, 2022

POSTER 7 DESCRIBED BY ML:
- A black and white poster with a group of people
- Magazine article

POSTER 7 DESCRIBED BY DESIGNERS:
- Vaguely recalls newspaper aesthetic
- Strong text hierarchy with size and font weight

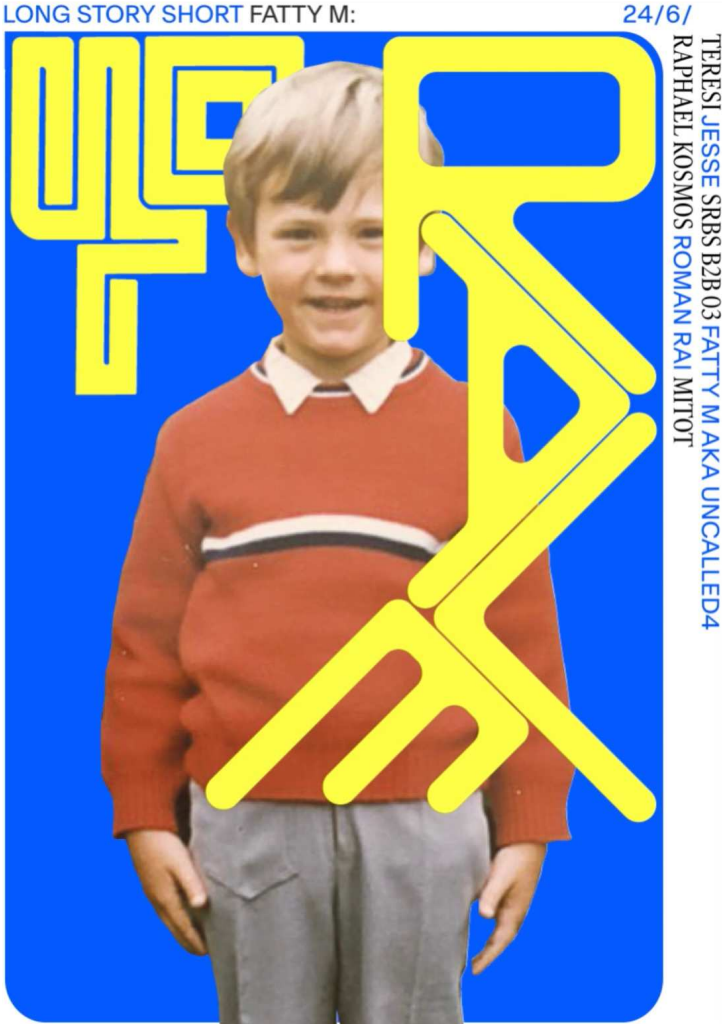


Fig. 38
Poster for 40 Rave
Matěj Moravec in 2022

POSTER 8 DESCRIBED BY ML:

- A young boy standing in front of a blue background
- Initials

POSTER 8 DESCRIBED BY DESIGNERS:

- Retro-futuristic aesthetic
- Reinterpretation of old layout with an overlay of a trendy font

6.1.1 Sampling strategy

The participants in my within-subject design survey were selected through convenience sampling, with their listing on Studio-Index as the primary selection criterion. As discussed in the interview section (4.2), *Studio-Index* is a global directory of worldwide graphic design studios. In the sample gathered for my interviews (20 studios), I invested more time in the selection process, carefully analysing the designers' websites regarding the display of various identity projects. I observed that almost every studio had worked on identity projects. This knowledge proved useful when selecting my second sample, as I sought a larger participant pool than previously, and thus needed to reach out to numerous studios, making detailed analysis unfeasible. By limiting my sample to the western hemisphere, the context I am familiar with, I ensure an 'insider' understanding of the cultural aspects influencing design work. Furthermore, given that this experiment investigates the effectiveness of language and syntax, it is crucial that the chosen context shares cultural similarities. However, the levels of English competency and interpretations may not be entirely consistent among studios, potentially influencing the context of my study. By selecting studios that provide an English version of their website, I attempted to minimize this discrepancy.

6.1.2 Presenting the sample

I contacted 400 graphic design studios in Western countries, resulting in a total of 58 respondents from 52 different graphic design studios. The sample includes 27 cities from 14 countries: Vienna (Austria), Helsinki (Finland), Paris (France), Berlin (Germany), Bologna (Italy), Brescia (Italy), Milan (Italy), Valletta (Malta), Mexico City (Mexico), Amsterdam (The Netherlands), Deventer (The Netherlands), Kraków (Poland), Matosinhos (Portugal), Porto (Portugal), Barcelona (Spain), Madrid (Spain), Basel (Switzerland), Bienne (Switzerland), Lausanne (Switzerland), Zurich (Switzerland), Brighton (UK), London (UK), Norwich (UK), Los Angeles (USA), New York (USA).

The most frequent cities in my sample are London (10 participants), Milan (7 participants), and Zurich (6 participants). London and Zurich are the cities with the most graphic design studios listed on Studio-Index, which perfectly mirrors the sample.

On the other hand, Milan has a higher representation given to my current residence in the city, allowing me to have greater familiarity with and access to more studios in the area. I recognize this limitation in my study.

6.1.3 Statistical Analysis

My statistical analysis tests the following hypothesis: Designers find the graphical descriptions they use in their daily practice more useful than the descriptions generated by ML systems. Table 1 shows how useful the ML and designer descriptions were for participants for each poster. Examination of Table 1 suggested that the designer description was rated more useful than the ML description for all posters, except for poster 3.

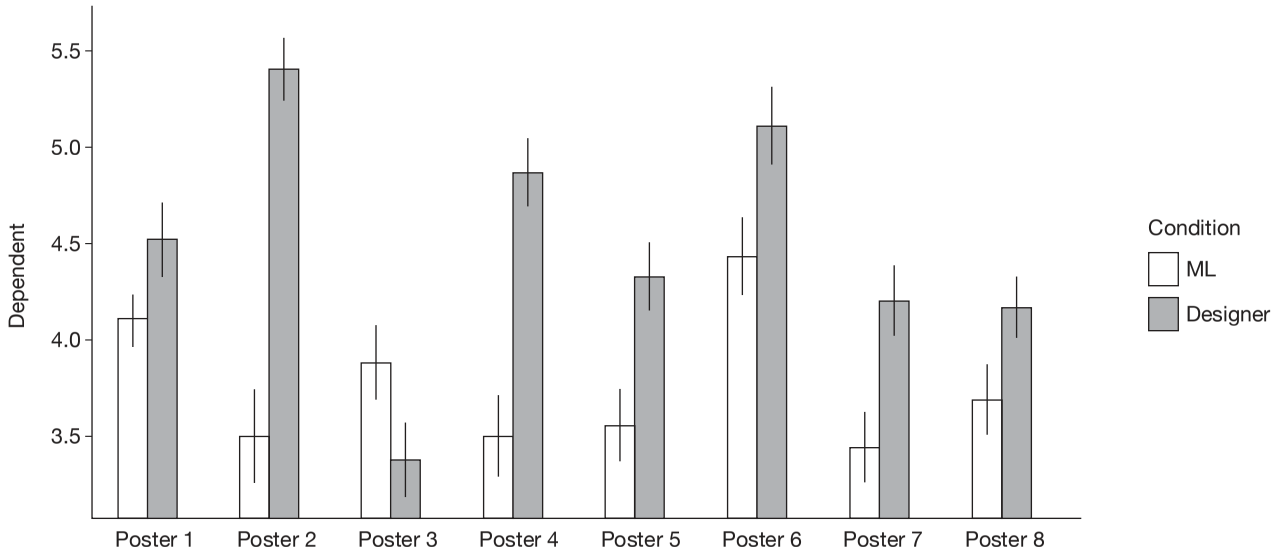
A 2x8 repeated measures ANOVA with description type (ML and designer) and poster (1 to 8) as factors was then conducted to test whether the designer description was found statistically more useful than the ML description for all the posters. The ANOVA showed that the description type significantly affected the responses ($F(1, 57) = 56.64$, $p < .001$, $\eta p2 = .50$). This confirms that the designer descriptions were found more useful than the ML description, as suggested by Table 1. The ANOVA also showed that there was a significant effect of posters on responses ($F(7, 399) = 8.70$, $p < .001$, $\eta p2 = .13$). Post-hoc tests indicated that two posters (poster 3 and 6) show a relevant difference in values compared to the other posters ($ps < .047$). From Table 1, this difference seems to arise from poster 3 having relatively low scores (3.62), and poster 6 relatively high scores (4.79).

Finally, there was a significant interaction effect between the description type and poster ($F(7, 399) = 15.99$, $p < .001$, $\eta p2 = .22$). Figure 3 indicates that the interaction is significant, as the designer description was found more useful than the ML description for all posters except poster 3. These findings mostly support the hypothesis that designers' descriptions of graphical artefacts are more useful than ML-generated ones. Only one poster resulted in unsuccessful human descriptions, confirming an 87.5% accuracy rate.

Table 1
Mean (and standard deviation) of the responses

Poster	ML	Designer
1	4.10 (1.05)	4.53 (1.39)
2	3.50 (1.80)	5.40 (1.18)
3	3.84 (1.41)	3.39 (1.41)
4	3.52 (1.59)	4.88 (1.32)
5	3.58 (1.49)	4.34 (1.33)
6	4.45 (1.56)	5.13 (1.55)
7	3.47 (1.44)	4.22 (1.45)
8	3.71 (1.43)	4.19 (1.25)
All	3.71 (0.95)	4.51 (0.89)

Fig. 39
Estimated marginal means



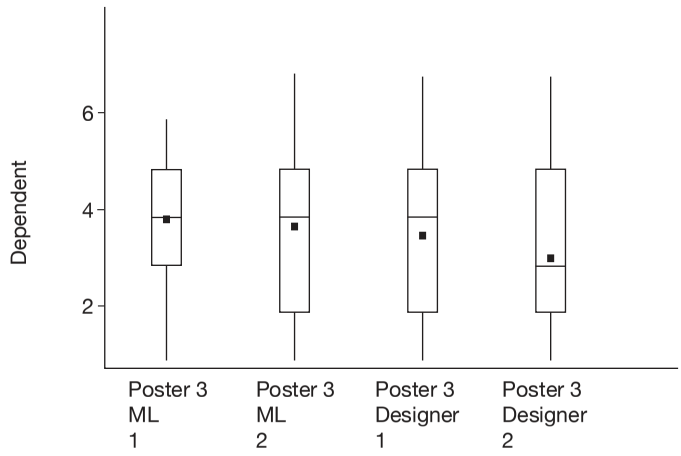


Fig. 40
Mean (and standard deviation) of the responses of Poster 3

6.2 Discussion and literature review

The data analysis mostly confirmed my hypothesis: Graphic designers perceive designer descriptions as more useful than ML-generated ones. However, poster 3 stood out for having the lowest mean value (3.62) and the lowest designer description score. This exception shows that designer descriptions are often subjective and connected to personal semantic interpretations. The survey participants did not consider the designer descriptions of poster 3 to be generic enough to offer particular utility. Poster 3 was described by ML as follows:

- Abstract design
- Ambient occlusion render

While two graphic designers described it as:

- The future of gaming and consoles, embedded into human bodies
- Masculine 3D Tech style

As illustrated in Figure 4, among all descriptions, *Masculine 3D Tech style* was found the least useful, and it significantly impacted the average value, causing the lowest performance among all posters. Furthermore, through the open-ended question, *If you don't find any of the above descriptions useful, please add your own*, one participant strongly disagreed with the term *masculine* while 5 others suggested alternative descriptions:

- Morphing shapes, gamepad buttons, black and white
- Black and white textured 3d blobs
- Modern slick abstract gaming console
- A poster for an exhibition about game design at Museum für Gestaltung Zürich
- Design without soul

The term *masculine* delves into gender stereotypes, a delicate topic at present regarding AI systems. While this description was provided by a human designer, ML has frequently been found to perpetuate gender inequality through biased datasets (Cornish et al., 2015). While gender bias falls outside the scope of my research, this instance shows how bias can be introduced into a dataset through human tagging, if for example this description was part of such a process. The comment *Design without soul* is not only subjective, but it also goes beyond a mere description by conveying a personal impression. The other alternatives emphasize the gaming reference as the core theme of the poster.

The descriptions generated by ML tend to be more generic and superficial, merely describing the visual elements of the posters or simply identifying the graphics representative of a poster. These descriptions directly mirror the content of the neural network CLIP dataset, on which the CLIP-interrogators operate. The creators of CLIP acknowledge that the dataset performs strongly in identifying everyday objects; however, it faces challenges when dealing with more abstract concepts. Moreover, CLIP also has poor generalization to images not covered in its pre-training dataset, and with low Optical Character Recognition (OCR) capabilities (https://openai.com/research/clip). This largely accounts for ML performance in describing the posters, the latter often relying on intricate concepts and extensive typography usage.

A practical example of the descriptions' inaccuracy (Northcutt et al., 2019), is poster 7, which is described as a *Magazine article* while the designer descriptions specify that it *Vaguely recalls newspaper aesthetic* because it is structured through *strong text hierarchy with size and font weight.* The difference between the two descriptions can be crucial, especially when working in the identity context. A graphic-design oriented dataset should therefore have strong capacity for OCR, and be able to work with abstract and intricate concepts.

Various graphical datasets are available online. Having been curated over multiple years, they often serve as online portfolios or sources of inspiration. Examples were quoted by the designers during the interviews (4.3.2.1), including platforms like *It's Nice That, Behance and Pinterest*. Another example is the *Typo/Graphic Poster* archive made available for my research. Such datasets usually contain rich attribute labels for content, emotions and artistic media (Wilber et al., 2017). Moreover, larger datasets like Behance are grouped into 'projects', each associated with metadata including a title, description and other user-supplied tags (Lai et al., 2022). *Behance* has been utilized for ML purposes over the years, for example to improve the generality of design classifiers of computer vision models, with the main intent to extend labels

to different artistic styles. (Wilber et al., 2017). Datasets of this nature could serve as a foundation for ML training in typography and identity design, ultimately enhancing ML's comprehension of graphic artefacts.

Numerous examples in literature illustrate the repercussions of overlooking the interpretation of context, resulting in an incorrect understanding of data, which leads to incorrect generalizations. (Tanweer et al., 2021; Van Der Burg et al., 2023). As emerged through my interviews, designers frequently allude to specific contexts through analogies, leading to the emergence of novel contexts of representation. Overly literal descriptions carry the risk of diminishing the uniqueness of graphics and diluting their conceptual depth. The incorporation of literal ML descriptions into identity therefore holds limited value in comparison to its potential when equipped with strong OCR and adept concept interpretation. Currently, the ML descriptions seem to work best when combined with the descriptions provided by the designers.

Poster 3 stands out as an example of designers' inherent subjectivity. Even if ML descriptions seem less subjective, their generalizability through classification, categorization and labelling has created a false sense of 'objectivity' (Van Der Burg et al., 2023). By reflecting the dataset's biases and oversimplified description tags, they can be perceived as objective by users. Regarding these labels as objective and aligning designers' graphical interpretation with them carries the danger of trivializing design outcomes. Recent research has in fact seen a pushback against such thinking, emphasizing the essentially interpretive nature of actions, leading to categorizing and labelling (Van Der Burg et al., 2023). Experiments have been conducted using more subjective description data from social networks and content-sharing websites. Metadata like user tags, ratings and comments have been used for visual detection (Huiskes et al., 2010). The strong subjective nature of these text inputs has great potential to improve the performance of the classifying detection approaches.

Nonetheless, user tags, ratings and comments have numerous problems like providing incomplete descriptions of the visual content, or focusing mainly on the interest of the user (Huiskes et al., 2010). Van der Burg et al. (2023) explore the process of training AI models as a process of self-reflection for designers. Focusing on the designer's subjectivity, they embraced AI's limitations such as small, biased datasets to create innovative designer-AI partnerships. Even though their research generally confirms the potential for leveraging biases in AI prompting, the model had consistency problems with categories. This highlights the challenge of integrating human subjectivity into AI processes. Despite being in their early stages and potentially encountering issues, these experiments are in accordance with my proposal of taking advantage of biases to create custom datasets for design studios. Nevertheless, due to their predominantly technological nature, these contributions distinguish themselves from mine, which doesn't emphasize technical intricacies but rather focuses on optimizing communication between designers and ML. Based on my findings, I propose that the shared semantic cognition of design teams (5.3) can serve as descriptive input of images and design artefacts in ML datasets. This approach would embrace the subjective nature of graphic design and prevent design projects from being distilled into generic concepts and visualizations. Given that the homogenization of trends is already a common problem in the industry, (4.5.2) this would be also a step towards creating customized sources of inspiration. Instead of creating generalized datasets for all designers, studios or design groups could customize datasets to match their distinct design perspectives. Moreover, these datasets could be employed in connection with clients to align designers with their expectations and interpretations of graphics.

The incorporation of designers' subjectivity and shared semantics could also be achieved by fine-tuning pre-trained models. Instead of training large datasets exclusively, they could be used as a starting point for processing new data in further training iterations (Vigliensoni et al., 2022). This would help create more customized datasets, especially if fine-tuning is used for task-specific labelling (Gunel et al., 2020). The most popular approaches for text-to-image generation require massive datasets to be trained. As mentioned before, large training data from the internet tend to amplify generic biases (Bender et al., 2021). However, for identity projects and other creative applications, this conflicts with the designers' desire to generate content which is uncommon or distinctive (Vigliensoni et al., 2022). For this purpose, the biases within small, manually-curated datasets can prove valuable when creators employ them as a means to communicate more specific types of outcome a machine should generate (Vigliensoni et al., 2022).

At present, there are platforms such as Runway that provide open-source pre-trained ML models which can be fine-tuned (Run-

way, 2023). Furthermore, interactive ML training, a concept introduced by Fails and Olsen (2003) two decades ago, integrates both dataset curation and training into the creative process. Datasets would not remain fixed, and designers could continually refine them for diverse projects; they would dynamically evolve alongside designers' knowledge, preferences and capabilities. Small datasets react to minimal changes such as the addition or removal of a few training examples, which can have appreciable effects on the models' behaviour (Vigliensoni et al., 2022). Datasets containing human-written captions are known to outperform automatic captioning, which may correlate poorly with human judgement (Desai et al., 2021). However, it is expensive and time-costly to collect human-authored captions (Li et al., 2023). Li et al. (2023) present two strategies for manually curating datasets. First, they recommend eliminating or substituting captions that are not efficient; and second, they propose exchanging images with a text-to-image generation model. In the latter scenario, rather than removing problematic examples, they suggest that the caption may better describe different images.

By comparing designer and ML descriptions in my survey, a clear distinction emerges: designers, unlike ML systems, reference the posters' style and the emotions they evoke. Nonetheless, subdivisions of description and style are used in many commercial AI image generators. The prompting structure is usually divided into two parts: 'SUBJECT in the style of STYLE' (Liu & Chilton, 2022, p.2), they describe the users' subject and subsequently apply a desired visual style. This so-called style transfer is a process of migrating a style from one image to another, with the goal to synthesize a new image which is an artistic mixture of content and style (Elad & Milanfar, 2017). Considered collectively, the ML and designer descriptions in my survey conform to this structure. The Clip-interrogators' divergence from this pattern can mainly be attributed to the limited graphical and typographic inputs in current ML datasets (Ebbecke, 2022). As long as research on generative AI continues to improve and more graphical training data will be made available, generative models will begin to be able to reproduce typography and recognize design styles (Ebbecke, 2022).

The concept of style was not discussed previously in this thesis. In my interviews, only a few designers mentioned style or personal taste as a component of identity projects:

> There is also a sort of personal taste and things that are part of the contemporary world, which need to be taken into consideration. *Bontempi L., Parco Studio*

In contrast, the designer descriptions in the survey frequently reference specific graphical styles like minimalism, brutalism, experimentalism, internet aesthetic, and retro-futurism. The results of the survey suggest that the designers were adept at interpreting the stylistic references. Style in design is defined as a way of doing things, chosen from a number of alternatives (Simon, 1975). It refers to different ideas concerning the artefact, modality, society, culture, period and so forth (Jupp & Gero, 2006). As noted by Fuller (2021) in the context of graphic design and minimalism, even when a style is recognized, it can still hold numerous subjective interpretations. Graphic designers frequently borrow style references and reinterpret them in different social and cultural contexts (Coogan, 2022). Thus, evaluating the visual similarities of design artefacts and identifying styles again depends on the context (Jupp & Gero, 2006). These characteristics are critical to a digital classification of visual style in design because designers are capable of analyzing artefacts using different measurements (Jupp & Gero, 2006). In contrast, fine art datasets are more advanced, leading to significant achievement in classifying and recognizing artistic styles (Menis-Mastromichalakis et al., 2020). Thus, a notable contrast between designers and ML is simply their knowledge of graphic design. Designers are experts, whereas ML currently functions like an amateur.

One of the branches of AI, expert systems, developed the first successful software programmes in the field around 1970 (Nilsson, 1998). As pointed out by Feigenbaum (1980) these systems use knowledge and inference procedures to solve problems that are difficult enough to require significant human expertise for their solution. In graphic design they were used in connection with 'fuzzy logic' to automatically provide design elements by text input (Glez-Morcillo et al., 2010). Fuzzy logic, stands for a multivalued logic, that allows intermediate values to be defined between conventional evaluations like true/false, yes/no, high/low and so on. Notion like rather tall or very fast can e formulated mathematically and processed by computers in order to apply a more human-like way of thinking in the programming of computers (Hellman, 2001). However, this approach leans towards automation,

not augmentation, and still falls short of the truly expert, largely intuitive knowledge of graphic designers. With a vast graphic design dataset and extensive tagging by a designer or design studio, ML could mirror the knowledge of its trainer. The pressing question that arises is how to correctly employ these proficiencies. Employing such a tool requires careful consideration, particularly to avoid crossing the boundary from augmentation to full automation. As mentioned before (4.6.2.1) literature warns against so-called *Heroic AI*, systems that produce art autonomously without the direct intervention of the artist (D'Inverno & McCormack, 2015). Text-to-image generators are one example within this category. My research has a strong focus on design descriptions and syntax employed by designers in their professional practice. These insights can be used to enhance text-to-image generators. However, they were developed to be applicable during the definition phase to assist designers in the creative process. Following the literature (e.g., Kaiser, 2019; McCormack et al., 2020), my proposition involves avoiding ML in the outcome phase to directly generate 'finished' graphics. Instead, it aims to provide designers with feedback and assistance, especially to align concepts and graphics.

6.3 Answering RQ 3

The heart of my research lies in the third research question, *How can the most critical phases in visual identity projects be augmented through ML?* I address this through various investigative approaches. First, through semi-structured interviews:

- I located the definition phase as most suitable for augmentation through ML.
- In this phase, ML might elucidate the intuitive phases of decision-making that rely on tacit knowledge.
  - In general, ML learning could play a crucial role in improving the visual identity process through tools that prioritize the creative process and support human creativity rather than replace it.
  - A step-by-step implementation of ML would be beneficial for designers and allow them to develop alongside their tools.

By conducting non-participant observation, I challenged my findings and gained deeper insights into the design process, leading me to a more precise answer to the research question:

- Within the definition phase, ML could be especially valuable in feedback sessions where designers analyze and refine their work. ML might provide additional feedback and suggest improvements.
  - The language employed by designers is subjective and full of semantic descriptions that are not yet adequately supported by natural language processing.
- By incorporating the shared semantic cognition of design teams into ML datasets, a recommendation system can be developed to provide unique support for the specific needs of designers and design teams.
- Graphic designers perceive designers' descriptions as more useful than ML-generated ones.

The concluding statement above became the hypothesis I subsequently explored through a within-subject design survey. Beyond mostly confirming the hypothesis, the survey provided valuable insights for augmenting the definition phase with ML:

- Because current ML datasets lack graphic and typographic inputs, ML applications operate with limited expertise in graphic design. As more graphic and typographic materials are integrated into ML datasets, generative models should better support graphic designers in their daily practice.
- Fine-tuning is an effective approach to incorporating the semantic cognition of design into datasets. Instead of training large datasets from scratch, these could operate as a foundation for processing new, smaller datasets to train subsequent iterations.
- Biases within small, manually-curated datasets might be valuable for their creators in communicating the precise outcomes they want to generate.
- Interactive ML training should integrate dataset curation into the creative process. Datasets would dynamically evolve alongside designers' knowledge, preferences and capabilities.

VII

STEVE, CONCEPTUAL FRAMEWORK FOR AUGMENTING THE VISUAL IDENTITY PROCESS WITH ML

In this chapter, I contextualize the theories that arose from semi-structured interviews, non-participant observation and the within-subject design survey, to propose new working scenarios for graphic design practice following the procedures suggested by Charmaz and Thronburg (2021). The following guidelines are organized around the findings generated throughout the research and are constructed as a framework named Steve that structures ML augmentation scenarios for the visual identity process. I decided to assign a human name to the framework to emphasize its role as a collaborator. This anthropomorphic touch wants to symbolize a cooperative relationship between designers and ML, portraying it as a team member. Considering that, I propose ML to convey to the designer's personalized semantic expressions, using an acronym would have felt out of context. Furthermore, AI and ML are increasingly considered as part of a sociotechnical system consisting of larger structures (Sætra, 2021), and social collaborations with technology (Hwang, 2023).

Steve is situated in the definition phase as ideal for ML implementation. It furthermore incorporates feedback and frames the use of ML in correspondence with personalized datasets and labelling, in order to align with designers' shared semantic cognition and distinctive syntax. The framework aims at supporting graphic designers by incorporating collaborative AI solutions and emphasizing the interactions between ML and human designers. Based on abductive reasoning, the concepts in the framework do not constitute new cases of already known general rules (deduction), nor do they rely solely on explanations of observed phenomena (induction) (Vila-Henninger et al., 2022). Instead, abduction is the only form of inference enabling the introduction of novel concepts, serving as the foundation for innovative contributions (Pfister, 2022). Abduction is considered the "most powerful, but also most controversially discussed, type of inference." (Pfister, 2022 p. 205) with no commonly accepted definition.

7.1 What is the framework, introducing Steve Fig. 41

Where in the process should ML be inserted?
Based on the statement generated through interviews and analysis in Section 4.5.2 – The translation of concepts into visuals is described as the most unconscious part of the process, for which the designers rely on intuition, research, references, input from the client and prior knowledge – ML can strengthen the definition phase by elucidating the intuitive stages (section 4.3.4.1) of decision-making.

In my analysis, interviews and literature suggested that decision-making in identity unfolds around value-driven judgments (Da Silva Vieira et al., 2011). The challenge and complexity of translating concepts into visuals through these judgments stems from their subjectivity (Lu & Liu, 2011). ML can be an additional help in this phase, as it can be used as a compass that aligns visuals and concepts throughout the sketching phase. Moreover, the Definition Phase represents the critical decision-making stage in the process where design is produced (De Peuter et al., 2023). By inserting ML into this phase, they can assist designers with insights and feedback in order to improve their work. This enables designers and ML to collaborate rather than relying on so-called 'Heroic AI' (Meron, 2022, McCormack et al., 2020, D'Inverno & McCormack, 2015) systems that aim to produce designs autonomously, potentially rendering designers obsolete.

How should the designers communicate with ML?
In order to find a productive way for designers to communicate with ML, I rely on a statement formulated as a result from my non-participant observation (Section 5.3): During feedback sessions, designers step back from their work to analyse and enhance it. ML can be instrumental in this phase by providing additional feedback or directly suggesting potential improvements.

During feedback, designers pause to critically assess their work, and gather external perspectives from peers, mentors, clients and users. In instances where multiple designers collaborate on a project, feedback serves to compare, select or integrate the work. Incorporating ML as a feedback mechanism aims to support designers' willingness to receive external inputs during that specific phase. This is contrasted by the rest of the process, in which designers normally work independently. This allows the designers the autonomy to choose when to pause their work to receive ML

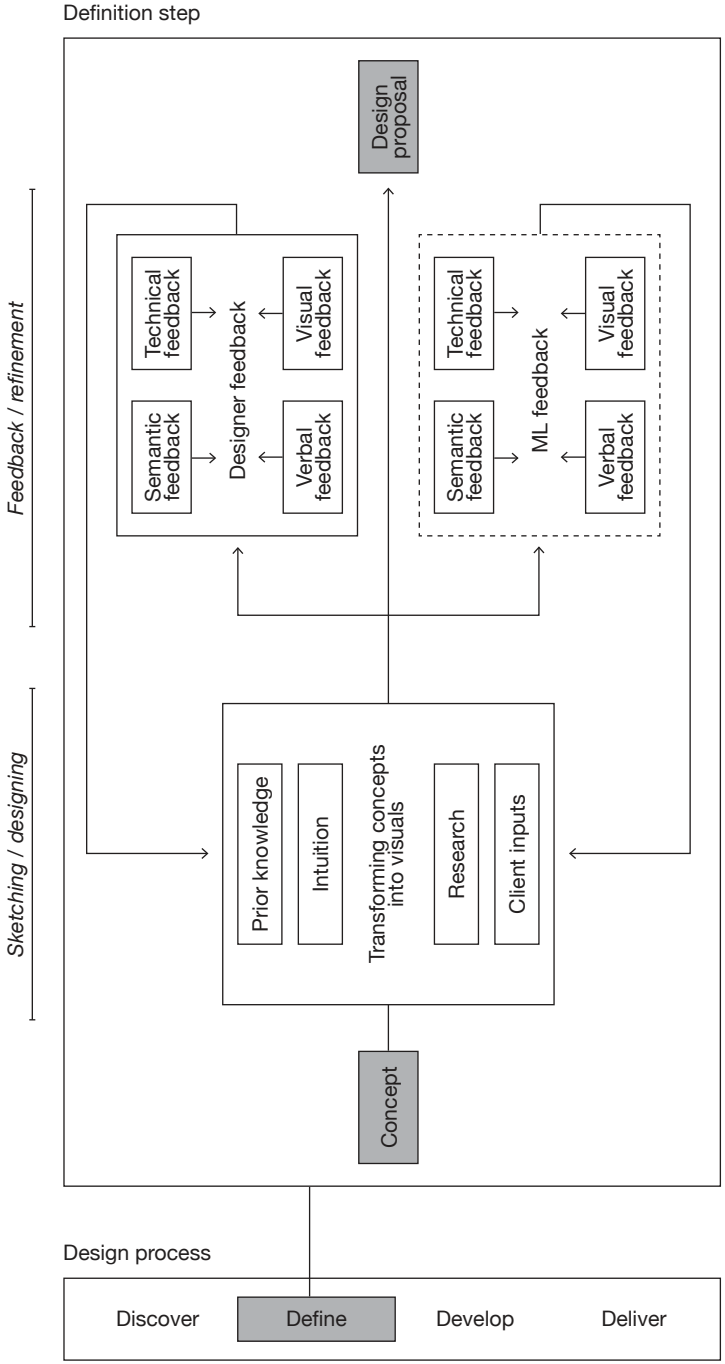


Fig. 41
Framework visualization
Augmented Visual identity design process

feedback, and the freedom to decide whether and to what extent they want to incorporate the suggestions. ML becomes an extension of the studio, functioning as a digital collaborator that can be consulted when suitable.

This approach aligns with the designers' desire to enhance the creative process using ML while retaining the final decisive power (Section 4.5.2). Additional support for this statement can be found in literature, which expresses concern over designers' limited ownership, creativity, expressiveness and lack of control when using ML tools that automate rather than augment the design process (De Peuter et al., 2023; Guo et al., 2021).

As previously discussed (Section 4.3.3.1), feedback sessions can occur at any time, constituting a common thread that links all stages of the process. This could potentially extend the use of ML feedback to all process stages. However, since the definition phase determines the core attributes of an identity, it provides the optimal opportunity for collaborative decision-making and knowledge sharing between designer and ML. An example of feedback in this research can be found in the within-subject design survey. The designers were tasked with evaluating poster descriptions in a process that simulated written feedback of graphical artefacts. In a scenario where the descriptions are not put into question for their usefulness, they can function as a form of feedback for designers. Upon receiving feedback in the form of descriptive concepts from ML, designers can compare if these align with their initial conceptual constructs. Thus, ML serves as a bridge between the designers who collected the data, and those who make use of it.

What should ML do?

Up to this point in the framework, I have proposed that the Definition Phase is the most suitable to augment, with the feedback process as the place for communication between ML and the designers. To define ML's precise function within the design process, I rely on the following statement produced as a result of my non-participant observation: By incorporating the shared semantic cognition of design teams into ML datasets, a recommendation system can be developed to provide customized support for designers' distinct requirements, thus amplifying the effectiveness of natural language prompts in the design process.

The findings gathered from my research indicate that a crucial factor to consider is the customization of ML. The interviews highlighted a concern in the graphic design industry: the tendency of trends to become homogeneous due to the widespread dissemination of graphical artefacts on the internet (Section 4.4.1.1). ML has the potential to aggravate this issue by suggesting uniform solutions to different designers, relying on standardized patterns in the dataset and stereotypical labelling (Vigliensoni et al., 2022). Further challenges, such as diminishing the uniqueness and conceptual depth of projects, also emerged (Section 6.2). Moreover, the non-participant observation revealed that designers employ a distinct syntax rich in adjectives and qualitative descriptions. Their expressions encompass shared cultural references, analogies and synaesthetic elements, leading to a shared semantic cognition on design (Section 5.1.1). I therefore propose that ML reflects these aspects by providing feedback that aligns with the designers' distinctive syntax and shared semantic cognition of design. As an extension of the studio, it should be capable of replicating the same connections between graphical choices and perceptions as the other designers, yet adding its feedback. Building upon this framework, there could be numerous variations in complexity and sophistication. In one scenario, for example, ML could function as an integrated extension within existing software such as the Adobe suite or Figma. While capable of recognizing graphics, it could analyse them and provide feedback while maintaining a graphical tone of voice that aligns with the shared design cognition of the studio.

So far, I have established that ML should operate in the Definition Phase. Its primary function should revolve around providing customized feedback through tailored biases (section 5.1.1) while aligning with the shared semantic cognition of design teams. Another potential functionality emerged through non-participant observation: Systems that leverage multi-modal search, combining visual and linguistic sources, would be particularly advantageous for the requirements of design work in the definition phase.

Throughout my non-participant observation (Sections 5.1 - 5.1.1), verbal feedback was consistently accompanied and facilitated by visual references. Improvement suggestions were immediately implemented on the computer and assessed in real time. This is further supported by literature, which highlights that the written or spoken feedback is most effective when complemented by visuals (Vyas et al., 2013). Hence, I propose that ML provides both written and visual feedback to designers. Some suggestions for visual feedback include rearranging graphical elements within

a layout or presenting designers with examples from the dataset that align with the concepts.

7.2 How to implement the framework Fig. 42

How can ML provide customized feedback while aligning with the designers' semantics?

To detail the effective alignment of designers' and ML's semantics, and the implementation of personalized feedback, I refer to the insights generated during the discussion in the within-subject design survey (Section 6.3):

1. If current ML datasets lack graphic and typographic inputs, ML applications operate with limited expertise in graphic design. As more graphic and typographic materials will be integrated into ML datasets, generative models will better support graphic designers in their daily practice.

2. Interactive ML training should integrate dataset curation into the creative process. Datasets would dynamically evolve alongside designers' knowledge, preferences and capabilities.

3. Fine-tuning is an effective approach to incorporating the semantic cognition of design into datasets. Instead of training a system using large datasets from scratch, ML can operate as a foundation for processing new, smaller datasets to train subsequent iterations.

The primary challenge for my framework's implementation is the limited ML training conducted on graphical and typographical datasets (Ebbecke, 2022). Labelled design datasets, such as Behance, It's Nice That or Pinterest, lay the groundwork for transmitting fundamental knowledge of graphic design to ML systems. The advantage of these datasets lies in the designer-supplied tags, which encompass titles, design description and emotional values (Wilber et al., 2017). The downside on the other hand is that even if they are created by designers, as large-scale datasets they tend to be repetitive and homogeneous. Furthermore, my non-participant observation manifested the significance of syntax in shaping designer collaboration: ML should be able to conform to it. Through

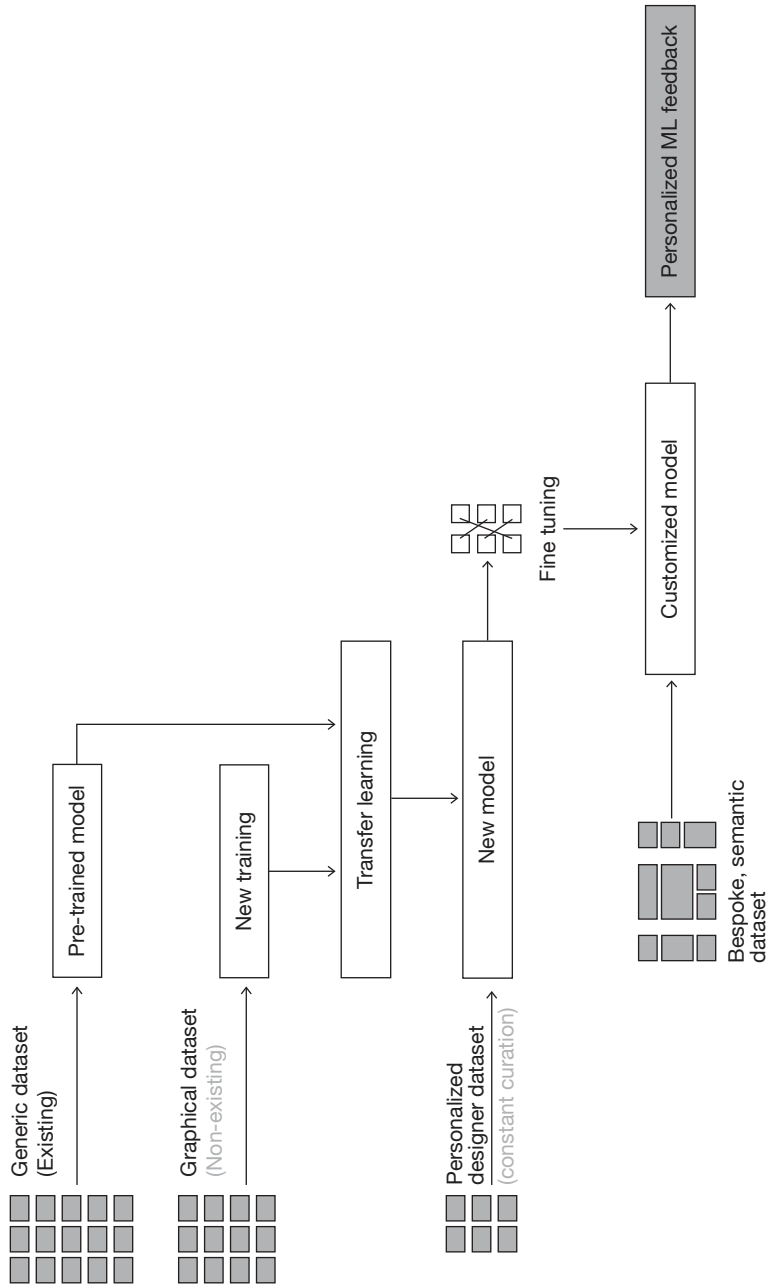


Fig. 42
Framework implementation
Augmented Visual identity design process

dataset personalization, designers can transfer their distinct perceptions about graphics to ML systems. Consequently, a significant portion of designers' interaction with ML can be focused on curating, personalizing and labelling datasets for fine-tuning purposes.

As a new task, dataset curation needs to be defined in terms of how and when to execute in within the time constrains of design studio. Simultaneously, ML should accelerate the Definition Phase, freeing up time for additional tasks. Current ML techniques primarily focus on large datasets, targeting the mean values of whole populations, while an opposite approach that emphasizes fine-tuning datasets, results in a positive form of algorithmic discrimination by shifting generic biases to tailored, context-specific biases (Hagendorff & Fabi, 2023). Moreover, since the training data is backwards-focused (McCormack et al., 2023) it is beneficial to consistently enrich the dataset by incorporating found references or personal projects, while simultaneously labelling the material. Following this approach, the dataset would remain dynamic and evolve alongside the designers' work. The personalized, subjective datasets can be extended to clients and other stakeholders involved in identity projects. Datasets could be customized in collaboration with clients and adjusted for specific projects. ML then becomes a powerful resource that can be strategically employed by mirroring the distinctive graphic vision of a particular designer or design team.

Furthermore, my interviews revealed that for some designers, the collection of references is an unwelcome task (4.4.1). While dataset curation would replace the conventional image collection process, it still involves mundane and repetitive tasks that designers may not find enjoyable. To accelerate this process, transfer learning algorithms, operating with deep neural networks, can gradually automate the labelling process, through object detection and classification techniques (Wang et al., 2018). Various approaches exist for this task. For instance, inductive transfer learning is primarily applied to computer vision models. These are rarely trained from the ground up, but instead fine-tuned from pre-existing models pre-trained on datasets such as ImageNet or MS-COCO (Howard & Ruder, 2018). In their study, Ward Church et al. (2022) proposed a general fine-tuning system that works with so-called 'little language', systems that allow users to tune hyperparameters such as learning rate and stopping rules without having to modify multiple lines of Python. The system comprises everything into one line of code. Furthermore, most tuning parameters can be adjusted though default settings, eliminating the necessity of coding. Another approach to accelerate the dataset curation process involves leveraging pre-existing graphic datasets, allowing designers to customize a selection within.

How can ML adapt to different feedback typologies?

My observation highlighted different feedback typologies that may require different treatment within the framework. So far, I have addressed verbal/written and visual feedback. Another relevant aspect to consider is the feedback providers, who were found to be clients, peers and art directors, or other higher-level designers within the studio hierarchy. Client feedback, as is typical, occurred during the final stages of the process rather than in the definition phase. Consequently, it will not be included in this framework. The two main typologies to consider are peer designer and senior designer feedback. Within these categories, there is a further distinction between semantic and technical feedback (Section 5.1.1). As previously discussed, technical feedback addresses the functional aspects of graphic design, with solutions related to font sizes and legibility, color values etc. Semantic feedback describes the expressive qualities of the graphics. To effectively incorporate both technical and semantic feedback typologies into ML, datasets must be appropriately labelled and trained with both types of feedback. While the semantic feedback needs to accurately refiect the individual perception and semantic cognition of designers and their teams, the technical aspects can be trained in a more generalized manner. The same artefacts in the datasets should be labelled using technical and semantic descriptions. Previously discussed (section 7.2) transfer learning algorithms can be particularly useful for the technical labels.

A bigger difference in approach is constituted by peer designer and senior designer feedback. In my observation, peer feedback was employed the most by Studio Off Office. The designers' opinions were considered equal, regardless of their hierarchical position within the studio. A productive approach to enhance designer peer feedback through ML involves the cooperative curation of a dataset by collecting and labelling references and projects. By collectively curating the dataset, ML becomes an extension of the studio, best employed for peer feedback.

7.3 How to use the framework

Steve is intended to serve as a set of guidelines that articulate designers' preferences and requirements for augmenting the visual identity process with ML. The suggestions outlined in this framework do not delve into technical details. Instead, the idea behind them is to assist developers and ML experts in identifying the appropriate stages and entry points for integrating ML into the design process. As this work provides a step-by-step description of the design process, developers can leverage these insights to craft applications that are better suited to the existing identity design process.

The framework can be considered for implementation either as a whole or by selecting specific parts to develop further. It aims to address the gap in the literature at the intersection of graphic design and ML, responding to the call from scholars who encourage graphic designers to engage in this discourse (Meron, 2022). These examples of augmented feedback are meant to complement designers' existing processes, not replace interpersonal exchange. They serve as additional resources during feedback sessions or as an aid to unlock creative blockage. Through this framework, ML can create direct connections between the initial concepts and their visual representation. During my observation at Off Office, most feedback was exchanged online, therefore integrating ML would seamlessly align with this existing pattern without significantly altering established practices.

As mentioned above, Steve was constructed specifically for the definition phase. Nonetheless, the principle of ML feedback can be adopted throughout the process, and it could potentially also include different feedback typologies if the dataset is trained accordingly – For example, from peers or senior designers. The latter type is more likely to occur in the implementation stages when art directors supervise the work of less experienced designers. Considering the additional responsibilities of art directors, they are expected to provide feedback to the entire team and hold the final decisive power over projects. By utilizing ML feedback that extends the expertise of senior designers and art directors, junior designers can accelerate their learning. Young designers, however, could assist during the labelling process, allowing them to gain insights into the graphical perspectives of their more experienced colleagues. In the interviews, delegating specific tasks,

like the collection of references, was a topic of discussion (Section 4.4.1). Thus, junior designers can take part in dataset curation by engaging in tasks such as the selection of preliminary references. Additionally, they could benefit from handling the non-automated aspects of technical labelling, since recognizing fonts and layout particularities provides a valuable educational experience. Different feedback typologies that occur in various process stages, these possibilities are not discussed in the framework and would require further investigation.

7.4 Benefits and target groups

The framework, Steve, is structured into two parts, the first introduces the process phase in which it should be inserted, and the second focuses on its implementation. Each aspect is tailored to address the specific needs of different audiences. The first part (What is the framework 7.1) introduces a revised version of the definition phase that includes collaboration with ML. Thus, this part of the framework is aimed at graphic designers who possess an understanding of the outlined process and can critically evaluate the augmentation proposal.

With the rapid developments of AI, there already exist platforms for designers to created their own tools, such as Runway AI training (runwayml.com/ai-magic-tools/ai-training/). However, these platforms currently offer limited features. As discussed in literature (Armstrong, 2021; Meron, 2022) the limited amount of graphical research on the intersection of graphic design and ML weakens the academic discourse and leaves graphic design practice unprepared for future industry developments. My framework contributes to both the academic discourse and the future development of graphic design tools. It furthermore gives an overview of the insights, preoccupations and expectations of some of the major design studios of the Western hemisphere. It distils these insights into a set of practical guidelines that provide clarity on ongoing developments at the intersection of the two fields under consideration. Designers can benefit from the framework, which, through its awareness of design practice, aims to provide practical solutions for the insertion of ML into visual identity. Further potential benefits are the conversations that might initiate through the work, as well as its basis for further research, frameworks and projects.

The second part of the framework proposes an implemen-

tation model that incorporates the latest ML advancements without delving too deeply into technical details. It addresses ML developers, providing them with an overview of the augmentation of the definition phase in visual identity projects. The second target group that my thesis aims to benefit comprises engineers and developers working on ML tools for graphic design practice. Meron (2022) states that computer science suffers from fiawed assumptions about graphic design. He explains that developers often start their work with reductionist premises about graphic design theory and practice, with the risk of distorting the development of future research. My framework facilitates insights into the graphic design process by offering an augmentation system based on knowledge of practitioners and literature. It moreover identifies the definition phase as the most suitable for augmentation, and elucidates how this phase is transformed when incorporating ML.

To address ML and gain insights from developers, Steve underwent examination from Casper Wortmann, AI developer at Field Systems. He confirmed that the framework is comprehensible and beneficial for ML developers. He furthermore endorsed the framework presented in Fig. 4 by describing it as adequately broad for developers to implement in various ways (Wortmann, 2023). Wortmann also approved my proposal of inserting ML into the more intuitive aspects of decision-making:

> Often I have the feeling people think AI should be used to replace the most technical part - the most non-intuitive parts, because they think AI cannot replace intuition. But actually AI is very good ad predicting what intuitively feels good for humans, because it is trained on things that we created using our intuition as well, that way it can also predict our intuition. (Wortmann, 2023)

Overall, the framework Steve benefits graphic design practice by representing their perspective on future ML tools for their industry. Moreover, it enhances communication between graphic designers and the experts who create their tools. In pursuit of this goal, the research has drawn upon insights from graphic designers to formulate guidelines rooted in their expertise.

7.5 Speculative ideas

In addition to the statements and hypotheses that established my framework, several other future-driven, speculative ideas arose during the research. In the interviews, the designers emphasized that the majority of their work occurs in their minds, and that tools primarily assist them in translating their ideas into different media (4.3.5). Accordingly, the designers wish to have instruments that can simplify the transmission of their thoughts. They envisioned programs where elements such as typography, style and colours can be communicated to a program, which would then generate the content accordingly. Similar ideas ranged from tools that can synthesize different thoughts or create visuals based on written narratives. Some designers also discussed the concept of visualizing client's ideas to facilitate their communication process. Another aspect highlighted in the interviews was the limitation of using a mouse and keyboard as input devices while working. In contrast, some designers suggested the desire for more intuitive and natural interaction methods to design, such as drawing. Literature suggests that ML has already had a significant impact on the way humans interact with machines. This relationship is expected to evolve further in the near future by enabling people to communicate with technology via gesture, movement and emotions (Armstrong, 2021). These capabilities will enable designers to engage with creative tools more intuitively, supplanting the mouse, trackpad and touchscreen. Armstrong (2021), suggests that the concept of 'tool' will grow irrelevant evolving towards more natural and personalized interactions with software that might feel like an extension of ourselves rather than a separate clunky software package.

Additional speculative ideas stem from the framework Steve, suggesting potential advancements in its functionalities over time. ML could potentially play a more prominent role over time, evolving into an interactive interlocutor. Its role as feedback giver could be extended to include asking designers questions about their designs, instead of the opposite. ML could transition from reacting to sketches and designs only when prompted by designers to taking the initiative and engaging with designers during the sketching process. To achieve this, ML could introduce relevant references that align with the sketch, propose suggestions in real-time, and align visuals and sketches proactively. This approach would grant ML a greater agency over the design process, making

it a seamlessly integrated member in visual identity projects. These suggestions are not currently integrated into the framework, as it would be a significant leap at this point. As designers emphasized in the interviews, it is crucial to gradually acclimate to new tools to avoid being overwhelmed by them (see section 4.5.1)

7.6 Technical feasibility

As previously discussed, ML developers constitute the central target audience for this research, with the framework Steve primarily directed towards them. Moreover, one of my objectives is to foster communication and collaboration of multidisciplinary work, between graphic designers and ML developers. As a next step, feedback on Steve's functionalities and technical feasibility was sought from developers. This marks a new exploratory phase, where I evaluate my work, crucial for bridging the communicational gap between designers and developers. Simultaneously, it allows for a critical examination of any errors and technological misunderstandings I have encountered as a designer.

7.6.1 Presenting the sample

To gather feedback, I conducted semi-structured written interviews via email. This method allowed me to provide the developers with the framework, enabling them to thoroughly review it and prepare their responses. I approached them individually on the basis of cross-recommendations, leading from one to the other – therefore this constitutes snowball sampling. The interviewees in chronological order were:

1. *Casper Wortmann*, AI developer at Field Systems, London, UK.

2. *Sebastian Berns,* AI developer and PhD candidate at University of Mary, London, UK.

3. *Anton Lambert,* developer and designer at Lava, Amsterdam, Netherlands.

4. *Luc Weyingh*, freelance AI developer, Berlin, Germany.

I asked two concise but open-ended questions:

> *As a developer, what are your thoughts on the framework?*
> *How do you envision its technical implementation?*

When analysing their responses through thematic coding, three main trends emerged. Therefore, the following section is organized into three macro areas: positive aspects of Steve, remarks and questions about Steve, and technical implementation suggestions.

7.6.2 Positive aspects of Steve

The interviews produced positive feedback on the framework, Steve. Developers generally found the structure clear and could relate to the decisions made based on the results of grounded theory and within-subject design survey.

> In general, I think the framework is well formulated and has a good focus and scope (automated design feedback). *Berns S. (2024, March, 5)*

> The proposed framework aligns with my vision on the use of AI in the future. In my opinion, AI should be seen as a tool we collaborate with, instead of a replacement of our work. *Weyingh L. (2024, March, 24)*

My focus on inserting ML in the development phase, the most intuitive stage of the design process, found particular consensus with Wortmann:

> Often I have the feeling people think AI should be used to replace the most technical part - the most non-intuitive part. Because they think AI cannot replace our intuition. But actually AI is very good at predicting what intuitively feels good for humans, because it is trained on things that we created using our intuition as well. *Wortmann C. (2023, October, 14)*

Steve's broad architecture provides developers with the fiexibility to interpret it from various perspectives, which is crucial for fostering effective collaboration. I chose to create a conceptual framework over a finished product in part because it allows developers

ample room to envision various products and different methods of creating them, and in part because the technology is evolving rapidly. A framework offers the advantage of engaging all parties not solely in an executive capacity, but also conceptually (Piorkowski et al., 2021). This was rightfully recognized by Wortmann:

> I do have to say that how this architecture would look is something that an AI student could write an entire separate thesis about. Many options here. *Wortmann C. (2023, October, 14)*

7.6.3 Remarks and questions about Steve

At the same time, my open-ended approach left the developers with some questions and aspects that need clarification before implementing Steve. For instance, Wortmann believes that more details about dataset modalities are necessary:

> The first thought I had is: what modality (or modalities) are the datasets made of. If you want to combine visual and linguistic sources, usually you want to incorporate a dataset that contains both images and text. Because otherwise, it is difficult for a model to learn both the visual and the linguistic. *Wortmann C. (2023, October, 14)*

These datasets as proposed by Wortmann are Multimodal Large Language Models (MLLMs), datasets that integrate both image and text. These models combine language modelling with image understanding capabilities and have seen rapid advancements in recent years, largely due to the availability of large-scale image-text datasets (McKinzie et al., 2024).

Weyingh, Berns and Wortmann tackle the issue of gathering and curating references for designer datasets, which requires specific and biased data. While they acknowledge the need for manual labour from the designers, they also proposed leveraging ML to enhance the process.

> The quality of feedback hugely depends on the quality of the data that the model was trained on. A starting point for such a framework is marked by extensive data labelling and dataset curation. I agree that AI could assist in curating this dataset by assisting in the labelling process. *Weyingh L. (2024, March, 24)*

> When building a style-specific dataset, probably the designers themselves won't get around putting in some work themselves, providing written descriptions and feedback of design work (does not only have to be theirs). You have mentioned that Off Office already do this via some messaging channels. So, it might be possible to pull that information from there alongside the associated imagery. In any case, the point is to capture the personal register, terminology and style of specific designers, so there is no other source than the people themselves. *Berns S. (2024, March, 5)*

> In your thesis, you also write:
> "[...]my interviews revealed that for some designers, the collection of references is an unwelcome task."
> As you state yourself, ML can also help with this process. My thought would be that there is some sort of platform needed, in which uploading your own work also benefits other use cases, for instance the platform could be a great way to organize your work, find old work, or push new works to a website, such that creating the dataset actually happens naturally. *Wortmann C. (2024, March, 14)*

Berns proposes a list that helps developers understand how to approach Steve's functionalities:

> For developers, what is most important to understand are the following points:
> 1. Input: what information goes into the system?
> Quite simple: one or multiple images
>
> 2. Processing: how is information processed from input to output?
> In the case of ML, learning task: which patterns are an ML model supposed to capture? And thus, data: what examples are necessary to provide information on these patterns?
> - Already well covered and justified
> - Sufficiently general to allow for different implementation approaches
>
> 3. Output: what information comes out of the system?
> - Covered by the taxonomy of feedback
> *Berns S. (2024, March, 5)*

Another insight came from Lambert, who wondered whether Steve may or may not need to be entirely approached with ML. He suggested that parts may be implementable without ML through different agents that possess different abilities to handle different subtasks (Yang et al., 2022).

> [...]if the model is supposed to supervise or help with the implementation side, then we partly already have existing models to handle subcomponents of that. Things like legibility, color contrast and party layout balance could be handled by a more specialized algorithm instead of a more general ML model. Lamberg A. (2024, March, 21)

To refine Steve's potential implementation, Weyingh suggested refining the feedback modalities. This entails distinguishing between feedback that references text and images from curated datasets, and feedback that is generated through the curated dataset. Each modality requires a distinct technical approach.

> The assistive tasks mentioned in your framework include providing verbal and visual feedback based on its pre-existing knowledge and curated references. I would suggest defining more clearly if the feedback consists of referenced texts and images from the curated dataset, or if the feedback is generated based on the curated dataset. The former approach falls under *information retrieval*, and would provide only textual and visual reference that exist within the dataset as feedback. The latter approach falls under generative AI, an approach that generates new text or images based on its training data. An example of information retrieval is Google, where a query text (in your case a design description) retrieves documents related to that query. An example of generative AI is ChatGPT or DALL-E, where query text leads to the generation of new text or images. *Weyingh L. (2024, March, 24)*

Berns explores the potential for ML to extend beyond written feedback and provide inspiration and other visual content to designers.

> Regarding a model that 'proposes new things to the designers'—
>
> That is somewhat out of scope of a design feedback model. Yet, it is possible that such a model is still capable of proposing changes if you ask for it, as the foundation model was originally trained on very large corpora of text which surely includes some kind of example (lots of 'make the logo bigger' jokes). However, for such suggestions to be of high quality, we would need to ensure that there are some design-specific suggestions that respond to a given image in our general design feedback dataset. So, that would be another requirement to add to the data collection phase. *Berns S. (2024, March, 5)*

Weyingh highlights that within my framework, I introduce both transfer learning and fine-tuning. However, he suggests that fine-tuning aligns more effectively with my approach and proceeds to provide an overview of both techniques.

> Transfer learning is when you add new skills on top of what you already know without changing your foundational skills. Fine-tuning is when you adjust and improve your core skills based on new knowledge, making you better overall. *Weyingh L. (2024, March, 24)*
>
> To my understanding, both tasks you define could be fine-tuning tasks. *Weyingh L. (2024, March, 24)*
>
> This is a simplified schematic of the two approaches:
> - (after transfer learning) Pre-trained model > output > adjustment layers > new output
> - (after fine-tuning) Pre-trained model > new output
>
> The output marked in red can be a generic output and could present some biases that could be transferred to the new output (problem). In your framework, I would therefore consider two separate fine-tuning steps, one for the generic graphical dataset, and one for the user-specific dataset. *Weyingh L. (2024, March, 24)*

7.6.4 Technical implementation of Steve

My second question directly addresses the technical implementation of the framework. The developers envisioned various approaches to tackle the challenges that such a task may pose. As previous-

ly mentioned, my framework is designed to be fiexible, offering various options in terms of product features and technical feasibility. Hence, most developers propose an implementation based on their previous analysis of Steve's advantages and disadvantages. This is emphasized by Weyingh, who states that his proposed implementation exemplifies his preferred choice among the various options available.

> The implementation depends on the choices outlined above, but I will outline one possible approach as an example. *Weyingh L. (2024, March, 24)*

He suggests a step by step implementation, abstractly aligning with my Figure 42, which begins with the curation of a generic graphical dataset. Next, he recommends fine-tuning existing models for both the visual and textual components. Finally, he proposes converting verbal feedback into the same format as the visual dataset, and computing a similarity score between text and images within a generated feedback. Given that two data sets have different architectures, similarity scores measure the degree of likeness or resemblance between them (Shen et al., 2022).

> The first step is curating a graphical dataset with both images and reference texts, and a user-specific dataset with images and reference texts.
> For the verbal feedback, I would fine-tune a *Large Language Model (LLM)*, e.g. ChatGPT, based on the (textual) references in the graphical dataset. Then fine-tune it again based on user-specific references.
> For the visual feedback, I would use a model like OpenAI's CLIP to create a shared embedding (numerical representation) of the text and images in the graphical dataset and personal dataset. When Steve is asked for feedback, I would instruct the fine-tuned LLM to include citations of references in the graphical and personal dataset, forcing it to adhere close to the Design literature.
> Then, I would transform the verbal feedback to the same representation as the visual dataset, and calculate a "similarity score" between the generated feedback and the reference texts and images in the curated dataset. References with a high similarity score could be presented as visual feedback to accompany the generated verbal feedback. *Weyingh L. (2024, March, 24)*

Also Berns proposed to leverage an existing multi-modal model to process both natural language and images:

> For the implementation of such a system, I would leverage an existing multi-modal model that can process both natural language and image prompts. *Berns S. (2024, March, 5)*

After selecting a model modality, he goes on with what would be his next steps:

> The first, inexpensive but naive approach would be to use the model out-of-the-box, focusing on optimizing the input text prompt to elicit the desired output. While I don't expect the results to be very useful for a specialized audience of professional designers, this approach consists of the minimum necessary setup that does not require any model training. *Berns S. (2024, March, 5)*

> A better model for design feedback could be obtained by fine-tuning an existing pre-trained model on a general dataset of text-image pairs that cover graphic and typographic design content. *Berns S. (2024, March, 5)*

Wortmann also advocates for fine-tuning as the optimal approach to creating a custom dataset, rather than starting from scratch.

> Note that training from scratch this whole process would not be feasible, it would cost too much time. So I am really focusing here on fine-tuning (in line with what you are suggesting). *Wortmann C. (2024, March, 14)*

Berns' second approach aligns with the arguments I explored in chapter 6. The absence of graphical and typographic inputs in existing ML datasets (Ebbecke, 2022) present challenges in developing adequate tools for graphic design. The same approach is proposed by Wortmann:

> When I envision a technical implementation, an important factor is to make use of existing models that are already trained

on different datasets. These extensive models can be fine-tuned for a specific task, and thereby you can make use of the general knowledge encapsulated in these big models. *Wortmann C. (2024, March, 14)*

Fine-tuning is further examined, along with its potential advantages and disadvantages.

A very large amount of data is required for this fine-tuning step. This data can be a collection of images and texts from different sources and designers, as it provides general information about the relevant registers and terminology of design feedback. This step should result in a better model which is able to provide responses that are more useful for a professional design audience. *Berns S. (2024, March, 5)*

One technical hurdle involves integrating various data types within your dataset, including images and text. This diversity impacts the technical setup, particularly at the juncture where the adjusted model and the semantic dataset converge. This is the point where the fine-tuned model and the semantic dataset meet. Wortmann C. (2024, March, 14)

Wortmann's solution to that is the implementation of a loss function:

You need a loss function that can make use of both modalities. The loss function is used to optimize the model (so it is of great importance). The contrastive loss function looks like this:

$$L_{NCE} = -\log \frac{\exp(\mathbf{z}_i \cdot \mathbf{z}_j / \tau)}{\sum_{k=0}^{N} \exp(\mathbf{z}_i \cdot \mathbf{z}_k / \tau)}$$

A recent trend in ML is to use two different modalities, such that they can learn from each other. This approach is called multimodal contrastive learning, a well-known example is CLIP. CLIP has some interesting overlaps with your proposed model (although there are also important differences). Given the similarities and distinctions between CLIP and your model, employing a contrastive loss function, similar to CLIP's approach, would be beneficial for your framework. *Wortmann C. (2024, March, 14)*

CLIP (Contrastive Language-Image Pre-training), the model proposed by Wortmann, consists of a visual encoder and a text encoder (Shen et al., 2021). It is trained on 400 million image-text pairs taken from publicly available data on the internet (Radford et al., 2021).

CLIP's technical implementation could serve as a valuable reference for STEVE.CLIP (and many other contrastive learning algorithms) have shown promising outcomes, suggesting that your framework might adopt a contrastive training objective. This approach aims to cultivate semantic representations of a designer's creations, encompassing both visual and textual modalities. Essentially, the goal is to refine the customized model within your framework to grasp the semantic essence of visual design and its textual representation. Or to put it in simple terms: you optimize the customized model in your framework to understand the semantic meaning of visual design, and at the same time you also learn how this can semantically be represented in text. *Wortmann C. (2024, March, 14)*

Berns further explores suggestions for potentially creating a graphic design dataset. He also notes that, similar to the creation of CLIP, a common practice is to leverage available data from the internet.

The most important thing is to find a cost-effective strategy to obtain as much data as possible. Many big tech companies and non-profit organizations basically scrape the internet, with or without regard for copyright issues, first downloading all relevant material. The next step is then to clean the data to ensure its quality, removing duplicates and bad examples. *Berns S. (2024, March, 5)*

Finally, Berns addresses the construction of the third, biased dataset:

A personalized model can be built in the next step by using data specific to an individual designer, team, studio or agency. The type of data should follow the requirements explained in the previous steps, though less examples are necessary. Instead of a full fine-tuning, it might be possible to use low-rank adaptation methods (LoRA) to optimize only a subset of model

parameters. This would allow for more customized feedback and the development of a style-specific design feedback agent. *Berns S. (2024, March, 5)*

A personalized design feedback model is supposed to be biased, in particular towards the people it was customized for. Note that I am not proposing to train a general model only on the data of one studio. That is the third step. Before that, I would fine-tune a more general design feedback model capable of critiquing any type of design work, with the limitation of potentially being too average. *Berns S. (2024, March, 5)*

Lamberg suggests a different approach, advocating for the use of GPT Agent clusters. To elucidate the concept of GPT Agents, I refer to Kilpatrick's (2023) explanation: GPT stands for Generative Pre-trained Transformer and represents the core ML model architecture underlying Large Language Models (LLMs). Agents are setups of LLMs tailored to specific tasks. They function as independent programs capable of interacting with their environment, perceiving their surroundings, and engaging in self-dialogue without human involvement.

I think my first approach would be closer to a GTP Agent cluster, where ML and general algorithm tools would take care of different aspects of the problem. Seen how a brand, or a layout is made out of multiple smaller systems and challenges, type size, color contrast and cohesion, layout, logo placement it would potentially be easier to make smaller models, or agents that would deal with them individually than to make one generic model that would be stable enough to give an overall impression. Using industry proven concepts like atomic design system etc. Then you can utilize ML for what it does best, making a cohesive, and easy to consume consolidation of what these agents have concluded. *Lamberg A. (2024, March, 21)*

This aligns with Weyingh's proposal, advocating for the use of pre-existing generative models to provide both textual and visual components within Steve. For instance, he recommends directing ChatGPT to reference text documents and fine-tuning Stable Diffusion for generating graphical content.

In the textual domain, besides fine-tuning one could instruct a generative model like ChatGPT to behave in a certain way, e.g. forcing it to reference documents from a curated dataset. In the visual domain, one could adapt a generative model like Stable Diffusion to generate design-like images by fine-tuning, but it would not generate exactly the references in the curated dataset. *Weyingh L. (2024, March, 24)*

Lastly, Wortmann lists the specific technical tools he would use to its suggested Loss of function and Representation learning. Dynamic representation learning methods offer benefits like reduced learning time and improved accuracy by utilizing temporal information (Loghmani & Fazli, 2023).

For technical details, I would suggest implementing this all in PyTorch, which is a very common machine learning framework for training ML models. PyTorch is Python-based, offering dynamic computational graph construction (as opposed to static in frameworks like TensorFlow), which allows for more fiexibility in model development and debugging. *Wortmann C. (2024, March, 14)*

Technical details would also entail to use an adaptive learning rate, something like Adam or AdamW, to change the learning rate dynamically during training. Contrastive learning frameworks generally perform better for large batch sizes, because large batch size make the learned embeddings (representations of the data) more robust. Therefore, I would suggest using a large batch size (which impacts the choice for a GPU, it needs to be quite big). As is often the case for these kinds of frameworks, I would also suggest to use GPU acceleration, to make the whole process computationally less intensive. Moreover, PyTorch allows for the use of Mixed Precision Training, to speed up training. *Wortmann C. (2024, March, 14)*

Interacting with ML developers allowed me to evaluate and refine my framework from various angles. Each developer comprehended the framework and validated the logic behind my decisions. Thus, effective communication was established. This serves as an initial foundation for potential future human-machine collaboration scenarios. Moreover, the developers seemed to appreciate exploring diverse scenarios within the framework and selecting their preferred solution as an implementation proposal. They leveraged the framework's fiexibility to explore their distinct perspective within it.

Developers concur that dataset creation is crucial to defining the capabilities of an ML model. Thus, their primary concern revolved around refining dataset modalities. My proposal was considered broad and prompted them to suggest more specific solutions. For my framework, the most suitable dataset modalities involve the integration of Multimodal Language Models, which can effectively handle both images and text. To ensure the development of a suitable dataset, developers anticipate the need for manual tasks to be performed by designers, including labelling visuals and organizing datasets. However, ML can assist through a designated platform that simplifies the process, as suggested by Wortmann, or by leveraging existing platforms where designers already connect text and images. An example of this was provided by Berns, who referenced the digital feedback exchange I observed at Off-Office. This elaborates on my initial proposal regarding manual work by designers.

Steve incorporates two distinct feedback approaches: one technical and one semantic, alongside two feedback modalities: verbal and visual. Weyingh suggested that a further technical differentiation is needed between feedback directly referencing text and images from the dataset and feedback generated through the curated dataset. This distinction is necessary as each modality requires different technical implementations.

Berns proposed a different structure for Steve. While the initial framework was perceived as clear, he emphasized the potential for better alignment with developers' logic by organizing Steve around three main steps: input, processing and output.

Weyingh elaborated on the two approaches for dataset refinement I proposed in Steve: transfer learning and fine-tuning. He identified fine-tuning as the more suitable approach for all steps of the framework.

In conclusion, Lamberg highlighted that the entire framework does not necessarily have to rely solely on ML. Instead, it can integrate various agents and subcomponents that already exist and can contribute to decode graphical attributes, such as legibility and contrast.

When discussing the implementation of Steve, all developers concur that fine-tuning represents the most effective approach for creating both the graphical and personalized, biased datasets. Training the whole process from scratch was discarded since it would be too time-consuming. However, concerns were raised regarding the negative aspects of fine-tuning, including its associated costs and the necessity for substantial volumes of data. To overcome that, Berns suggested that instead of full fine-tuning, it might be possible to use a low-rank adaptation method (LoRA) to optimize only a subsided of model parameters.

The developers suggest building on top of GPT for textual data and CLIP for images. Different approaches were proposed to create interactions between text and image datasets. Weyingh suggests employing a similarity score to convert text feedback into the same format as the visual dataset, enabling the measurement of resemblance between them (Shen et al., 2022). Wortmann suggested a contrastive loss function that is used to learn cross-modal embeddings. The goal of contrastive loss is to bring similar instances closer together in the embedding space and push apart dissimilar instances (Aruna Gladys & Vetriselvi, 2023). Wortmann furthermore suggests using an adaptive learning rate, like Adam or AdamW, to change the learning rate dynamically during training. As pointed out by Xu et al. (2019), reinforcement learning can automatically learn an adaptive learning rate schedule by leveraging the information from past training histories. Thus, the learning rate dynamically changes based on the current training dynamics. Lamberg suggests using GPT agent clusters that function like independent programs capable of interacting with their environment. They perceive their surroundings and engage in self-dialogue with the systems without human involvement in the interaction (Kilpatrick, 2023).

The primary challenge in implementing a version of Steve lies in acquiring sufficient data. Berns recommends utilizing web scraping, an automated technique for extracting data from websites (Khder, 2021). While web scraping provides a rapid method for

gathering large amounts of data, debates persist regarding its ethical implications. Concerns surround informed consent, privacy and other risks and potential harms (Brewer et al., 2021). A morally sound approach to gathering graphical data involves using larger platforms that collect references, such as Typographic/Posters, which has been made available for this research. In contrast to web scraping, these platforms collect designers' work with their consent and maintain transparency regarding the platform's usage.

Berns further suggested an alternative approach that omits data training, although he expressed scepticism regarding its efficacy.

In summary, the following improvements were suggested by the developers:

- Multimodal Large Language Models capable of handling both text and images were proposed as ideal dataset modality.
- Feedback referencing the dataset versus feedback generating new content was introduced as an additional feedback modality.
- A new structure for Steve organized around the steps of input, processing and output was proposed.
- After an analysis of transfer learning and fine-tuning, the latter was suggested as the more suitable approach.
- The integration of non ML agents for subtasks was recommended.

The following implementation scenarios were proposed by the developers:

- The acquisition of graphical data was proposed through web scraping.
- Fine-tuning an existing dataset was introduced as first implementation step.
- Low-rank adaptation method (LoRA) instead of a full fine-tuning approach was suggested.
- The developers recommend building on top of a GPT for textual data and CLIP for images.
- To connect text and images, different approaches were recommended:
  The use of A similarity score was put forward to align the measurements of resemblance between text and images.
  A contrastive loss function for learning cross-modal embeddings was suggested.
- An adaptive learning rate such as Adam or AdamW was introduced to improve the training rates.
- The integration of GPT agent clusters was suggested.

7.7 Revisited Implementation

In this section, I will present a re-evaluation of Steve, following the developers' inputs. While the primary focus of this section is on the technical aspects of the implementation phase (how to implement the framework), I will begin with a structural suggestion that addresses the framework's interaction between designer and ML. My initial framework Structure in chapter 7.1 revolves around the following questions:

- Where in the visual identity design process should ML be inserted?
- How should designers communicate with ML?
- What should ML do?

As noted by interviewee Berns, designers and developers adhere to different logical structures. To address the interactions between designers and ML, he suggested a scheme that is particularly useful for developers in order to grasp the overall functionalities that Steve should have. Fig. 43 His structure consists of the following steps:

1. Input
What should go in the system?

2. Processing
How is information processed from input to output?
Which patterns is ML supposed to capture?
What data is necessary to provide information on these patterns?

3. Output
What information comes out of the systems?

1. Input

In this first phase of the augmented feedback system, designers select the sketches they wish to receive feedback on and submit them to the ML system. Since Steve is a framework rather than a finalized product, there are various options available for submitting sketches. Refinement and a selection among these options will be necessary during the development of an actual system. However, for the current stage, I will summarize all the options available within Steve.

The first option allows users to upload a sketch in the form of a single image, to receive generic feedback. In this scenario, the designer does not have a specific question in mind and is open to any kind of feedback. The second option involves submitting a single image along with a prompt specifying the desired feedback from the ML system. A third option is to upload multiple images to receive generic feedback and facilitate a comparison between different assets. Finally, users can also upload multiple images accompanied by a prompt that specifies the desired type of feedback.

2. Processing

This phase involves ML analyzing the content submitted by the designers. Initially, the system identifies elements present within the image. Image recognition accuracy can vary depending on the two involved datasets: the larger, generic graphical dataset and the smaller, biased dataset. The system will detect graphical content and determine typographic inputs, which distinguish themselves from other inputs in the image. Typographic inputs may or may not be readable to ML. Despite extensive research in text recognition in recent years, methods that intertwine font features and content features tend to perform poorly in text recognition on images (Wang & Lian, 2020). Text recognition encounters numerous challenges that are currently addressed in research. These challenges include managing data quality and diversity, optimizing large-scale training and interfaces processes (Meng & Ghena, 2023). With the advancement of ML, the ideal scenario is to maximize typographic recognizability, enabling the recognition of fonts, hierarchies, and semantic meaning. Moreover, the system might recognize layout rules such as grids, alignment and positioning at this stage. Additional analysis is required to detect the number of colours present, identify the predominant colours, and asses the contrast within the image. Compared to typography, colour and

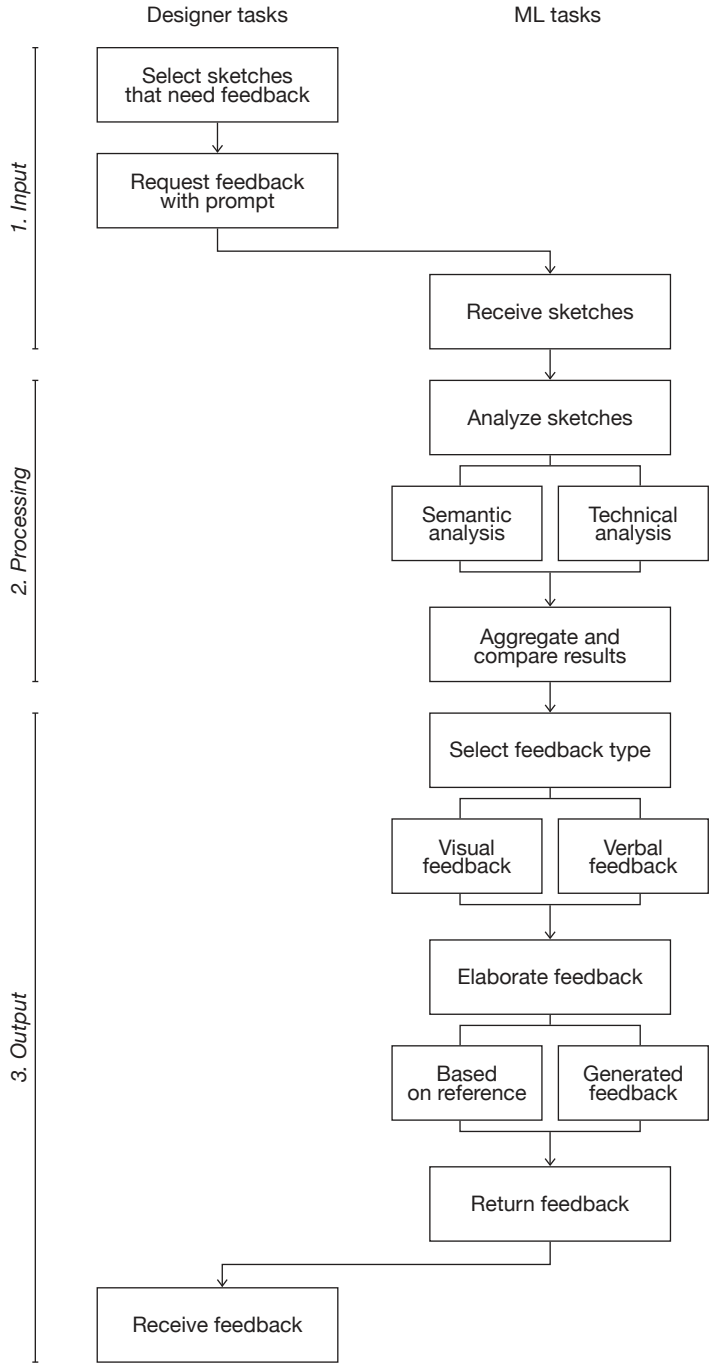


Fig. 43
Framework implementation
Technical feedback functionalities

contrast have been more extensively researched (Gevers & Smeulders, 1999; Wichmann et al., 2002). Finally, the semantics are analyzed, primarily relying on the biased dataset curated by designers, enriched with descriptions that reflect the shared semantic understanding of the design team. ML will thus establish connections between the image and identity values, target groups and other semantic content (see Chapter 5.2).

Before advancing to the output phase, several additional processing tasks must be completed. These ultimately result in the generation of feedback output. In the case of image comparison, ML should identify the difference between two analyzed images based on the parameters discussed above. The system should connect the image with brand values and possible target groups. Furthermore, the system should identify similar images within the dataset that share characteristics with the reference image. Alternatively, it can generate new content sharing similar traits with the reference image.

3. Output

The interaction between designers and ML continues as ML generates tailored outputs in the form of feedback. In the revised framework, the primary format for feedback is textual output. However, this feedback may also include reference images and generated images, as discussed below. This follows the data I gathered during the non-participant observation at Off-Office, where every feedback session accompanied both verbal and visual materials (Chapter 5).

Different input options lead to diverse output options, reflecting the range of possibilities in the system's responses. Feasible outputs on single image feedback can manifest as visual characteristics and analysis of identity values. This aids the designer in assessing whether their intentions are accurately reflected in their sketches and perceived similarly by ML. Additional feedback could identify strengths and weaknesses from a technical and semantic perspective. Moreover, ML could suggest alternative approaches, considering both technical and semantic perspectives. Feedback encompassing multiple sketches identifies similarities and differences between the images. Additionally, it enables the detection of the most effective image between the two, based on technical and semantic features.

Within the mentioned possibilities, the forms of feedback

can vary. Feedback may primarily be received in text format, presented as a conversation in a chatbot, or a comment on an image. This textual feedback can be complemented by generated sketches akin to quick real-time sketches often shared by colleagues during feedback sessions (see Chapter 5). Another possibility involves ML drawing on top of the designer's image, using arrows and boxes to highlight critical or non-functioning points in the sketch. In this scenario, ML acts like a peer, simulating a situation that commonly occurs in a graphic design studio. References could be pulled out from the dataset. These could be either previous works or pieces from other studios, commonly utilized by designers for mood boards and drawing inspiration. The references are uploaded into the dataset by the designers who trained the model.

As previously noted, ML's ability to accurately interpret typography remains inconsistent, presenting a challenge as typography plays a crucial role in graphic design. Other features also might not always recognized or confidently interpreted. Providing a transparent indication of the confidence threshold at which ML recognized objects, colors, contrast etc, would be helpful for the designer to measure the reliability of the feedback. Thus, another output should include metadata related to ML's analysis, ensuring transparent and ethically sound feedback. Moreover, the designer needs to take into consideration that ML's feedback is influenced by the subjective opinions of those who trained the biased dataset.

7.8 Application scenarios

In the previous section, I assessed the Steve framework by reorganizing its functionalities based on a structure proposed by Berns, one of the interviewed developers. This new structure delineated all potential interactions between graphic designer and ML, spanning from input to output. In this section, I utilize the new structure to outline specific application scenarios that illustrate potential interactions between designers and ML. While these examples clearly delineate user scenarios, they are hypothetical and are not intended to represent a complete implementation. The images and text presented in the user scenarios are simplified examples aimed at illustrating the core concept of what an interaction might entail.

For the scenarios, I hypothesize a tool in which images can be uploaded, and communication between the two entities functions through a text interface. This intuitive choice mirrors

current ML applications such as ChatGPT or DALL-E, which have been in use for a few years and have gained a level of familiarity among users. As I elucidate in the first framework proposal (7.1), ML could also serve as an extension of familiar programs like the Adobe Suite or Figma. To make more concrete proposals, research in interface and UX design needs to be conducted, and different options need to be tested thoroughly.

Scenario 1 Fig. 44
In this scenario, the designer wants to compare two identity proposals based on a client brief. The designer submits two images containing her sketches together with a prompt that clarifies the context of his work, a visual identity targeted towards children. She seeks a comparison between the two sketches and wants ML's help to determine which of the two is more energetic and child-friendly. Once she submits his request, ML elaborates a description of each proposal accompanied by references selected from the dataset.

Scenario 2 Fig. 45
In the second scenario, the designer is in an early sketching phase, seeking inspiration. The initial sketches are uploaded with no further content, allowing ML to interpret them freely. ML responds to the sketches by making an inference, by establishing a semantic connection between the sketch and its potential meaning. As a second step, the inference is investigated through direct questions to the designer. Moreover, through further questions, the designer is pushed to explore new directions. Finally, an image from the archive is proposed as inspiration.

Scenario 3 Fig. 46
The third example showcases a project in an advanced stage, where the designer has already sought multiple rounds of feedback from ML. Consequently, ML is well-informed about the initial brief and the project's developments. The current scenario depicts a confiict of choice arising after client feedback. The designer and the client hold different views, with each selecting a different design. In seeking resolution, the designer turns to ML for additional insights and a compromise that satisfies both parties. To facilitate the process, the brief is mentioned as the main guideline for both designs. The designer asks if sketch B, despite not being the client's preferred

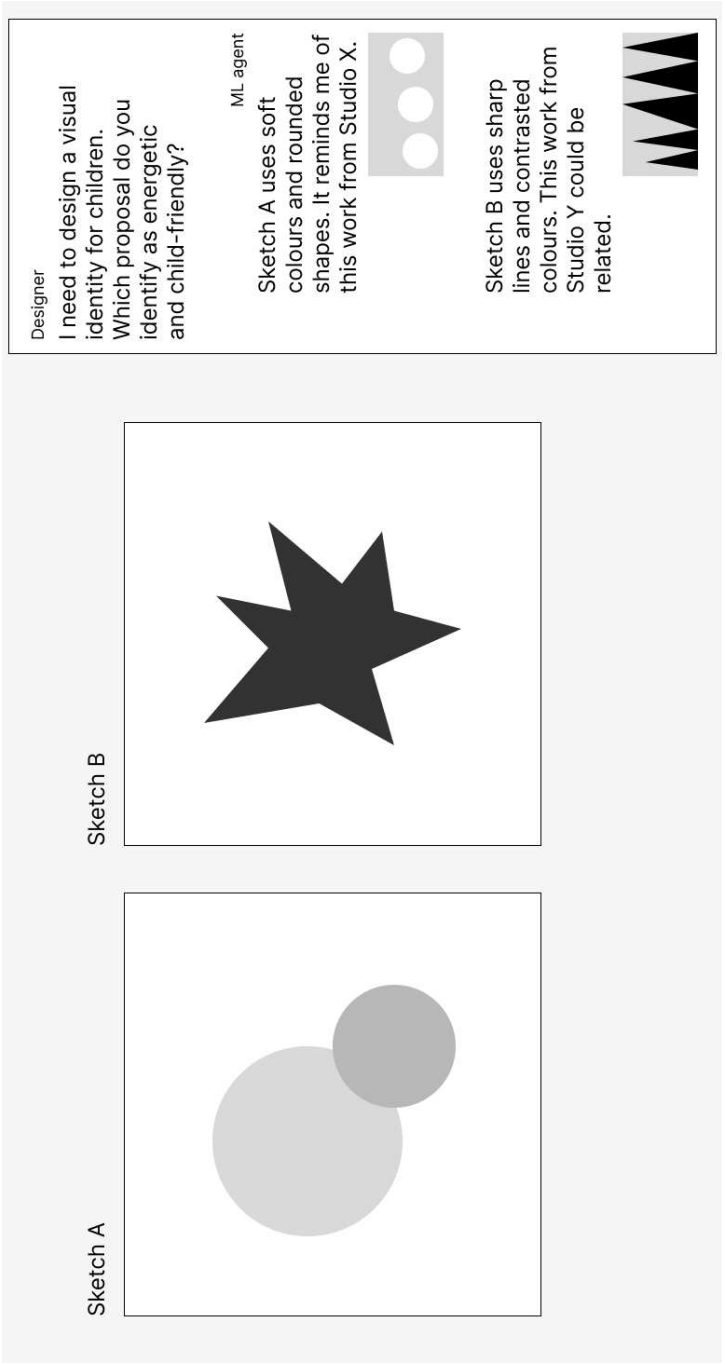


Fig. 44
Application scenario 1
Sketch comparison feedback

choice, still aligns with the brief. ML provides written feedback from a technical and semantic perspective, confirming that both sketches align with the brief. Sketch A receives better technical feedback, with a readability assessment supported by the system's scored data. Sketch B outperforms semantically, receiving attributes such as memorability and visual tension.

These three scenarios aim to provide a brief overview of designer-ML interaction through concrete examples, using the technical feedback functionalities diagram Fig. 43 as a guideline. They are presented in the form of wireframe sketches, to convey an abstract sense of implementation rather than representing concrete examples.

If we navigate through the scenarios in a non-linear manner, there could be various instances where errors or miscommunication might occur. For instance, ML could misinterpret the uploaded images, leading to incorrect technical and semantic connections. To foster transparency and avoid misinterpretations, ML could indicate a percentage with image analysis, allowing the designer to understand the level of confidence level in the feedback provided and appropriately measure the weight to give to the feedback. Moreover, understanding why AI systems give certain answers can significantly improve the designer's ability to deploy, regulate and monitor them responsibly (Turpin et al., 2023).

An additional approach involves the designer correcting ML through a prompt. Prompts are known to help models to learn faster, in the same way that humans learn faster when provided with task instructions expressed in natural language (Webson & Pavlick, 2021). In their research, Webson and Pavlick demonstrate that models are sensitive to the semantics of target words and learn slower with arbitrary or reversed target words.

Scenario 1 Fig. 44 showcases ML quoting visual examples from the dataset. However, a misinterpretation of the images could result in inappropriate references, leading to an off-topic recommendation. This circumstance could result either in unsuccessful feedback or evoke a serendipitous effect, wherein the referenced material appears disconnected from the work yet still proves to be beneficial or initiates an unforeseen connection.

Another possibility, applicable to all scenarios, is the potential for receiving a superficial or non-relevant response from ML. In such instances, the designer can make a second attempt or prompt the system to be more precise, through further instruc-

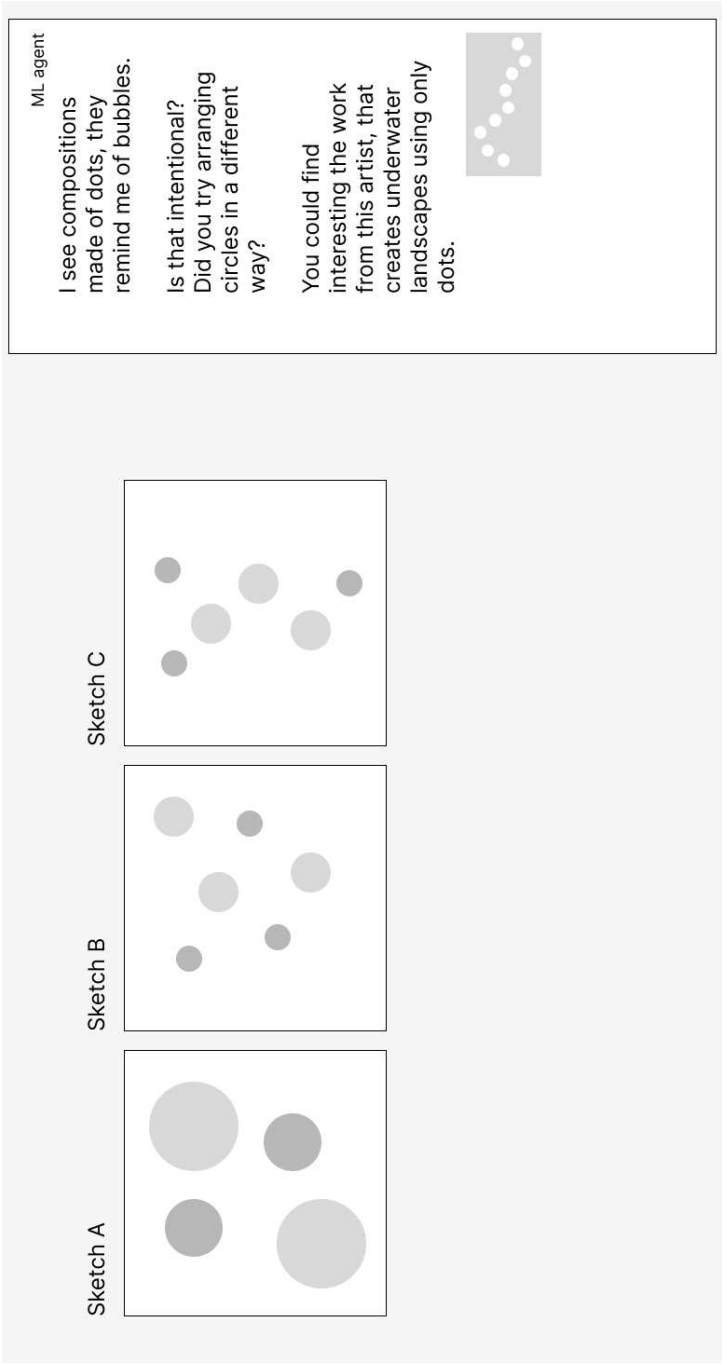


Fig. 45
Application scenario 2
Early sketching phase feedback

tion. However, if the results persist in being unsuccessful, the designer may experience frustration and a sense of wasting time. As research shows, crafting effective prompts can be challenging due to expectations stemming from human-to-human instructional experiences and a tendency to overgeneralize (Zamfirescu-Pereira et al., 2023). However, Steve having a personalized dataset containing the shared semantic cognition of the design team should theoretically facilitate the interaction for the designers by making it more intuitive.

Another potential issue that can arise from the scenarios, particularly with regular use of ML feedback, is the risk of developing a reliance on the feedback provided by the ML system. Designers may exhibit a loss of confidence in their own judgments, resorting to consulting ML for validation in every decision-making instance. A hypothesis I put forward to prevent designers from losing their confidence is linked to the transparency of the ML system. As previously elucidated, if ML indicates a confidence level in interpreting images and associating semantics, designers can perceive feedback not as absolute but with margins of error. Designers are accustomed to utilizing tools that provide suggestions and accelerate certain aspects of their work. Additionally, designers are familiar with receiving continuous feedback from peers, clients and other stakeholders. This familiarity with feedback mechanisms may serve as a deterrent against over-reliance. As highlighted in my initial interviews, designers excel at following their intuition and elaborating various impulses.

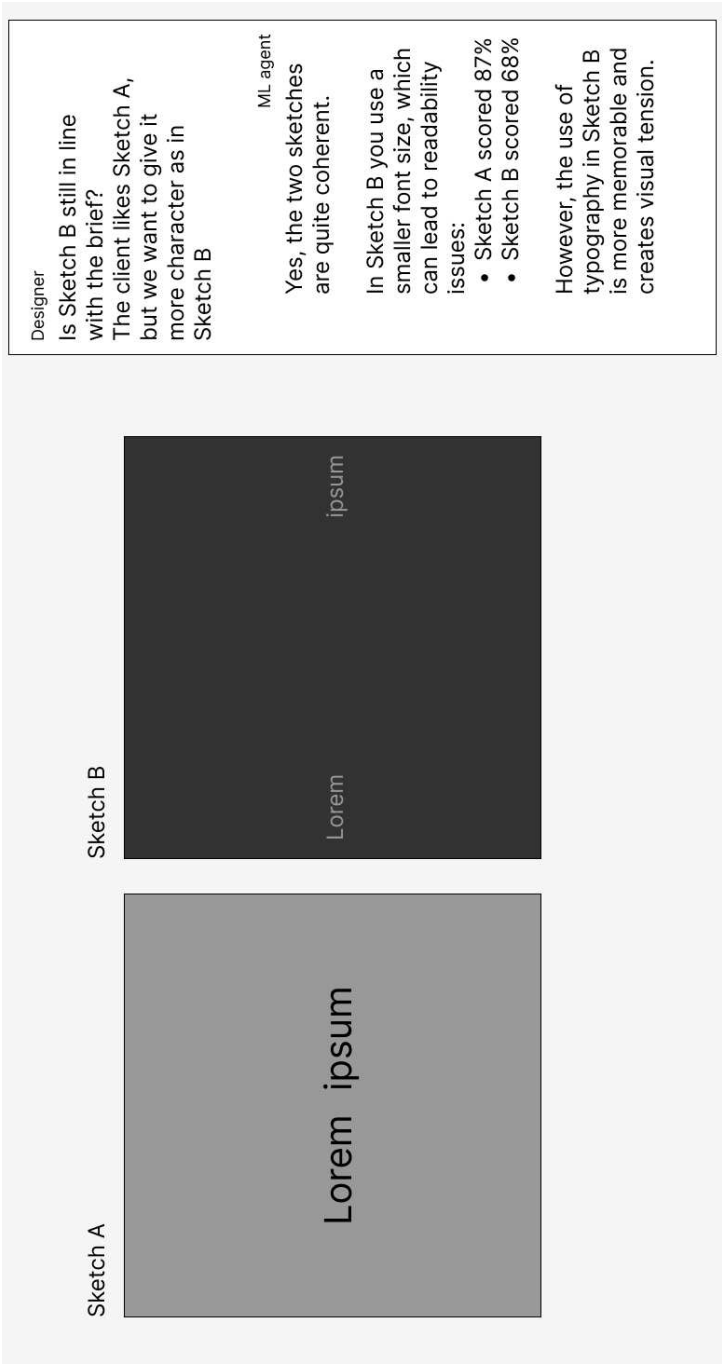


Fig. 46
Application scenario 3
Advanced stage feedback

VIII

CONCLUSION

In this final chapter, I summarize my findings and combine the answers to my research questions: 1. Is it possible to find coherent working methods in visual identity projects? 2. What are the most critical phases for the designers in visual identity projects? 3. How can these be augmented through ML? into primary contributions. In the first chapter, I outlined the objectives of my research by categorizing them into three groups: academic, design practice/ innovation, and interdisciplinary communication objectives. In this concluding section of my thesis, I evaluate the extent to which they have been met. I continue the chapter by examining the ethical considerations associated with the framework I developed, and its potential implications on design practice. I conclude my thesis by addressing the research limitations, and outline plans for future research directions.

8.1 Assessing academic objectives

The use of grounded theory (Chapters 4 and 5) in my research addresses my academic objectives. By prioritizing the knowledge of practitioners, I met my first group of objectives. My research establishes a robust link between academia and practical expertise by intertwining knowledge from 20 design studios with the latest research in literature. I ensured the relevance of my arguments for design practice by prioritizing designers' knowledge and complementing this with literature. Grounded theory helped me develop concepts for the underexplored topic of working methods in visual identity.

Moreover, my research establishes a connection between visual identity processes and ML technologies, through a conceptual framework that proposes to augment the definition phase within visual identity design. It constitutes a distinct as well-defined contribution within the field of graphic design while also addressing ML developers that create tools for the graphic design industry. To bridge the missing literature from the still-emerging research in graphic design, I incorporated knowledge from related design disciplines that is pertinent to the context of my study.

In summary, my research contributes to the enrichment and refining of graphic design literature. The study *The Challenges*

of Graphic Design in Establishing an Academic Research Culture by Corazzo et al. (2020) presented valuable guidelines for avoiding recurring mistakes. First, I tackled the absence of clear, formulated research questions by proposing concise and focused questions for my research (Section 1.1). Second, I contributed to clarifying the terminology in graphic design (Section 4.4.1.1), another concern raised by Corazzo et al. I carefully selected the terminology in my study by consulting practitioners and existing literature. While my research does not completely resolve the inconsistency in terminology, it explicates the challenges associated with it (Section 4.4.1.1).

8.2 Assessing design practice/innovation objectives

As discussed in Section 1.1, a crucial objective of my research was to foster innovative approaches for integrating ML into the identity process. The productive outcomes regarding the enhancement of critical process phases through augmentation by ML contribute to a positive assessment of my research. I located the definition phase as most suitable for augmentation and formulated a conceptual framework outlining how this phase could integrate ML as feedback giver. I explored and defined a semantic, descriptive approach to the language used by designers in their practice. Building on that, I suggested methods with existing ML technologies to incorporate similar language structures into an ML augmentation system for designers. Additionally, I proposed a potential implementation structure for ML developers.

In accordance with literature exposed in my initial objectives (Meron, 2022; Nolan, 2018), a majority of my interviewees expressed positive responses towards automating repetitive tasks (Section 4.5.2), aligning with the latest advancements in ML software. However, other relevant insights emerged that are more closely aligned with my objective of integrating ML through augmentation rather than automation. This also allowed me to align with literature that anticipates collaborative systems emerging between designers and ML (Rezwana & Maher, 2023; Subramonyam et al., 2022; Wang et al., 2020). Hence, I located the definition phase as most suitable for augmentation and close collaboration between designers and ML software.

My research introduces tangible innovation to the field, evidencing concrete solutions for a scenario that has not yet been implemented in the graphic design industry. All of my contributions

have been made while respecting the designers' preferences and prioritizing their knowledge in the research.

This set of objectives has therefore been successfully achieved. My conceptual framework for augmenting the visual identity process with ML aims to innovate and enhance graphic design practice by taking a dual approach: firstly, by providing valuable insights into the visual identity process; and secondly, by exploring practical ways to incorporate ML within this process. Nonetheless, in order to implement my recommendations, it is important for my research to engage with my target audience, ML developers. This leads me to my final set of objectives, focused on interdisciplinary communication.

8.3 Assessing interdisciplinary communication objectives

In this section, I assess my final set of objectives on providing a solid grounding of graphic design processes. My contribution fulfils graphic designers' aspiration for controlling the extent and methods by which ML is integrated into their working process (Section 4.5.2). With insights coming from two different approaches (grounded theory and within-subject design survey), my contribution has varying degrees of detail. Within my grounded theory, I started with a general inquiry that confirmed mostly coherent working methods in visual identity projects (Section 4.4.6). I continued by identifying critical phases within the identity process (Section 4.5.2) and suggested their improvement through the incorporation of ML (Section 4.6.2). Through non-participant observation, I challenged my first outcomes by observing practitioners first-hand. This led to a more profound exploration of my third research question (How can the most critical phases in visual identity projects be augmented through ML?) concentrating on the language used by designers and their shared semantic cognition of design (Section 5.4). The observation led to a new hypothesis, suggesting that designers find the graphical descriptions they use in their daily practice more useful than the descriptions generated by ML. Using a within-subject design survey, I generally confirmed the hypothesis and gathered additional insights on augmenting the definition phase with ML (Section 6.3).

To achieve my interdisciplinary objectives, my thesis provides insights into the visual identity process, targeting ML experts. Hence, through the semi-structured written interviews discussed

in this section, my framework underwent examination by four ML developers. Through these interviews, I tested the effectiveness of my communication with groups outside graphic design and improved my framework following the developers' advice. My interviews confirmed that the framework is comprehensible and potentially beneficial for ML developers. Moreover, Steve was endorsed for being broad enough for developers to conceptualize and implement in various ways. It was of utmost importance to foster a collaborative approach with developers, rather than solely involving them for executional tasks. As a final step, drawing front the insights gained from the developers, I proposed a technical implementation schema. Various technical approaches are outlined and summarized in diagrams. This is supported with my literature review, which delves deeply into the field of human-computer interaction. While I do not explore the technical implementation in detail, my research is well-informed about the present capabilities and limitations that must be addressed to implement my framework.

8.4 Summary of Contributions Fig. 47

Visual identity process Fig. 48

My first research question: Is it possible to find coherent working methods in visual identity projects? led to an in-depth exploration of the visual identity design process through a grounded theory study, in which I used semi-structured interviews. As a result, I can confirm that the identity processes of the 20 design studios I interviewed are homogeneous enough to be generalized and contained in the double-diamond diagram. Furthermore, the designers' approach is coherent enough to propose common augmentation scenarios. This initial exploration was necessary to provide relevant insights into the process and ascertain the generalization level of the ML augmentation proposals. During the process exploration, feedback sessions serve as a connecting element across all stages of the process. This observation held significant relevance for the subsequent stages of this research.

Critical process phases

As a second step, I investigated the weaknesses in the process to provide an answer to my second research question: What are the most critical phases for the designers in visual identity projects? There is

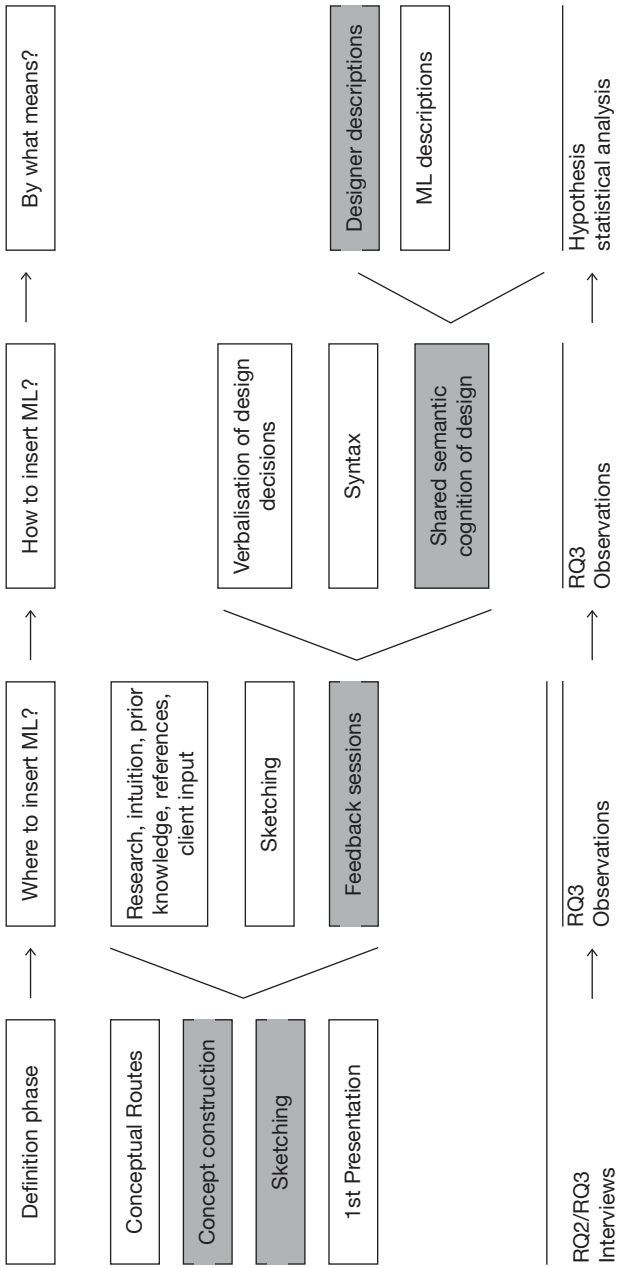


Fig. 47
Summary of contributions

consensus between designers and literature on manual and repetitive tasks being a weak part of the process that precludes designers from more creative work. Moreover, the definition phase stood out as well, for being a complex part of the process which designers can only hardly articulate. Touching upon the core of design work, the definition process relies on intuition and tacit knowledge, research the collection of reference, prior knowledge and the infiuence of the client.

Augmenting the critical process phases with ML (1)
Through my semi-structured interviews, I also addressed my third research question: How can the critical phases of the process be augmented through ML? The designers proposed automating the tedious tasks they had previously expressed dissatisfaction with. Furthermore, existing ML tools were criticized for their limited capacity to adapt to the design process. Envisioned were design tools that improve the creative process while allowing the designers to maintain the final decisive power. A gradual introduction of ML was perceived as convenient to allow designers to progressively adapt to the technology. Designers and literature agree on ML being used best at the beginning of the process (definition phase) as a creative collaborator, rather than for the creation of finished outcomes.

Augmenting the critical process phases with ML (2)
The definition phase emerged as a potential area for ML augmentation; however, determining the exact implementation methods is not straightforward. Therefore, I further investigated the process through non-participant observation at Studio Off Office. By focusing on their feedback sessions – the juncture at which designers step back to critically assess their work – I could observe and comprehend the motivations behind the graphics without disrupting the process. Through the new findings from the observation, I provided a more in depth answer to my third research question: How can the critical phases of the process be augmented through ML? The designers' feedback stood out for having a particular syntax full of adjectives. These expressions encompass shared cultural references, analogies and synaesthetic elements. Furthermore, the designers share a semantic cognition of design. To augment the definition phase, it would be beneficial to extend these linguistic attributes to ML natural language processing tools. ML could be employed during feedback sessions to offer supplemen-

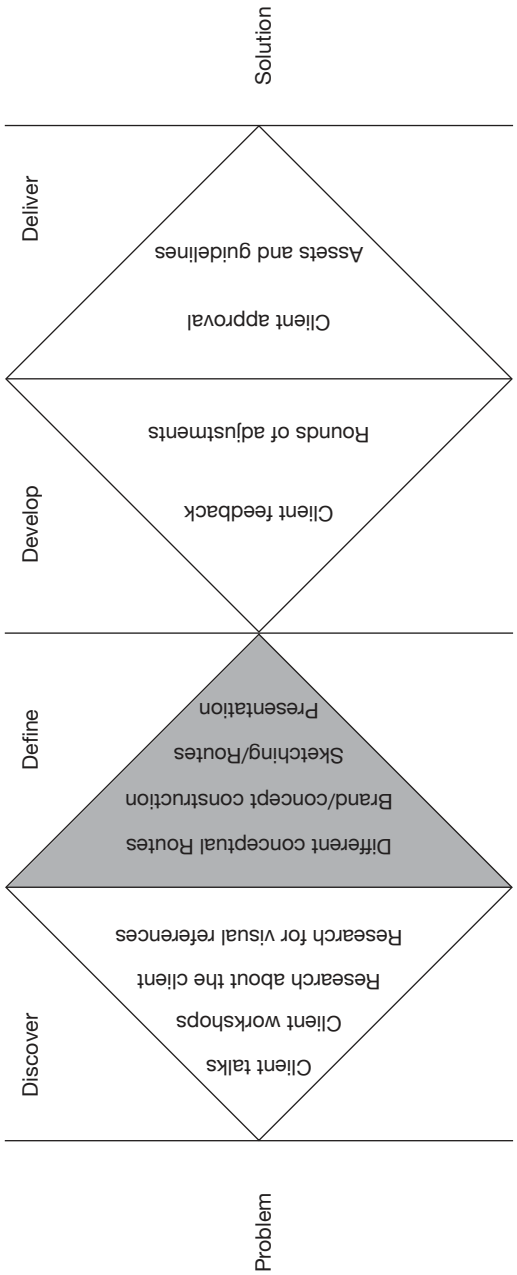


Fig. 48
Customized Double Diamond Diagram
(Average process of interviewed designers)

tary insights to designers or directly propose possible improvements. Subjectivity and shared semantic cognition can be beneficial for creating recommendation system, to provide unique support for each design team. Finally, combining visual and linguistic modalities would be particularly advantageous.

Augmenting the critical process phases with ML (3)
Upon comparing the syntax used by designers and ML via natural language processing, I concluded that designers perceive the graphical descriptions they utilize in their daily practice as more useful than the descriptions provided by ML. To test this hypothesis, I conducted a within-subject design survey involving 58 participants who rated designer and ML descriptions of 8 posters. The results of the 2x8 repeated measures ANOVA suggested that the designer descriptions were rated as more useful than the ML descriptions for all posters, with one exception.

These results are related to the current ML datasets lacking typographic inputs. With the availability of more graphic and typographic training data, generative models will progressively enhance their ability to assist graphic designers. Further suggestions to augment the definition phase include fine-tuning datasets by integrating the semantic cognition of design, manually curating compact datasets, and enabling designers to curate and constantly update their personalized datasets.

8.5 Ethical considerations

The path between sociopolitical implications and creative potentialities qualifies an otherwise overly simplified division between risks on one hand and opportunities on the other (Masure, 2023).

The latest advancements in AI have opened new concerns about the future of graphic design and other creative professions. Generally, the prevailing conception is that the more advanced AI is, the more risks it will bring to humanity, such as mass unemployment by replacing human labour and making decisions that humans cannot control (Blackwell, 2023; McNeil, 2023; Siau & Wang, 2018). Experts argue that as a society, we have an incomplete understanding of the outcomes that AI will bring, leaving us unprepared to face the consequences (Kahn, 2022). This is especially true in the case of AI based on ML (as opposed to 'expert systems' for example), whose outputs are sometimes unexpected and disconcerting (Constantinescu et al., 2021; Hakli & Mäkelä, 2019).

Conversely, there is enthusiasm surrounding the collaborative possibilities that ML offers. Scholars (e.g., (Armstrong, 2021) as well as my interviewees, for the most part envision scenarios in which ML does not replace designers but instead fosters collaboration between them. A website titled 'Will robots take my job?' ranks the automation risk of graphic design as low, with a 34% probability. (willrobotstakemyjob.com/graphic-designers, accessed 02.04.2024). Their explanation emphasizes that graphic design requires a mix of technical and human-centric skills based on originality, which are difficult to automate. In contrast, architect Asif Khan (2022) believes that design and creative tasks are already very close to being mostly handed over to computers. He argues that we should accept that most of the design process will be automated in the near future, since only a very small portion of creative design jobs can't be done by AI.

Another point of view comes from recent studies that estimate that the jobs most at risk from the new AI wave are those with the highest wages (Burn-Murdoch, 2023). For instance, ChatGPT has been shown to reduce inequality among workers by compressing the productivity distribution, providing more benefits to low-ability workers (Noy & Zhang, 2023). Another study, measuring performance of consulting tasks completed in collaboration with AI, demonstrates that performance differences across levels of ability were more productive and produced higher quality results (Dell'Acqua et al., 2023).

Considering the polarized predictions about the intersection of AI and creativity, here I critically reflect on my framework by contemplating potential implications and ethical challenges that may arise from it. Scholars have subdivided research about ethical issues of AI into three categories: features of AI that may give rise to ethical problems, human factors that cause ethical risks, and ways to educate AI systems to be ethical (Siau & Wang, 2018). I structure this section around these categories.

In order to thoroughly evaluate my framework and determine how its potential consequences intersect with these categories, it would be necessary to implement it and effectively put it into practice. Additionally, it should undergo rigorous testing with graphic designers to determine if and to what degree it enhances their workflow and work quality. After these steps are taken, the framework could be comprehensively evaluated to identify poten-

tial negative or ethically challenging consequences.

Since such a practical implementation was not feasible within the scope and timeframe of this thesis, I will focus on aspects that can be addressed theoretically. Human-ML interactions, for instance, are increasingly being monitored. While automated systems offer assistance to humans, this raises concerns about humans becoming reliant on the technology, to the point where they forget their skills or become less attentive. Harford (2024) highlights that when computers require human intervention, there is the risk that humans may no longer possess the necessary skills for the task at hand. In the context of Steve, ML is integrated with a studio to provided feedback to skilled designers, implying that designers retain the responsibility of designing and executing tasks. It is essential for designers to maintain an active role and do not delegate all practical tasks to ML. My approach mitigates the risks of designers decreasing their skills or assuming a passive role in the visual identity design process.

At present, scholars disagree on the urgency of addressing the potential consequences that AI can bring. Some argue that there is no necessity to address these concerns until there is a more precise understanding of what they will entail, while others argue that the ethical and moral concerns in connection to AI should be addressed before they become urgent (Siau & Wang, 2018). I align with the latter perspective, as I believe that designers and researchers should take responsibility for the ideas and content they disseminate. However, responsibilities concerning ML applications remain a complex and uncertain subject, especially as the issue of responsible AI challenges our broader philosophical understanding of responsibility (Constantinescu et al., 2021; Dignum, 2018). Digmun (2018) argues that responsible AI is about human liability for developing an intelligent system, along with fundamental human principles and values. An example of human responsibility over ML applications is OpenAI's DALL-E text-to-image generator, which currently blocks the creation of images that are violent, pornographic, or infringe copyright violations (Brusseau, 2022). In this instance, the creators of DALL-E assumed responsibility for its morality by preventing users from employing the application to generate what it defines as immoral content. In contrast, with Stable Diffusion, a main competitor to DALL-E, users can generate images without censorship (Brusseau, 2022). However, they release the images generated through the app under

a free Creative Commons licence (CC 0) (Masure, 2023). As discussed by Brusseau (2022), the debate that arises from these examples is whether AI researchers and developers should focus on innovation or safety.

8.5.1. AI that may give rise to ethical problems

In this section, I present two concrete examples illustrating how facets of Steve could potentially evolve in directions that ethical concerns. First, I examine the collaboration between ML and designers, exploring how an augmented process may transition into an automated one. Secondly, I address the issue of model amnesia, as highlighted by developer Lamberg in his interview.

Designer-ML collaboration

As emphasized throughout this thesis, the majority of ML applications used for graphic design purposes currently focus on automating tedious tasks in order to produce final outputs (De Peuter et al., 2023; McCormack et al., 2020). In this scenario, the potential risks are expected to develop towards autonomous systems that might neglect the creative process and collaboration between designers and ML (D'Inverno & McCormack, 2015). On the other hand, the collaboration scenario I propose in my framework is part of the category of approaches that aim to involve end-users as meaningful participants in the design process (Donia & Shaw, 2021). The concept of co-design which Steve embodies is frequently portrayed in literature as a strategy to enhance fairness and accountability in ML (Aizenberg & Van Den Hoven, 2020). It unfolds in a manner that gives users a role in the creation of such systems, involving the designers in the curation of datasets and training of personalized ML models (Sloane et al., 2020).

While collaboration between end-users and ML is considered as a virtuous approach and is gaining increased attention, numerous unanswered questions remain regarding the implications of using these tools in the design process (Van Der Burg et al., 2023). Moreover, the distinction between automation and augmentation is not always straightforward. Raisch and Krakowski (2021) argue that these approaches related to ML are interdependent. Thus, over time, close collaboration with machines (augmentation) helps identify rules and models that closely approach optimal processes. These can in turn be utilized to automate tasks. Con-

sequently, augmentation may enable a transition to automation over time (Langley & Simon, 1995). However, most importantly, the extent to which decision-making power is relinquished always remains at the discretion of humans.

The intimate collaboration between designers and ML I propose implies a profound transfer of designers' knowledge into ML algorithms. I suggest that designers curate small datasets and tag artefacts using their own semantics, perspectives and understanding of graphic design. For many current AI systems, personal data is collected and aggregated with that of thousands of others to create anonymous and generic datasets. In my framework, by contrast, the data remains personalized and reflects the opinions of a single designer or design studio. While my framework ensures control over personal data by the designers using it, there is a relatively limited exploration of the potential consequences and vulnerabilities associated with such personal datasets. Through Steve's close linkage of concept and design, ML acquires insights into the thought process that occurs during the definition phase. These insights can inform future ML developments, to create technologies that may be capable of critical thinking and problem-solving at a level approaching human abilities (Seeber et al., 2020). Additionally, this close collaboration can lead to the identification of key rules, resulting in the automation of the process stage, and ultimately eliminating the need for direct designer involvement (Langley & Simon, 1995).

While this outcome is contrary to the objectives of my research, it is imperative to recognize the potential risk that augmentation may evolve into automation over time (see 1.2.5). As highlighted by Raisch and Krakowski (2021), augmentation and automation are interconnected and subject to a paradoxical tension. Nonetheless, they also point out that a broader perspective comprising both augmentation and automation could result in achieving beneficial complementarities. As long as designers retain control over the visual identity process, certain functionalities of Steve could benefit from automation, For example, managing the continuous updates required by the personalized dataset.

Model amnesia

Recent studies indicate that to maintain a model's performance requires continuous human oversight (Hans, 2023). One experiment comparing the performance of ChatGPT-3.5 and ChatGPT-4 between March and June 2023 indicated a significant decline in the model's ability to generate executable code (Chen et al., 2023). As this example indicates, ML models require significant human supervision and are far from being independent entities. Moreover, training data is backwards-focused (McCormack et al., 2023), necessitating ongoing fine-tuning and data updates for models. In other words, data is collected at a particular moment in time and upon application of the model, it may no longer precisely reflect the current circumstances. This is supported by my interviewee and developer Lamberg, who raised ethical concern about the coherence issues with current ML tools. He pointed out that models do not remain constant over time, but instead tend to fade and evolve into something else:

> A challenge is the drift or amnesia of the models where they can forget or change over time, something that already is an issue within traditional brands where designers slowly drift away from the brand guidelines, losing brand cohesion.
> Lamberg A. (2024, March, 21)

This challenge is also acknowledged in recent research which underscores the difficulty of maintaining the quality of AI models (Vela et al., 2022). To prevent quality shifts in models and detect changing system behaviour, regular inspections are necessary (Zenisek et al., 2019). In Steve's case, this primarily impacts the overall graphical model. The second biased and personalized model entails continuous updates and is intended to evolve alongside with the designer or studio. This approach provides a practical means to ensure the model remains relevant and controlled, mitigating unintended shifts though continuous data updates.

Lamberg also addresses the evolution of visual identities over time and the potential risk of losing focus when implementation deviates from the guidelines. Additionally, shifts in consumer behaviour, changes in strategic focus, or other environmental influences, necessitate adjustments to a visual identity (Keller, 1999). However, Steve focuses only on the definition phase. Consequently, any fade or loss of coherence in the visual identity can occur beyond the designer's sphere of influence, once the guidelines have been handed over to the client. The precise methods for addressing these issues are presently unclear and necessitate further study and examination. As emphasized by Long and Magerko

(2020) it is important to keep in mind that research on AI is still in its nascent stages. Most of the work cited here was published in the last few years, and there is still a pressing need for more empirical research in order to build a robust and accurate understanding of the consequences of AI.

8.5.2. Human factors that cause ethical risks

Among the human factors that can cause ethical risks in AI, the most evident ones are the datasets and their biases (Siau & Wang, 2020). ML models refiect the data created and inputted by humans, thereby being only as effective as the quality of the data they are trained on (Koolen & Van Cranenburgh, 2017). Here, an examination of dataset creation and the potential use of web scraping is scrutinized through a critical lens, amplifying the discourse on the practice of graphic design and the utilization of graphical references in identity work.

Datasets

The implementation of Steve foresees the continued use of existing datasets for transfer learning and fine-tuning. These datasets present problems related to the collection and tagging of images. Whether acknowledged or not, a broad range of participants play a crucial role in producing the data used to train ML models (Sloane et al., 2020). ImageNet, for instance, which laid the foundation for ML and most image recognition applications, is a dataset of over 15 million labelled, high-resolution images collected from the web and labelled by humans using Amazon's Mechanical Turk crowdsourcing tool (Krizhevsky et al., 2017). Billions of web users also continually participate in the production and refinement of ML, as their online activities produce labelled data while navigating the web (Sloane et al., 2020). Users also improve the performance of ML models as they interact with them. As pointed out by Elish and Mateescu, (2019) the labour of integrating AI applications into everyday life and existing work processes is the 'human infrastructure' without which the sociotechnical system cannot function.

Moreover, all this work often happens without consent or acknowledgment and remains uncompensated (Sloane et al., 2020). Lilly Irani refers to this phenomenon as "...human fuelled automations..." (Irani, 2016, p. 36). This term encompasses crowd workers who engage in repetitive tasks that support AI systems, such as labelling vast amounts of training data and reviewing potentially harmful or suspicious content (Crawford, 2021).

My framework opposes these exploitative practices and proposes small-scale and personalized dataset curation instead. An example is MobileNets, small, portable datasets that use width and resolution multipliers to build lightweight and deep neural networks (Howard et al., 2017). The two levels of fine-tuning proposed in my framework are built upon existing ML datasets and, as such, they cannot avoid the ethical challenges associated with the conditions under which these datasets were created. Hence, Steve cannot avoid these ethical challenges but is inherently entwined with them, much like all ML systems. The additional datasets for Steve, which are yet to be created, can and should be developed through an ethical and moral lens. This entails using only data that is permissible for use and avoiding reliance on crowdsourcing. Instead, individual designers or studios can curate their own personalized datasets according to their own timelines and conditions.

In their study, Tseng et al. (2024) outline several key factors to consider when creating a dataset: First, they propose the incorporation of data diversity, ensuring that the data is representative and accounts for diverse characteristics of a label and variety of use cases. Secondly, they propose evaluating model performance and its relationship to data. This includes understanding how well the model is performing, identifying gaps, and assessing whether the model has improved after dataset revisions. Furthermore, they suggest balancing datasets by designing datasets that have roughly equal distribution of samples across labels, ensuring model performance is consistent across labels. As a last point, they insist on incorporating data diversity by checking if the data is properly labelled and of sufficient quality. These guidelines provide valuable insights to consider during the construction of the graphical dataset essential for the implementation of the Steve framework.

Additionally, attention should be directed towards algorithms not always being transparent to inspection. As previously noted (Section 5.1) similar to the thought processes of designers, ML systems possess a form of tacit knowledge, resulting in a black box phenomenon (Gilpin et al., 2018; Moruzzi, 2020). This is perceived as ethically challenging, since the black box is opaque to human interpretation, which can lead to AI evolving without

human oversight and guidance, potentially resulting in malicious applications (Siau & Wang, 2018). Researching what occurs within black boxes has been defined as not impossible but unproductive (Masure, 2023). In the last few years, there have been instances of ML algorithms evolving in unexpected directions, leading to their termination (Imana et al. 2021; Morse et al., 2021) For example, in 2014 Amazon implemented an AI hiring tool. However, it was subsequently revealed that the hiring process was not conducted in a gender-neutral manner. This was caused by biases in the training data, which predominantly consisted of resumes from male employees, reflecting the male-dominated nature of the company and the tech industry as a whole. The biased training data led the algorithms to develop an association that negatively impacted female resumes (Kodiyan, 2019). After a short period, the tool was discontinued.

A trial and error approach therefore appears to be beneficial in the context of ML, as it promotes innovation. However, it is also crucial to terminate experiments when engineers lose control over them. Another crucial aspect is ensuring that users have access to clear documentation and explanation regarding the functioning of ML algorithms within tools. This goes into the interface design domain and represents an ideal scenario for the development of flexible and transparent ML tools. It also involves the collaboration of multidisciplinary teams, comprising both designers and developers. This collaborative approach is also a key objective of this thesis.

Webscraping

In my semi-structured written interviews, web scraping was mentioned as a possible means to gather graphical data. It refers to the procedure of automatic extraction of data from websites using software (Khder, 2021). While this is increasing in use across disciplines, its legal status remains highly context-specific (Snell & Menaldo, 2016). The web scraping process starts by gathering everything of potential value, discriminating relevant from irrelevant data, and then mining the exact data from the classified corpus using additional search criteria (Luscombe et al., 2022). Web scraping poses unique ethical challenges to which there are no easy answers (Ravn et al., 2020). Luscombe et al. (2022) outline some of these challenges, including the potential for privacy invasion through aggregated data forms and the possible negative effects on websites, such as slowing down responses for other users. However, they also note that these issues are context-specific and fall under the umbrella of situational ethics.

The concerns around web scraping (Brewer et al., 2021), initiate a compelling ethical discussion about the utilization of references in graphic design more generally. Graphic designers engage in a restricted form of web scraping on a daily basis by browsing and downloading references from other designers' and studios' websites, as well as dedicated online archives. This represents an integral part of graphic designers' work (Dziubak, 2019). These references serve multiple purposes: they are utilized behind the scenes in daily work and are incorporated in mood boards that are presented to clients and other stakeholders. Given the importance of this practice, there are numerous online image repositories used for such graphic inspiration such as Behance, Font In Use, It's Nice That, Dribble or Pinterest. These archives are curated over many years and contain vast amounts of inspirational graphical examples (Dziubak, 2019). While designers mostly upload their work on these platforms for visibility and to attract new clients, their contents become mostly references for other designers. Even though platforms regulate the usage of their content, these regulations are not always clear or respected. Behance's copyright settings, for example, invites every participant to select their own copyright setting when uploading a project. The choices are "Creative Commons with varying degrees of control and sharing, or No Use which prohibits anyone from citing work or using it in any way..." (help.behance/copyright, accessed 28.03.2024). However, Behance also "encourage[s] participants to allow others to cite their work, as [they] think it is a powerful marking tool for all creative professionals". On the contrary, It's Nice That protects its content through a variety of third party rights that prohibit copying, adapting, republishing, and making available to the public copies of content (It'snicethat/terms-conditions, accessed 28.03.2024).

As revealed through my designer interviews (4.4) one of the main negative aspects of seeking graphic design references is the homogenization of trends–an ongoing phenomenon that results in similar graphics being prevalent for extended periods (Goree et al., 2021). While this has historically been the case in art and design, influences were often confined to specific countries due to limited global connectivity. However, in recent years, designers have been influenced more rapidly and more globally, resulting in worldwide

trends propagated through the web (Kress & Van Leeuwen, 2020). As pointed out by my interviewees, this weakens innovation and uniqueness in the industry. Web scraping and the use of ML amplify these scenarios. Bommasani et al. observe recurring algorithmic monocultures, where the same systems are used by multiple decision-makers, posing the risk of homogenization outcomes where particular individuals or groups experience the same results across different deployments (2022). Considering this, Steve, as outlined above, functions through smaller, biased datasets tailored to the designer or studio. Nonetheless, the implications of creating a graphical dataset scraped from the web or obtained with permission from online platforms remain unfamiliar. Therefore, since such external datasets are needed for designers' inspiration and integration with industry trends and practice, this balances the use in Steve of small, customized datasets. But as above, they should be collected and communicated with utmost transparency.

8.5.3. Ways to educate AI systems to be ethical

In this section, I will delve into the unavoidable presence of biases in AI and graphic design, to advocate for their recognition and transparent disclosure to users. In technical contexts, bias may primarily raise concerns over efficiency and optimizing the algorithm's performance. However, biases can cause significant harm when they stem from aspects of human culture known to perpetuate human behaviour (Fuchs, 2018).

Biases

Biases are inherent in ML systems, a matter highlighted throughout this thesis (see Sections 1.2.3, 5.2, 6.2). The approach embodied by the Steve framework seeks to harness biases towards positive outcomes. As proposed by Schwartz et al. (2022), some type of bias are purposeful and beneficial. For example, ML systems often model implicit biases with the intent of creating a positive experience for users, like identifying content of interest. Moreover, graphic design is inherently associated with biases, which manifest as specific values and assumptions stemming from the designer and the context in which he operates (Pater, 2016).

Even though biases contained in graphic design can cause misinterpretations by individuals adhering to certain biases, they define the culture and context in which they are created. As previously acknowledged in this thesis, graphical choices and communication are never neutral (Kinross, 1985). Trying to render graphical artefacts neutral by relying on generic graphical datasets would compromise the uniqueness and distinctiveness of graphics. This approach is problematic, as the essence of design practice is to create something unique and distinctive (Stolterman, 2008). For this reason, Steve is built around the positive utilization of personal and studio biases that are transferred onto the dataset. Such a user-centred approach aims to introduce adjustable and personalized tools (Milano et al., 2020). However, as highlighted by Milano et al. (2022), user-centred solutions also have shortcomings, such as their transferability to other domains and the insufficient protection of the user's privacy. It is imperative that the biased, personalized designer datasets remain private and under the protection of the designer or studio that utilizes them. Revealing such personalized datasets could potentially expose sensitive insights and studio dynamics, posing a risk if accessed by unauthorized parties. Therefore, stringent data security protocols should be applied in order to protect the datasets.

Personalized datasets should, to a certain extent, mitigate the homogenization of trends in visual identity, the concept of biases introduces other considerations. In Steve's subfunction of providing references from the archive or generating references, a significant risk is that designers become entrenched in their bubble and fail to discover unexpected references that may be relevant to their inspiration. Recommendation systems can encroach on individual users' autonomy, by providing inputs that nudge users in particular directions (Milano et al., 2020). Moreover, there is the risk that the element of serendipity, inherent in discovering inspirational references, could be lost. Indeed, in recent ML recommendation systems, elements of serendipity are included to surpass the 'more of the same' aspect that recommendation systems are often criticized for (Hertz et al., 2023). As in recommendation systems, biases impacting human decisions are usually implicit and unconscious, and therefore unable to be easily controlled for. It is pivotal that the underlying structures of Steve are made transparent to users so that they can consciously acknowledge the extent to which they are intertwined with the system's biases. This could be implemented by displaying the percentage of image recognition accuracy, as well as the accuracy of semantic and technical attributions made by ML systems. Furthermore. When designers upload

their sketches to receive feedback on them, ML could communicate the degree it was able to recognize and interpret them. Since it is inevitable to have biases in both ML systems and graphical outcomes, designers must be conscious of how they are influenced by the tools they work with.

Similar to graphic design, AI is built in specific social settings (Jaton & Bowker, 2020) and can therefore not be neutral. A sociotechnical approach to AI takes into account the values and behaviour modelled from the datasets, the humans who interact with them, and the complex organizational factors that go into their commission, design, development, and ultimate deployment (Schwartz et al., 2022). The cognitive biases of the creators are intertwined with each phase of AI's creation. Teams involved in the design and development of AI systems inevitably introduce their biases into the process (Schwartz et al., 2022). Crawford emphasizes that the input and content provided to ML systems greatly influence how the models elaborate information. When examining the layers of training data that shape AI models and algorithms, it becomes clear that labelling data about the world is inherently social and political, even though it may appear purely technical (2021). Also in the realm of graphical content, labelling assumes significance beyond mere technical classification. As elucidated earlier (Section 1.2.1), graphic design charges visuals with profound significance, contributing to an economic ecosystem intertwined with the emotional responses evoked by it. Designers serve as intermediaries between corporations and consumers, thereby intricately engaging with the socio-political dimension inherent in communication. Furthermore, through the lens of a designer's technical perspective, common technical patterns such as general composition principles and spatial organization (Kress & Van Leeuwen, 2020), are taught through tagging.

Biases overview

Academic work classifies biases and the relative discussion into three dominant categories: systemic, statistical and human (Caliskan et al., 2017; Schwartz et al., 2022). Systemic biases are present in the datasets and result from procedures and practices of particular institutions that operate in ways which favour certain social groups and disadvantage others (Schwartz et al., 2022). As pointed out by Yeung et al. ML models are subject to statistical laws, therefore the accuracy of a model is proportional to the

training sample size. Models trained on one statistical population will perform differently if deployed on a different population (2021). When using graphical datasets sourced from the internet, biases may emerge in the form of over-representation of work from renowned studios or bias towards a particular graphical style, depending on the origin and creator of the dataset. Consequently, certain designers and styles could be disproportionately represented. It is essential to consider these factors when choosing the datasets for training purposes. One potential approach to address these biases is to select and combine diverse platforms into a dataset, thereby balancing out any disproportionate representation to foster more inclusive training datasets. However, Steve embodies a different approach, involving two datasets: a generic and a biased one. Thus, it should aim to balance out or positively utilize biases inherent in these datasets.

The second category of biases pertains to statistical and computational errors that arise when the sample fails to accurately represent the population (Schwartz et al., 2022), in this case a graphic design studio. In addition, algorithms can display biased behaviour due to certain technical choices, even if the data itself is not biased (Mehrabi et al., 2022). As pointed out by Yeung et al. (2021), the biggest danger is that ML models can fail silently without giving indications of when their outputs should not be trusted. Over time, patterns of decision-making can evolve or degrade, and if the users fail to recognize these changes, it can lead to failures and problems. ML models depend on the basic principle that what happened in the past is likely to repeat in the future, and contain a semantic memory similar to the way humans recall information for their memories (Gershman, 2017). Conceptual drifts occur when underlying properties and characteristics of the target or variables of ML change. Data drifts and consequently model failure occur when the data distribution, probabilities or other variable change (Bennett et al., 2022). Because ML is typically embedded within a complex system, it is often unclear which agent was responsible for the error (Babic et al., 2021).

As pointed out by Babic et al., scholars have now begun to frame these challenges as problems of responsible algorithm design, including how to automate moral reasoning (2021). As revealed in my interviews with developers, there exist multiple implementation approaches for Steve, each influenced by the preferences and technical decisions of the individual developer. Con-

sequently, the architecture of Steve is inherently shaped by these technical choices, which themselves are not entirely neutral but rather reflect the preferences and priorities of the creator. In the pursuit of creating a transparent tool, it would be beneficial for the ML system itself to communicate with designers when its prediction begins to falter in accuracy. This proactive approach enables designers to stay informed about the model's performance and make necessary adjustments accordingly. Such an approach is implementable by stating a statistical level of confidence in a prediction or classification (Walker, 2024). An example of such a system has been demonstrated by Walker (2024), in his experimental Ethnographic AI for Festival dei Popoli. He utilized randomly selected images from the festival's catalogue and highlighted the limitation of the pretrained model he employed by displaying the ML's confidence percentage for labels assigned to the images.

The third category comprises human biases, which manifest as semantic errors in human cognition based on a limited number of heuristic principles and predicting values to simpler judgmental operations (Schwartz et al., 2022). Human cognitive biases are processes that disrupt decisively and reasoning ability, ending up in errors. Human bias instances include stereotyping, affirmation predisposition, priming, selective perception, the speculator's false notion, and the observational selection bias (Sengupta et al., 2018). Developing datasets for graphic design is a novel concept that will introduce new challenges, biases being one of them. This will also create a new frontier for AI ethics, which generally need to evolve beyond well-known cases and develop sector-and case-specific guidelines (Mittelstadt, 2019). Technical solutions and empirical knowledge base are essential for detailing the impacts and potential harms of producing AI technologies in different domains. Sengupta et al. (2018) propose several actionable methods to address the issue of human bias in AI, including experimenting with different datasets and metrics, increasing representation in the technical workforce, and introducing external validity testing and auditing processes. Gaba et al. (2023) propose visualization, a strategy to inform users when the systems are compromising due to biases. They suggest that design choices can profoundly affect how people reason, compare data values, draw conclusions and trust the data. This aligns with my proposal (7.7) in which I explored three user scenarios and their positive and negative outcomes. Communication between designers and ML is heavily contingent upon interface design decision. I advocate for a two-way communication approach wherein errors or misunderstandings can be reported, enabling ML systems to learn and improve white preventing frustration among designers. Simultaneously, in order to promote transparency, when ML encounters difficulties in understanding or exhibits a low confidence rate in image reading, it should proactively communicate this to designers. This ensures that designers are aware of the limitations of the feedback provided by the systems.

8.6 Research limitations and next steps

Structured as a conceptual framework, my research envisions the augmentation of the visual identity process through ML. It primarily centres on practitioners' insights and encompasses an understanding of contemporary ML developments, but does not adopt a technical perspective. Nonetheless, the framework underwent a first and generic inspection from an ML developer. Further testing and refining implementation methods will be a focus of future research. Through collaboration with ML experts, the intention is to assess the technical feasibility of the framework and explore potential avenues for its implementation.

In future studies and testing, incorporating graphical datasets like *Typo/Graphic Posters* will be crucial for gathering additional data on the optimal communication structure and language between designers and ML systems. Analyzing the interaction patterns and outcomes with specific design examples can provide valuable insights into refining the collaborative process and enhancing the effectiveness of ML augmentation in visual identity design.

Dataset curation has been identified as one of the key components of tailored ML feedback within the framework. To further refine the modalities of tagging within small datasets, additional research is required. To achieve efficient execution in dataset curation, it is crucial to maintain an optimal balance between manual tagging and delegating this task to transfer learning. Recent experiments on subjective labelling (Van Der Burg et al., 2023) have revealed the potential for leveraging subjectivity and biases in ML. However, these models have also encountered consistency issues with their labelled categories. This illustrates the challenges involved in merging human subjectivity into ML processes and highlights the need for further research in this direction to refine

and optimize these approaches. Designers should have the capability to independently curate their datasets. However, this is currently challenging, as it necessitates coding skills, which most identity designers lack. In the absence of simplified dataset curation capabilities, interdisciplinary collaborations between graphic designers and developers can uncover the most efficient methods for enabling designers to autonomously handle their datasets. Ideally, designers should have access to an interface that enables the interaction with datasets without the need for coding.

This brings me to the next area that requires additional attention: interfaces. The development of interfaces for datasets and communication with ML is essential. Although premature for this research, it represents a crucial aspect for future investigation. Efforts to create user-friendly and efficient interfaces are essential not only because most designers lack coding skills, but also because designers are visually oriented, with a heightened sensitivity to design aesthetics and usability. Exploring innovative interfaces involves their integration with popular programs, and the development of new applications. Designer-ML collaborations must extend beyond traditional interfaces currently in use, blending conventional toolbars (as seen in the Adobe suite, for example) with chatbot tools that are becoming increasingly familiar (as seen in ChatGPT, for example). Interfaces enable clear and efficient communication between designers and ML, allowing for feedback and interaction. The fields of UI and UX design can therefore provide valuable insights into product appearance, usability and the design of elements that shape user interaction with a product.

In conclusion, this work elucidates current structures and challenges within the visual identity design process and establishes the groundwork for fostering a beneficial relationship between graphic designers and ML. By addressing key aspects of collaborative dynamics through feedback mechanisms, this research provides insights that contribute to the evolving landscape of graphic design and its interaction with ML. My thesis responded to the call to action directed at graphic designers, urging them to actively shape the trajectory of their field:

> Graphic design and artificial intelligence remain hampered by a lack of accessible graphic design sources with which to inform their algorithms. Irrespective of the technical efficacy, if future excursions into graphic design and AI are to move beyond machine generated aesthetic artefacts, then more input from professional graphic designers (incorporating their professional goals and aspirations) becomes critical. (Meron, 2022, p.9)

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STUDIO FM, FRANCESCO SCAGLIARINI, MIDDLE WEIGHT GRAPHIC DESIGNER

General questions

What term do you use to name identity projects?
Brand Identity

What is the first thing you start with when dealing with an identity project?
Brief, confrontation with the client, research about the client, research about competitors.

To which industry do your clients belong to?
Culture but doesn't bring money, furniture companies bring money.

Do you have clients in the fashion industry?
Generally no, but I handled one myself, Jacop Cohen, high end jeans.

Do you use different approaches with customers from different sectors?
The studio tries to have the same approach with every client but with our fashion client it was completely different.

How?
Everything is different, their identity was much stronger, we could bring in less of ourselves in.
The fashion industry has more rules, it is more industrialised.

General process questions

How is your design process structured?
Yes, but that's very personal it varies form the approach the other studio members have.

Can your process be broken down into phases? Briefly describe your phases.
Studio formula: Inspirational part, three conceptual proposals for the client, the client chooses one, then based on that we create three graphical proposals for the client from which he chooses one.

Francesco's process: research, visual references, mood board, first graphical proposal that will be united with the other proposals of the team, once the client chooses the art director leaves the project and it eventually becomes my project. After that the email process with the clients starts, all the further steps are sent and discussed with the client.

Is your process intertwined or rather linear?
Mostly linear

What is the most complex part of your working process?
Specific process (phases) questions

What is your favourite part of the working process?
When I start sketching, I like to get my hands dirty

What is your least favourite part of the working process?
I hate researching images, because I have a clear idea in my head and I can not always find it.
I also don't like the parts in which I have to make a lot of micro corrections.

When do you get inspired the most?
Right after the talk with the client, also when the client choose one of the proposals and I can start working on details.

When do you get inspired the least?
When I have to look for images online

Specific process (research) related questions

Do you collect information for the project?
Yes, I collect two kinds of content: I collect content, theoretical information about the company for instance and I also collect information about form, visual shapes, logos, grids and so on.

How do you collect information for the project?
How much time do you spend collecting information?
Time for research is not much, not more than 20%, most time of the project is used for little adjustments in the end, back andforward with the client so to say. This is a problem, the project often suffers from a lack of research.

What instruments do you commonly use for collecting information?
If I have time I like to research with books, but most of the time I use the web such as: Pinterest, Font in use, It's nice that, Behance. But the problem is that most of those projects are too similar. I don't look at Instagram.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?
That also depends on the cultural level of the client, with "low culture" client you try to find simple visual references in sound, name of the client and so on. With "high level" clients you try to find connections that are not that direct. Those choices are more subtle like typography, shapes. Sometimes you even have to go against existing iconography.

On which parameters are your visual choices based?
The parameters are connected mostly to the client. To how much he is able to sustain a certain type of abstraction.
Specific process (tools) related questions
How much of your process is depended on computer software?
Most of the process is develop with computer software.

Internal structures questions

How many people do usually collaborate on a project?
It depends on the project typology. We usually have two project typologies: normal project, two people: one senior/studio founder with one junior, at some point the junior takes on the whole project. Important decisions still go through the senior. Pitch project, most studio members until one direction is chosen.

What are the hierarchies between the people that work on the same project?
Senior, junior

SERIOUS BUSINESS AMADEUS MALMIN, ART DIRECTOR/FOUNDER

General questions

What term do you use to name identity projects?

It's confusing because different designers use different terms We call it branding. We have names for each part of the process: Brand strategy, Visual Identity

What is the first thing you start with when dealing with an identity project?

At first I try to understand the company and how it stands out from their competitors

To which industry do your clients belong to?

It's very mixed, we mostly work with startups

Do you have clients in the fashion industry?

Yes

Do you use different approaches with customers from different sectors?

We don't treat the process differently. But for fashion clients, for example, we can allow ourselves to create something that doesn't need to last for very long. For our client the Canvas (fashion client) for example, we had a more contemporary approach to typography, used a lot of white space.

General process questions

How is your design process structured?

We start with the Brand strategy, we do workshops to find out who the companies are and who they want to be, who their competitors are. Then we move to the Visual Identity phase, where we put out the foundation for the identity. Then it depends also on the applications we have to make (from websites to packaging, UI, UX, and so on). I'm also adapting to the clients, to the types of clients I think they are. If the deadline is really tight, for example, we remove a bit from the initial phase. If we have more time on the other hand we like to have a more thorough initial research phase.

Can your process be broken down into phases? Briefly describe your phases.

Research, Interviews, visual phase.

The visual process starts with mood boards, find a direction without doing any work, just using references, then we take the first feedback of the client and start exploring different directions by ourselves. Many times the clients select different parts from each project and want to combine them into one direction. Then it goes back and forward between feedback and execution.

Is your process intertwined or rather linear?

Nowadays it quite linear, since we become more confident.

What is the most complex part of your working process?

The challenge is to understand what the clients want. That's why I feel quite confident in showing more than one direction. The most complicated part is pushing the client towards something that he is not entirely comfortable with, convincing the clients to have a bolder, more unique approach. That's mostly because if the clients haven't seen something before they get scared. Most clients don't want to be the disrupters in their industry, they want to be different from the competitors but still kind of the same.

Specific process (phases) questions

What is your favourite part of the working process?

Definitely the initial, conceptual part. Because that's where I feel that I can give my knowledge back

What is your least favourite part of the working process?

Doing little adjustments after the client's feedback. Mechanical things like exporting files. Because I feel that I'm not using my time in the best way.

When do you get inspired the most?

I'm most inspired when I'm exploring, when everything is open. The exciting part is also when the clients understand and choose the more exciting route.

When do you get inspired the least?

The final part, before delivering.

Specific process (research) related questions

Do you collect information for the project?

We do a lot of research.

How do you collect information for the project?

We collect information through workshops and interviews with the clients, stakeholders in the company. We research the competitors a lot.

How much time do you spend collecting information?

Depends on the client. If the deadline is really tight, for example, we remove a bit from the initial phase. If we have more time on the other hand we like to have a more thorough initial research phase.

What instruments do you commonly use for collecting information?

We use collation websites like Behance, Pinterest and other design blogs. As a designer I feel the need to also know myself what the trends are. Sometimes I feel like I can get an idea directly based on my existing knowledge.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?

By understanding the company and their business model very well. The foundation lies in the research. The most common way is to separate the company from the others.

On which parameters are your visual choices based?

It's based on my creative muscle. If I work a lot I get very fast in exploring and translating thoughts into visuals.

It's all based on your education and the visual references you have in your head, your design knowledge. Knowing about design and execution techniques. The more you know in terms of execution possibilities, the easier it is to translate your conceptual thoughts into something tangible.

Specific process (tools) related questions

How much of your process is depended on computer software?

Most part of the identity is developed on the computer.

How much of your process is not depended on computer software?

I personally like to work in my head before anything. I come up with visual ideas in my head, and later I execute them on the computer.

Internal structures questions

How many people do usually collaborate on a project?

It can be very different, from 2 to 5, depends on the project.

What are the hierarchies between the people that work on the same project?

We don't really have a hierarchy, mostly colleagues specialized in different directions. Of course, the art director/creative director, in this case me, has the final word when it comes to the design.

Johannes Von Gross and Markus Lingemann, Art directors/Founders

General questions

What term do you use to name identity projects?

Visual Identity or Identity

What is the first thing you start with when dealing with an identity project?

J: We start by intensively analysing the client, we personally try to understand how the client positions himself in his field.

M: The first thing is a sort of dialogue with the client, in which we document the general feeling. Our final results are based on a general feeling/vibe that we get since the beginning. We get this feeling through conversations, personal impressions and exchange with the client. We are then trying to construct a final outcome that can manifest that feeling.

J: We are also trying to understand how the client sees himself and how realistic his perception is. We can control this through certain questions we ask. The client's reflection emerges through these questions. This usually begins with a dialogue, and can also turn into a longer strategy process.

Does the client usually have a realistic perception of himself?

J: This is what we are trying to understand. Sometimes it's very clear, other times they don't know in what pool they are swimming.

M: The more realistic the client is, the easier it is to work with him. This is one of the challenges that we often have to overcome, that the clients don't have a completely realistic picture of how far they are from what they actually want to be.

To which industry do your clients belong to?

Culture, industrial design, architecture, art: both museums and artists, photographers.

Do you have clients in the fashion industry?

M: Yes, we work with a shoe brand "VOR" and a high fashion client, OAMC. We worked for that last one for over three years. Sometimes also smaller fashion brands. It is not the field in which we work the most, though.

J: We are not specialized in fashion, but in our projects there are Intersections between culture, lifestyle and fashion. It is important that we can, to a certain extent, identify with the customer's product. The best scenario is when the client is passionate and stands behind his own "product", then we have a good feeling, and it does not matter from which industry the client is. If a client is passionate about his product, it's a good sign for us, because we approach our work with so much passion as well. It is important that there is a certain appreciation for creation.

M: Why are you concretely asking for fashion projects? Because for now it is one of my primary selection parameters. I am assuming (and still trying to verify) that identity is approached differently in fashion. Which leads me to my next question:

Do you use different approaches with customers from different sectors? Is there a specific difference with clients in the fashion industry?

J: It is more demanding to work for fashion.

M: I also think that it's different. The identity process is different. Fashion has it's very particular world, it is very competitive, also aesthetically. There are definitely other streams in the identity project, for example you don't need to express everything through the logo.

J: Our brand "VOR" for example tries to detach itself from the typical fashion seasonal cycles. Also, because shoes are generally less seasonal. We noticed that big fashion brands had drastically changes in branding when they changed creative director. Fashion's changes in identity are often more connected to a change in art direction than through seasons. Many brands don't change their identity for years, since their products stay the same for many years. In fashion everything is much faster, fashion cannot stay still.

M: In other fields identity is needed to maintain consistency, this is only partial the case in fashion. Of course there is the tradition of the house, but innovation is ultimately more important than tradition.

How did this apply to your working process?

J: At OAMC it was the case that the creative directors, Luke Meier and his wife Lucie Meier, who are now also doing Jil

Sander, had a vision about how the new collection should look like, and we received a brief. Not too many details, just a few sentences. Then they asked us to find moods which we sent back. Once they decided how the cloth are going to look like everything happens very quickly and everything needed to be done very quickly also from our side.

M: We also designed their website. Here the challenge was to of course create something functional but also something unexpected, since the fashion audience is aesthetically spoiled and therefore needs to be continuously challenged. We definitely noticed that this gets a higher priority in the working process compared to other typologies of identity work.

J: You generally become faster and have to adapt to their rhythm.

M: Exactly, you cannot negotiate timing at all because everything like shows are set. But it is also a very interesting field for graphic designers in general, because the appreciation for design is very high. General process questions

How is your design process structured?

M: The first step is the dialogue with the customer, where we try to find out the origins, the self-image, their direct environment, location, products, and positioning within the market and with competitors. If there is already and identity we try to understand what they want to change about it and what the expectations of the new identity are.

Can your process be broken down into phases? Briefly describe your phases.

M: Our main work phases are: Dialogue, research, mood boards, sketching and applications. But this is a structure we don't always follow.

Is your process intertwined or rather linear?

The process is not always linear, it varies depending on the customer, time and budget.

M: We often jump back and forth between these phases. We sometimes try out our first ideas very quickly and then continue to research. So, we already have a first design but then go back to the beginning to lay a new basis.

J: We jump back and forth all the time.

Specific process (phases) questions

What is your favourite part of the working process?

M: The abstract mood-board construction. Trying out is also fun. While working on the mood boards, you don't have the frustration point yet. Otherwise, with design you always have this alternation of euphoria and frustration.

J: I also like to immerse myself in the clients world.

What is your least favourite part of the working process? Actually the organization. The biggest frustration is when I notice that we are actually putting more energy into it than the client himself. When there is no appreciation for our work.

When do you get inspired the most?

J: When I immerse myself in a new world and get to know it and get to know new work approaches and philosophies. This also helps a lot for the project development.

M: Inspiration tends to be the exception. Most of the time it's work. Generally I agree with J. I often get my inspiration from the client's story.

When do you get inspired the least?

M: It is exhausting to constantly evaluate everything you do. I find cliché marketing slogans not inspiring at all, it does not help to get an individual approach for design.

Specific process (research) related questions

Do you collect information for the project?

M: Yes, we collect information about the client, its origins, self-image. We also collect information about the competitors.

J: Then we also collect moods that are not directly connected to the client but to the overall feeling we got.

How do you collect information for the project?
How much time do you spend collecting information?
What instruments do you commonly use for collecting information?

Specific process (visuals) related questions

*What are your parameters for translating concepts into spe*cific visuals?

J: The first translation takes place in the head, and the rest is reworking it. It feels concrete in the head, but it's actually still very abstract. It often happens that ideas come when I'm not sitting in front of the computer, obviously you hear that often, and it sounds like a cliché.
M: For me, it is almost exactly the other way around, I have a rough feeling, an abstract mood board, but then I have to go straight to my desk and start visualizing it at the computer. Sometimes the ideas that arise from doing are more interesting than the ones in the head.

On which parameters are your visual choices based?
J: Our projects are mostly constructed around one main idea, which plays the main role in the design decisions. All the decisions related to a project reflect the content without trumping the main idea, it's a delicate balance.

Specific process (tools) related questions

How much of your process is depended on computer software?
J: Most of the process is done with the computer.
M: For instance, I don't sketch by hand, I don't find it efficient.
J: Most of our work is done on the PC, but it's mainly head work. It's not necessarily the great magic that happens on the computer, but rather in the head. There is constant transfer between the computer and head.

How much of your process is not depended on computer software?
– M: Not much. The dummy constructions are completely analogically. What I definitely notice is that when you bring things back to reality, through print for instance, it looks completely different. Sometimes we change things shortly before the end, once we made print tests.

Internal structures questions

How many people do usually collaborate on a project?
M: We never work alone on a project, we all need feedback and exchange. The feedback from someone who wasn't looking at the work for the past hour is indispensable. The moment you see your design through the eyes of the other person, you already have a different perception.

What are the hierarchies between the people that work on the same project?
M: We're very small, so we are not that structures in the sense of hierarchies. J and I are usually supervising the projects, but we want to change that and give more responsibilities to our collaborators.

STUDIO KELLENBERGER, WHITE, SEBASTIAN WHITE, CO-FOUNDER/ART DIRECTOR

General questions

What term do you use to name identity projects?

In our portfolio, we call them identity. But we are sometimes making corporate identities, brand identity, visual identities, or we are making a logotype, which is quite similar to visual identity. And then, there are other things that we do, such as a rebranding, and a brand, refresh. Officially we call it identity, but it keeps changing. Our studio is a work in progress and especially in the last two years we've become more aware because we've been doing strategy within brand identity, beyond the visual, giving guidelines about how you speak your mission statement.

What is the difference between brand identity and visual identity for you?

Visual identity expresses the brand. But the clear ideas about what the brand is in the form of a short story, a mission statement, manifesto, or some kind of strong idea is more branding. That process is quite particular, we do it also together with strategy consultants. We are doing design work, but doing branding is a moment to talk about the entire brand, not just about the logo. It's about the whole experience.

What is the first thing you start with when dealing with an identity project?

We clarify brief, project management, budgets, and stuff like that.

To which industry do your clients belong to?

We work almost entirely with public organizations, it's officially called Arts and Heritage. We work with art galleries, contemporary art centres, we do exhibitions, way-finding, identities, books. But then we also work with practitioners, like contemporary artists, architects, or furniture designers. And this is very interesting. They have a creative process, and a strong sense of authorship, and we try looking at ways of translating this in the graphics that we do.

Do you have clients in the fashion industry?

We worked for La Fatiche. It's not really a normal fashion company, I would say. It's not a big fashion band. They're not doing huge lines of clothes, and they don't have a big seasonal change, with new identities each season.

We created something that lasts for a long time. So in a way, I think it's been less about working in fashion, but more about representing a creative design practice. The working process for La Fatiche was similar to the way we've worked with architects and industrial designers. La Fatiche is interested in making clothing that the wearer feels a bit familiar with. So there's this familiarity of remembering an old idea about something in a garment. But then there is also the idea of construction, making construction really visible and expressive, showing how something's made. What we eventually thought about was a typeface that could play on memory. We were quite interested in this typeface that Radim Pesko designed, called Correspondence. It's a font that Radim drew from memory of Adrian Frutiger Subway signage. And so this, informal process of remembering how something was made, synchronized quite well, with the way La Fatiche designs their clothes.

Do you use different approaches with customers from different sectors?

Well, you know, it's like making a song. You have a mixing deck with different volume controls. So you might do more of one thing and less of something else. Depending on the client or the budget. There's been some projects where we did something quite different. Whereas with a brand refresh, which already has a clear story, it's different. We still do some research, but it's a bit more technical, perhaps. It was very much about understanding the authorship of the design of that position and trying to reflect that.

General process questions

How is your design process structured?

We clarify brief, project management, budgets, and stuff like that. And then there is the findings report, which is a series of things: It's looking at all the past material that that person might have produced. It might include interviewing some people who work there, collaborators, or other types of stakeholders or audiences. You can do comparison audits where you might look at four or five similar places or four or five very

different places, and just work out where that brand sits.
It's not about making a business plan. That's not what we're doing. We are trying to understand the mission. And then once we've done all of those interviews, we try to make sense of it. We might make something we call a SWOT in English, that's strengths, weaknesses, opportunities, threats, you might pull all of that interviews together. Then we, try and make some key points that the project team understands. That's basically research. But it's structured, and the structure allows us to identify problems and successes.

Can your process be broken down into phases? Briefly describe your phases.
It really depends on the scale of the project. I guess with medium or large-scale projects, the process becomes more formal, and structured.
This might happen in three phases:
We do research, experiments, and ideas, and then we do sort of final designs. We do that on all projects, depending on scale and budget. Is your process intertwined or rather linear? We have realized how the process is always changing. Not to say that it's unstable, but it's very much a work in progress. There are a lot of challenges and interesting things to develop. Visual identity projects are almost a living thing. It's a really fascinating design subject that isn't really talked about enough in education. You know, branding has a bit of a bad name in education. After we've done, research, experiments, and final things, we keep moving back and forward and checking things. We want to develop a sense of logic. But we also stay open to new things that happen in the process. But we also need to be guided by some clear principles and objectives.

What is the most complex part of your working process?

Specific process (phases) questions

What is your favourite part of the working process?
Well, the most exciting element is trying to create a new piece of visual language. That's sometimes easy and sometimes quite hard to do. But it's really exciting. It's about taking the ideas from the research and trying to sense make it into something that can be a type of graphic design, that's pretty exciting.

What is your least favourite part of the working process? We are a design practice with a small team, and we are all designers. We also do project management, but it's not the most exciting thing.

When do you get inspired the most?
We don't really use the term inspiration. I guess we probably use the word information. We don't really spend a lot of time looking at mood boards, or things like this, we've got a library of books and things like this.

When do you get inspired the least?
It's important not to always replicate what we see. I think it's really difficult to break graphic design that's new if all you are doing is looking at graphic design.

Specific process (research) related questions

Do you collect information for the project?
Yes

How do you collect information for the project?
We look at all the past material that that person might have produced. It might include interviewing some people who work there, and or collaborators or other types of stakeholders or audiences if it's a museum, you might write to some people like some artists and interview some answers. He asked the whole question series of questions about their experience and interaction with that organization into you can do comparison audits where you might look at four or five similar places, or four or five very different places and just work out where that brand sits.

How much time do you spend collecting information?
That depends on the project, client or the budget

What instruments do you commonly use for collecting information?
We do interviews, we look at past materials from the person/company. We compare by looking at similar or different places.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?

We are interested, and we look at a lot of things. I think we feel confident that a lot of the things we see can be translated into graphic design. So this means that our ideas can stretch and move into really interesting places. There is a lot of motivation to think about how to make something because we have a good knowledge of contemporary art practice, literature, and cinema. We are very interested in experimenting with the hand and digital craft. And the idea that something made by hand is visible in the final outcome.

On which parameters are your visual choices based on?

There's this sort of challenge in how we develop something to make those early stages visible in the final outcome.
I think it helps to design stronger artefacts that kind of reveal the story behind it as you look at them. Sometimes it's important not to create something in one way and then put it on the computer and completely change it because we can lose things that way.

Specific process (tools) related questions

How much of your process is depended on computer software?

We are probably on the computers, usually each day.

How much of your process is not depended on computer software?

We've done things with ceramics, last year, in Darby in a metal factory. And we were developing typography in sand cast process where you, you make a mould in the sand in Newport metal into it. So this was quite an unusual process. And we've been looking at different ways machines can make fonts, and then develop fonts that way. This has also been very interesting. We've got loads of different pens and brushes and spray cans, and we've got the lighter rough library of these things that we may have been.

What tools would you like to exist?

We always want to practice more, to get better at using tools. Something that we tend to do is translate something human into graphics or objects. It would be nice to have a tool for that, that immediacy.

A good example is what studio Front did, They developed a chair by drawing with a tool in their hand. They had these cameras set up in space, and they draw by moving their hands in 3d. The cameras captured their hand movement and that's how they created their product.
We are also quite interested in appropriating different tools that exist. But I don't know what these are. These could be different things that a specific project makes us think about. For instance, there is a project we did about 8 years ago, for Glasgow. And we ended up using a pink roller to make a typeface. We never thought that we want to make a typeface with a roller. But while doing this project we understood more about it being really quick and connected to the city, and really improvised and temporary. It was an unexpected idea.

Internal structures questions

How many people do usually collaborate on a project?

The studio is founded by me and Eva, we are the lead creatives and then there are a few designers that work with us in the studio. It can be to four designers. Then we also work with different collaborators. Sometimes they're completely new because we're, we're developing something that we haven't done before. But then we also work with a surplus of people that we've worked with a long time like writers, photographers, printers, financial companies. There's a couple of type foundries that we use.

STUDIO TEMP GUIDO GREGORIO DAMINELLI, CO-FOUNDER/ART DIRECTOR

General questions

What term do you use to name identity projects?

For Italian clients "progetti di identità visiva", often also just identity because the visual is implied. For non-Italian clients, visual identity or brand identity. I honestly never thought about it.

Do you make a distinction between visual and brand identity?

No because in our case it is always visual, we don't deal with marketing strategies, naming, or anything like that. Just the visual part.

To which industry do your clients belong to?

A bit of everything, fashion, culture, music, design, industrial, a lot of art, products, institutional projects as well, frankly a bit of everything.

Do you use different approaches with customers from different sectors?

We try to be as consistent as possible with our approach. Then it obviously depends on the client and the size of the project. The process is similar in one way or another.

Do you have clients in the fashion industry?

In the fashion sector, we deal with different project typologies, and we have different customers. We do textile graphic projects, then we do projects in which we create the identity. Then we do graphics for the collections. All of these projects are quite different and have different processes.

Is your approach different for projects related to fashion?

The main distinction is that fashion usually has higher budgets. Obviously, the approach is a bit different for various dynamics But we like to try to bring in our approach, that comes different worlds like culture and art. We like to apply these methods to different sectors. In the case of fashion, it's interesting because it is a sector that is used to different visual languages.

What is the first thing you start with when dealing with an identity project?

Research, we try to find out as much as we can about the client and the topic we are dealing with.

General process questions

How is your design process structured?

It is unstructured. The studio was founded by three partners, all three graphic designers, and there is no one who takes care of other things. Although we have been doing this job for 15 years, it is always a bit complicated to manage the process. But we still do it one way or another.

Can your process be broken down into phases? Briefly describe your phases.

Before we start doing anything, we need to know what we are talking about. It's very essential. After that, there are too many variables. It depends on how complex the project is. Generally one of the three partners is responsible, and then we work with other people who help us, the guys here in the studio, or even other people who are not physically in the studio but help us remotely. The project is carried out through review rounds, drafts, and so on, the usual things.

Can you describe the process in a specific fashion project?

Preliminary research is done, then we did field research, we put together a small presentation that summarized the research. Fortunately, our type of customers know what we are talking about, so the exchange with them is quite interesting. This brand is very particular and connected to the industrial world, despite being fashion. Practically on the sticker of an envelope of a shipment that they had sent us, we saw a strange code. A sign that is not typically used here but exists in the glyphs. Eventually, this became one of the key elements of that identity. Then clearly a series of choices derived from how the identity is expressed online. We have created a system, we rarely work only on the logo. We create systems where a series of parameters are applied across various media. Then prototypes have been made.

Is your process intertwined or rather linear?

Depends on the project, rather intertwined.

What is the most complex part of your working process?

Specific process (phases) questions

What is your favourite part of the working process?

It's nice when you discover something new, in my opinion. We are all still quite young, but since we are working for a long time already we have seen much. In the end, many patterns repeat themselves.

What is your least favourite part of the working process?

The administrative part. We have no one to take care of it, so we have to do it ourselves, but we do it with annoyance and difficulty.

When do you get inspired the most?
When do you get inspired the least?

Specific process (research) related questions

Do you collect information for the project?

Yes, it is an essential part of your work.

Then it is clear that by dealing with truly different things, there is no single way of doing things. But the important thing is that you need to know what you are talking about, otherwise you won't be doing an honest job.

How do you collect information for the project?

We usually try to avoid looking only at the internet. We try to look at physical things as much as we can. Whenever we can, we try to do physical research. We go to companies to see their archives. Furthermore, we try to find out about the production processes or the history of the company.

How much time do you spend collecting information?

We spend a lot of time on this part of the job.

What instruments do you commonly use for collecting information?

We do everything that can be done when it can be done, but there is no specific instrument we use, it varies, and that depends on many things. We buy books, do field research, interviews/talks with the client.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?

That's difficult to answer, since that's the job. That's the core part of our job. We like to try and mix the visual languages up a bit. For example, if we work on a contemporary art book, we like to not necessarily use a typical visual language for that sector. Same thing for the design of a fashion invitation, design brand, and so on.

On which parameters are your visual choices based on?

We like to explore worlds that are not classically identifiable. We are interested in different visual worlds, and technical languages like industrial branding, or everything connected to spontaneous graphics. For example, a greengrocer's sign is made by hand. He wrote in a way for no particular reason but maybe as a designer, you can see something in it, and it ends up on the catwalk in Paris. This is exciting for us. We like doing things that are not quite standard.

Specific process (tools) related questions

How much of your process is depended on computer software?
Which digital tools do you use?

We all work with the adobe software, someone uses programs for drawing characters, 3d tools, video editing, illustration with the iPad, programs for making illustrations, but we don't do many of these things in-house. As for the digital, social world, I don't know, I don't like anything in that world. Imagine that there are so many tools that can be used in that field.

How much of your process is not depended on computer software?

We spend more time on the computer than we would like, but probably less than others.

Which other tools do you use?

We do a lot of things the old way. We use paper and pen, scissors, tape, glue, markers, crayons, spray cans. These effects

are not reproducible digitally.
If you want to make a stamp, for example, have a stamp made! You literally do it, you stamp a piece of paper, you take a scan, a photo, and that and a stamp. If you do it with programs, it doesn't look real enough.

What instruments would you like to have?
I don't know. Tools are just tools. It would be nice not to have to use the keyboard but a USB cable in the head. It's a question of interface, i.e. how long it takes you to transfer what you're thinking to the instrument. If you've got a pen in your hand, it's more direct than opening a program.
At the end of the day, we are working with patterns that repeat themselves. We work in the head, and sometimes you know right away what is going to work and whatnot. The important thing is not to get too attached to the first idea, because it can be replaced the second after.

Internal structures questions

How many people do usually collaborate on a project?
It depends on the project. For small projects, even just one of the partners. Normally, one of the partners manages the communication with the customer, and then maybe another person. Projects that are starting to be more structured may also have two partners and several other people. Dramatic projects also all three partners. At the moment we are three partners plus four other people, the number more or less is this. We usually work together on a blue table. But right now we are in contact with five other collaborators who are not physically here.

What are the hierarchies between the people that work on the same project?
There is no real hierarchy. It's only that if things go wrong, we three partners are responsible for it.

ZAINA, PATRICE BARNABÉ, CO-FOUNDER/ART DIRECTOR

General questions

What term do you use to name identity projects?
That's something that we thought about quite a lot. The straight answer would be identity, just identity. Then the alternatives would be brand identity or visual identity. But we don't consider identity only in relation to brands. We also consider identity in a larger sense. For instance an exhibition, one could design the identity of an exhibition. In that sense, we just prefer to talk about identity. Then, if we talk to clients we speak about visual identity to avoid confusion because there are also verbal identities, meaning the tone of voice copywriting, and so on. If we want to distinguish one or the other, we would use visual identity or verbal identity. But overall, if we do a brand or a re-brand, we call it an identity.

What is the first thing you start with when dealing with an identity project?
With what we call definition stage, which is basically getting un understanding of the core values of the brand or the positioning of the brand, where they want to be in the market and how they position themselves.

To which industry do your clients belong to?
We are trying to expand our sectors. Especially here in France, you have studios that are super specialized in one type of client or service. This is quite common here. We want to do quite the opposite of that and trying to work in as many sectors as possible with a defined list of services. I think that this also makes the work more interesting.

Do you use different approaches with customers from different sectors?
Do you have clients in the fashion industry?
Yes, now we are doing a packaging line for a new fashion line. In the past, I worked quite a lot for agencies with clients within the fashion industry. I worked for the London fashion week while at Pentagram. In 2017, I was the lead designer for the London design fashion week campaign. I also worked for Missoni, Todds and many others. Two years ago, we did the identity for a

sustainable fashion brand in Paris, but it never saw the light yet.

How do projects for the fashion distinguish themselves from other projects?

Depending on the level of fame of the brand, the difference for me is that in the fashion industry it's a lot about opinions and about ego rather than rational thinking and appropriate solutions. It is sometimes difficult to come to a solution without having discussions.

Solutions are sometimes purely based on aesthetics, which is problematic for us because we work very conceptually. Another difference in fashion is that timings are incredibly fast. Basically, they need everything today. We generally like to take our time when developing solutions, and for the fashion industry – and this does not only apply to the design phase – everything needs to be done quickly. That also contributes to a lack of depth and conceptual thinking, because that requires time. It's a way of working, and I've done it, I just don't enjoy it massively.

General process questions

How is your design process structured?

We have a very systematic approach to projects. Normally we have 3 or 4 stages for project. If we are doing a complete rebrand identity, we start with a definition stage, which is basically getting un understanding of the core values of the brand or the positioning of the brand, where they want to be in the market and how they position themselves.

We call that definition stage. If that's quite clear from the get go, if they know who they are and what they want to be, we start with stage two, which is concept. During the concept stage, we basically define the visual language for the client/project. We always present only one root where we establish the visual language, and we show it through many unique applications. We normally have a deliverables list and maybe sometimes we give ideas of how the brand would look on other applications. We do revisions on that and once the concept stage is kind of approved we move on to the third stage which we call development. Which basically is the development of the design concept into the final design solutions, and that's also a stage where the client has to provide the final content. For instance copy writing or images and information or whatever, the real content is.

So that's the stage of final design and concept improvement if necessary. The fourth stage is production which basically covers the creation of the final artwork and all the deliverables and of course production, so we collaborate with producers, suppliers, we ask for quotes, we present those quotes to the client and once that is approved we send everything to production. If necessary, we also control the production process. If possible, we do it because it's always better to have an eye on the final production, to ensure the quality of the work.

Can your process be broken down into phases? Briefly describe your phases.

Normally we have 3 or 4 stages for project. Which are definition stage, concept stage, development and production.

Is your process intertwined or rather linear?

The ideas are to be linear, it's a step by step kind of process. Sometimes the project is very production led. The linearity allows the client to feel safe. For instance, when we present the ideas, they want to sign off every stage and approve every decision. We always present and discuss and when each stage is completed and all parties are happy we move on to the next one.

What is the most complex part of your working process?

Specific process (phases) questions

What is your favourite part of the working process?

I guess the concept stage is by far the most challenging one because you need to present your big idea to the client. If they don't like it, it is kind of an issue because you have to change it until they like it. We put a lot of effort into that stage. We don't share much of the work until the presentation. We are not a studio that shows the screen and shows every draft. That way of working is quite a bet, many studios prefer to share day to day what they do, but we don't think that the client is ready to, or able to understand the process of design. It's kind of the same – if you want an analogy – like going into a restaurant, and before you are served your dish you go into the kitchen and see every ingredient on the table, and you have to imagine that all these ingredients will make a nice dish. Not everyone

can do that, and it's the same for design.
I guess, to get back to your question, the concept phase would be the most challenging and also the most interesting phase from a creative perspective, because you are putting all your mind into the work. Then the development is more technical. The production stage is even more technical, you have to be careful about mistakes. It's also exciting after that stage when you receive the final product. Even if it's something small as a business card, it's always a very exciting moment.
Your question said enjoyable, but I don't know if enjoy is the right word, I would say challenging. I sometimes wake up in the middle of the night just thinking about ideas, or in the shower. I'm constantly thinking, so I'm not sure if that's enjoyment. It's a deeply creative process.

What is your least favourite part of the working process?
I guess not enjoyable would be having to ask the client for content. Sometimes the content is unfinished, and you have to chase the client to get it. There is another thing I don't enjoy doing, like writing lots of emails or doing quotes. We would happily like to delegate that part.

Specific process (research) related questions

Do you collect information for the project?
Yes, we collect visual and written information about the client.
How do you collect information for the project? During the project, we usually have a shared folder with the client. We would ask the client to provide us with all the content we need. We use a questionnaire we use at the beginning of the project. We use it to gather information for the brief because normally briefs are not always very well done. Those questions would help us answer questions that might pop up later on.
Firstly, we try to get an overview of the company, story, and values of the companies, how these are manifested through the company. Then we ask about positioning, target, and competitors. Recently, we started talking to clients about sustainability and ecological responsibility.
We ask about the project objectives, what they are hoping to achieve with the project, how they see their company in 5 years, what their budget for the production is. All those questions

help us during the design process.
We ask for the client's inspiration, mood boards. We often have to read between the lines though and reinterpret the images ourselves. We always also do our research, which is a combination of what they showed us and what they want to look like, and what we think they should look like. There are times when you need to get out of the internet and look at old signs, old books how brands looked in the past, and so on. Otherwise, you just get inspired by the same things over and over again. We are quite conscious about not replicating trends. We always avoid coping.

How much time do you spend collecting information?
Depending on the project, usually quite a bit.

What instruments do you commonly use for collecting information?
The internet. We have a long list of studios that we admire and find inspiration from their projects. We don't copy their work, we look up to those studios and find inspiration from what they do. We also look at brands. We have a good share of brand knowledge, in the sense that we can reference things. In all sectors, kind of. Having a good knowledge of the industry is a good basis, and then we also get inspired from everyday life, whatever you see in the streets, whatever you read about, movies, music. Inspiration comes from every place.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?
Well, I guess that's the science of design – as you study. I don't know if I can put that into words, but I guess it's like a blender. You kind of put all of those references into a blender and whatever comes out of it is a mix of references and stuff that we think should be there and make sense. We always try to mix references with our own approach. It's a mix between the stuff we research and our own interpretation of that. How exactly it translates is hard to answer.

On which parameters are your visual choices based on?
We recently worked for a photographer based in London, she had quite specific references. She wanted to do a booklet about

a series of her images, and she wanted the booklet to look like the first pamphlets of the 'archaeological society'. We had a look at her references and our interpretation of that is a mix of that reference with whatever we thought is contemporary and offering a new solution to that. We don't replicate works of others as well as historical references. We are always referencing in a contemporary way. We don't imitate, we reinterpret.
Specific process (tools) related questions

How much of your process is depended on computer software?

We spend almost every hour of the day in front of the computer. Which is not ideal, but it is the way it is. Especially now during the pandemic.

How much of your process is not depended on computer software?

The moments where you can avoid the screen are perhaps during the research stage, where we can look at books or do some field research. We sometimes look at references in stores, when we deal with certain products.
When we did a fashion project a while ago, we were looking at garments and labels, tags, shopping bags, and everything. We store leafiets, from museums, business cards. If we want to do something printed, for example, we think it's better to have some physical things that we can actually touch and see. Over time, we collected hundreds of business cards, books as well, programs. It's not for the design but more formats, different ways of binding, and printing.

What tools do you use for identity projects?

The Adobe suite, mostly InDesign. When we deal with type-related projects, we use font creation software. We are not big on tech.

What instruments/tools would you like to have?

I never thought about that. I don't know. I'm quite obsessed with mistakes and errors, finding all errors in designs. It would be nice to have something that bulletproof everything you do. That would be easy. But other than that, I don't know if I have an answer to that because with the tools that we have we manage to do anything really. Maybe a printer to do nice foiling and see it right away and not spend hundreds of euros for printing. It would be nice to have something that creates little samples by just pressing a button instead of doing mock-ups. We do spend a lot of time doing mock-ups to show the clients how things would look like. That's also why we store business cards and stuff like that so that we can show the client what embossing is, and more generally how a finished product could look like. Otherwise, we mostly rely on the truthfulness of the mock-ups, and that's time-consuming.

Internal structures questions

How many people do usually collaborate on a project?

We are a very small studio with just two founders and designers. When needed, we collaborate with other people, designers, copywriters, and so on. It usually depends on the project's size. When we deal with the construction of websites, we require a developer because we don't do that part. If we don't get enough content or well-written content, we would need a copywriter. If there is the need to do strategy, then we would need a strategist, but typically only big brands need that because it's quite costly. Then, when we need to print stuff, which is mostly the case, we collaborate with suppliers and printers. If we need other visual content like illustrations, photography or infographics, or custom fonts, we partner with those professionals.

What are the hierarchies between the people that work on the same project?

Since we are just two, there is no hierarchy.
Mostly we are just us designers and external developers and printers. We try to partner with different people because it's nice to create this network.

POST NOVIKI, KATARZYNA NESTOROWICZ, MARCIN NOWICKI FOUNDERS/ART DIRECTORS

General questions

What term do you use to name identity projects?

M: visual identity.

K: In polish, it means the same.

M: We don't use the term branding, because branding for us is something more corporate, and we hardly ever design identities for such products. We usually create identities for exhibitions, museums in genera, or lately for events or stuff like that.

K: I think the term identity is more open, while branding is very strict.

M: Branding has more of its own language, it's very precise, it has a brand book and specific elements. We often treat identity in a more loose way, not that strict.

What is the first thing you start with when dealing with an identity project?

M: Of course, we start with research to know all about the context of the project.

K: It can be quite crucial because identity is the first thing you'll see. In the case of an exhibition, for example, the identity can determine if you decide to visit it or not. Therefore, it's interesting to use it as a tool to make an introduction.

M: It's the first contact with the visual language.

K: One can treat an identity also as speculation of some sort, by creating a visual language that is completely different from the exhibition itself.

M: One can create an identity that is not really connected to the real thing. A bit like in marketing when they come up with values that are not necessarily connected to the company, but it helps to sell a product. It's a way of manipulating the consumer's feelings.

K: This way of speculating and playing is the most interesting for us. To which industry do your clients belong to?

M: They are almost all from the cultural field. We work a lot with museums in Warsaw and across Europe.

K: Curators, writers, galleries, architects...

M: Architects, very often. Lately, we started working more and more with theatres. We are building identities for theatres, and if the theatre already has an identity, we are sometimes asked to create the visual language for a new season. Sometimes we are also asked to renew existing identities.

M: We also work with academic institutions, with scholars or scientists.

Do you use different approaches with customers from different sectors?

K: Nowadays, the approach is quite similar in every project. Once we understand the situation, we want to find a clear direction to follow with the clients. The cooperation with the clients is really important for us.

M: We feel like the best way of cooperating with the client is through a long process, which can last up to half a year or a year. Then we are able to have a strong connection to the client and are able to build a visual identity that replies to the demands and the environment it acts in.

K: It sometimes depends on the clients. People from the theatres for example are completely different from people from museums. It is different to talk to them and their visual references are quite different as well, they would find different solutions for the samevisual problem. What I mean is that each field creates a different way of thinking, and sometimes you have to spend a bit more time with those people to understand them.

Do you have clients in the fashion industry?

K: Yeah, a few. Sometimes these clients are in between fashion and art.

M: We are now working for a company called Space friends. But why are you asking about fashion?

Is your approach different when you deal with the fashion industry?

M: Yeah, we worked for one specific fashion client that had a higher budget. But the client asked us to do a project similar to our previous ones. Since we usually work a lot with artists, also the fashion project mostly develops similarly. The clients see our projects for artists and ask for something similar. In that case, we were asked to build an identity, and for us, it was similar to the identities we build for galleries or museums.

M: We more or less used our usual approach of presentation

and execution.
K: What changes a lot in fashion is the timing, this sector moves faster compared to the art world.

General process questions

How is your design process structured?

B: It usually starts with meeting and talking with the client. It depends on the client and whether we already know him or did previous work together. We have numerous long-lasting clients that we are ultimately friends with.
K: At the beginning, we are trying to learn the language of our clients. For example, the word 'simple' can mean very different things and can be interpreted in many ways.
B: As a second step, we would look for references. Not necessarily design references, it's more a way to understand the client's visual language. Then we present these to the client. We try to confront him with new possible ways to present himself.
K: We basically try to slowly let him out of his comfort zone and show different approaches and solutions. This is also ongoing research for us because we need to be fiuent with the latest references and popular artefacts of different areas. As designers, we like to break rules, but to do so we must know the existing rules very well.

Can your process be broken down into phases? Briefly describe your phases

M: Most of the time, we work on more projects simultaneously.After the research part we present some solutions, discuss them with the client, implement the changes, and like that the project appears.

Is your process intertwined or rather linear?

K: Ideally, we would like to have this really smooth working timeline, but that's not often the case. Especially now with COVID, there are a lot of unpredictable complications.
Specific process (phases) questions

What is your favourite part of the working process?

K: What I really like is when I learn new things through design, learning through design.

B: I particularly like when through a project other interesting possibilities open up, like travelling, visiting new places, getting to know interesting new people. It gives some extra value to our everyday life, and it expands the working routine. It is inspiring not to be just in the office but see new things, read books about it, and so on.

What is your least favourite part of the working process?

B: It is very tiring when the client doesn't know what he wants. Also, when the project is delayed and expands beyond the agreed framework, things like that.

Specific process (research) related questions

Do you collect information for the project?

K: Yes, we do. Sometimes we ask the client for specific materials, other times we gather references. As mentioned before, we really try to know as much as we can about our clients and their environments. This stage of the project can be very refreshing, especially when we work with interns from other countries. It is interesting to see how different the references can be depending on the cultural background.

How do you collect information for the project?

B: Foremost, we build a platform with the materials that we receive from the client. In a second moment, we make the same thing with our materials.

How much time do you spend collecting information?

K: Sometimes even a couple of months. When we can, we like to alternate the more intense working phases with research.
What instruments do you commonly use for collecting information? We don't use Pinterest, that's a rabbit hole.
B: It can be useful in some cases, though. We don't have specific tools for that. In many cases, we are guided by the project itself and in that case, everything can be useful
books, articles, or anything. Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?

K: References defiantly play a big role. If I have to design a

book, for instance, I like to browse through the books we have in the studio. We also like to cross the references. For example, use the style or attitude of a magazine for a book or vice-versa. On which parameters are your visual choices based on?
B: What we do, for example, is narrow down certain things step by step. So, I could for instance narrow down the style I want to use, or the kind of visual language that my output should have. Then we decide on the different media and formats that we want to use. Every project can be executed with different tools, you know. We try to vary that. Of course, we have some sort of studio style, but we try to stay as fiexible as we can.It's a series of conscious decisions that narrow down the attitude of the project and how it is going to present itself.
K: I really like the idea of a disturbance in the design, you know, when you see something different or wrong. Something that can be perceived as too big, too small, or too ugly. In our aesthetic, in fact, we are not looking for 'nice images'. We prefer to create some sort of noise that is memorable and makes you wonder about the designer's decision.
B: We are always trying to create something multi-layered that corresponds to the content. We are working with a visual output that can be read on multiple levels. This is probably our most common attitude towards what we are doing.

Specific process (tools) related questions.

How much of your process is depended on computer software?
B: Mostly on the computer.
K: Yeah, we mostly work on the computer.

How much of your process is not depended on computer software?
B: Almost nothing.

What tools do you use?
K: Computes, the Adobe suite, we never try to use open-source software, because it's harder to use sometimes.
B: We don't really think about software or tools.
K: But it's interesting to change and experiment with tools. A few days ago, I was trying to design something in PowerPoint for a client, and it's a completely new tool for me. It's refreshing, and you cannot do all of your tricks, maybe it's good to

change once in a while.

What instruments/tools would you like to have?
B: Better tablets for drawing.
K: What would be interesting for me is designing posters like Andy Warhol did, through phone calls. You make this phone call and say what should be on the paper. So another person has to do the poster for you, add interpret what you said.
K: It would be nice to work with voice controls. There is a website that is generating posters with different styles. But of course, it was a failure.
B: It would be nice to tell a program what style you have in mind, which typography, colour palette, upload some references and the content builds itself. Without any manual work at the computer. Like working with commands straight from the brain. Without touching or having to use an interface.
K: It's some kind of art direction. We worked with photographers and gave them some idea, and what kind of feeling we would like to get, and it was interesting to see after all what images they came up with. I think that nowadays graphic designers are less responsible for the production of images, but more for the production of concepts. It's more than designing one image, it's more about the whole strategy. The mediums in which we work with also drastically shifted, it seems now that the most important part of the identity lies in social media. It shifted more from graphic design to art direction.

Internal structures questions

How many people do usually collaborate on a project?
B: It's actually just two people, us. The biggest amount of people in the studio was 4 or 5.
K: We never hired other designers. We usually work with interns for about 3-4 months.
B: We don't hire graphic designers. Sometimes we collaborate with developers or photographers. We tried to work with other graphic designers, but it never works out.
K: It's hard to find a person who thinks like us.
B: Even the two of us don't think in the same way. But we never met someone we would have liked to work with for a longer time. It's very difficult to become a part of our studio

because we are...
K: This is also why we use the name Noviki, which now become Post Noviki rather than our names. Our friends used to call us that way and when we decided to start the studio we thought that this name is great for us.

What are the hierarchies between the people that work on the same project?
B: It's usually just the two of us, and sometimes we have interns helping us out.

PARCO STUDIO, LOREDANA BONTEMPI AND EMANUELE BONETTI, CO-FOUNDERS ART DIRECTORS

General questions

What term do you use to name identity projects?
L: That depends.
E: Brand Identity, 'immagine coordinata' almost never.
L: Internally, we call them identities.
E: Externally, we refer to it as visual systems. The reason we call it a visual system externally is that we have realized that we apply the same rules to complex systems like websites as we would apply to an identity system. In any case, it is a question of designing something that has a level of coherence as well as a level of variability and usability for the user.
L: This is when we explain what is done, then we further unpack terminologies within the visual system. Especially while working, otherwise we wouldn't understand each other.

What is the first thing you start with when dealing with an identity project?
To which industry do your clients belong to?
E: We don't have a particular target sector, nor a particular client direction. We work a bit for all sectors. It's also true that over time, our working areas were created quite naturally, not because we actively chose them ...
L: Well, yes, to a certain extent we made choices. Our working areas were created from our own interests. That is, at a certain point we decided that we wanted to work with content we believe in. It's different to design for something you believe in, there's a stronger interest.
E: In the last few years we've tried to be a bit more selective, and in the end, that system feeds on itself. If you start doing something, then obviously you get similar stuff. In recent years, the areas we have worked most on are architecture, which is something we have been looking for. The rest is for socio-cultural areas, events, art.

Do you use different approaches with customers from different sectors?
L: Yes. Actually, it always changes a bit according to the request. The creative part stays more or less the same but the prelimi-

nary part, which is very important to us, may vary deepening on the project and team size. In that phase, we usually do mood boards, personality sliders, benchmarks, and all of that changes depending on what kind of people you have in front of you.
L: It changes a lot depending on whom the client is.

Do you have clients in the fashion industry?

L: Yes, a few, but in our case, it's always more connected to experimental or cultural clients. We worked for a client that does its own local production of clothes, but they also show their process in a showroom outside a theatre. So they are basically people who work with culture anyway.
E: It's more likely for us to work with fashion indirectly, with people or companies that work for fashion. We worked for a management company and a photography agency, or with a photographic studio that mainly deals with fashion photography. Our projects that are directly connected to fashion are rather small. They are artisans' projects, often connected to particular projects like sustainability. We had projects linked to the LGBT community. Things like that, not big fashion brands like Louis Vuitton, for example.

Is your approach different for projects related to fashion?

L: Yes, because in any case, they have different intentions and objectives.
E: But our approach changed also between the two smaller fashion projects we mentioned. For us, it's not so much a matter of sector but rather from case to case.

General process questions

How is your design process structured?

L: There is a preliminary phase in which we analyse the case, first alone, then with the client. We strongly believe in cooperation. We've based some of our research and methodologies on that. For us, the client is an active part of the project, and we include him from the start to understand what the right direction could be. Obviously, we have an idea of what is 'right' to do, but every time we start a new project we try to understand the customer's needs as well as we can.

Can your process be broken down into phases? Briefly describe your phases.

L: Yes, our process is becoming more and more defined. There is a preliminary research phase that lasts two or three weeks, then there is an ideation phase that can last up to two weeks. This is the part where we come up with ideas and put the creative concept down. Then we make a presentation for the client and based on the client's feedback we define the final version. There might be iterations we need to elaborate on in another few weeks.
E: In short, or a more abstract definition of our process would be then so-called double diamonds. Basically, In our process there is a part of opening the diamond, this is an exploration done by the studio, and then there is the synthesis part that which is done with the client. So the idea is to start out with multiple options and filter the right one together with the customer. This also helps us control where we are going with the project.
L: We do initial mood boards, for instance with three boards, but they are not really three separate directions, these moods can also intertwine at some point.
E: We usually do different proposals, but the idea is not to arrive with three finished proposals but to have three concepts, suggestions, which then have to be refined in some way. This also means that you hardly work immediately in detail on a proposal and get attached to it. It is as if through this process there is a constant focus. It starts from very blurry and gets to focus by trial and error.
L: Our approach comes to form the world of development and these ideas of release soon, release often. Therefore, without finishing or finalizing the project, we make releases to the client during the process. We also apply this philosophy to the finalized project. That is, we make final projects which must however be open and fiexible to be resumed at some point.

Is your process intertwined or rather linear?

L: The process can be intertwined, but there are normally no steps backward. That in fact would be a problem, if you take a sept back it means that something problematic has happened.
E: This shouldn't happen, especially because we start from the generic, blurry to get to something focused. We reach this focus with the involvement and awareness of the client, so going back usually happens when you change contact person.

Also, because the important part of the preliminary phases, like analysis, study, mood boards, etc. serve to define common ground with the customer. It makes sure that the same language is spoken.

Specific process (phases) questions

What is your favourite part of the working process?

L: for me, it's the creative part, after all the analysis there is that moment in which start throwing with ideas. This moment can be very surprising. Usually this part is mostly done by Ema and me, and it's a lot of fun.

E: For me, it is the first presentation after the analysis phase. So at that point, the mood board is already done, as well as the personality slider. At that moment we have three proposals, and we apply them in a series of contexts but without the hall of making the final version that goes into production. So it's just the drawing and creativity, This part is fun because it is the first focus on what the identity could be.

What is your least favourite part of the working process?

L: Perhaps the part we like least is the re-work.

E: We don't usually do re-work, but if necessary we do a maximum of 3.

L: Doing a second re-work is already a tragedy, so this is defiantly the part we like the least.

Specific process (research) related questions

Do you collect information for the project?

L: We basically do benchmark research that can start through very different media where we can find graphical inspiration. It could be the web, but also our gallery, which for us is a research tool. This is one of the reasons which we founded the gallery in the first place.

How do you collect information for the project?

L: We basically do a benchmark search that starts from different places where you can find graphic projects, like the internet, but also our gallery, which for us is also a research tool. It is one of the reasons we did the gallery.

E: The client himself gives us some ideas.

L: Our research is only visual but also goes into the topics connected to the projects or the competitors.

How much time do you spend collecting information?

L: Depending on the project, a couple of weeks usually.

What instruments do you commonly use for collecting information?

L: We use mood-boards and when we started doing them, we noticed that they are important for connecting with the clients. Then we make personality sliders, which are a fairly standard tool, that helps us define with words the tone of voice and values connected to the company.

E: It is primarily a tool to stimulate discussion with the client. Because, in any case, these are subjective choices, there is no right or wrong, but it's a way to start a discussion about the meaning of certain words. In fact, we are not that interested in where the client places the

L: It also serves to make the workgroup account for what is happening and what the objective is.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?

L: The mood boards are definitely a big help. Ema and I have been working together for many years and when he shows me an image I immediately understand where he wants to go with it. Not always, though, with is interning as well. When you mean different things, interesting things can come out. There is also a sort of personal taste and things that are part of the contemporary world, which need to be taken into consideration.

E: There is always a concept or a central theme that can be very abstract or very tangible, then a visual translation is made. For example, one of the last projects, we worked on is 'Magnete' a cultural centre, and one of the two routes we showed was the idea of magnetism represented primarily with typography. The name was part of the assignment, and we developed that as well. The whole idea was to show the concept of attraction through typography. We choose to work with type taking into consideration that this identity project had to be used by many subjects, and therefore we developed very strict rules to maintain a certain level of coherence.

L: In my opinion, beyond the research that is done at the moment there is also a background of research that we have done for the last 15 years or so, and we carry that with us in every decision we make.
E: But the important thing, at least for us, is to have a visual culture, because that feeds us and what we're going to do.
It is difficult, or rather impossible, to invent something from scratch. We are always reworking something else or translating from one context to another. We've always been pretty fixated on not having a specific studio style. We thought that since we are a graphic design studio and artists, we shouldn't have a recognizable visual language. Then we realized that actually that just happens at some point, maybe it's not the fact that we use certain fonts but rather that we have a certain taste, approach, background, or interests. And in the end, this is what makes us ourselves as graphic designers. How it works for us is more or less that we have a blurred idea of how some things should be or should look like, and then we try to construct and focus it step by step. That's because I believe that if we don't know what we are looking for, we might not recognize it when we find it.

Specific process (tools) related questions

How much of your process is depended on computer software?

L: In my opinion, we carry out all the phases both on the computer and analogically. For example, when I think it always helps to write down things, or draw schemes. I often need paper and a pen.
E: The final drawing is definitely done on the computer, maybe not the sketch, though. Lori taught me that you hardly get the idea of staring at the computer. She also always insists on working on the project as soon as possible.

How much of your process is not depended on computer software?

L: We do research online, but we also research outside, we are serial accumulators of graphic artefacts since 2007, so we have a lot of things to see and touch in our studio.

What tools do you use?
What instruments/tools would you like to have?

E: Something that transforms our thoughts into the final thing would be nice.
L: Maybe something that accelerates the more technical parts.
E: Jokes aside, in terms of tools, project management is a part where there is still room for growth, the communication within the studio is okay, we use Slack, and that works well. Communication with suppliers, especially with those we work with the most, is okay, communication with the clients on the other hand can be difficult. The clients are an active part of the project and there are things we expect from them, for example, the production of content.

Internal structures questions

How many people do usually collaborate on a project?

E: It depends on the phases, however, in projects we tend to always have a similar structure. There is always one of us, a designer and in some cases also an intern. There is also always the involvement of the project manager. What actually happens very often is that there is one of us, another designer, and the other somehow orbits around the project.
For most projects we are together on the initial part and then slowly one takes the responsibility and the other slowly fades out and remains for revision and stuff.
L: The project manager coordinates all the studios, he does the monitoring on all the activities like timing and so on.

STUDIO MUCCA, MATTEO BOLOGNA, CO-FOUNDER/ART DIRECTOR

General questions

What term do you use to name identity projects?

It can be interpreted in a million different ways. When I was younger, the job that I'm doing was called corporate identity, because usually, it's corporations who are spending money to have their identity designed by design firms. And it was a very, restricted discipline in which one would design the logo or the mark mostly. The basic elements that were helping to recognize a brand in public. So for many, many years, I think companies thought that their brand was their logo. Nowadays, the client or the brand – sometimes it's very difficult to differentiate between the two – needs to express their personal through different touch-points. So, branding could be photography, branding, could be copywriting, branding could be typography, branding, could be colors, all these different things. Also, marketing actions are a brand expression.

So, what we do is a bit of every all of that, we tend to work on the tenant of the main tenant of the brain, helping them to understand strategically what they are. We take care of the strategic part of understanding who they are, and how they need to be expressed themselves. Our job is to give them all these different elements and say, if you use this color, make sure that you use it always with this kind of copywriting, with this typeface or this set of typefaces. We give them the ingredients for the recipe that is then the brand.

What is the first thing you start with when dealing with an identity project?

We start by giving the client an estimate of costs. We define the scope of work.

To which industry do your clients belong to?

We do everything from hospitality, hotels, restaurants, to products, like physical products, not digital products, we do a wide range of offerings.

Do you use different approaches with customers from different sectors?

You know, the truth is no.

The brand platform, the strategic part, it's more or less the same for every project.

Do you have clients in the fashion industry?

We had some clients in the fashion industry. Or actually not, we have beauty, but not fashion currently.

Does your approach differ for fashion or beauty related projects?

No, actually not. We use the same approach. Because at the end a brand it's like it's like a persona. The tenants of the branding are the same across all the industries. The marketing that they do then is different because they talk to different kinds of people, they have to talk in different ways. The scale of their marketing is different. Nevertheless, who they are the tenants of the brain, which is what we do, can be determined before.

General process questions

How is your design process structured?

We start by giving the client an estimate of costs. We define the scope of work. The client comes to us with a certain idea on how the project needs to be developed. And after a few conversations with them, we sometimes realise that they actually need a different output from us. We usually do workshops with the clients to understand what they really want. We run these workshops, we used to do it in person, With a lot of post-its, now we do it digitally.

We developed a process that works pretty well for us. It helps runs understand their goals. Sometimes through the workshop, the clients understand that they actually require something else. Sometimes we even call it client therapy. After we do this workshop, we do some research based on the information that we gathered from the clients. Then we prepare a brand platform document, which is a tool that we use to determine the several checkboxes that the brand needs. Based on this document, we start creating the brand. And when we start building the brand, even designing a logo or a typeface or choosing a color, we have to make sure that the choices that we make are refiected are the refiection of what has been written in this document.

Can your process be broken down into phases? Briefly describe your phases.

Definition of the scope of work, workshops with the client, create the Mucca brand platform with the client. Based on this document, we start creating the brand. We have a couple of rounds of presentations with the client until we define the final content.

Is your process intertwined or rather linear?

In an ideal world, it would be linear.

Sometimes we skip certain parts. For instance, we skip the brand platform if the client has a clear understanding of its needs, and we understand clearly what he needs. Sometimes, when if it's a small job, that sounds fun, it could be that the brand platform is overkill.

Specific process (phases) questions

What is your favourite part of the working process?

A bit of everything I like I should favorite part is when I see the work that my team does because I have an amazing team. It's like, whenever they present something to me, and with the ideas, I'm always so grateful to have this team that works so well. And it's so dedicated and smart. That's the best part. And then, and then, my favorite part is when I have the rare chance of working on a typeface for a client. And my favorite part is when I really work on the curve of that later in for that little detail. I like very detailed things, as well as I like to look at things from very, very far away. In general, I'm always trying to be nice to people. When I moved to the United States, there were a few people that were super nice to me and that introduced me to this world that then I started living in, and I think whenever there's a young designer that one has questions.

What is your least favourite part of the working process?

My least favorite part is talking to my accountant, doing the bookkeeping part, making financial decisions. And that's something that I feel I'm learning more and more on how to do it. There are people for whom it's easy, but for me, it's always kind of complicated to do.

Specific process (research) related questions

Do you collect information for the project?

Yes, It depends on the scope of the project.

How do you collect information for the project?

if it's a project that is well-founded, you know, we can do customer interviews. Customer research, if it's not well-founded could be just, you know, desktop research, you know, looking at stuff online.

How much time do you spend collecting information?

It depends on the client's schedule, our schedule, and the budget. If we have a big budget, we can interview people, for that we usually need someone who does that, they need to set up the interviewing system they and they need to find the people they need to interview. Then we need to write a report and analyse it, we need to show it to the client and discuss it. Everything can take up to two months or more.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?

Actually, I don't, I try not to look at what other designers are doing. Because then I get, I start copying other people. And I try not to do that.

On which parameters are your visual choices based on?

Anything that we do needs to check with the platform of values we created previously. For instance, our choice of fonts refiects the values of the customer and ultimately the concept of the whole project. Our studio also has a particular passion for stencil fonts, so we tend to use them a lot in proposals.

We also use copy in a way that fits the entire concept. Usually, we present about two or three proposals to the client. We do that because we noticed that clients need to compare, and they love to choose, it makes them feel empowered. If you just give them one, they will often ask to see something else. Since we create a brand, platform with the client, we define the concept in advance. We call it Mucca brand platform. So that the visual choices are dependent on it, it gives the project stability. If the client doesn't like something, for instance, he says that the proposal is too serious, we can go back and show

him that he used the word serious to define himself in the first place. We need to make sure that what we show the client is connected to what we wrote down together.

Specific process (tools) related questions

How much of your process is depended on computer software?

Everything is digital. One of our designers is an amazing logo designer, and he sometimes sketches by hand.

How much of your process is not depended on computer software?

In the idea-finding phase, I still sporadically use pen and paper. What sometimes do is this: I take a piece of paper, I fold in 6 or 8 parts, and then I try to have – in the least amount of time six or eight ideas. But they need to be really different from each other.

What tools to you use?

For the research Interviews

What instruments/tools would you like to have/invent?

I would take the people that develop Adobe Illustrator for desktop and kill them. The iPad version of illustrator is so much better, in the way the interface is designed. But in general, I think that what we have so far is fine.

Internal structures questions

How many people do usually collaborate on a project?

That depends on the project size.

What are the hierarchies between the people that work on the same project?

The hierarchy is very fiat, except for the fact that I'm the one who makes the final decision and gives directions. But I'm also happy to sometimes just let the project be taken over. We are a very small team, we are six people. Often the client wants to see me. In terms of structure, we have a strategist who is also a designer, we have a design director who also makes mechanical, we have a designer who also writes copy, we have a boss who is also a receptionist. Everyone does a bit of everything.

STUDIO DUMBAR, MERIJNVANVELSEN, SENIOR DESIGNER

General questions

What term do you use to name identity projects?

We just call it identity. Visual identity is the term we probably use most, but internally we just say identity.

What is the first thing you start with when dealing with an identity project?

We divide it into several steps. The first step is always orientation and strategy. That means getting to know the clients and their needs. We are usually involved when things are changing and that's quite expensive. It is expensive to change your visual identity, and there should be a good reason for doing it. One of the reasons could be for example a merge with another company or a new business plan, opening their company to a new market to whatever.

Once we get involved, the strategy department does the first steps through interviews and putting a strategy document together, and from that, there's new positioning of the brand. Typically before the design process starts we want to know the clients and their needs, and what is the world they are operating in. As designers we are usually involved in a later stage, sometimes we are also involved in the presentation or strategy phase.

To which industry do your clients belong?

It varies a lot. Governmental organizations like the Dutch railway or the Dutch government for example. Nowadays, we have quite a lot of companies from Silicon Valley, for example, like the big corporate star. We also work with cultural organizations, like museums or classic orchestras. We work a lot with blockchains companies nowadays. Generally, we try to vary because we find it important to have this variety of clients that asks a different approach from us. This also makes our work more playful in a way. I think this variety is also our strength.

Do you use different approaches with customers from different sectors?

Yes definitely. It really depends on the clients and their needs.

Our approach in general is to keep things rather simple, simple, and powerful based on a solid idea that needs to be communicated through the identity. This is how we approach every project. Sometimes the client asks us to go all the way, which in our case means lots of coding or motion design. While other times the client just requires a structure where he can apply the graphical language by himself, in some cases it can even be a framework on Microsoft Office. For us designers, this means that we have to deal with a lot of boundaries. It's always about finding the right solution for the client.

Do you have clients in the fashion industry?

Yeah, we worked for Nike and Adidas. Also, Lululemon, but not with high fashion brands.

Do you have a different approach when dealing with fashion projects?

I don't really know. This is difficult to answer. If I look at the identity of fashion brands I could say that at the core they are really simple, use mostly typography. Sometimes they are more outspoken and have an artsy way of approaching their communication. There is a visual language that is more common within the fashion industry.

General process questions

How is your design process structured?

After the first step – which I already explained – we start sketching, and it depends a bit on the identity and its size, but most of the time we work with a team of at least two designers and an intern. Depending on the project, we might also include a motion designer or a creative coder. In the beginning, we start with individual sketching. We look at the brief and at the strategy and try to sketch as many ideas as possible. Then we review everything and select the interesting ones and try to develop them further. Sometimes we also swap ideas. Then we narrow it down until a review moment that we call the kitchen review. Then we invite the client, to have a further review, and normally we show all the ideas we have. This helps us to understand what the client likes. It's a way to get to know the client better on a visual level since the strategic part has already been contained at this stage.

Based on the outcome of the kitchen review, we develop our work further until we have two ideas. That would be the concept presentation. Then hopefully if they like one idea we make a decision and develop the project into a final presentation. After that, we implement the ideas and develop guidelines. And then based on that, another studio or agency develops the identity further. So, most of the time we create the framework, and other, mostly local agencies, start working with it.

Can your process be broken down into phases? Briefly describe your phases.

Strategy, preliminary individual sketching, feedback sessions, kitchen review, development of two ideas, concept presentation, development, final presentation. Depending on the project, the team is composed of two graphic designers an intern, and eventually animator and a coder. Above that, there is always the creative direction.

Our process is rather fiuid. Nowadays, this process in which graphic design works together with motion and creative coding is the main way we work.

Is your process intertwined or rather linear?

It is quite linear. What we now notice is that some clients try to interfere in the process in a way. Some of them for instance want to have meetings every week. We try to adjust to these requests without compromising our process. Our process is really important for creating something good.

Specific process (phases) questions

What is your favourite part of the working process?

The first part is really nice, where you can be creative without judgment. But I also really like the next phase when you have a strong idea and develop it further into a strong identity.

But I Yeah, every phase has its own value. Creatively speaking, I definitely prefer the first phase. But I also like the phases afterward when you have contact with the client and develop the identity further.

What is your least favourite part of the working process?

Personally, I really don't like creating guidelines. So the final phase, where you have everything there and need to write down

the rules. This is an extremely important phase for the client, but not so much for the designer.

Specific process (research) related questions

Do you collect information for the project?

Yes, we have a research phase, and there are two ways to approach it. There is research that is more about the client. It's about how they present themselves to the public, what their competitors are, and so on, and it's based on communication items. For this part, we collect information from their website, social channels, and everything we can find online. We collect everything we can find about themselves and their competitors and pay attention to what visual language they use. For instance, if they use illustrations, photography, colour, typography, etc. The other research we do is an internal one based on technology. We try to find new, ways of creating identities by trying new tools at least once every two weeks. We have a group where all the designers, motion designers, creative coders are there to use new programs and try to make stuff with it.

And what new technologies do you experiment with?

Well, most research is based on motion. But in general, it's very diverse, everyone has the opportunity to bring in a program. Last time we used a stop-motion app. It can also be just a simple app on the phone, and sometimes we discover something in it which is very interesting things.
It's really free, and I think it's super nice!

How much time do you spend collecting information?

Depending on the project, we usually get some research from the strategy team and start sketching from that.

What instruments do you commonly use for collecting information?

This part is usually done by the strategy team.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?

We always judge the design based on the strategy and on the positioning of the client. It's also based on the quality of the

idea,and I think that has also to do with experience. Although I believe creativity is not really based on experience, a junior can have the best ideas ever. It's more that with experience, one can define its choices better and have a better understanding of what the clients want. I also believe that the Creative Director plays a big role because she (Lisa) has more of an overview and helps with the decisionmaking.
That's a bit of how we approach it. It's always connected to the reference and the strategy.

On which parameters are your visual choices based?

There's no magic behind it, at least in my case, and I think this is the case for most designers, it's just hard work. I start with the first idea, and then I let big go. Then it's just about trying, trying, and trying. I don't necessarily believe that good ideas come in the shower, otherwise we would have the whole studio filled with showers. I sketch as much as possible. That is more our approach.

Specific process (tools) related questions

How much of your process is dependent on computer software?

Almost everything, if not everything. I personally almost never use paper and pencil, I always start already at the computer.

How much of your process is not dependent on computer software?

Almost nothing

What tools do you use?

I use a Wacom tablet, a MacBook with a second screen. For 3d designs, we need a strong computer for rendering. Then we use Dropbox, adobe for almost everything. Besides that, we use processing, new apps, font programs, and so on.

What instruments/tools would you like to have?

This is not so easy to answer, I think. Lately, we have been using Figma and what is nice about it is that you can work simultaneously in the same file. In most other programs you cannot interfere though. It would be nice if this feature could be extended to every program. When I sometimes have calls with my colleagues, there comes the moment where I just want

to take over the mouse and try things out myself. I think this is really, really helpful, if you can work in the same document it gets much faster. That's the first thing I can think of.

Internal structures questions

How many people do usually collaborate on a project?

Most of the time, we work with a team of at least two designers and an intern.

What are the hierarchies between the people that work on the same project?

Our hierarchy is quite fiat, but there is some hierarchy, of course. We have the strategist, project management, they are more in contact with the client. So as designers we don't have to worry about all the questions from the client and stuff, we can really focus on the creative process. Then we have the creative direction, lead designers, senior designers, juniors, interns. We mix teams so that we can learn from each other. It really feels like we are a family. What's also unique about the studio is that there are people from all over the world

BASE DESIGN, GEOFF COOK, PARTNER/ DIRECTOR OF GROWTH

General questions

What term do you use to name identity projects?

Either brand identity or visual identity.

I think we will use visual identity when it's typically for non-profits, like cultural institutions, where they are more sensitive to the world brands. So for example, for museums, we always say visual identity, not brand identity, but there is, at least in our mind, is fairly interchangeable.

What is the first thing you start with when dealing with an identity project?

We always start with what we call a discovery and immersion process. It's self-explanatory, it's really learning as much as we can about the client.

To which industry do your clients belong to?

We are very unusual, in that we work with many, many, many industries. But to keep it sort of simple, I would say about a third of our work comes from the like-minded industries of fashion, luxury, hospitality, beauty, food. Another third comes from cultural work, museums, operas, orchestras, theatres, and the final third is a little trickier because that's sort of everything else. That includes tech. It includes schools and education, cities, airports, non-profits. Lots of different things. So we're very unusual in that we are, we work much more broadly than most studios.

Do you use different approaches with customers from different sectors?

I don't think that the approach is different. I think the base is known for a very conceptual approach. We have a 10 point manifesto that governs all of our work. And I believe the first point is the first concept, then design. And so it doesn't really matter which subject area we're working on because we always strive to start with a strong concept.

Do you have clients in the fashion industry?

Yes.

Is your approach different for projects related to fashion?

So I'm not sure that the approach is different in the sense that what I just mentioned concept first, but I think that the teams are different. So for example, in fashion, the art director becomes very important because it's very visually driven. Whereas let's say in culture, the graphic designers or the design directors may be sort of have a heavier, you know, stronger lead, because they tend to be more graphically driven systems. You know, a lot of times we have writers, and a lot of times the writer might take a lead if the content is the driver. So it, I guess, that plays into what you're asking the approach. But that is more personnel-related.

Certain industries have different needs, though. So for example, in the tech industry, we're almost always going to have a motion designer, for example, whereas In other types of work, we might not need a motion designer. So yes, that the sector can dictate the team. Yeah, so it's definitely, I would say that most of our work is graphically driven, generally speaking, so the creative director or the design director on the project has a graphic background. And then everything else tends to be complementary to that motion, writing art direction, and so on. Fashion is a bit different from, it is almost equal parts art direction and graphic design.

Brand identity has evolved from when we started, let's say, in the early 90s, where it basically was a logo, you know, in the early 90s, branding is a fairly recent or brand identity systems have really evolved in our 20. You know, we've been in New York, for 23 years. And when we started, it was like, here's a picture, here's a logo, put the logo on the picture, and you're good. And then the system became much more robust as our, the number of communications channels, expanded. There were no social media, there were no digital billboards, and so on and so forth. So it was enough back then, because basically, you're communicating in a magazine, maybe, and then a website, and then it got broader, but it was like a magazine, a billboard. So it's really about a logo and an image.

I think today, even if identity systems are important in fashion, it still can be said that the image and the logo are critical. You know, because we are still seeing, I mean, 99% of fashion ads are logo and image. A few have tag lines. And generally, they're bad, and they don't work. So people companies steer away

from them. And now, with all digital media, we've expanded into film and motion graphics and that sort of thing. But at the end of the day, those two components are core, because also the logo goes in the on the labels, it goes on the clothes themselves. So fashion is a little different in the sense that you have these two players, which really work together. And funnily enough, Base is very unusual, because it was founded by an art director and a graphic designer. Most studios are generally founded by one person. And Base was founded by two complementary people.

How is your design process structured?

So we start with discovering immersion. From there, almost every project we do, it then goes into brand strategy. So it's very rare anymore, that we are doing projects that are just purely designed without any strategic part. So that brand strategy to be clear, that includes narrative, positioning, competitive analyses, consumer archetype being messaging personality. So that's all phase two. Phase three is brand identity. It's really just a visual reconciliation with the narrative. So we're saying the narrative is this? How do we translate that visually and verbally? And then from there, we go into all sorts of applications, digital physical print.

Can your process be broken down into phases? Briefly describe your phases.

Phase one, discovering, phase two, brand strategy which includes narrative, positioning, competitive analyses, consumer archetype being messaging personality. Phase three, brand identity, which is a visual reconciliation with the narrative.

Is your process intertwined or rather linear?

That's a great question. Because we pride ourselves on a nonlinear process. We call it the round table approach. We sort of compare it to like, kind of how the UN operates, you know, you bring in all these different talents into a room around a circular table. And so from the outset of a project all the way at the beginning of the design and immersion process, we will have people on our team that would typically be involved if it were linear at the end. I'll give you an example. Like the digital designers, right? So that would typically in a linear process be, you know, even if the let's put it this way, even if the process

is linear, it does go as I described immersion strategy, identity applications. But the team is involved from the very beginning. So that there's no friction in between the phases.

Is your process agile?

It is and it isn't. It's not agile in the sense that tech companies describe. We are not an agency of like, move fast and break things. We're not an agency of like, test, iterate, test, iterate. We're much, much more deliberate than that. I've been having some very interesting conversations lately because we are starting to do a lot of work in web three in the blockchain area. It's interesting that they are very different from web one and web two. In Web three, the founders are moving so much faster than even web two, that we don't have time to test and iterate. What's really been great is that our process of being deliberate, we tend to show, for example, one solution, which is very unusual for the industry. Most agencies they say, here are five, pick one. We typically if we do our work, well, we say yes, there are many solutes, there are many possible solutions, but this is the best one. And in fact, that's very similar to how the web three companies are working, which is to our ears. It's very, it's different from what Tech has operated until now, in terms of the Agile processes.

Specific process (phases) questions

What is your favourite part of the working process?

For me, personally, and I guess this is always the case, I think where my talent lies is my favorite part. And that is working with founders, entrepreneurs, and CEOs on the vision of the company, sort of like, what's, what's the big idea? And where are we going. I think what the agency's answer would be, in terms of the most favorite is, I would say, there is the ideation coming up with the idea, the concepts that then translates into the idea.

What is your least favourite part of the working process?

For me personally, where again, where I'm best as the big picture, so my least favourite is like, when it gets extremely in the minutiae, that's where I'm less good. I think that the team, in terms of less favourite part of the working process, would

answer when brands don't trust us.

If we say we've been doing this 23 years, and at this point, I think we know what we're doing. So even if we come up with an idea, that's pretty radical, or pretty surprising, it might seem risky, but it's not. It might be what is needed to achieve the client's objective. Our least favourite moment is when the founder says he can't go that far. Because when we compromise, we know that the potential is reduced.

Specific process (research) related questions

Do you collect information for the project?

Yes.

How do you collect information for the project?

I'm guessing this is a fairly common approach, in the sense that we do multiple things with our research. We always interview the key, stakeholders, the key people in the company, and secondary stakeholders. A lot of times, we'll go outside the company and talk to the press or talk to consumers. We do desk research, which is also pretty common. We do research on documents or analytics that the companies provide us. And I think that from that research, we form, certain hypotheses. And then, from there, it's taking those hypotheses that trigger the ideas, the concepts that serve as whatever we're doing for the brand.

What instruments do you commonly use for collecting information?

The easy answer is all the typical analytical tools. So Google Analytics, or analytics for very various, like email, like performance marketing, you know, campaigns, social analytics for pretending to the social graph, just straight-up customer demographics, customer analytics. So, any sort of analytics. I think the next level up, is sort of like more subjective research in the sense of, you know, going online or doing in-store audits. You know, we did a project recently with Drew Barrymore Do you know, the actress, where we did a line of furnishings for the kitchen like kitchen appliances, toasters, and you know, slow cookers and all that. And so, there we actually went to Walmart.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?

I think there are certain, let's say, non-variable parameters, and there are certain variable parameters. The non-variable parameters are when a company says, we must communicate in these channels. That will dictate certain approaches. So, I think what's harder question is like, and I guess, it's not going to be very helpful, but that's the magic of it.

On which parameters are your visual choices based on?

There is always a red thread behind. I think that's why more and more we don't just do design work. We always start with the strategic work because the strategic work makes the design work defensible. It makes, it gives us justifications for our actions. And yet, you know, I think the better agencies are coming up, I would argue, with conceptually driven visual solutions as opposed to figuratively driven or literally driven. That are more pronouns are more therefore emotionally engaging. The only way you can do that is by having talented people. We are also always looking at how to break the tropes. I think one of our points on our manifesto is, if it looks familiar, try something different. And that is something we are constantly fighting against are the tropes of a given industry.

Specific process (tools) related questions

What tools do you use?

All the typical stuff for the graphics. We're using the Adobe Suite. On the digital side, we're using Figma Sketch. So as the world evolves, we're evolving into different technologies, but I'm sure it's what you've heard from the others.

What instruments/tools would you like to have?

Yes, we always have our wish lists, but at the end of the day, Adobe is so big that they're on top of it, I think they know.

I guess Figma was a pretty leap, big leap forward on the digital side. Let's argue that web three is coming much faster than people think. And the metaverse is coming faster than people realize. I think the tool is less about the tool and more about the need, right. So if the need is all around, you know, designing for the metaverse, then the tools are going to have to move much more quickly in order to design for it.

Internal structures questions

How many people do usually collaborate on a project?

The short answer is, it depends on the size of the project, obviously. Speaking in generalities, let's say a midsized company, and it's a brand identity project. There is always a CIO man as creative director, strategist, design director, a couple of designers one, two, let's say, almost always any more a writer, because I think we more than I think more than most agencies, I think we put a greater emphasis on the verbal, and then sometimes in our director. So let's say it's, let's say it's like, typically eight, plus or minus.

What are the hierarchies between the people that work on the same project?

For us, it's a very fiat hierarchy.

I think our culture lends itself well to people that want their voice to be heard, as opposed to fitting into a more corporate structure. Like, in the early days, it used to be much more authoritative, like, I'm the creative director, this is where we're going now execute that idea. And now it's more or less, she's acting more like a coach kind of, or as a mentor. Like, okay, we're listening to all these ideas.

AKTIVA, BELDIVÍ – SENIOR DESIGNER

General questions

What term do you use to name identity projects?

Normally, I use branding. But we also say visual identity, or depending on what we are working on, we might say brand guidelines or brand manual. I normally say just branding because it's shorter. I have worked for different studios, also as a freelance, and everyone calls it differently. But it's always the exact same thing. It's a brand manual. In the US they more likely call it brand, while here in Europe it's mostly called visual identity.

What is the first thing you start with when dealing with an identity project?

It depends on whether it is a brand refresh or a new brand we have to create from scratch. I normally start with investigating. I research – in the case of rebranding – how the brand elements are currently used. In the case of a new brand, I start by researching the competitors.

To which industry do your clients belong to?

I have been working a lot for the wine industry, as well as beauty, food, and so on.

Do you use different approaches with customers from different sectors?

It's generally the same. But there are some areas that are more conservative than others. The way I work though is the same. What changes is maybe the focus of what to transmit. Beauty has to be an experience, it has to transmit a good smell. Food needs to be tasty. In the end, it's how you transmit these values, and how you evoke the meaning around the brand.

Do you have clients in the fashion industry?

Yes, several clients in fashion and beauty.

Is your approach different when you deal with the fashion industry?

Fashion is the same beauty. It needs to make you dream and transport to another place. It needs to be very sensory. My approach is basically the same. I start by looking at everything I can find about the current status, competitors and so on. The process depends a lot on the openness of the client. With aspirational clients even the mood boards can be crazy. Depending on the client we can be more artistic or more commercial.

General process questions

How is your design process structured?

It's mostly the same.

I for example like to make the client participate. I like to show and reapprove all of the processes. For example I like to present the mood bards and the sketches before moving forward.

Can your process be broken down into phases? Briefly describe your phases.

First research, then first drafts then first brand guidelines, depending on the brief.

Is your process intertwined or rather linear?

Luckily it's not intertwined. I believe that by applying a super professional process, that has lots of steps, like baby steps it makes everything easier. Like the you avoid going back and forth. If you have to go back it's always because the identity is super complex, meaning that there are some politics of big companies and the project needs to go though several layers of management. Sometimes that could even mean to start form scratch, but not because it's not good but rather because fo the politics.

Specific process (phases) questions

What is your favourite part of the working process?

Research and mood boars definitely. Because while doing that I'm thinking – even without scratching or without doing anything manual – my mind is actually working. And once I had time to research and think the other parts become much faster. With lots of research the process gets less painful and less blocked. If I don't do this first research part I believe that the project might fail.

What is your least favourite part of the working process?

Maybe building the brand manual per se. Because I have to set limits for the next person who will apply the rules and

usually designers don't like rules. I feel like I'm putting limits to someone's creation. But I'm usually very generous, trying to crate fiexible variables.

Specific process (research) related questions

Do you collect information for the project?
Yes, it's the most important phase of the project.

How do you collect information for the project?
Depending on the project, at least half a day/ four hours.

How much time do you spend collecting information?
Normally, I like to spend at least half a day, or four hours on research. It always depends on the project's complexity. If for instance. I'm dealing with a historical brand that exists for several years I will need to go backwards and do more research.

What instruments do you commonly use for collecting information?
Pinterest. Everything is in my Pinterest folders. I use Pinterest for saving my research and inspiration that comes form other channels and I also research through Pinterest.
There is another tool that I used, it's called "My mind" but it's very similar to Pinterest but I cannot use both, that would require to much time.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?
I don't really know. I think it happen because of experience. This is why I research. I need to now what's happening in the world. Through the research I understand what's important for the specific product I'm working for, or what the communication of that product could be.
Something it depends also on the briefings. I had to work with extremely complex briefing, with an appendix of 20 pages and I had to read it several times. This happens for example in Pharma. On which parameters are your visual choices based on?

Specific process (tools) related questions

How much of your process is depended on computer software?
Most of the process, sketching is a minimal part.

How much of your process is not depended on computer software?
I'm old school, so I still sketch but not that much. I usually start sketching after the research phase and when I have something that I might like, I implement it on the computer.

What tools do you use?
Mostly the Adobe suite. Indesign, Illustrator, but that depend on the requirements of the project.

What instruments/tools would you like to have?
A mind translator.
I think the tools we have are fine. Obviously there is room to improve them, and make them more personal.

Internal structures questions

How many people do usually collaborate on a project?
Normally, it's one or maybe two if there's a junior. It's one two people. It really depends on the complexity of the project. If the projects covers only branding even just one designer. If it includes social media or an email campaign for example there is going to be a bigger team. In the agency we have a super multidisciplinary team. We have almost everything in the house.

What are the hierarchies between the people that work on the same project?
Depending on the project rather fiat.

LEFT LOFT, ANDREA BRACCALONI, CO-FOUNDER/ART DIRECTOR

General questions

What term do you use to name identity projects?

We call them branding.

We are self-thought graphic designers coming from architecture, but since the start, we considered ourselves graphic designers and this is a graphic design studio. Now, through an organic evolution, graphic design has become just one of the things we do. It's certainly the thing we do most, but we also deal with photography, illustration, copywriting, and other commodities. We tend to deal with identity or branding projects the most. These terms are almost synonymous, to be honest. We call them branding because it seems to be the most capacious term that contains what we do. When we create a brand, for example, the corporate identity is one of the things we deliver to the client. Graphic designers historically made mos ly corporate identities. But I'm not sure any more how this term is used.

I guess there are mixed feelings about the term branding because it is used more by agencies and there is this difference between studios and agencies. We call ourselves a studio and don't want to be called an agency. Agencies also sell other knowledge, while I consider ourselves a studio because we never sell a consultancy without design. It's a completely different approach.

What is the first thing you start with when dealing with an identity project?

We start with research about the client.

To which industry do your clients belong to?

We have a very high range of sectors we work for and we like that because we can learn different things. We work a lot for contemporary art, manufacturing, and services. Our longest-lived customer is Pirelli. For which we have always done institutional communication like interiors, the exhibitions. Anything but advertising. We work for the Hangar Bicocca, the Madre di Napoli, the Castello di Rivoli, we have made the identity of Documenta 13. Contemporary art is really important to us. We also work a lot for publishing houses. We recently did the re-branding for the Oscar Mondadori series, along with 2,000 book covers.

Do you use different approaches with customers from different sectors?

Definitely, but not drastically, though. The approach can vary based on project size or company size, and obviously also depending on the budget. When we work on identities with small to medium-sized clients it is easier to have an overview and to collaborate do workshops with them etc. When we are dealing with multinational companies, it gets more complex. However, over time we have created our own method that is not very rigid, but there is a logic that repeats itself.

Do you have client's from the fashion industry?

Just a few, which is strange in a city like Milan. We worked a lot on product design, but very little for fashion. We did an identity for Slow Wear, a Venetian men's clothing brand. But I'm talking about 10 years ago, or something like that.

Does you approach change when dealing with clients from the fashion industry?

The approach was different, but we were also pretty different ten years ago.

General process questions

How is your design process structured?

We have phases, but they are not always very precise. We are four partners, and we are very different from each other, which is an absolute enrichment, but it also has its limitations since each of us has its own method. But we definitely also have a studio method. We do a lot of research, there is a lot of thought in our work. Then the execution phase on the other hand is faster. We think more and design less.

Can your process be broken down into phases? Briefly describe your phases.

We take two or three weeks to study the client, we ask them to share any marketing research or anything they might have done before. This preparatory work leads us to workshops with the clients, which can last from half a day to a couple of days. Here we talk about values, mission, vision, language, stake-

holders, and so on. Then we write a small manifesto of the brand. The activities we do during the workshops have the aim to obtain what we call the brand DNA.
Then there is typically a second phase, which is about contents. For instance, we build a sort of message pyramid. Since there are so many contact points in which the companies communicate with their target groups, every detail must be planned and designed, for which we create a series of narratives and corresponding visuals. After that, everything is implemented on the final assets. My dream is to create a kind of studio manual. Also, to share it with everyone in the studio, as a reminder of all the things we have done over the years. There is a big difference between tacit knowledge or knowledge that is passed on verbally compared to explicit knowledge which is traditionally written down. In our studio, like probably in most studios knowledge is passed on verbally. Written documents might seem rigid or even scary. But in my opinion, they are extremely useful.
When I meet someone who has worked in a place I like, I immediately want to know how they are organized and how their work is structured. That's also why I find your research fascinating.

Is your process intertwined or rather linear?
We follow a specific logic but we are not very rigid. So it can happen that it gets intertwined.

Specific process (phases) questions

What is your favourite part of the working process?
For me, it's definitely the initial part. The thinking and more conceptual phase. Probably also the end, when after weeks of work we get to present the project to the client. At that moment, I'm very excited, especially when I'm proud of what we've done. What is your least favourite part of the working process?
I don't know, honestly. I'm not very invested in the economic part, but thankfully I don't have to deal with that myself.
I like to do things until the end, and I also like the execution phase. So I would like to bring a project to the end by myself, but that's not my role any more, and I'm prevented from doing that, even if I sometimes miss it.

Specific process (research) related questions

Do you collect information for the project?
The research phase is probably the most important one. Especially because over the years we learned to think and reattach more so that we have to design less but more effectively.

How do you collect information for the project?
For the activities we do during the workshops, we use different methods and exercises. Some we invented, others are taken from here and there, for example, the 5w or the Google sprint.

How much time do you spend collecting information?
That really depends on the client and on our knowledge about the specific industry we are dealing with. We usually spend time trying to get as much knowledge as we can about the topic we are dealing with.

What instruments do you commonly use for collecting information?
One of the most important things we do in this phase is interviews with the clients.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?
This is a very difficult question. A bit might be instincts, then of course the visual culture that has been assimilated over time. For us, typography is a medium that we use a lot, and I don't just mean designing custom fonts but also the presence of type in our projects.

On which parameters are your visual choices based on?
Since our work consists in solving the problems of others, every project we do tends to be different from the previous one. Maybe if someone knows us he might see some similarities in approach, usage of typography or colours for example, but we are not interested in developing a strong studio style. We establish concepts together with our clients, and then our ability is to transform that into something visual and tangible. Something that the client is usually not able to do by himself.

Specific process (tools) related questions

How much of your process is depended on computer software?

I've never worked manually in my life, I'm from the very first generation of computers. Our designers obviously work on the computer most of the time, that also depends on their position within the studio. The more a designer grows, the less he designs.

How much of your process is not depended on computer software?

We don't really spend so much time in front of the computer at least I don't. We talk a lot and since almost every project is done by multiple people there are a lot of exchanges and discussions.

What tools do you use?

We use various tools for various phases.
For workshops that are done digitally we use Miró, we have used Basecamp for a while. I actually designed a management software that fits our needs, but it was never developed.
We use the Adobe Suite, Figma for the digital stuff, Glyphs for Type, then Sketch, Cinema 4d, and so on.

What tools would you like to have?

I would love to see my management tool come to life, sooner or later. We have some tools we made over the years, for example, a list of all the partners we can potentially collaborate with. There are illustrators, printers, photographers, etc.
Years ago we made a publishing tool for our projects, but I'm talking about 20 years ago. A mock-up generator would also be useful.

Internal structures questions

How many people do usually collaborate on a project?

This depends pretty much on the project size. It can vary from two to eight people. For the Oscar Mondadori project, we ended up being eleven people working on it. But that was an exception, since we had to create thousands of book covers.

What are the hierarchies between the people that work on the same project?

– In terms of hierarchy there are the most experienced designers that work as project leaders, they have usually been working with us for 3, 4 years. They are supervised by one of the creative directors that would be me or the other partners. Then there are the senior designers and the designers. The project leaders also work as sort of project managers.

E-TYPES, MADS ELLEBERG PETERSEN, PARTNER/CEO

General questions

What term do you use to name identity projects?

That's a good question. I think that we recorded a brain Odyssey. That's what we create in the end.

We create band concepts, but of course, the product, in the end, is brand identity. So, I guess that depends, we often have to call it visual identity since a lot of people still think that brand identity is more commercial, and connected to the marketing world. But we see ourselves as creators of branding identities. In the end, it's all about creating the visual expression of a brand. So we call it brand identity, but sometimes we have to translate it into the – in my opinion – more fiat term visual identity. I see visual identity as a part of brand identity. I think that brand identity is the bigger word.

What is the first thing you start with when dealing with an identity project?

Insights. Or maybe even before that, we get a clear idea of who we are working with. I think it's really important to understand what type of organization or company we are dealing with.

So the first thing is to get to know the client and him getting to know us because it's also a matter of personal relationships. It's really important to understand each other, and have the same idea of the meaning of words we use in the production. So first of all, we establish a kind of relation to the client. The first step we actually work on during a project is the inside phase. In this part of the project, we help the clients to collect insights, or they might have been working on the strategy with our agency already. All this information is needed to translate it into something tangible.

Often they come to us with something that can be 50 slides, for instance. It's all very clever, but it's really hard for them to get away from that. And I think that's exactly what we do then, to visualize the force that's behind ideas and strategy.

To which industry do your clients belong to?

We enjoy working with design and branding across all kinds of sectors. That gives us the insight to voice over these kinds of sectors and businesses. We definitely use this knowledge for our solutions, especially since the world is not that separated anymore. If something happens in a sector it might infiuence another one and so on.

Do you use different approaches with customers from different sectors?

Yeah, you could say that to some degree. In culture, for example, we could say that they are a bit ahead since they are also more open-minded. Obviously, that's true only to some degree. But that's why we often go to Venice, for example, to visit the Biennale. Because we definitely believe that art is the first place where new thoughts and ideas in the world are being measured. As an agency, we noticed a tendency from certain sectors like art, culture, and lifestyle to come first in terms of ideas. But then there are also movements across sectors, when it comes to sustainability, for example. And that can also gravity working within different nationalities and states and so on.

Do you have clients in the fashion industry?

Yes.

Is your approach different with clients from the fashion industry?

There are differences. I mean, different sectors often need different solutions. Since fashion has products, it's mostly about creating a frame for their products and creating coherence between the identity and the products.

For them, it's more about creating the universe around the products. Whereas if you work for a more corporate business it's more about creating a landscape, so fashion might be different in that way. For example, we worked for a Danish fashion designer and when we realized the e-commerce website looking back they used to have a more fun weird e-commerce website. But now they realize that it's the dresses and products that need to stand out rather than the experience.

General process questions

How is your design process structured?

One thing that's really important for us is that we do – maybe not enough – have exactly when we need in terms of structure, or how we do things. The process looks similar in most projects.

But we try to avoid having too many specific templates, we like to keep these to a minimum because we believe that with every new project we need to find out how to do it in the best way. Following too many templates would create this structure and insert of being aware of how to adapt to every project, even if we end up doing most projects in a very similar way. But possibly these last five or 10% that you do differently, are exactly the reason why you come up with a great result.
We don't believe in all these kinds of Google ways of doing everything. I actually experienced that if by following the same exact structure every time, I ask myself if it is really necessary for every specific project or every specific customer? But people just love to follow steps, it's somehow reassuring. Also, since we are working with creativity, some clients can get a little nervous and insecure. Then it might be easier to say that there are specific phrases and everything will be good.

Can your process be broken down into phases? Briefly describe your phases.
First, we have the product, inside phase, then we have the strategy phase, then concept sketching, then we have the presentations, and feedback and adjustments, and then that we have grown out designing a lot of different projects, depending on the needs. We have a bigger framework, which is these, but then in the micro-level, the path to reach the end goal can be very different.

Is your process intertwined or rather linear?
It is definitely, intertwined.

Specific process (phases) questions

What is your favourite part of the working process?
I actually like any phase.
For us, it's very important to create nice, functioning concepts, but we notice that if they are implemented poorly or by companies that don't have the right resources or skills to work with it, then it doesn't matter. Therefore, it's really important for us that interpretation is nice. I really love when we have these people who are so engaged in what they are good at.

What is your least favourite part of the working process?

We are always looking for what makes sense for us to do, and we have been struggling a little with the digital part, with the coding of all parts connected to CMS. Also, if we try something new within the design, it's going to be really expensive and might not work as intended.

Specific process (research) related questions

Do you collect information for the project?
Since there are a lot of marketing agencies that do deep strategy work, we realized it would make more sense for us to focus on the visual and maybe "crazy" explorations.
Often our research phase is much more about collecting what companies already have and then transforming it into something where it becomes visual. Then we typically create concepts or analyse the different possibilities of the strategy. We try to create a different visual solution so that the clients can narrow down what's right for them.

How much time do you spend collecting information?
Of course, it differs for every project, but it can be from 2 to 4 weeks.

What instruments do you commonly use for collecting information?
We have specific tools for research. We use a lot of visuals when we do the workshops with the clients. We have a set of different words the client should pick from.
We have different tools in terms to get an idea of how they see their own brand. We have different tools that we use for the insight phase.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?
That's a good question. And that's also where it gets difficult. We really want to avoid that it becomes a matter of personal taste. So we always spend a matter of time defining the tone of voice. We often for example write a short text that goes with the visual or use that text to inspire the visuals. In that way, we try to have descriptions that function as a backup. Then our choices like typefaces or colours are all connected to that

tone of voice. There are always arguments why the design looks like it does. It's important to us that the clients can explain the design choices to their employees, for example. We always try to come up with a great idea that is the DNA of the project, that is the core of the brand.

On which parameters are your visual choices based on?

We often borrow references from other sectors and try to push the clients and distinguish them from their competitors. That's also because many sectors are colliding nowadays. Let's just take home and work environments.

Specific process (tools) related questions

What tools do you use?

I think we are kind of standard in terms of tools. We use the Adobe suite, we use Figma. I think in the digital realm, tools change all the time. One of the nice things about this is that it's changing to something that's easier to work with. Figma for example is something that works directly out of the browser. In terms of tools, we try to follow the trends. I don't think that we use any specific tool that is different from other design studios. Of course, we also use the tools for motion and so on. But we are open-minded to whatever new tools might come out.

What tools would you like to have?

One thing that is really important for us is to get the pictures that everyone gets in his head when thinking about an idea out of the head. We especially try to get these pictures out of the head of our clients. So it could be something that helps us with that. The perfect tool would be for visualizing what's in the mind of the clients, that would be great.

They probably don't have the right picture in their head, but their idea is right. They know where they want to go, but they don't have the skills to go there by themselves. I guess I should come up with something very brilliant, but I keep on coming up with the excuse that it's actually important not to have a tool because our brain is already the best tool. As soon as the client comes to us with a brief, we already have an idea in our head. I guess it's important that we ensure that the brain is well-functioning all the time, that it stays creative and

open-minded. We probably need to be aware of new tools and automation, otherwise, we end up being outdated faster than we think. When it comes to font design, for example, so much has changed already. Now we can design some letters and the machine helps us create the rest.

In general, I think that creativity is very fascinating, everything is so complex and changing all the time.

Internal structures questions

How many people do usually collaborate on a project?

There are about 50 employees in our studio, and we have divided them into different teams or units. I think it's important to create a space where everyone is cable of using their talents, and there is a big difference between creating ideas or concepts and creating specific products. This product can vary from e-commerce to a book or even interior design. So we are divided into small teams with a different focuses, we have a team that focuses on motion and film, a digital team, one that focuses on typefaces, and so on.

Once the project starts, we will loop in the people needed. Here it's important to differentiate between skills and resources.

What are the hierarchies between the people that work on the same project?

Everything is kind of fiuid, and we have a very fiat hierarchy. It's not so much how many years people work if they are seniors or juniors, but more about who is the right person for the job. Of course, if we set up a team, and a designer just started, we pair him with designers that have more experience. But again, it's not a matter of us working on experiences to match our skills.

BLEED STUDIO, SVEIN HAAKON LIA, CREATIVE DIRECTOR/FOUNDING PARTNER

General questions

What term do you use to name identity projects?

I actually called it an identity. We don't use branding, we use identity, it's the most precise term for us.

What is the first thing you start with when dealing with an identity project?

It depends on the size of the client. But we always start with a strategy process, whatever client we have.

For a simple process of understanding, like mission and vision and why they exist, and all those kinds of things. We try to understand what the client's drivers are. As well as their target groups and all of this. We never talk with the clients about what they like or dislike, or about colours or fonts, at least not before we define the concept. It's all about getting this surgery thing in place, or rather our creative brief. The start is a workshop, it's usually half a day or a day-long, and we go through things with a specific method. It almost always gives us quite the precise picture of what we're supposed to do.

Of course, we ask the client for materials also before the workshop, so that we can research as much as we can in advance and have enough relevant things to go with during the workshop.

To which industry do your clients belong to?

We have quite a wide range of clients, actually. But what we do most at the moment is either culture, like larger or smaller cultural institutions or startups, mostly within tech. We also have cultural startups, but they would go in the culture category. Then we have some larger technical companies that are more corporate, but most of our work at the moment within identity is culture and startups, it seems there is a special need for this. Right now there is a lot happening, culture is waking up again after COVID. But it seems that also a lot of people in startups got ideas during the pandemic.

For us, it's a very balanced combination. The speed of startups is interesting, and it balances itself out through culture and the other way around.

Do you use different approaches with customers from different sectors?

We always apply the same process. Of course, I mean, we are people and talk to everyone differently, and also all the clients think they are special of course, but the process in itself stays the same, it is efficient, and we don't adapt that much in the end.

Do you have clients in the fashion industry?

Yeah, we have some, I put them together with culture. Historically we had a lot, but right now we have less and smaller-scale, mostly in the Northern European region.

Is your approach different when you deal with clients form the fashion industry?

The start is the same. But then of course depending on the client and everything, every identity project has a different speed or rhythm. Fashion projects usually contain certain elements that can be relaunched again and again to create excitement. So, fashion is different in that sense. If we want to look for differences between the industries, I think rhythm makes the biggest difference.

Before it was very different. I think that fashion was more personal for example while tech was something new, that didn't really need to be understood. At least before the iPhone, after the iPhone tech became as personal as fashion and there are fewer differences.

General process questions

How is your design process structured?

Depending on the size of the client and everything, this is a more or less difficult process. I mean, if you're working for a large bank, for example, there is a lot of anchoring that has to be done. We have to take with lots of different people from the organization, and there might be some back and forth before we actually land on concepts we are going to develop further. That also affects the process as well as the costs. Big identity projects can become very expensive because of this huge anchoring process.

Often when we are asked to do a redesign it's more complicated than creating something totally new because we have to take into consideration all of their history and everything gets more complicated.

– Redesigns can happen for various reasons, to attract new customers, but sometimes also to change the target group and get rid of certain customers. This happens especially in culture, for example, a youth radio channel for people between 15 and 25 might want to change its target group and get rid of the older customers and make them feel like they don't belong there any more.

Can your process be broken down into phases? Briefly describe your phases.

After the research workshop phases, we discussed before, we define the main point, the brand goals, vision, and so on. This then becomes the creative brief once it is approved by the client. That brief with the whole research on everything goes to the creative team. Usually, at least one from the creative team is in the workshop as well, to get a feeling about the client. After that, we work a bit like in a black box, isolated. We usually create two concepts based on the brief, they can go in very different directions, but that depends, of course, sometimes they can also be similar.

Then we have a presentation meeting in which we show the concepts and adaptations of it. In some cases it's more or less finished things, we show how the identity could look when executed. And then we make the client choose before we go further. Hopefully the like one of the concepts, usually that's the case for 97%. Then we work on it further, try to iterate it, make it better, more precise, and everything. Then we have a second meeting in which we show more precise things, depending on how detailed the start was. Sometimes it's almost finished already, other times it's still a long way to go. Then we present that, hopefully, they approve, and then we start executing into the different needed touchpoints.

It's quite a simple process. In between, of course, there are collaborations with programmers, photographers, distributors, but it's basically three or four phases, depending on the project.

Is your process intertwined or rather linear?

I think that identity processes don't work that well when iterative, at least not at the start. The starting phase is usually quite linear. Of course, one can iterate and rotate things for a while, but it's hard to do things in parallel in identity. We can't do the photos before actually finding the style for the photos

and so on. Of course, identity, in general, is iterated also in the market, when people start using it. We also have to have checked in on the client after the launch and a year after or so to see if everything is working or if there is the need to optimize things.

Is your process agile?

No. It can be more 'agile' when we do service design, or products.

Specific process (phases) questions

What is your favourite part of the working process?

I really like the concept phase in general, I think everything else or everything after feels a bit like production. It's also creative but the most interesting part for me is the concept and to surprise the client, that's interesting and makes it fun. And for me personally, the most interesting thing about the processes is that I actually learn something about something I didn't know so much about before. This happens especially with startups and all the new technology.

Also presenting to the boards to top-level employees of different companies is very nice. I think that because of these things, I have done my job for so long. Because it's always these new things in an identity process that you can learn from. And identity is basically everything a company is supposed to be, and to narrow it down to the point that everyone can understand that. Our job is to communicate this idea to an audience. Because of that, we need to understand so many companies, and that's the fun part.

What is your least favourite part of the working process?

I don't think there is any. We don't have a very complex process, and that's also intentional. We don't want to get bored, we also do little production in general, we mostly deal with new identities. We also don't have long tail clients, also intentionally. We don't want to get stuck with the same client for 10 years doing their production. That's also why we keep the studio small, even if we are working with quite large clients.

We usually just do the first implementation, the manual, and everything, but we don't do the complete production over time, like catalogues and stuff.

Also, more and more businesses have a quite large design department internally, especially within technology. That's also why the requests are usually for creating a rule set and inspiring these departments to continue working on it.

Specific process (research) related questions

Do you collect information for the project?
Yes, we have an initial research phase.

How do you collect information for the project?
We have a method that is kind of a mix of design thinking, like marketing strategy, very classic. Tried to mix them together, and also how we start the workshop is very much about how the client is also structured.

How much time do you spend collecting information?
It depends on the size of the client.

What instruments do you commonly use for collecting information?
Sometimes it's more like a Design Thinking workshop. It's mostly dialogue with the clients. But it depends on the client of course when we can meet them, otherwise, most of the research is actually desktop research.
Some of the exercises we do in the workshops are more like round-robin exercises, to specify things within each target group. But it really depends on the project, I mean, the products are much more intertwined with identity than ever before because users interact with the actual identity all the time. That also makes it more relevant to have a UX identity in the design process since the beginning.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?
That's impossible to answer. Sometimes it's obvious, sometimes it's quite abstract. It depends so much on the client.

On which parameters are your visual choices based on?
We want the clients to come to us if they won't stand out in a category. This means that they are usually a challenger in the

category. When we think about designing for a category we keep in mind certain things, let's take a microwave for example, how much can we change the design of the microwave before it loses its believability? We always have to think about that in the visual language as well. So, of course, these are parameters we look into and see how far we can go before we actually lose the connection to the product. But it's always interesting to look at how we can stretch that because making category design is quite boring in a way in its purest form, and I think that as designers we have the responsibility to develop that further as well as the perception of the audience.

Specific process (tools) related questions

How much of your process is depended on computer software?
I think nothing is really depending on the computer, the computer is a hammer. I like to do stuff, of course, we need to do stuff on the computer, but everything is based on what a designer can do and of course, everyone has a computer. It's all about the designer status and different tools.

How much of your process is not depended on computer software?
That really depends on the designer. Some go directly to work on the computer, we also have illustrators, they are more manual. Maybe the designers that come from typography work directly on the computer. So that really depends, we don't force people to work a certain way, it's really more about giving the freedom to every designer to find its own way.

What tools do you use?
We have MacBooks, mostly laptops with separated screens because we want to be able to move around. We have a large office and people can sit anywhere. We use Google products like meet. We don't use Slack any more because it becomes too chaotic. Dropbox is our server basically, the usual.

What tools would you like to have?
That's a very big question.
Basically, I would like a time machine. A project time machine, I think that we would always like to have more time. Somehow, it always feels like time is too short. Because we are in a busi-

ness that gets paid by the hour, we only have limited time for everything, but in a way, that's nice, too, because you can do different things. I don't think there's anything I feel is needed. I think there is a bit too much communication these days. I mean, in general, on private channels like WhatsApp or iMessage you get bombarded with a lot of different things. So maybe there could be something that collects all of these messages so that we could get more work done. That would be good.

I think we are okay with design tools-wise. But I think that Adobe could need more competition so that they can get better. For example, I noticed that in our process the sketching part is done more and more in Adobe XD instead of using Photoshop or Illustrator. Also, some are also using and sketching in Figma more and more. It's more efficient to work directly in those programs, and they offer almost the same tools as Illustrator. What also happened is a cubital revolution from sketch, this way of working with more canvases and different sizes. That's also because we have more responsive sizes that need to be designed. It would be nice to have more powerful tools without being cluttered.

I also believe that AI will probably help a lot in the future, especially in the production phase that we are not doing ourselves. It's coming more and more, and there is a lot of code out there that is easy to apply if you know how to code. It's interesting, but it needs to be used in the right context.

Internal structures questions

How many people do usually collaborate on a project?

We also don't work in very big teams, it's usually one designer that runs the project. A project normally starts with a strategist, a creative director, and one or two designers. And then the project is usually led by one designer, even on larger projects. Sometimes an animator comes in and helps. We also work with photographers and people like that, but usually, there are around 4 people in a team. We also believe that ownership is very important for the project, which has worked out very well so far. We are not a large studio, we are twenty people. There are five in Vienna. We don't want to grow, right now we are big enough to do interesting work and at the same time small enough to do other interesting work. Like that, we don't have to hunt for very large projects, but we can do them if there are interesting ones. We also have two designers in the studio that program as well, they help us build systems with AI for example.

What are the hierarchies between the people that work on the same project?

We have a very fiat hierarchy.

PENTAGRAM, JACK LLEWELLYN, SENIOR DESIGNER FOR HUDSON POWELL

General questions

What term do you use to name identity projects?

To be honest, branding, I guess, is the thing that most of us feel is most widely understood. For me anyway. I'm on Luke And Jodie, the Hudson Power team specifically. Within Pentagram, there are 23 partners, globally.

We would call ourselves a branding agency. So, we would say we use the term brand identity and graphic design, as long as the kind of graphic design is like a catch-all. We still do also do books, exhibitions, installations. But then our day to day, projects are, what we would say, brand identity. And the reason why I'm saying brand identity rather than overall brand, rather than identity, or rather than visual identity, is that I feel there is a split between brand projects, where you would include an element of, I suppose, are heavier elements of strategic investigation, that would take into account kind of like, wider company structure, wider audiences, on the client-side, we're about, you know, by the structure, kind of short term goals, long term goals.

We would have strategic partners that maybe would be interested in the brand values, key messaging all the way through to the tone of voice, marketing strategy is kind of all of that.

After all that work, when it eventually comes through to the graphic design element, we see it more than kind of creating systems and frameworks that are not only the immediate surface-level visual outputs, but also both conceptual narrative, and also just practical structural frameworks that allow that company to kind of live with that identity for a long period of time, allow them to extend the identity as and when they need to, with their own growth, allow them to kind of manage their internal teams in order to produce that or realize that identity kind of going forward. Whereas visual identity, for me, is a lot more about creating a simpler set of assets or a simpler set of tools that are about a graphic manifestation of something (and I don't mean this in a derogatory way, because I personally prefer often doing visual identity projects). And it doesn't include necessarily the broader strategic framework or con-

structional framework. So for me, a brand identity project, it's brand with a capital B, it's everything that is kind of associated with the brand, as I say, narrative, strategy framework, etc. visual identity is really just that smaller graphic element. So let's say, for example, to make it a bit more tangible if Coca-Cola comes and says we need an identity, it's brand identity. If the coffee shop around the corner comes and says you need an identity, it's probably a visual identity depending on what their goals are, but probably because you're just dealing with those visual assets.

Another example within museums could be a rebranding for the V&A, where it's the entirety of that institution, it would be a brand, it would be a brand project because you're dealing with kind of what are those very top-level directional kinds of strategic conceptual narrative, kind of thoughts, and goals and values for the VNA and how you're kind of manifesting that. And you will be building a system that allows them to hold and print your product and hold all the very small granular identities that exist for exhibitions or for publications or for whatever. But if the VNA came and said, we have a show, we have one show, it's about I don't know, like Roman history in wherever. And we need an identity for that for me as a visual identity, because there's no need for that long-term strategic framework because it is a thing it's going to happen and once it's happened, it's ended. Whereas the V&A as a whole of the whole brand is something that is gonna change over a long period of time and needs to kind of incorporate all of this different stuff.

What is the first thing you start with when dealing with an identity project?

We will do either the big strategic piece, or we will work with somebody doing the big strategic piece, which to be honest, that's a whole other thing. But that would do that first step. If that exists within the project, it happens.

Then the result of that is usually for us a creative brief, or a creative framework that we would have kind of had some level of authorship on to settings out the parameters of the job that we are about to do. We define what success looks like within that job for the client for us. To which industry do your clients belong to? Pentagram, broadly, in terms of all the partners is really like, what sector don't we touch, it's kind of

everything and anyone. I think that's like for my team Hudson, Powell that's true, to an extent. We touch all sectors but of course, we do naturally, like any service provider, we have things that we are more well known for, and less well known for. For my team, in particular, over the last four or five years, we have a lot of West Coast tech, and tech adjacent industries. Not only specifically Silicon Valley, but increasingly also a lot of UK and Europe based companies. We are quite well known for doing technology-based company branding. We have done things like computer chips all the way through to quantum computers, machine learning. We have done a bunch of things for tech, startup banking, and insurance.

I think that we're well known or appreciated for doing that work, because we are quite good at synthesizing these very conceptual ideas that exist in tech, and especially in the kind of like progressive AI and machine learning tech, and turning them into kind of visual narratives that the layman can understand. Then we have another part of our team business which is around I'd say research and development of type projects. We do have a lot of that clients come either for their own purposes or for things like exhibitions.

Do your clients come through Pentagram or do they contact your team directly?

It's literally both so like, say we each partner effectively has a name of the of their own and is known for certain things. So I would say we get most of our jobs direct to us. But Pentagram has a front desk concept whereby, especially bigger clients, bigger, businesses seem to come to Pentagram. And then what happens is we have a number of kind of new business managers, who will be looking at current schedules and try and work out kind of which partners are free, which partners are maybe more suited less suited?

Some clients come in there, their requirement is actually three partners, mostly because the job is huge. We had a project with a Banking in the UK, and that required two graphic design partners and the industrial design partner, and a communications partner who does kind of like language and strategy.

It's a relatively fiuid way of working.

Do you use different approaches with customers from different sectors?

I don't know. I would like to say no, purely from the integrity

of the creative process aspect. I feel like if we sat down and attempted to thoroughly analyse the way that we work, we all have a picture of how we work.

In general, from a creative point of view, I would say no.

I think it also just comes from experience. So if we have kind of client sectors where we've done a bunch of work within that sector, and we know that there are certain challenges, whether that's maybe to do with, like client structure, and how we, the stages of presentation, we have to go through, we might present a lot of our ideas, from a conceptual point of view, start out quite abstract.

When we have clients who identify with that really quickly, we might go into a broader phase of experimentation. Whereas there are other clients that are either bigger or have a more structured, hierarchical setup. So it's like, we know that we have to work with this group about this thing, And then when we're speaking to whoever is that decision-maker, we need to jump through these hoops to kind of say, you know, on a very, very basic level, it's kind of how we structure our presentations. On a broader level, it's that we might work through certain challenges in a certain order, or try and ask certain questions or solve certain questions in a certain order, and kind of build our output, or build the exploratory work in the development work, etc, in a certain manner. Whereas, like I say, with other clients is a bit more free-form. I think it probably just differs in that regard. And I think if there's anything else that we do differently.

Do you have client from the fashion industry?

Yes, when I first joined pentagram, we did a bunch of fashion things. That's primarily because we were working with London Fashion Week, and we had an ongoing relationship with them. More recently, we've kind of done less fashion, fashion, but in all honesty, fashion, cultural work, and film work, and a lot of those generally related industries don't pay very much money. We often can't take on that work.

Does your approach differ when dealing with clients from the fashion industry?

I don't think there's much difference, to be honest, and I think that, at least in my experience. I was surprised at how fashion and these kinds of industries feel like a creative hotbed, and

you can kind of go and do kind of these magical things that are going to be on board with it. But really, once you get beyond the maybe some individuals. These institutions are the same as any other institution, you know, they have certain structures. London Fashion Week as an example or rather the British Fashion Council, which was the actual client, they have quite an intense hierarchical structure, just as the way they operate. So whilst they did allow us to do some quite experimental work at a granular level, we had to actually work quite hard to bring everyone on board with that work. And it was almost as much of a challenge to kind of create a narrative that they were aligned with onboard with felt ownership over. Then the kind of any, any other client really.

No, in a way, it was no different. But I think that you do get, in a very, base level, there is a tonal difference to fashion. You can probably do more sort of expressive work with fashion just because it's fashion.

General process questions

How is your design process structured?

We have a framework we use every time.

But at the more interesting bit. We do have a process that is maybe unique to our team. And we work a lot with basically building a lot of tools. Within our team more broadly, we have a lot of interest in generative design.

What it means is that often we try and approach solutions from the point of view of once we have our kind of narrative or conceptual idea, we build or try to build tools that effectively generate our response responses to that narrative. We will typically do this creative concept phase where our exploration is kind of revolved in part around the traditional design, which is, you know, tonally images, colour type, like how what are the constituent parts that we're using to try and build a picture of what this kind of concept is.

But in parallel to that, we're always looking at those elements and saying, Is there a system here? And if there's a system here, how do we parameterize it? Can your process be broken down into phases? Briefiy describe your phases.

Every project, more or less, we structure in a manner of we will do either the big strategic piece, or we will work with

somebody doing the big strategic piece. So we start with that, and then we go through what I think is a very common way of working which is creative exploration, which results in usually two or three, sometimes five, sometimes more creative routes. So they will be conceptual directions or narrative directions or graphic thoughts even sometimes, depending on how complex the job is. So we get those, we present them to the client, and he picks one of them, and then we take that one, and we develop it. Then we just have these rounds of presentation and feedback, we end up with kind of delivery, and that will be either the assets themselves or brand guidelines, etc.

Specific process (phases) questions

What is your favourite part of the working process?

My favourite part, my specialism, is typography. I am primarily a designer, graphic designer more broadly, but I draw type as well. Any job we get where I get to draw a type is my favourite, but the more useful answer is that me and the rest of the team at the end of the day, – when we strip out all the other stuff that is connected to Pentagram, big jobs and whatever – all of us are here because we are excited by design, we are excited by very crafted design artefacts.

I think that the best part of any job, for the creative team, are usually those early stages where there is this blank white canvas of imagining new things. This is a bit of an anecdote, but I sometimes imagine 20 years from now, and I'm just doing a craft. I'm just doing carpentry or pottery. I have no skills in either, but there is something very appealing to me about doing all of this stuff because here, but the real joy of it is making. That's always the fun part.

I probably more than other designers enjoy the challenge or mental gymnastics of rationalizing and post rationalizing work. There are obviously times when we make something, and we think it's very cool and relevant, but then we have to go through a stage of reversed engineering and add a narrative to make the client agree with it.

Sometimes when we are just doing experimental stuff, we come out with things that we never thought were going to happen, so we have to rebuild the surrounding narrative to make it make sense.

What is your least favourite part of the working process?

Fortunately, I get to delegate some of my work and the bits that I always delegate is the collection of references. Once we went through the stage of defining what needs to be achieved, we have to find a method of visualizing that for the clients before we actually do the work. Usually, we do this with photography of certain things or scientific principles, or certain abstract images that reference what we are trying to achieve. The reason I don't like is that I feel that we naturally went through this process when we are discussing the idea in the first place, but then we have to have this week of actually collecting it. But the one that I think is actually more of a progressive challenge is having to do all the practical manifestation of that creative work.

For London fashion week, for example, we would work until 2, 3 pm every night for two weeks because we had thousands and thousands of assets we needed to make. That's an extreme case, of course. A more general case would be doing the creative work and then applying it to different assets for the client, in combination with writing and producing guidelines. I'm relatively good at guide lining, but I find it very boring because after doing all the work it's just writing it down for someone. A big turning point was a project we did a number of years ago, is called graphical. For the first time, we made a digital application that anybody from a company can use by inserting certain values and the application will produce a creative asset that can be downloaded and used.

We did that for graphical, so all of that branding is based around a generative system piece of software we created ourselves with a pattern language, colour language all the way through a typographic system that automates through a number of different styles. That's a principle we try to apply to every client now. It's a tool that we use to produce visual assets, but we still need to create certain guidelines. Like this the client doesn't even need guidelines, the client just uses the tool that has a context, a format, a text, and whoever in marketing can just write that out and produce a visual asset. That is something that we actively think and talk about. We want to understand how far we can go. It's the classic, like, will AI destroy the designer. We don't think it does destroy the designer, we think

that there is the need for somebody who is the architect of that framework, but it effectively replaces that production job. Like that, we don't need someone that has to do 20 different assets for the same company.

The other thing you are talking about goes a step further. We don't actively pursue this, but we talk around the idea of it, which is: could you have something where you give it the ingredients of an idea to a machine learning algorithm or a parametric tool or whatever and this thing is going to make sense of it for you. That's something we talk about a lot, but. At the moment, we don't have any feasible way to put that into practice, purely because we have no time to do this.

Do you work with generative design or artificial intelligence, or both?

At the moment we do both, purely generative parametric stuff, and we don't actually do machine learning in the house, but we collaborate with a studio called Counterpoint, based in Portugal and Finland. We collaborate with them relatively regularly, and they are Machine Learning specialists. If it's parametric you need someone to define the parameters, but if it's ML you get more into this territory of training a model. It could be trained on what is perceived as our process or our style and feed it. That becomes really interesting.

The way we use this kind of thinking practically is that we often test our ideas against that. We were doing some experimental work for a recent job. There was a kind of typographic expressive installation, and we were messing about with a machine learning algorithm that was trained in poetry. We were feeding it some of our anchor point statements and concepts and trying to find new angles on some of the ideas that we already defined.

Jody, one of my bosses, does a load of his own experimental work with image guns. He will often take parts of the design work that we are doing, feed it through relevantly trained models, and pull out either to see what happens or to find similarities between different things by pushing them through the same things. It is by no means sophisticated and by no means this bigger vision of having an automated outcome. Jody sometimes also trains his own models as well.

There are little embedded elements in a process where I suppose we see ourselves – or maybe it's just me – in a fiat hier-

archy of the designer, the tool, the computer, all of it is the same you are just using it in different configurations, and you are assigning it different roles. There is this broader debate of AI and the designer. I think there is a fundamental reality where all the resources needed for production just migrate up the chain towards development refinement and exploration of what these tools are.

More broadly, for me, there is this mergence and basically no difference between a designer and a machine that designs things, they are one and the same thing. The machine can be seen as just an extension of me, the designer, allowing me to do something.

Specific process (research) related questions

Do you collect information for the project?

This is an area where we are a bit less sophisticated. We do research for every project.

How do you collect information for the project?

There is a more formal part of the research, which is meeting people, interviews and observing, or going and visiting and finding out somebody or about a business or an audience. In terms of visual research or creative research a lot of it is very boring we just go and find stuff and might be books that we are reading, places we have been and seen stuff, could be exhibitions and creative stuff, or more broadly experiences that we have. It could be the experience of a certain journey or a certain type of interaction that might inform something that we are doing.

How much time do you spend collecting information?

We do different degrees of research depending on the need of the client or also the budget of the client.

What instruments do you commonly use for collecting information?

We do a lot of things like mapping, often the research is evolved around trying to position values, people, or trends within a world space. We understand that there is a bigger world we are living in, and there is the statement or positioning. That happens quite a lot, and it's about asking people to define what they think these positions are.

Another way of exploring is just by making things and seeing what happens. Or, the easiest way of doing research is just to make a list of what's out there.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?

Usually within a branding project that's expressing what the business is, what the services are, or what the product is. Sometimes it can be a bit more varied than that, you know if the job is different.

We'd be looking for that very top-level statement. It's something that through for example creative concept one or root one that we're going to show the client, here's our statement. We say what it is made when we try and capture a kind of perspective or a narrative on what it is. That becomes almost like our signal, our North Star of kind of all the work that we then produce underneath it with. We are constantly looking back to that while exploring colour, for example. We ask ourselves how colour could play a role in that narrative. If it does, how does it?

Then we also have these other layers underneath, which are things like, how does that business actually operate? To what industry do they belong, who are the people that are going to interact with our work, and so on. Another aspect is if we can deliver all of these big ideas and how. So parameters' for the translation of that brief into-creative work is about defining what our perspectives are, and what the client's perspectives are on those areas.

On which parameters are your visual choices based on?

They're not really parameters. It's just that as we explore the work, we just have this constant. It's almost like a Q&A back and forth. Symbiotic relationship of, here's what we're trying to achieve. We've established this, here's what we're doing, does it achieve it? If it doesn't achieve it? Why doesn't it? How do we change it if it does achieve it?

We hate focus groups, and we hate some of those kinds of really corporate versions of user testing. But it will require us to kind of go out, and we try and define how we actually want to engage or what we think the most useful way of engaging

with, with a kind of target audiences and do some research about kind of what their perceptions are. I don't necessarily think that this is the system, I think it's rather the framework we start with.

At the end of the day, creative practitioners are creative practitioners. Working with a too procedural process – at least for me – is not the best solution. If there was literally just a method that you follow, you could get anybody to follow that method. I do think that we, we spend not all of our time, but some of our time, making instinctual things, work or decisions or progress. I think we make intentionally explorative experimental work. This is why I was actually starting to talk about tools, ultimately, when you're in this mindset of creating tools and processes, you can make something, and you expect it to work in a certain way, and then it doesn't, and it, or it breaks, you suddenly have all of this, a creative opportunity that's kind of caused by chance, or randomness or unexpectedness.

Making tools and making parametric or generative designs is really great to kind of harness that potential in a bit more of a structured way, and less of her just a purely kind of artistic, instinctual manner. I think we have that as a huge component of our actual day-to-day working, which is allowing ourselves to be instinctive to open things up to chance, but also just to rely on our own perspectives. And I think, we can look at a creative brief and that structure that I saw before, but actually, I know that if we do this, and we put it out in the world, that it's going to look like every other thing that's out in the world. Surely a part of this is that we want something that's going to stand out or be different.

This leads us on to another thing that we do in a little more formalised way. Sometimes we will talk to the client, about the idea of, I suppose juxtaposition, and actually that we can take these things that we know about these things that we can kind of find from a strategic process, and try to imagine the opposite of that, or what a different route into that is and actually do something that is challenging or groundbreaking. But if we were to sit down and analyse the process I think we have a structural framework that is more just like due diligence, we need to go through the steps of understanding all the different sort of parties within the within that brand world, we need to do that. Because if we don't do that, we're not doing

our job properly. And then the other side is this more ethereal process of making creative decisions for better or worse and then the real experience comes in, navigating that and being able to see what we have done and how it functions within the framework.

Specific process (tools) related questions

What tool would you like to have?

I'm going to be unambitious in order to be ambitious.I would find something very useful whereby I could give the tool the graphic territory and I could output the visual assets that I need, dependent on format or context, message.

That would be really useful because that would allow me to take my more granular ideas and quite quickly prototype them. That's kind of unambitious, and the reason is that at least for now I would still like that open space. I still would like to think about ideas the way I already think about them. If I said to you, I want something that could synthesize different thoughts or imagine certain visuals based on narratives that I'm writing, that would be really cool, but I want to get there step by step. I can imagine all of those wonderful things, but in practice are they the right things? Or do I get that and then realize that it doesn't actually do what I want it to do, and now I'm left with this thing.

I think we as a collective industry have a lot of exploration to do before we can wish for the perfect thing. But my perfect thing for right now would be a rapid prototyping tool.

Internal structures questions

How many people do usually collaborate on a project?

Our team is about ten people, we don't all work on the same thing. Project by project is usually four or five. So it would be a creative director, someone like me a senior designer, it probably would be another mid or junior designer. That would be the core team and then in addition to that, we would typically have one or two motion, 3d, or code-based designers. All in-house.

In most projects, we get effects about four to five people.

But then we scale, we do mega-scale for all these different jobs, sometimes we might have 5 or 6 designers which are just in

production, that are just making things, or we might have a studio counterpoint which is taking on a specific aspect of it. Sometimes they collaborate in the creative process as well. We do that because we feel like we get the better result when the people who are producing things are invested.

What are the hierarchies between the people that work on the same project?

The only hierarchy is the loose things that we have in terms of creative director, senior designer, down. With partners, there is no hierarchy. Everyone is valid, obviously, which makes us very agile. We are very scalable in everything we do, and we intentionally look for partners who also want to work in that way. Of course, outside the times when we have a week to the deadline, and we just need to produce something, they just need to produce it. But outside that in these kinds of more formative, creative spaces we want everyone to come and talk to us about the tests they have done. Because if we prescribe everything, we are removing that thing that I told you about before, which is the chance of the unexpected, interesting outcome. If we want that, we should give partners or collaborators the opportunity to bring something interesting. Like that, we don't lose the interesting things. And then we are back to what I said before about this machine/designer thing that opens up this creative role, being able to make decisions about that content. All of this stuff is feeding in, all of it is interesting, so the designer's job is to say which of these things make sense for a potential audience, etc, etc.

FIELD SYSTEMS, XANDER MARRITT, ART DIRECTOR/CREATIVE LEAD

General questions

What term do you use to name identity projects?

This may be tricky because we are not really a graphic design studio, and we don't really straight up do the identity from scratch. Normally they come to us with an identity already, and we maybe do a brand refresh, or we are doing something to the identity to bring it to a new state. For example, there is a client who has an identity and want to make it more media friendly. We don't really have a term for this kind of projects, we just call them identity.

What is the first thing you start with when dealing with an identity project? To which industry do your clients belong to?

–Most of our clients are from tech or from fashion. We get a lot of brands like Nike or Adidas, and then we get brands like Meta or Facebook, IBM. Most people we work with have already established an identity, we don't really make identities from scratch. We have done a couple of refreshes before but even then they were already out there, and they had their brand.

Do you use different approaches with customers from different sectors?

The approach is always different because it's obviously unique to the brand that you are talking to, and you definitely have to go down and understand what they specific values are. Even if they are two tech companies or two fashion companies, they don't always have the same ideals, so you always have to take a unique look and access what they are doing.

So, on one project right now, we are building a similar brand system or identity system for them as we did for Nike. But the way that they handled the content and the brand, the way they present stuff is much different, so we can't take the same approach exactly. It has to always be a whole new work.

Do you have clients from the fashion industry?

Yes, tougher with tech they are our most common clients.

Does you approach change when dealing with clients from the fashion industry?

Not normally. Everything we do is of graphical or digital nature. We will always kind of do things similarly. We are quite small studio as well, is not like we have strict ways we work. It is always quite fiuid.

General process questions

Can your process be broken down into phases? Briefly describe your phases.

Yeah, I think so. There is always an investigation phase, where we kind of assess everything. We take everything on board and take all the information the client will give us, we have a meeting, we'll do research, just to find out more about them and kind of get as good a picture as we can, of what they do. Then we'll obviously take a brief and the next phase would be sort of pitch or come up with something that they didn't necessarily asked for or expect maybe, but we felt that it fit into what they were really asking.

We are always trying to read between the lines to see what are they really after as a brand, not just what did they say. I think that's an important distinction, also because the clients often come to us because we push those boundaries. That also gets us in trouble sometimes, but when it works well. After the pitch phase, and the client's feedback, we actually start developing or creating production assets but not the final ones. It's more to have an agreed kind of goal. Then there will be a timeline, different projects have different timelines, and we will just produce stuff and share and if it's going well we will keep going until eventually, we get a production window where the general direction has been completely decided, and we made one thing that we think is right, and then we will just be making the final assets.

That's when the production starts, and for us that's quite heavy because we are not graphic designers, there is a lot of media work and code and that kind of stuff.

Is your process intertwined or rather linear?

They are intertwined, especially with some projects because we often don't know what a certain result is going to be until we get somewhere, and actually sometimes have to a point where we agreed on directions and what we have done ins't working as well as it should have, or the client isn't happy with

it, we often scrap large parts of work. One project that was quite infamous for that was the IBM project, the IBM think identity, that we did. And that was supposed to be an identity based on audio. There was an audio track and the visual were supposed to be completely linked to that. So you could kind of see the sound. We did so many iterations and so many different sound style things that didn't work or didn't fit, and the actual majority of the work for the final piece was done in a very short. There was more time spent experimenting and doing things that we never used.

Is your working process agile?

I think our process is quite agile, we definetly rely a lot on the talent of the people we are work with.

I definetly can't do a project by myself, nor would I want to. When people question what you say and kind of find ways to help you. When we find these people we want to work with those people more, because they are the designers that are going to help to push things forward.

Specific process (phases) questions

What is your favourite part of the working process?

Favourite part of the process can be two things. It can be really interesting coming up with the initial ideas and putting together kind of the pitch. That can also get really tiring if you constantly have to think about something new. If you are always pitching a new idea, that can be too much, but it also ca be fun. Beyond that, the first experimental, design phase where you have a general fiow and make your stuff with freedom. Because there is no like, real constrains, it could be anything, let's see what we come out with.

What is your least favourite part of the working process?

My least favourite part has to be the last production part, where we are just doing work. When we are not necessarily designing or making out something new. Just doing what was set before.

Are there parts of the process you would like to change?

I think we are quite fiuid with the way we do things. We try to chop and change when needed. If, for instance, we think that

something is taking too long and not giving results or taking too long to get to results, we will change that process. We always try to find quicker ways to get to something. If we can get to that point quicker, then we are also more relaxed because we can spend our time to do it properly.
This definitely happens a lot with code, because we do a lot of systems or generative code whereas like the best way to build things may be one way but to build it that way takes a long time, so we try to find other software to quickly test it and see it and rebuild it the right way once we know it works. We sometimes get an animator to do things or mock something up. We are always looking for the quickest way to get first results.

Specific process (research) related questions

Do you collect information for the project?
Yes.

How do you collect information for the project?
We don't really like analytics the research we do, depending on what we are doing – if we are doing something retail oriented then we would look at what they have done in the past, what they are doing now. We look at competitors and what they are doing. To kind of get an understanding of the surroundings and the context of what they are asking. Or we also just go through their own website to see what they have on there, because it kind of gives you a lot of clues.
Client's very rarely come to us with the actual information we need. In their head they have all the context of what they have done, but we definitely have to go and look ourselves, we usually don't just rely on the brief.

How much time do you spend collecting information?
It can vary, how much time we spend on research. Some projects it may only be a couple of days, if it's something that is relatively simple. Other projects, for example one I'm doing right now we have been researching for about three weeks or so, and a lot of that it's just due to an unorganized plan, essentially where it's hard to get the information we need, or we have to go to third sources or waiting to hear back from someone to gather everything that we need. This obviously means

that we still need to keep in contact with the client, so we are still like to talk to them and talk through what we discovered and what we are looking at, but we wouldn't necessarily be presenting a solution to them yet or literary it would be us asking them questions.
So it can be anywhere between two days and a month.

What instruments do you commonly use for collecting information?
The internet is the main tool we use for research.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?
We use Google Slides for doing our deck. Then what we will do is take the ideas that we have, and we put them in this deck with any supporting information or research we need to have that structure of what why we are thinking how we are thinking, and then we would use tools like Pinterest or something like that to collect reference imagery.

On which parameters are your visual choices based on?
When we want to sell an idea, it is really important to have not only backups of how we thought of that, but also references of what our solutions could look like. This part is very difficult because it's hard to sell something to someone when they can't see it, so obviously you can't show someone something until you made it, which is the end of the project, so we have to find something. Often I find pairing references together is the best way to go because you take certain aspects of each, but then not overdoing it, I prefer to use only a couple of references that sell what we are saying the best. If we have one idea it may just be a few pages, if we have a bunch of different directions we may split those up into different sections and have a different explanation for each.

Specific process (tools) related questions

What tools do you use?
What instruments/tools would you like to have?
It's hard because there are tools out there for everything.
I mean definitely I think more Artificial intelligence tools, for

doing things. I think that there is a lot of opportunity to use AI to create stuff, but a lot of the tools out there right now are not the best. They are very specific for doing a certain thing and not necessarily made towards design. But I think that there are a lot of opportunities to make things that do. I don't have a specific tool in my mind.

Do you use code in your process or for the creation of tools?

We use whatever tools we can build to do what we need to do. We build a lot. I wouldn't say we did any tools for a planning purpose. But we experiment with tools in different ways to find good results.

One interesting thing we did is we used AI style transfer to create some visuals. We were making some images, and we found that certain ones were working, and certain others weren't. So we took the ones that weren't working and fed them into an AI to give us ideas on how the colour could work. It generates an unexpected result, and I think that often reveals the most interesting stuff. When these kinds of happy accidence happen or when you can feed something into somewhere that is going to give you something no one would necessarily think of because it's part of a strange process, and then you can learn from that and even if you don't use that in the end, you can use the information you created to make something new.

Internal structures questions

How many people do usually collaborate on a project?

It can range because we are quite a small studio, or medium size now. There are about 17 people, 12 in London and a few in Berlin plus freelancers, we have grown. On rally small projects, we might just have a couple of people working on it. The minimum size project I would say is a producer, a creative lead, creative director, and at least one of the artists. For a bigger project, it can grow to eight or nine people.

When we do that, though, it is often because we have so many different tasks to take care of. I think it's hard to have eight designers work on a specific thing. But for example in some projects like the Nike project, we have to code backhand and front hand, then there are different assets to the front hand, we have someone responsible for design someone responsible for animation, someone responsible for info structure, someone responsible for the code then, we have a producer, someone like a technical lead to watch over all the technical people and maybe a design lead and a creative director.

What are the hierarchies between the people that work on the same project?

We have a bit of a structure, but it's not very top-down led, I feel like the people at the top are more kind of keeping an eye on everything and guide everything together. A lot of the design decision can be and are made by all the designers.

LESLIE DAVID, LESLIE DAVID,
FOUNDER/ART DIRECTOR

General questions

What term do you use to name identity projects?

I think that in the studio, we tend to say branding now, I guess it's also quite a trendy word right now. Also, when clients reach us, they mostly speak about branding. When I'm talking about branding in French thought I rather say identity, otherwise it's not always understandable.

What is the first thing you start with when dealing with an identity project?

The process varies a bit between a new brand or a re-brand. But we actually do more new brands than brand refresh or rebranding. Usually, our clients know more or less what we do and there is a natural selection based on our work. Our brands are usually lively and rich in terms of content and assets. We start by understanding the project. What we do when we start the conversation with the client is trying to understand as much as we can about the requirements of the project and what they want to achieve with us. We also try to understand if we are aligned in terms of visual directions.

We don't consider ourselves a branding studio, we are more of a creative agency doing branding, we mostly do branding now, which is a bit sad, but it's just how it is. We try to understand where the client really wants to go and once we agree on a direction, the first step for us is sending a questionnaire to the clients.

Do you use different approaches with customers from different sectors?

It's mostly products, beauty, in particular. We worked with a lot of cosmetic brands especially after we did the Glossier identity, a lot of other cosmetic brands reached out to us. Since we don't want to do only cosmetics, though, we tried to explore also different areas. Right now, we are working on accessory brands, the identity of a farm, and a brand for plants.

Our projects are usually very diverse, and it's always something that for us feels interesting. Our process is mostly the same, but of course we are not reacting the same towards different clients. It's very different from one client to another, I think, but we try to have the same process, and it's usually the same steps. There are some clients that want more from us, and often we also create the content and work on the strategy. It really depends on the scale of the brand and what they want to achieve.

Do you have clients in the fashion industry?

Yes, we have clients in the luxury world, fashion luxury. But we are not really working on branding projects with them. The work we have done for Chanel is small communication projects. We never did a brand refresh for a big fashion company. When we did branding for fashion, it was smaller creative brands.

Is your approach different when working with clients from the fashion industry?

It is almost the same process as working for cosmetics. It's the same process, what changes are the visuals. It's not the same product, therefore also the target group changes. What differs are the art direction of images, photographic images. Fashion photography is very precise and specialized, very different from still life shoots for products.

General process questions

How is your design process structured?

We do have certain steps we follow. When we work on the first presentation, for instance, we work on different directions. Mostly to help the clients understand how the design could look like on assets that we are showing. We are showing a lot of fake assets in the first presentation as a way to show the elements like logo and colour would work on a website, billboard, T-shirt or whatever.

Can your process be broken down into phases? Briefly describe your phases.

After the research, workshop and mood board phase we create a first presentation to see also for ourselves, if the systems that we are working on are really working when applied to assets. Then we are creating presentation after presentation until we agree on everything. After that, there is the phase in which we create the project, the production phase. Then we talk to suppliers. We work in parallel with the client so that they can

choose packaging, paper and so on with us. Then the last step would be to work on the website, which we are not doing ourselves usually. It's a pretty specific task, and we don't want to be involved too much in it. We usually team up with specialized agencies for this. It's usually an Italian one, from Milan.

Is your process intertwined or rather linear?

There is a schedule and logical order, but the way we are working is quite organic.

Specific process (phases) questions

What is your favourite part of the working process?

Most certainly the excitement at the beginning. I think the first two steps are quite exciting because we are really creating something, and after that it's more about refining something that has more or less already being created. There are some clients that are keeping us excited even if the process gets very long. For one particular client we have been working for a year and a half now, and it almost feels like my own brand, even if it's not at all. But at one point after creating so many elements for a brand we get so immersed in it.

What is your least favourite part of the working process?

I think – it's not the worst part – but it happens that when clients are reaching us, they are usually in a rush. If a company contacted us now, for instance, to launch a brand this summer, I'm pretty sure they would launch next spring. It's never taking the time they expect, and it's not even our fault, it's just that the process and developing products takes so much time, as well as developing a website. We then often have to tell the clients that their timing expectations are not realistic. If they came with everything prepared for let's say a brand refresh, then it could be doable, but if it's a total creation it never takes the time a client expects.

What I also really don't like if when the client comes back to us after a presentation or a second presentation with random feedback. Sometimes the clients are showing the presentation to a lot of people, and then they come back with strange feedback from grandmothers or friends and family. After experiencing this, we asked the clients to share the presentation only

with other people that work on the project. If they really want to show it to someone because they feel it could be the right target group, it's not a problem, but we want to avoid that the client gets tu much pressure from too much feedback. This could also blur the purpose. Sometimes there are clients who are having a hard time to take decisions, which I totally understand because I think that it's super difficult.

Specific process (research) related questions

Do you collect information for the project?

Yes, the research phase is quite important for us, it's where we try to understand the project.

How do you collect information for the project?

We work with questionnaires. They are for understanding how the clients invasions the brand. It's a list of questions like where you see yourself in five years, and so on. There are different topics, and it's for us to understand how they think about themselves, who they think their competitors are. It's interning to see who they are competing with, at least in their minds.

We also ask if they want to share references with us, anything that might inspire us.

In the research phase, we also do workshops with the clients. One exercise is giving them a set of opposing adjectives, and they need to position themselves between them.

For example: luxury vs. mass market, and they have to position a dot between this words so that we can understand visually where they see themselves. Once we have that, we get an understanding of the brand and start doing mood boards that we share with them. Sometimes we also do workshops in which we create a big mood board face to face with the client.

How much time do you spend collecting information?

That depends on the projects, especially if it's a new brand or a re-brand or brand refresh.

What instruments do you commonly use for collecting information?

Questionnaires, workshops, collective mood boards that we create with the client. We also look at books a lot for references. Sometimes we go to the library to do more specific research.

It's a lot about finding inspiration, so we look at documentaries about the topics we are dealing with.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?

I think that's the beauty of work. It's difficult to explain, I guess you resonate with one reference more than another one. Usually I create an idea in my mind and I try that out. I also like to mix things together and see

The way I'm working, and now I'm just talking for myself, not the whole studio. The proper creative process, which is probably 10% in case of branding projects. I think that part is very organic, that's also why I really enjoy this part. It's pure creation, and it's hard to explain how I am inspired by it. But I guess I try to combine elements that I like or that I have in my mind and I see if they work together. It does not always work, but I think that's the starting part, once I have some first elements designed.

On which parameters are your visual choices based on?

What we do a lot with Charlotte at the studio is working on each other's sketches. She usually works on the first stage of the logo, and we do a lot of ping pongs. I also create logos, but my designs are simpler than hers since I'm not a type designer. I think this back and forth enriches the process quite a lot. I'm using what she started doing, and I'm re-transforming, keeping some elements and ideas I like, and she is doing the same with my stuff. So we kind of do a big mess in this phase that can last to 2 or 3 weeks. To be able to really take time and try as much as we can.

We are really making a mess, crating things, printing stuff, cutting and gluing things. It's quite exciting and overwhelming at the same time because if something does not come up it's quite scary. I mean, it's hard to control that part. As a creative person – not every creative is like that, but I am – I'm often doubting what I'm doing. That's why I like to have the time to change my mind and try new things. It's a way to challenge my self as much as I can and also keep the quality high. But this can vary, it can happen that I'm happy with the first presentation, this does not happen very often though. I obviously like to be proud of what I'm showing to the clients.

Specific process (tools) related questions

How much of your process is depended on computer software?

Most of it.

How much of your process is not depended on computer software?

Not much, actually. We draft some logos by hand sometimes, but not always. Charlotte is a type designer in our studio, she sketches a lot but also uses specific type related programs.

What tools do you use?

Nothing special, the Adobe Suit of course, a bit of Pinterest but we try not to use it too much. We like to emerge into the project and don't stay only on the visual surface, but we try to understand more about the topics. More than a tool, it's a state of mind, to immerse in a project. Sometimes I can also relate more instantly when I'm part of the target group in a way. Or if I feel like I'm resonating with the brand and I could potentially be a consumer of it.

What tools would you like to have?

I don't know. I guess it would be one program that does everything, so that we don't constantly have to jump between Photoshop, InDesign, Illustrator and so on. But I mean that's easy to do with the adobe suite is quite easy, that's why we are using almost exclusively. I don't know if that's realistic, but it would be nice.

Internal structures questions

How many people do usually collaborate on a project?

We are a small studio of four people. We are three creatives and sometimes interns.

What are the hierarchies between the people that work on the same project?

I am the founder and then there are other designers working with me. We are a very small team. There is Mary, she is the studio manager, there is Charlotte which works more on typography, then we have another designer which is more into

the digital things, she does the animations or 3D effects for example, she is usually not present during the first steps of the process.

OTHER MEANS, GARY FOGELSON, CO-FOUNDER/ART DIRECTOR

General questions

What term do you use to name identity projects?

We actually call them visual identity, internally, and with our clients, we talk about visual languages rather than visual identity systems. Earlier in my career, I worked at a place that refused to use the word branding and that really resonated with me and I think we took that into the studio for a really long time.

We started to use that term a little more because we kind of lost that battle, I think. Clients and that's what people think of, but I think that branding has become so much more than a visual identity or a visual language, and we don't do a lot of the things that people want when they want branding. We don't usually do tone of voice or positioning. The strategy that we do is usually oriented on visual positioning like where are we at, what are we making together. We really do visual identity as a visual language, and the reason for that is because we think that languages will naturally change over time.

What is the first thing you start with when dealing with an identity project?

It's not always the same. Our process is probably pretty standard in a way, we have a kind of discovery research phase where we are just learning as much as we can about the project. Depending on if it's a new thing, we'll research the history or other materials that might be of interest to understand where they are coming from. We don't do mood boards or anything like that in the design process, but we do often look at examples during that research/discovery or the second phase, which is a kind of strategy or concept design.

Sometimes we look at that kind of stuff with our clients to make sure that we are on the same page. Make sure that they didn't find us for the wrong reasons, or expect something that we are not going to make. It's a way to create a shared set of references, it doesn't really inform the work, but it gets us to understand if we are on the same page. We usually start with research, but we also internally are sketching a lot during that phase, but we are not sharing the work. We kind of have to think through ideas visually, so my partner Ryan and I usual-

ly split the running of that part of an identity project where he is typically thinking more about the visual work or sketching on things, and then me and other people on the team are thinking more about getting the research done and sharing it all together.

We usually have meetings where we are sharing what we found, ask questions, confirm that we got it right, getting input on it. They are not really workshops, they are more conversations where we are looking for confirmation that we understood the research that we are doing. Sometimes, depending on the project, that will involve some initial thoughts about what the identity could be. Depends on what the project timeline is, the budget, and how much time we have to work on it.

To which industry do your clients belong to?

We are mostly entirely working in the art/culture field, so working with galleries, museums, art market-related things, publishers, galleries performing as publishers. Things like that. We are about to start to work on some projects that are outside that space, but we are pretty much working at that for about 10 years and almost all our work is in that world.

We have done a little in fashion, but as far as identity is concerned almost entirely in that world.

Do you use different approaches with customers from different sectors?

No, I don't think so.

For an identity project, we don't really change the approach. What would change the approach is the scale of the project, maybe, but not the type of work. The process isn't really different, but depending on the client the things we look at might be different.

General process questions

How is your design process structured?

Something that is a little different about us compared to maybe not other studios, but agencies, is that we often work on the assets ourselves. One of the reasons we don't really hand over guidelines is that we often continue working on the project. That's a part of why we like to think about identities as languages because this first step is just establishing a vocabulary and a grammar, and then we have to start speaking it to really know how it works. We like being involved in that. A lot of our institutional or museum clients or gallery clients we stay involved with to various degrees. It's pretty rare for us to hand stuff off immediately. It sometimes happens, but we also worked with clients for 8 years. Most of our work is translated to the web. We make websites that respond to the identities.

Can your process be broken down into phases? Briefly describe your phases.

There is a discovery phase, there is a strategy or concept design phase where we are trying to land on some shared principles or ideas or directions. Sometimes it's just writing, sometimes it's initial sketches, and we will take that into a design phase where we take one or two of the ideas that we defined in the concept phase into an actual direction.

If a project also involves actually producing things, not just creating an identity and handing it over, we'll usually have a phase where we are making a lot of stuff at once. We don't always make super-comprehensive guidelines, but we usually end the project by handing over some kind of guidelines. We have made very comprehensive guidelines in the past.

Is your process intertwined or rather linear?

It's linear, but there is a lot of overlap. I think the tricky thing with identity projects is that you can propose a bunch of ideas at the beginning and once you start making things they might not work out – you might not have the right idea, and it's hard to go back. That's why we try to approach strategy as a visual strategy where we are coming up with ideas but also have to make work because we can't go in and say this is what we think this should be about until we feel like we can actually translate it into something that will work great.

There is little more overlap internally than we share with our clients. Sometimes we might hold off on something we already made and then show it once we get to a later stage. We try not to run in circles. Things really blur into each other and there is a lot of overlap. Especially if we are doing a website. Development will usually start at a certain point, but the identity design or the website design are usually happening at the same time and inform each other.

Specific process (phases) questions

What is your favourite part of the working process?

I like the beginning stages of the project. I like coming up with ideas. I personally would tend to enjoy the beginning and the end of things. Getting things started and sort of coming in and out, seeing how it's going, and figuring out how it's wrapping up. That's my favourite part of the project, personally, but we all have different roles and Ryan enjoys the making, so he usually jumps right in and starts designing.

Production is also important to us, depending on what the project is and what we are making.

What is your least favourite part of the working process?

I like all of it.

I think the practical side of running a studio when we are working on a lot of projects at the same time prevents us from iterating and working on our designs. It's not that I don't like that part of the process, but I often just personally find it really hard to spend enough time translating ideas into design. Iterating and really working, working, which I used to do all the time, but it's harder and harder when there are lots of projects to manage. We have designers working for us, then work is usually given over to them, and we are checking to see how things are developing.

Ryan does a lot of iterating, especially when we don't have a designer working with us on a project. Sometimes one of us or both of us would sketch out some ideas and hand it over to a designer to see how they push it.

Specific process (research) related questions

Do you collect information for the project?

Yes, we usually start with research.

How do you collect information for the project?

We actually don't interview clients that much. We don't really ever come to something with questions. It's really more about having a conversation. I like making assumptions and then having people tell us that it's right or wrong, rather than waiting for them to tell us everything.

It's a balance between having a conversation with a client and learning from them.

How much time do you spend collecting information?

It should be 2 to 4 weeks. I feel like we are kind of slow, but that's usually because we are juggling a lot of work at the same time. We are probably not working on it for 4 weeks straight, but we can maybe just put one day to it per week. Something we actually started doing with some architects that we are doing identities for is something we treat like a month of discovery. That's like one weekly meeting over the course of a month, that's kind of like therapy where we talk to them, they tell us what they want, what their problems are. We listen, we give them some advice, we sketch out some ideas, and at the end of that phase, we share what we have heard and some suggestions for the next step. Then we start to making work.

What instruments do you commonly use for collecting information?

We do use a tool, called Notion, for organizing and sharing notes. We are not using surveys or forms. There is no real template for what those questions are. Every project is a little different. It's really different if we are working with an institution that is brand new, that doesn't really know who they are yet, versus someone who has been around for a long time. It's all different, and we are learning different things, so it's hard to have a standardized questionnaire.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?

I think that just like anyone does anything.

Ideally, we hear something in a conversation, somebody gives us an idea of how to translate that into form. We think through typography and language, so most of the work that we do is going directly towards the type of graphic form that can create a name or a typographic system, or a typographic language or whatever that feels right for what we have just heard. We just naturally go towards type. Within that, we don't have a scientific method. I do think that what we try to do is – and this is where strategy comes in – these are the things we have heard and this is how we are translating it into form. That's how we

present it to someone, but the way that we are working is sometimes post rationalized. It feels right to us, and then we look for the thing that they said, and we think we connect to it.

On which parameters are your visual choices based on?

I think that what we do in our work, but it's not conscious, it's just how we think, we like to pull from existing references a lot. Sometimes these references come from the client's history. A lot of it's connecting the dots, something that feels intuitively right for us based on what we have learned. We are all pushing things around until we step back, and we feel that it looks right. What looks right to everyone is different, and what looks right comes from different places. It could come from someone else's work, we saw that we admire, It could come from some idea, waiting to get closer and closer to that. It could come from historical references, it could come from philosophy, or how design work should look.

We worked together for a long time and sometimes what happens when new people come into the studio, sometimes it's like oh we wouldn't do that, actually. It's kind of you don't know what you are doing until someone does it differently.

Specific process (tools) related questions

How much of your process is depended on computer software?

Probably all of it.

How much of your process is not depended on computer software?

I mean, I'll write notes and make the crudest sketches just to get ideas out of my head. But then, almost everything is digital.

What tools do you use?

Normal creative stuff, Adobe suite. We use Notion for project management. We are using Slack, we don't like it, but we are using it. We are not using Figma yet, but we are thinking of starting to. It seems like a good tool. I use something called Standard notes, personally, which is an encrypted note app. That looks really undesigned. I have a hard time personally typing notes in anything that has a form to it. I used to write in text edit by turning off ridged text and just writing in plain text. But it was hard to save, so I Started using Standard notes because you can tag notes, and it's encrypted over the cloud,

so you can get it on your phone or on the desktop. I don't like services that, even if you don't realize they are reading it, or storing your notes

What tools would you like to have?

I think that there is a gap between, or the biggest problem that I have noticed in our workfiow is that moving from design to documentation to presentation – the process of doing something and then putting it into a presentation is a way of making images of images and images. I think there is a workfiow problem there. That's why Figma or Adobe XD are very useful tools to that when designing a website. The thing you are making immediately turns into a presentation tool. Whereas we would never work on a book or an identity and open up Illustrator or InDesign art boards. And while doing a lecture, we end up recording a website.

There is something wrong with the process of documenting digital work. We started using Notion more and more for discovery phases of work, proposals, and things like that, where we are not translating anything. We are kind of just letting the rawness of that part of the project be conveyed in the rawness of the tool. We would even drop images and or links, all of these things within Notion directly. Then we use it again at the end, but in the middle when we are showing design work it becomes a template or a PDF. I think there is a gab there.

Internal structures questions

How many people do usually collaborate on a project?

Our team right now contains 3 partners, myself, Ryan, and Phil. Phil runs the technical part, and programming, Laura directs the studio and is doing project management, and strategy, Mark is interning with us right now, and we also have another intern right now.

We are also working on a freelance designer on a couple of projects, but before that, we had a full-time designer for 4 years. That's pretty much the scale of the studio, we rarely get much larger than that. We all work a little bit on everything.

What are the hierarchies between the people that work on the same project?

The 3 partners are running different parts of the projects, but we're usually interfering and communicating with each other.

We are pretty small and we do everything ourselves. The hierarchy isn't necessarily in roles or in people, but in phases of the project. We are either directing ourselves or each other, there are not a lot of strict hierarchies.

ATELIER ROOSJE KLAP
ROOSJE KLAP – FOUNDER/ART DIRECTOR

General questions

What term do you use to name identity projects?

Visual Identity. It's not necessarily a conscious choice, I think. That also depends on my clients, most of them are Dutch, and in Dutch we would just say identity 'identiteit', not visual identity. The reason I don't call it branding – although that might be a bit similar, of course – is because I feel it's reserved more for commercial projects. For me, branding would relate more to products and not to people. Whereas, identity is more connected to the person.

What is the first thing you start with when dealing with an identity project?

I start by talking with the person it is for, the client. Usually, this involves a little bit of research, and discussion. Basically, I would like to know everything from this person. What they love, hate. If they can give me examples of projects they love, that's great, so I can get an understanding of their taste. When I do websites within identity, for example, I would ask the client what is a good website for him. Not to copy that, not at all, just to know what the client thinks it's good. Of course, I see more, and I know more, but it's always good to know what their perspective is on a good website or a good logo, what colours they like. So it's not me putting in on them.

I love – also, a bit like we are doing now – to have an unvoiced discussion on what is good and what is bad for them. Then I take all of that in, and I also include the stuff they read, anything that's really connected to becoming something or someone, becoming an identity. Because I think that the atmosphere is also important. It's all observations to understand if the client wants something dynamic, or maybe less dynamic.

To which industry do your clients belong to?

Without exception to the cultural sector.

It's not that I don't want anything different, but these people come to me because I am in the cultural sector, I represent it. I wouldn't mind designing something for a commercial company, it's just that they don't find me. I have enough work, so

I don't need to find them, either. It's not necessarily my preference that I only have cultural clients but, it's just the way it is.

Do you use different approaches with customers from different sectors?

There is definitely a difference between institutions and, let's say, makers. I'm not in the process of making a design for a small architecture firm, and the approach is somehow similar but also different, especially when it comes to the output. Makers, have often ideas already, for example, the architects came to me with an idea already. The makers I work with are very free and also give me full freedom. They come to me because they realize that what they want to make is not something they can realise on their own.

I feel very lucky to be asked a specific kind of work. An in that the clients usually give me enough freedom. I learn a lot from my clients and I always try to create something great for them, it's an exchange at the end.

General process questions

How is your design process structured?

It's rather precise, actually.

It depends a little on the budged, and how extensive the identity needs to be. But I usually start with a workshop. I do something quite nice for my workshops, I have a huge set of Legos and I 'lego' together with the clients. It's especially interesting with the makers, because they usually already have clear ideas. I also use this method to understand how the clients position themselves in relation to others, to their competition. This becomes very visual with Legos. Sometimes I also use this method to visualize the steps in a certain process. Then I also ask the clients to bring images, photos, or anything they love. But I also always try to find out what they hate, so I know it's a no-go.

Once I have all the information I need some time to work on my own, that's usually when I start sketching. Based on the information I collected, I start to make color pallets. I search for typefaces that I find suitable, sometimes I draw my own typefaces. I often also work on – and that might be a bit branding – copywriting. I sometimes write text that ends up on websites by using the information I gathered during the workshops. Sometimes these are suggestions on how their identity can be manifested better also through text.

Can your process be broken down into phases? Briefly describe your phases.

First the Client talks, then Workshops, then I gather more specific information from the client, then sketching that flows into the presentation. I basically have 3 stages, 3 types of presentations we make, the first presentation is the sketch/design, the second presentation is preliminary design, the third presentation is the final design, when everything is pixel perfect and ready to go. This whole process lasts between a month and two moths.

Specific process (phases) questions

What is your favourite part of the working process?

It is definitely the beginning, research, sketching and the first presentation where I can finally share what I cooked up for the client. I love to present, I make extensive presentations in which share all of my research, my thought process and conclusions. The feedback that I get on that is always positive.

The design is actually the result of all the steps, so the favourite part is indeed all of it.

What is your least favourite part of the working process?

It's probably the dilemma of making all the social media posts, I'm not so interested in that, it's mostly the same content in different formats. I make it, but under protest

After the first presentation, I'm usually not very interested any more. Depending on the client, if I can, I sometimes delegate that part.

Specific process (visuals) related questions

What are your parameters for translating concepts into specific visuals?

I have a very vivid imagination, almost like a lucid dream. I can really imagine or picture what I want to make. So when I'm talking to someone, and I start to understand what this person is like, it sort of bubbles up in my head and I see everything already. Through these workshops, my creativity starts to flow, and I usually already know what I want to make after that.

On which parameters are your visual choices based on?

It is often the case that my final product looks very close to the first sketch. I also usually just present one proposal. I know that other designers or studios present up to 3 ideas and let the client choose, but I don't believe in that at all. I don't do that, also because when I work for a client I always try to give him my very best and usually just one proposal is the best, there are not 3 bests.

I also believe that I'm there to make these choices for this person. What I noticed earlier in my career, I noticed that my clients were negotiating, and they ended up wanting a little bit of each proposal. I'm not about this negotiation. I'm absolutely open to feedback, but not about letting the client design for me because that's not their job. They should rather feel like they are taken care of. If a client does not like my proposal, I start again, instead of twitching here and there. I think it's fine if a client wants me to start again. I also tell that beforehand. I think that it's not very useful to look at others people's designs. It's more useful to look at unrelated things. I get inspiration from all sorts of things, the various things could inspire me. From a neckless, that falls to the fioor and creates an interesting shape, to a museum exhibition. I think that the best inspiration comes from normal daily life. If I looked only at other designers, I would constantly compare myself to them. I think that designers need to keep certain sovereignty, and that in my opinion comes from normal daily life and not from the work of others. I think that it would be very inspirational to know where other people get their inspiration from.

Specific process (tools) related questions

How much of your process is depended on computer software?

I often start by sketching by hand because I really love to do that. But then it really quickly goes into the computer.

What tools would you like to have?

I don't know if I really need extra tools. I can think about all sorts of things related to AI, Machine learning, or other automated tools. Which probably in the end would still need defining and cleaning up.

I can imagine that in the future that will happen. Especially Adobe seems to go in the template direction. This will take a lot of work out of the designer's hands. I think this will help especially designers that are less experienced, which is great. Taking things into your own hands is wonderful. But I think that if we all use the same tools in the end all the designs will look the same, and they will have the same standards. I actually really love amateurism. It's often very unthoughtful, and I really like when things are not so calculated. For example, I think that the vegetable seller that works nearby makes great posters. He just picks coloured paper, he uses the biggest lettering possible. 'Strawberries –4,99, really lekker' they say for instance, and I think that they are great. I have big respect for that.

Internal structures questions

How many people do usually collaborate on a project?

I usually do most of the things alone or with one junior designer. If the workload is too much, I work with someone else. Most of the time, I work on the beginning of identity projects by myself, sometimes with one or maximum of two people. That obviously depends on what is needed and on the skills of my collaborators. I usually work with up to 7 freelancers. Since the pandemic, many things changed. Before, I used to work with about 4 people in the studio, but I started to work alone, and I realized that I really love it. Especially after sharing a studio with many people for so long. I noticed that sometimes the studio was so busy that I had to look for a different space to write, and really concentrate. So through the pandemic, I was actually quite happy to work alone. Everyone I worked with during the years has his speciality. I have worked with philosophers, hackers, type designers, designers like me, video makers and so on. That's also why I always loved the acronym ARK (Atelier Roosje Klap) because it stands for a space where everyone collaborates, where there is space for all kinds of creatives.

(1)

Off Office Design Feedback Observation Date 23.08.22 Time 09:55 P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)		Johannes works from home feedback through phone call
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin X (Designer)		
2. Who is giving feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)		
	Client		
	Other		
3. How many people are giving feedback?	One designer X		One designer through phone call
	More than one designer		
	The whole design team		
	Client spokesman		
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		searching in chat/emails thread speaking about client feedback
	Reference Research		
	Concept construction		
	Sketching		
	Presentation		
	Rounds of adjustments X		
	Final implementation		
5. What is the designer asking for feedback on?	General	Printed matter X	(cover) (wie dass Logo sitzt am besten)
		Web	
		Logo	
	Detail	Type selection	
		Type edit	
		Image selection	
		Image edit	
		Composition	
		Proportions	
		Illustration/vector	
		Other	
	Other		
6. What is the goal of the feedback?	Unlocking creative process		'Reinzeichnung' Organizing timing and tasks
	Dispel doubts		
	Finish and move on to other task		
	Approval from collegues		
	Approval from client		
	Other		
7. Why does the designer ask for feedback?	Positive reason	report breakthrough	How to implement client feedback
		need confirmation	
	Negative reason	blocked in process	
		douting choices	
	Other X		
8. In what form is the feedback given?	Verbal feedback	dialogue X	speaking about the client looking at Notion and email threads
		monologue	
		discussion	
	Visual feedback	references	
		on spot sketching	
	Other		

Off Office Design Feedback Observation P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives		more about the organization than the design
	Mostly verbs		
	Long articulated sentences		
	Short statements X		
	Other		
10. In case of visual feedback, what kind of visual material is used?	Online references		
	Physical references/printed matter		
	Sketching/designing on computer		
	Manual sketching		
	Other		
11. What is the designer's reaction to the feedback?	Positive reaction X	accepting X	
		enlightening	
	Negative reaction	arguing against	
		hesitation/doubt	
	Other		
12. What is the feedback-giver's attitute?	Positive attitude	encouraging	I can't hear the other part of the phonecall
		satisfying	
	Negative attitude	frustating	
		unsupporting	
	Other		
13. What kind of effects has the feedback session on the studio?	Positive effect	mood lightening	Neutral, no one seems to be engaged in it, except Robin
		interaction	
		break opportunity	
	Negative effect	distraction	
		work interference	
	Other X		
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction	flow of ideas	
		collaborating	
	Negative interaciton	slowering	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		till 10:09
	About 5 minutes		
	About 10 minutes		
	More than 10 minutes X		

(2)

Off Office Design Feedback Observation Date 23.08.22 Time 10:30 P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)	X	client asked for the call
	Johannes (Art Director/Founder)		
	Leonie (Designer)	X	
	Robin (Designer)		
2. Who is giving feedback?	Markus (Art Director/Founder)		through video call
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)		
	Client	X	
	Other		
3. How many people are giving feedback?	One designer		2 clients online one client is dominant
	More than one designer		
	The whole design team		
	Client spokesman		
	Client group	X	
	Other		
4. In which identity process phase is the feedback requested?	Client Research		email signature
	Reference Research		
	Concept construction		
	Sketching		
	Presentation		
	Rounds of adjustments		
	Final implementation	X	
5. What is the designer asking for feedback on?	General	Printed matter	email signature type size, font type
		Web X	
		Logo X	
	Detail X	Type selection X	
		Type edit X	composition of signature type, font selection, size creating a shorter version of the signature.
		Image selection	
		Image edit	
		Composition X	
		Proportions	
		Illustration/vector	
		Other	
	Other	X	
6. What is the goal of the feedback?	Unlocking creative process		client request
	Dispel doubts		
	Finish and move on to other task		
	Approval from collegues		
	Approval from client		
	Other	X	
7. Why does the designer ask for feedback?	Positive reason	report breakthrough	The client asked for it, 'speaial'
		need confirmation	
	Negative reason	blocked in process	
		douting choices	
	Other	X	
8. In what form is the feedback given?	Verbal feedback	dialogue	sharing screen in the email
		monologue	
		discussion	
	Visual feedback X	references	
		on spot sketching	
	Other	X	

Off Office Design Feedback Observation P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives		technicalities about the appearance of the signature client speaks most of the time
	Mostly verbs		
	Long articulated sentences	X	
	Short statements		
	Other		
10. In case of visual feedback, what kind of visual material is used?	Online references	X	looking at the signature
	Physical references/printed matter		
	Sketching/designing on computer		
	Manual sketching		
	Other		
11. What is the designer's reaction to the feedback?	Positive reaction X	accepting X	pleasing the client coming up with multiple solutions on spot joking to enlighten the mood
		enlightening	
	Negative reaction	arguing against	
		hesitation/doubt	
	Other		
12. What is the feedback-giver's attitute?	Positive attitude	encouraging	client group do not agree, very rigid dominant client gets what he wants, other client agrees eventually
		satisfying	
	Negative attitude X	frustating X	
		unsupporting	
	Other X	X	
13. What kind of effects has the feedback session on the studio?	Positive effect X	mood lightening X	① silence, focus on call ② talks between Markus and Leonie after the call ③ Robin joins to make jokes about the 'rigid' meeting nice studio moment
		interaction X	
		break opportunity	
	Negative effect	distraction	
		work interference	
	Other		
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction X	flow of ideas	Markus collaborates the client is not 'really collaborating' Leonie collaborates to find solutions
		collaborating X	
	Negative interaction X	slowering X	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		10:30 – 10:52
	About 5 minutes		
	About 10 minutes		
	More than 10 minutes	X	

(3)

Off Office Design Feedback Observation — Date 28.08.22 Time 11:39 — P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)	X	
	Robin (Designer)		
2. Who is giving feedback?	Markus (Art Director/Founder)		Through phonecall after couple of minutes from phonecall to video conference
	Johannes (Art Director/Founder)	X	
	Leonie (Designer)		
	Robin (Designer)		
	Client		
	Other		
3. How many people are giving feedback?	One designer	X	
	More than one designer		
	The whole design team		
	Client spokesman		
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		
	Reference Research		
	Concept construction		
	Sketching		
	Presentation		
	Rounds of adjustments	X	
	Final implementation	X	
5. What is the designer asking for feedback on?	General	Printed matter X	Poster for festival image in poster
		Web	
		Logo	
	Detail	Type selection	implementing client feedback
		Type edit X	
		Image selection	type on image
		Image edit X	
		Composition X	
		Proportions	
		Illustration/vector	
		Other Colors	
	Other		
6. What is the goal of the feedback?	Unlocking creative process		improve image selection for poster
	Dispel doubts		implementing client feedback
	Finish and move on to other task		
	Approval from collegues		
	Approval from client		
	Other	X	
7. Why does the designer ask for feedback?	Positive reason X	report breakthrough	telling Johannes everything she tried with the photos
		need confirmation X	
	Negative reason X	blocked in process	
		douting choices X	
	Other		
8. In what form is the feedback given?	Verbal feedback	dialogue X	looking at poster on screen, screensharing
		monologue	
		discussion	
	Visual feedback X	references	
		on spot sketching X	
	Other		

Off Office Design Feedback Observation — P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives		speakes about heaviness making smaller/exactly centred contrast technical solutions for legibility costs are considered /printing options
	Mostly verbs		
	Long articulated sentences		
	Short statements	X	
	Other		
10. In case of visual feedback, what kind of visual material is used?	Online references		minimal changes? previous printed work as reference
	Physical references/printed matter	X	
	Sketching/designing on computer	X	
	Manual sketching		
	Other		
11. What is the designer's reaction to the feedback?	Positive reaction X	accepting X	
		enlightening	
	Negative reaction	arguing against	
		hesitation/doubt	
	Other		
12. What is the feedback-giver's attitute?	Positive attitude X	encouraging X	both agree on what does not work, both try to find solutions Johannes suggests, Leonie implements Leonie creates Johannes comments
		satisfying	
	Negative attitude	frustating	
		unsupporting	
	Other		
13. What kind of effects has the feedback session on the studio?	Positive effect	mood lightening	silence, focus on call, other designers continue working
		interaction	
		break opportunity	
	Negative effect	distraction	
		work interference	
	Other X	Neutral	
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction X	flow of ideas	find satisfying solution
		collaborating X	
	Negative interaciton	slowering	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		11:39 – 12:00
	About 5 minutes		
	About 10 minutes		
	More than 10 minutes	X	

Off Office Design Feedback Observation — Date 23.08.22 Time 12:00 — P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)	X	
2. Who is giving feedback?	Markus (Art Director/Founder)		phone - call
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)		
	Client	X	
	Other		
3. How many people are giving feedback?	One designer		
	More than one designer		
	The whole design team		
	Client spokesman	X	
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		choosing logo variation
	Reference Research		
	Concept construction		
	Sketching	X	
	Presentation		
	Rounds of adjustments		
	Final implementation		
5. What is the designer asking for feedback on?	General	Printed matter	3-lined logo
		Web X	testing logo variation on
		Logo X	instagram/ web applications
	Detail	Type selection	
		Type edit X	
		Image selection	
		Image edit	
		Composition	
		Proportions	
		Illustration/vector	
		Other	
	Other		
6. What is the goal of the feedback?	Unlocking creative process		
	Dispel doubts		
	Finish and move on to other task		
	Approval from collegues		
	Approval from client	X	
	Other		
7. Why does the designer ask for feedback?	Positive reason	report breakthrough	
		need confirmation X	
	Negative reason	blocked in process	
		douting choices	
	Other		
8. In what form is the feedback given?	Verbal feedback X	dialogue X	
		monologue	
		discussion	
	Visual feedback X	references	
		on spot sketching	
	Other looking at designs in screen		

Off Office Design Feedback Observation — P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives		detailed explanation of reason of choices
	Mostly verbs		strong focus, of type, classic, focus on 120 years
	Long articulated sentences	X	modern but serious
	Short statements		
	Other		
10. In case of visual feedback, what kind of visual material is used?	Online references		looking at designs on computer
	Physical references/printed matter		looking at Notion task-board
	Sketching/designing on computer	X	
	Manual sketching		
	Other		
11. What is the designer's reaction to the feedback?	Positive reaction	accepting	designer argues to explain his choices, tries to convince the client
		enlightening	
	Negative reaction	arguing against	
		hesitation/doubt	
	Other arguing/defending/explaining		
12. What is the feedback-giver's attitute?	Positive attitude X	encouraging	supporting
		satisfying	
	Negative attitude	frustating	
		unsupporting	
	Other		
13. What kind of effects has the feedback session on the studio?	Positive effect	mood lightening	everyone keeps working
		interaction	
		break opportunity	
	Negative effect	distraction	
		work interference	
	Other X	Neutral	
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction X	flow of ideas	
		collaborating X	
	Negative interaciton	slowering	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		12:00 — 12:13
	About 5 minutes		
	About 10 minutes		
	More than 10 minutes	X	

(5)

Off Office Design Feedback Observation Date 23.08.22 Time 12:30 P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)	X	
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)		
2. Who is giving feedback?	Markus (Art Director/Founder)		Phone call
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)		
	Client	X	
	Other		
3. How many people are giving feedback?	One designer		
	More than one designer		
	The whole design team		
	Client spokesman	X	
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		
	Reference Research		
	Concept construction		
	Sketching		
	Presentation		
	Rounds of adjustments	X	
	Final implementation	X	
5. What is the designer asking for feedback on?	General	X	Printed matter X	Format, type size
			Web	
			Logo	
	Detail		Type selection	
			Type edit X	
			Image selection	
			Image edit	
			Composition	
			Proportions	
			Illustration/vector	
			Other	
	Other		
6. What is the goal of the feedback?	Unlocking creative process		technical issues
	Dispel doubts		
	Finish and move on to other task		
	Approval from collegues		
	Approval from client	X	
	Other		
7. Why does the designer ask for feedback?	Positive reason X		report breakthrough	
			need confirmation X	
	Negative reason		blocked in process	
			douting choices	
	Other		
8. In what form is the feedback given?	Verbal feedback X		dialogue X	
			monologue	
			discussion	
	Visual feedback X		references	
			on spot sketching	
	Other looking at design on screen		

Off Office Design Feedback Observation P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives		short discussions about font size/format
	Mostly verbs		
	Long articulated sentences		
	Short statements	X	
	Other		
10. In case of visual feedback, what kind of visual material is used?	Online references		screen, design on screen
	Physical references/printed matter		
	Sketching/designing on computer		
	Manual sketching		
	Other looking at designs/screen		
11. What is the designer's reaction to the feedback?	Positive reaction	accepting	looks for confirmation
		enlightening	
	Negative reaction	arguing against X	
		hesitation/doubt	
	Other X		
12. What is the feedback-giver's attitute?	Positive attitude	encouraging	
		satisfying	
	Negative attitude	frustating	
		unsupporting	
	Other X agrees		
13. What kind of effects has the feedback session on the studio?	Positive effect	mood lightening	everyone continues to work
		interaction	
		break opportunity	
	Negative effect	distraction	
		work interference	
	Other Neutral		
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction X	flow of ideas	fast interaction, fast agreeying
		collaborating X	
	Negative interaciton	slowering	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		12:30 — 12:35
	About 5 minutes	X	
	About 10 minutes		
	More than 10 minutes		

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Off Office Design Feedback Observation Date 23.08.22 Time 14:49 P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)	X	
2. Who is giving feedback?	Markus (Art Director/Founder)	X	
	Johannes (Art Director/Founder)		
	Leonie (Designer)	X	
	Robin (Designer)		
	Client		
	Other		
3. How many people are giving feedback?	One designer		
	More than one designer	X	
	The whole design team		
	Client spokesman		
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		
	Reference Research		
	Concept construction		
	Sketching		
	Presentation		
	Rounds of adjustments	X	
	Final implementation	X	
5. What is the designer asking for feedback on?	General	Printed matter	Type variations typographic animation
		Web	
		Logo	
	Detail	Type selection	
		Type edit X	
		Image selection	
		Image edit	
		Composition	
		Proportions	
		Illustration/vector	
		Other	
	Other X animation/type		
6. What is the goal of the feedback?	Unlocking creative process		showing variations choosing one variation on type animation
	Dispel doubts		
	Finish and move on to other task		
	Approval from collegues	X	
	Approval from client		
	Other		
7. Why does the designer ask for feedback?	Positive reason X	report breakthrough	
		need confirmation X	
	Negative reason X	blocked in process	
		douting choices X	
	Other		
8. In what form is the feedback given?	Verbal feedback X	dialogue X	showing different designs
		monologue	
		discussion	
	Visual feedback X	references	
		on spot sketching X	
	Other		

Off Office Design Feedback Observation P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives		static, small type, don't need that much simplicity, static version better coherent book, coherent book missing composition issues, simplicity describing the animation *
	Mostly verbs		
	Long articulated sentences X		
	Short statements		
	Other		
10. In case of visual feedback, what kind of visual material is used?	Online references X		showing animations type animation variation showing examples on phone
	Physical references/printed matter		
	Sketching/designing on computer		
	Manual sketching		
	Other X		
11. What is the designer's reaction to the feedback?	Positive reaction X	accepting X	discussing options explaining choices made so far proposing to try new things
		enlightening	
	Negative reaction	arguing against	
		hesitation/doubt	
	Other		
12. What is the feedback-giver's attitute?	Positive attitude X	encouraging X	explaining doubts in detail with details testing versions on mobile phone
		satisfying	
	Negative attitude	frustating	
		unsupporting	
	Other X requesting changes		
13. What kind of effects has the feedback session on the studio?	Positive effect X	mood lightening	interactive, team discussion almost brainstorm session on what to change
		interaction X	
		break opportunity	
	Negative effect	distraction	
		work interference	
	Other		
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction X	flow of ideas	complimenting on the work done so far
		collaborating X	
	Negative interaciton	slowering	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		14:49 – 15:15
	About 5 minutes		
	About 10 minutes		
	More than 10 minutes X		

* In detail discussion of composition
where to put address? title?
Choosing one version, discussing how to improve and change it
Es macht inhaltlich sinn → it makes sense given the content
analyzing the connection of content and animation movements
~~time~~ speed of animation, legibility
to much information given the time of the animation
discussing visual features as well as functional features
* color testing on screen / twist the colors, work on saturation
→ getting the same color on instagram
"ist viel serier die Röre"

* adjectives like flowing animation, old school, gameboy style
like a wave

(7)

Off Office Design Feedback Observation — Date 23.08.22 Time 15:31 — P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)	X	
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)		
2. Who is giving feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)	X	
	Robin (Designer)		
	Client		
	Other		
3. How many people are giving feedback?	One designer	X	
	More than one designer		
	The whole design team		
	Client spokesman		
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		
	Reference Research		
	Concept construction		
	Sketching	X	
	Presentation		
	Rounds of adjustments	X	
	Final implementation		
5. What is the designer asking for feedback on?	General — Printed matter	X	Type size on sign for Museum (~~wayfinding~~)
	General — Web		
	General — Logo		
	Detail — Type selection		
	Detail — Type edit	X	
	Detail — Image selection		
	Detail — Image edit		
	Detail — Composition		
	Detail — Proportions		
	Detail — Illustration/vector		
	Detail — Other		
	Other		
6. What is the goal of the feedback?	Unlocking creative process		doubts about font size
	Dispel doubts	X	
	Finish and move on to other task		
	Approval from collegues		
	Approval from client		
	Other		
7. Why does the designer ask for feedback?	Positive reason — report breakthrough		asking about type size
	Positive reason — need confirmation	X	
	Negative reason — blocked in process	X	
	Negative reason — douting choices	X	
	Other		
8. In what form is the feedback given?	Verbal feedback — dialogue	X	printed example is discussed
	Verbal feedback — monologue		
	Verbal feedback — discussion		
	Visual feedback — references	X	
	Visual feedback — on spot sketching		
	Other		

Off Office Design Feedback Observation — P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives		adjectives about size speaking about legibility
	Mostly verbs		
	Long articulated sentences		
	Short statements	X	
	Other		
10. In case of visual feedback, what kind of visual material is used?	Online references		printed wayfinding for museum sign physical interaction with the printed sign, going closer to the sign
	Physical references/printed matter	X	
	Sketching/designing on computer		
	Manual sketching		
	Other		
11. What is the designer's reaction to the feedback?	Positive reaction — accepting	X	
	Positive reaction — enlightening		
	Negative reaction — arguing against		
	Negative reaction — hesitation/doubt		
	Other		
12. What is the feedback-giver's attitute?	Positive attitude — encouraging		agreeing with Markus' choices
	Positive attitude — satisfying	X	
	Negative attitude — frustating		
	Negative attitude — unsupporting		
	Other		
13. What kind of effects has the feedback session on the studio?	Positive effect — mood lightening	X	short interaction between the two
	Positive effect — interaction	X	
	Positive effect — break opportunity		
	Negative effect — distraction		
	Negative effect — work interference		
	Other — Neutral	X	
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction — flow of ideas		
	Positive interaction — collaborating	X	
	Negative interaciton — slowering		
	Negative interaciton — conflicting		
	Other — short feedback	X	
15. How long is the feedback session?	Less than 5 minutes	X	15:31 — 15:33
	About 5 minutes		
	About 10 minutes		
	More than 10 minutes		

(8)

Off Office Design Feedback Observation — Date 23.08.22 Time 17:54 — P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)	X	
	Robin (Designer)		
2. Who is giving feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)	X	
	Client		
	Other		
3. How many people are giving feedback?	One designer	X	
	More than one designer		
	The whole design team		
	Client spokesman		
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		'it was pecified that it's not the final version'
	Reference Research		
	Concept construction		everything needs refinement
	Sketching		
	Presentation		
	Rounds of adjustments	X	
	Final implementation		
5. What is the designer asking for feedback on?	General	Printed matter X	foalding leaflet
		Web	asking about differen variation
		Logo	(zik zak flyer)
	Detail	Type selection	
		Type edit	
		Image selection	
		Image edit	
		Composition X	
		Proportions	
		Illustration/vector	
		Other	
	Other		
6. What is the goal of the feedback?	Unlocking creative process		approval before sending the design to the art-director (Johannes)
	Dispel doubts		
	Finish and move on to other task		
	Approval from collegues	X	
	Approval from client		
	Other		
7. Why does the designer ask for feedback?	Positive reason X	report breakthrough	
		need confirmation X	
	Negative reason	blocked in process	
		douting choices	
	Other		
8. In what form is the feedback given?	Verbal feedback X	dialogue X	looking on screen, moving parts of the layout around
		monologue	
		discussion	
	Visual feedback X	references	
		on spot sketching	
	Other		

Off Office Design Feedback Observation — P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives		questions from the feedback giver
	Mostly verbs		'better than' / type treatments
	Long articulated sentences	X	
	Short statements		
	Other X questions		
10. In case of visual feedback, what kind of visual material is used?	Online references		looking at printed and folded prototype
	Physical references/printed matter	X	moving things around
	Sketching/designing on computer	X	
	Manual sketching		
	Other		
11. What is the designer's reaction to the feedback?	Positive reaction X	accepting X	enfolding during tryouts and discussion
		enlightening	
	Negative reaction	arguing against	
		hesitation/doubt	
	Other X finds it helpful		
12. What is the feedback-giver's attitute?	Positive attitude X	encouraging X	asking questions discovering mistakes through questions
		satisfying	
	Negative attitude	frustating	
		unsupporting	
	Other		
13. What kind of effects has the feedback session on the studio?	Positive effect	mood lightening	small interaction
		interaction X	
		break opportunity	
	Negative effect	distraction	
		work interference	
	Other X Neutral		
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction X	flow of ideas	calm collaboration
		collaborating X	
	Negative interaciton	slowering	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		17:57 — 18:07
	About 5 minutes		
	About 10 minutes		
	More than 10 minutes	X	

Off Office Design Feedback Observation — Date 23.08.22 Time 18:15 — P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)	X	
2. Who is giving feedback?	Markus (Art Director/Founder)	X	
	Johannes (Art Director/Founder)		
	Leonie (Designer)	X	
	Robin (Designer)		
	Client		
	Other		
3. How many people are giving feedback?	One designer		
	More than one designer	X	
	The whole design team		
	Client spokesman		
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		
	Reference Research		
	Concept construction		
	Sketching	X	
	Presentation		
	Rounds of adjustments	X	
	Final implementation		
5. What is the designer asking for feedback on?	General	Printed matter	Problematic with the conversion/compression of colors on Instagram
		Web	X
		Logo	
	Detail	Type selection	discussing color values for instagram video
		Type edit	
		Image selection	
		Image edit	
		Composition	
		Proportions	
		Illustration/vector	
		Other	
	Other X	colours/insta	
6. What is the goal of the feedback?	Unlocking creative process		
	Dispel doubts		
	Finish and move on to other task		
	Approval from collegues	X	
	Approval from client		
	Other		
7. Why does the designer ask for feedback?	Positive reason	report breakthrough	hard to adjust color for instagram
		need confirmation	
	Negative reason X	blocked in process X	
		douting choices	
	Other		
8. In what form is the feedback given?	Verbal feedback X	dialogue X	looking at insta screen
		monologue	
		discussion	
	Visual feedback X	references X	
		on spot sketching	
	Other		

Off Office Design Feedback Observation — P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives X		about rotY rgb/ pantone full red, desaturated red illuminating,
	Mostly verbs		
	Long articulated sentences		
	Short statements X		
	Other		
10. In case of visual feedback, what kind of visual material is used?	Online references		looking at color variations on screen
	Physical references/printed matter		
	Sketching/designing on computer		
	Manual sketching		
	Other X		
11. What is the designer's reaction to the feedback?	Positive reaction X	accepting X	no one is 100% satisfied
		enlightening	
	Negative reaction	arguing against	
		hesitation/doubt	
	Other		
12. What is the feedback-giver's attitute?	Positive attitude X	encouraging X	trying to mix other variations of the colour together
		satisfying	
	Negative attitude	frustating	
		unsupporting	
	Other		
13. What kind of effects has the feedback session on the studio?	Positive effect X	mood lightening	day is about to end, feedback as studio moment
		interaction X	
		break opportunity	
	Negative effect	distraction	
		work interference	
	Other		
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction X	flow of ideas X	ideas of what colour variations to try
		collaborating X	
	Negative interaciton	slowering	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		18:15 — 18:22
	About 5 minutes		
	About 10 minutes X		
	More than 10 minutes		

(1)

Off Office Design Feedback Observation Date 24.08.22 Time 10:25 P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)	X	
	Robin (Designer)		
2. Who is giving feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)		
	Client	X	
	Other		
3. How many people are giving feedback?	One designer		throughy videoconference
	More than one designer		
	The whole design team		
	Client spokesman	X	
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		
	Reference Research		
	Concept construction		
	Sketching		
	Presentation		
	Rounds of adjustments		
	Final implementation	X	
5. What is the designer asking for feedback on?	General	Printed matter	Digital email signature
		Web X	
		Logo X	
	Detail	Type selection	
		Type edit X	
		Image selection	
		Image edit	
		Composition	
		Proportions X	
		Illustration/vector	
		Other	
	Other X digital mail signature		
6. What is the goal of the feedback?	Unlocking creative process		
	Dispel doubts		
	Finish and move on to other task		
	Approval from collegues		
	Approval from client	X	
	Other		
7. Why does the designer ask for feedback?	Positive reason X	report breakthrough	
		need confirmation X	
	Negative reason	blocked in process	
		douting choices	
	Other		
8. In what form is the feedback given?	Verbal feedback X	dialogue X	looking at the graphic throug screen sharing
		monologue	
		discussion	
	Visual feedback X	references	
		on spot sketching	
	Other looking at screen		

Off Office Design Feedback Observation P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives		technical issues serif vs. sans serif type size, in pixel vs. points size appearances on screen
	Mostly verbs		
	Long articulated sentences X		
	Short statements		
	Other		
10. In case of visual feedback, what kind of visual material is used?	Online references		looking at graphic on computer, screen sharing
	Physical references/printed matter		
	Sketching/designing on computer		
	Manual sketching		
	Other X		
11. What is the designer's reaction to the feedback?	Positive reaction X	accepting X	
		enlightening	
	Negative reaction	arguing against	
		hesitation/doubt	
	Other		
12. What is the feedback-giver's attitute?	Positive attitude X	encouraging	talking a lot, explaining problem
		satisfying	
	Negative attitude	frustating	
		unsupporting	
	Other		
13. What kind of effects has the feedback session on the studio?	Positive effect	mood lightening	the other designer continue working
		interaction	
		break opportunity	
	Negative effect	distraction	
		work interference	
	Other X Neutral		
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction X	flow of ideas	
		collaborating X	
	Negative interaciton	slowering	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		10.25 — 10:36
	About 5 minutes		
	About 10 minutes X		
	More than 10 minutes		

(2)

Off Office Design Feedback Observation Date 24.08.22 Time 11:01 P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)	X	
	Robin (Designer)		
2. Who is giving feedback?	Markus (Art Director/Founder)	X	
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)		
	Client		
	Other		
3. How many people are giving feedback?	One designer	X	
	More than one designer		
	The whole design team		
	Client spokesman		
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		
	Reference Research		
	Concept construction		
	Sketching		
	Presentation		
	Rounds of adjustments		
	Final implementation	X	
5. What is the designer asking for feedback on?	General	Printed matter	micro adjustments
		Web X	
		Logo X	
	Detail	Type selection	
		Type edit X	
		Image selection	
		Image edit	
		Composition	
		Proportions	
		Illustration/vector	
		Other	
	Other		
6. What is the goal of the feedback?	Unlocking creative process		
	Dispel doubts		
	Finish and move on to other task	X	
	Approval from collegues	X	
	Approval from client		
	Other		
7. Why does the designer ask for feedback?	Positive reason X	report breakthrough	
		need confirmation X	
	Negative reason	blocked in process	
		douting choices	
	Other		
8. In what form is the feedback given?	Verbal feedback X	dialogue X	looking at work on screen
		monologue	
		discussion	
	Visual feedback X	references	
		on spot sketching	
	Other		

Off Office Design Feedback Observation P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives		a point smaller smaller and more compact much bigger on client screen too big / better proportions
	Mostly verbs		
	Long articulated sentences		
	Short statements		
	Other		
10. In case of visual feedback, what kind of visual material is used?	Online references		looking at work in screen
	Physical references/printed matter		
	Sketching/designing on computer	X	
	Manual sketching		
	Other		
11. What is the designer's reaction to the feedback?	Positive reaction X	accepting X	
		enlightening	
	Negative reaction	arguing against	
		hesitation/doubt	
	Other		
12. What is the feedback-giver's attitute?	Positive attitude X	encouraging X	suggesting minor changes finding "mistakes" in digital appereance proposes to try Arial different font
		satisfying	
	Negative attitude	frustating	
		unsupporting	
	Other		
13. What kind of effects has the feedback session on the studio?	Positive effect	mood lightening	Others continue to work
		interaction	
		break opportunity	
	Negative effect	distraction	
		work interference	
	Other Neutral	X	
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction X	flow of ideas	
		collaborating X	
	Negative interaciton	slowering	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		11:01 — 11:07
	About 5 minutes	X	
	About 10 minutes		
	More than 10 minutes		

(3)

Off Office Design Feedback Observation Date 24.08.22 Time 11:35 P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)	X	
	Robin (Designer)		
2. Who is giving feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)		
	Client	X	
	Other		
3. How many people are giving feedback?	One designer		
	More than one designer		
	The whole design team		
	Client spokesman	X	
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		
	Reference Research		
	Concept construction		
	Sketching		
	Presentation		
	Rounds of adjustments		
	Final implementation	X	
5. What is the designer asking for feedback on?	General	Printed matter	digital, email signature
		Web X	
		Logo	
	Detail	Type selection	
		Type edit X	
		Image selection	
		Image edit	
		Composition	
		Proportions	
		Illustration/vector	
		Other	
	Other		
6. What is the goal of the feedback?	Unlocking creative process		
	Dispel doubts		
	Finish and move on to other task	X	
	Approval from collegues		
	Approval from client	X	
	Other		
7. Why does the designer ask for feedback?	Positive reason X	report breakthrough	
		need confirmation X	
	Negative reason	blocked in process	
		douting choices	
	Other		
8. In what form is the feedback given?	Verbal feedback X	dialogue X	looking at screen
		monologue	
		discussion	
	Visual feedback X	references	
		on spot sketching	
	Other		

Off Office Design Feedback Observation P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives		Arial 14, Arial 10 point 8 *
	Mostly verbs		way too big, eindeutig
	Long articulated sentences	X	definitely, first step would be ...
	Short statements	X	"this is a mistake"
	Other		aggressive language
10. In case of visual feedback, what kind of visual material is used?	Online references		looking at Figma file
	Physical references/printed matter		
	Sketching/designing on computer	X	
	Manual sketching		
	Other		
11. What is the designer's reaction to the feedback?	Positive reaction X	accepting X	accepting but 'defending' her position
		enlightening	
	Negative reaction	arguing against	
		hesitation/doubt	
	Other		
12. What is the feedback-giver's attitute?	Positive attitude	encouraging	
		satisfying	
	Negative attitude X	frustating X	
		unsupporting	
	Other		
13. What kind of effects has the feedback session on the studio?	Positive effect	mood lightening	Others continue towork
		interaction	Markus listens and gets involved +
		break opportunity	
	Negative effect X	distraction X	Markus intervenes to find quick solution
		work interference X	uses humor to lighten the situation
	Other X	Neutral	Leonie back in control
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction	flow of ideas	conflicting but polite and trying to collaborate, client insists on his problem
		collaborating X	
	Negative interaciton	slowering	
		conflicting X	
	Other		
15. How long is the feedback session?	Less than 5 minutes		11:35 – 11:55 with client
	About 5 minutes		12:05 without
	About 10 minutes		
	More than 10 minutes	X	

* like in Kindergarden → client referring to font size

Discussion about who should continue to fix the problem
standard would be ...
should look exactly like ...
should look the same on every device ...
"No brainer"
very sharp logo
asking for screenshot

+ Leonie and Markus continue to discuss the feedback
Robin joins as well
speaking about how to avoid this kind of feedback in the future
complains about client's attitute

(7)

Off Office Design Feedback Observation Date 21.08.22 Time 12:46 P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)	X	
	Johannes (Art Director/Founder)		
	Leonie (Designer)	X	
	Robin (Designer)		
2. Who is giving feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)		
	Client	X	
	Other		
3. How many people are giving feedback?	One designer		through videoconferenze screen sharing
	More than one designer		
	The whole design team		
	Client spokesman	X	
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		
	Reference Research		
	Concept construction		
	Sketching		
	Presentation		
	Rounds of adjustments		
	Final implementation	X	
5. What is the designer asking for feedback on?	General	Printed matter	Web Email signature adjustment
		Web X	
		Logo X	
	Detail	Type selection	
		Type edit X	
		Image selection	
		Image edit	
		Composition	
		Proportions	
		Illustration/vector	
		Other	
	Other		
6. What is the goal of the feedback?	Unlocking creative process		
	Dispel doubts		
	Finish and move on to other task	X	
	Approval from collegues		
	Approval from client		
	Other		
7. Why does the designer ask for feedback?	Positive reason X	report breakthrough	find finale solution for problem
		need confirmation X	
	Negative reason	blocked in process	
		douting choices	
	Other		
8. In what form is the feedback given?	Verbal feedback X	dialogue X	looking at screen
		monologue	
		discussion	
	Visual feedback X	references	
		on spot sketching	
	Other		

Off Office Design Feedback Observation P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives		optical adjustment chang padding font sizes/g
	Mostly verbs		
	Long articulated sentences	X	
	Short statements		
	Other		
10. In case of visual feedback, what kind of visual material is used?	Online references		looking at design on screen screen sharing
	Physical references/printed matter		
	Sketching/designing on computer	X	
	Manual sketching		
	Other		
11. What is the designer's reaction to the feedback?	Positive reaction X	accepting	X
		enlightening	
	Negative reaction	arguing against	
		hesitation/doubt	
	Other		
12. What is the feedback-giver's attitute?	Positive attitude X	encouraging	'(finally) narrowing down the problem and proposing concrete solution ~~all the client~~
		satisfying X	
	Negative attitude	frustating	
		unsupporting	
	Other		
13. What kind of effects has the feedback session on the studio?	Positive effect	mood lightening	
		interaction	
		break opportunity	
	Negative effect	distraction	
		work interference	
	Other X Neutral		
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction X	flow of ideas	productive, solution oriented
		collaborating X	
	Negative interaciton	slowering	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		12:46 — 13:00
	About 5 minutes		
	About 10 minutes		
	More than 10 minutes	X	

all the clients computer need to change their default font to Arial

(5)

Off Office Design Feedback Observation Date 24.8.22 Time 15:16 P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)	X	
	Robin (Designer)		
2. Who is giving feedback?	Markus (Art Director/Founder)	X	
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)		
	Client		
	Other		
3. How many people are giving feedback?	One designer	X	Robin joins the conversation after about 5 minutes
	More than one designer	X	
	The whole design team	X	Johannes gets called after about 10 minutes
	Client spokesman		
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		
	Reference Research		
	Concept construction		
	Sketching		
	Presentation		
	Rounds of adjustments	X	
	Final implementation		
5. What is the designer asking for feedback on?	General	Printed matter X	Logo positioning on Poster
		Web	Logo size
		Logo X	
	Detail	Type selection	
		Type edit	
		Image selection	
		Image edit	
		Composition	
		Proportions	
		Illustration/vector	
		Other	
	Other		
6. What is the goal of the feedback?	Unlocking creative process		implementing new client feedback
	Dispel doubts		
	Finish and move on to other task		opinion from Markus on how to implement client feedback
	Approval from collegues	X	
	Approval from client	X	
	Other		
7. Why does the designer ask for feedback?	Positive reason X	report breakthrough	
		need confirmation X	
	Negative reason	blocked in process	
		douting choices	
	Other		
8. In what form is the feedback given?	Verbal feedback X	dialogue X	looking at poster in screen
		monologue	
		discussion	
	Visual feedback X	references	
		on spot sketching	
	Other		

Off Office Design Feedback Observation P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives		problematic, matter of organization
	Mostly verbs		Feedback comes to late, everything was already discussed
	Long articulated sentences	X	
	Short statements		*
	Other		
10. In case of visual feedback, what kind of visual material is used?	Online references		looking at work on screen trying things together
	Physical references/printed matter		
	Sketching/designing on computer	X	
	Manual sketching		
	Other		
11. What is the designer's reaction to the feedback?	Positive reaction	accepting	explaining client's position
		enlightening	
	Negative reaction X	arguing against X	
		hesitation/doubt	
	Other		
12. What is the feedback-giver's attitute?	Positive attitude	encouraging	frustrating because it was discussed with the client previously
		satisfying	Johannes proposes to just say (no) to the new feedback
	Negative attitude X	frustating X	
		unsupporting	
	Other		
13. What kind of effects has the feedback session on the studio?	Positive effect X	mood lightening	Robin joins +
		interaction X	Johannes gets called videoconference
		break opportunity	concentrated sketching and valuation
	Negative effect X	distraction XX	all designers stopped working for this feedback session
		work interference X	Markus jokes at the end
	Other		
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction X	flow of ideas	both complaining about the client
		collaborating X	
	Negative interaciton	slowering	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		15:16 — 16:33
	About 5 minutes		more than 1 h
	About 10 minutes		
	More than 10 minutes	X	

Logo existe aus der Asche
* es wirkt falsch positioniert
it looks like a wrong positioning
+ Markus a Robin agree / Johannes and Leonie agree very considerate and respectful discussion

it destroys our concept of the glitch, they should have said something before
definition of glitch

- Logo sitzt random über den text
- dass nach oben gebockt ist richig cacke
it's clashing — but at least this clash still fits to our concept

"Das Logo auf schwarz da rauf knallst"
conceptually coherent
balance between red and black typography
"we are all sitting here starting again" → not acceptable
I would do that (increasing the size of the logo)
Johannes: "Let us quickly not just think about the concept alone but also the aesthetic"
simplicity of the right version works better (Robin)
that could be a compromize

(6)

Off Office Design Feedback Observation Date 29.08.22 Time 16:37 P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)	X	
	Johannes (Art Director/Founder)	X	
	Leonie (Designer)		
	Robin (Designer)		
2. Who is giving feedback?	Markus (Art Director/Founder)	X	through video conference
	Johannes (Art Director/Founder)	X	
	Leonie (Designer)		
	Robin (Designer)		
	Client		
	Other		
3. How many people are giving feedback?	One designer	X	
	More than one designer		
	The whole design team		
	Client spokesman		
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		
	Reference Research		
	Concept construction		
	Sketching	X	
	Presentation		
	Rounds of adjustments		
	Final implementation		
5. What is the designer asking for feedback on?	General	Printed matter X	windoors gallery windows
		Web	
		Logo	
	Detail	Type selection	
		Type edit	
		Image selection	
		Image edit	
		Composition	
		Proportions	
		Illustration/vector	
		Other	
	Other		
6. What is the goal of the feedback?	Unlocking creative process	X	discussing options creative ~~done~~ possible directions
	Dispel doubts		
	Finish and move on to other task		
	Approval from collegues	X	
	Approval from client		
	Other		
7. Why does the designer ask for feedback?	Positive reason	report breakthrough	
		need confirmation	
	Negative reason	blocked in process	
		douting choices	
	Other X (brainstorm)		
8. In what form is the feedback given?	Verbal feedback X	dialogue X	looking at 'shop' windows online / looking at client' material, sizes photos of location
		monologue	
		discussion	
	Visual feedback X	references X	
		on spot sketching	
	Other		

Off Office Design Feedback Observation P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives	X	cheap gefühl, wirkt 'webish' seems commercial, cheap seems relaxed fits to the rest of the design looks like a banner
	Mostly verbs		
	Long articulated sentences	X	
	Short statements		
	Other		
10. In case of visual feedback, what kind of visual material is used?	Online references	X	first mockups
	Physical references/printed matter		
	Sketching/designing on computer	X	
	Manual sketching		
	Other Client material	X	
11. What is the designer's reaction to the feedback?	Positive reaction X	accepting	
		enlightening X	
	Negative reaction	arguing against	
		hesitation/doubt	
	Other		
12. What is the feedback-giver's attitute?	Positive attitude X	encouraging X	
		satisfying	
	Negative attitude	frustating	
		unsupporting	
	Other		
13. What kind of effects has the feedback session on the studio?	Positive effect X	mood lightening	the others continue to work
		interaction X	
		break opportunity	
	Negative effect	distraction	
		work interference	
	Other X Neutral		
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction X	flow of ideas X	sketching, observing, commenting online sketching session
		collaborating	
	Negative interaciton	slowering	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		16:37 — 17:05
	About 5 minutes		
	About 10 minutes		
	More than 10 minutes	X	half an hour

* it has the proportion of a banner
make it look 'installative' like an installation
'cool'
talking about production costs while sketching and brainstorming
- I find these versions good
- intervene on with the building
- while looks ~~sleek~~ slick
- industrial but slick material, I'd like an industrial feeling
- web wave gutter
- is would be nice if we would cover the windows completely
- this looks like a commercial
- this looks like a brothel
- anti-edgy
- das milchglas is mein favorit
- that looks like art, it's a compromise between commercial and artsy
- like that it can be taken seriously
- repetitive but sober (repetitiv aber trocken)

(7)

Off Office Design Feedback Observation — Date 21.08.22 Time 17:15 — P. 1/2

Feedback modalities	Details		Notes
1. Who is asking for feedback?	Markus (Art Director/Founder)		
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)	X	
2. Who is giving feedback?	Markus (Art Director/Founder)		through video call
	Johannes (Art Director/Founder)	X	
	Leonie (Designer)		
	Robin (Designer)		
	Client		
	Other		
3. How many people are giving feedback?	One designer	X	
	More than one designer		
	The whole design team		
	Client spokesman		
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		finale design for client presentation
	Reference Research		
	Concept construction		
	Sketching	X	
	Presentation	X	
	Rounds of adjustments		
	Final implementation		
5. What is the designer asking for feedback on?	General	Printed matter	gefühles welt / art direction
		Web	X website, instagram, identity +
		Logo	X
	Detail	Type selection	in presentation for client
		Type edit	
		Image selection	X
		Image edit	packaging
		Composition	
		Proportions	
		Illustration/vector	
		Other	
	Other	X Presentation	
6. What is the goal of the feedback?	Unlocking creative process		preparing for client presentation
	Dispel doubts		
	Finish and move on to other task		
	Approval from collegues	X	
	Approval from client		
	Other		
7. Why does the designer ask for feedback?	Positive reason	X report breakthrough	
		need confirmation	X
	Negative reason	blocked in process	
		douting choices	
	Other		
8. In what form is the feedback given?	Verbal feedback	X dialogue	X looking at work on screen
		monologue	
		discussion	
	Visual feedback	X references	
		on spot sketching	
	Other		

Off Office Design Feedback Observation — P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives	X	loss of playfulness * right points etwas lockerer, only outlines are super boring breaking the cohesiveness
	Mostly verbs		
	Long articulated sentences	X	
	Short statements		
	Other	X Questions	
10. In case of visual feedback, what kind of visual material is used?	Online references		showing designs on screen
	Physical references/printed matter		
	Sketching/designing on computer	X	
	Manual sketching		
	Other		
11. What is the designer's reaction to the feedback?	Positive reaction	X accepting	X both designers seem to agree on everything
		enlightening	
	Negative reaction	arguing against	
		hesitation/doubt	
	Other		
12. What is the feedback-giver's attitude?	Positive attitude	X encouraging	X encouraging Robin to convince the clients how to present
		satisfying	
	Negative attitude	frustating	
		unsupporting	
	Other		
13. What kind of effects has the feedback session on the studio?	Positive effect	X mood lightening	the others keep working after the feedback some friendly small talk
		interaction	X
		break opportunity	
	Negative effect	distraction	Johannes says thank you for the good work
		work interference	
	Other	Neutral	
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction	X flow of ideas	
		collaborating	X
	Negative interaciton	slowering	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		17:15 — 17:34
	About 5 minutes		
	About 10 minutes		
	More than 10 minutes	X	

* responsive logos, turning back the hierachies
opportunity to be playful
the layout works, good usage of hierachies
3 distinct application areas / even more conclusive / same components with different weights

both logos find their clean applications in the layouts

Johannes: "everything looks great"
- What do you think about the hierarchy?
- Did you change the embossing?
- Tell me how would you present it?

the logos are purposeful

Off Office Design Feedback Observation — Date 24.08.22 Time 17:30 — (8) — P. 1/2

Feedback modalities	Details		Notes
1. Who is ~~asking~~ getting for feedback?	Markus (Art Director/Founder)	X	
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)		
2. Who is giving feedback?	Markus (Art Director/Founder)		through Phonecall
	Johannes (Art Director/Founder)		
	Leonie (Designer)		
	Robin (Designer)		
	Client	X	
	Other		
3. How many people are giving feedback?	One designer		
	More than one designer		
	The whole design team		
	Client spokesman	X	
	Client group		
	Other		
4. In which identity process phase is the feedback requested?	Client Research		
	Reference Research		
	Concept construction	X	
	Sketching		
	Presentation		
	Rounds of adjustments		
	Final implementation		
5. What is the designer asking for feedback on?	General	~~Printed matter~~	~~image selection from photographer~~
		Web	Looking at the gallery space to design the exhibition in it
		Logo	
	Detail	Type selection	Exhibition design based on the previous created identity
		Type edit	
		Image selection	
		Image edit	
		Composition	
		Proportions	
		Illustration/vector	
		Other	
	Other	Gallery exhibition	
6. What is the goal of the feedback?	Unlocking creative process	X	client explains space and constrains
	Dispel doubts		
	Finish and move on to other task		
	Approval from collegues		
	Approval from client	X	
	Other		
7. Why does the designer ask for feedback?	Positive reason	report breakthrough	
		need confirmation	
	Negative reason	blocked in process	
		douting choices	
	Other	X getting to know	
8. In what form is the feedback given?	Verbal feedback X	dialogue	X looking at ~~design online~~ photos of the gallery space online
		monologue	
		discussion	
	Visual feedback X	references	
		on spot sketching	
	Other		

Off Office Design Feedback Observation — P. 2/2

Feedback modalities	Details		Notes
9. In case of verbal feedback, what kind of language is used?	Mostly adjectives		lots of nodding
	Mostly verbs		full of colors and materials
	Long articulated sentences		yeller/not contrast
	Short statements		indicate connection
	Other		
10. In case of visual feedback, what kind of visual material is used?	Online references		files on computer
	Physical references/printed matter		photo files
	Sketching/designing on computer	X	
	Manual sketching		
	Other		
11. What is the designer's reaction to the feedback?	Positive reaction X	accepting	X
		enlightening	
	Negative reaction	arguing against	
		hesitation/doubt	
	Other		
12. What is the feedback-giver's attitute?	Positive attitude	encouraging	
		satisfying	
	Negative attitude	frustating	
		unsupporting	
	Other	X informing	
13. What kind of effects has the feedback session on the studio?	Positive effect	mood lightening	the others keep working
		interaction	
		break opportunity	
	Negative effect	distraction	
		work interference	
	Other	X Neutral	
14. How is the interaction between feedback giver and feedback receiver?	Positive interaction	flow of ideas	polite conversation
		collaborating	
	Negative interaciton	slowering	
		conflicting	
	Other		
15. How long is the feedback session?	Less than 5 minutes		17:30 — 18:00
	About 5 minutes		half an h
	About 10 minutes		
	More than 10 minutes	X	

Casper Wortmann

Question 1:
What do you think of the framework?

Where in the process should ML be inserted?
"ML can strengthen the definition phase by elucidating the intuitive stages of decision-making"
— > I think it is interesting you use ML in the most intuitive stage

"as it can be used as a compass that aligns visuals and concepts throughout the sketching phase. "
— > I definitely agree on that :)

Overall thought about this section:
You combine ML and design in the most intuitive stage of decision making. I think that's a good call. Often I have the feeling people think AI should be used to replace the most technical part - the most non-intuitive part. Because they think AI cannot replace our intuition. But actually AI is very good at predicting what intuitively feels good for humans, because it is trained on things that we created using our intuition as well. And that way it can also predict our intuition. So I agree on the place at which ML/ AI is applied. Although, as you later state, it could be used at any stage (I agree on that as well). But good to combine the notions of intuition and AI, I would say.

How should the designers communicate with ML?
There is a sentence here that feels a bit off from an AI perspective:
"ML serves as a bridge between the designers who initially trained the dataset and those who utilize it."
I would phrase this differently. From a technical perspective it would be: "ML serves as a bridge between the designers who collected the data, and those who make use of it"
Or something like that. As an AI developer it is a bit strange to say that designers trained a dataset. As a designer, I think you are the one who collects a dataset and feeds it to an algorithm / a model. You do not train a dataset yourself, you train a model. And this model uses the data that you collected.

What should ML do?
Here is also a sentence I would phrase differently:
" By incorporating the shared semantic cognition of design teams into ML datasets, a tailored bias system can be developed to provide customized support for designers' "A tailored bias system is not a commonly used term. I think the technical term you are looking for might be a recommendation system, not a tailored bias system. (Recommendation systems are a big thing in AI / ML, very often used term). Something like:
"By incorporating the shared semantic cognition of design teams into ML datasets, a recommendation system can be developed to provide..."

"ML could function as an integrated extension within existing software such as the Adobe suite or Figma. "
— > Figma had the same idea as you're having, and bought this: https://diagram.com

"Systems that leverage multi-modal search, combining visual and linguistic sources, would be particularly advantageous for the requirements of design work in the definition phase. "
— > Good call, multi-modality is definitely something to mention

7.2 How to implement the framework
Your focus is on the design perspective, not necessarily on the mL perspective. So I'm not sure how detailed Fig 4 should be. My first thought about the architecture that you present in Fig 4, is that this definitely makes some sense. I'm not sure if you thought it out yourself, if so than nice job :P.

For someone who looks at ML architectures a lot, I also have some questions about the framework / architecture you propose. The first thought I had is: what modality (or modalities) are the datasets made of. You could consider writing this in the figure, or in the headline underneath the figure. For instance the generic dataset I would say are images with their caption (text). This is for instance what is used to create Stable Diffusion. Or does the dataset consist of only images (that is what it looks like in the figure)? If it is only images, then what you write earlier "combining visual and linguistic sources," would not really align with the architecture

you display here. If you want to combine visual and linguistic sources, usually you want to incorporate a dataset that contains both images and text. Because otherwise it is difficult for a model to learn both the visual and the linguistic.
So maybe it is good to somehow show in the image that the dataset is multi-modal, or write this in the caption. That way if someone has a ML background it fits a bit better.

Another thing about the architecture / Fig 4 is that I personally would remove the 'new training' block, and point the arrow directly from 'Graphic design dataset' to 'transfer learning'. So no 'new training' block in-between. And maybe the [transfer learning] block could be visually different from the blocks [pre-trained model], [new model] and [customized model]. Because these model blocks contain weights / numbers, and transfer learning is something you do with these weights. That could be a bit clearer from looking at the image.

I do have to say that how this architecture would look is something that an AI master student could write an entire separate thesis about :P. Many options here. So maybe the figure is detailed enough as it is! But you might want to check this with your supervisor. Also let me know if it's unclear or if you want to chat about it.

"Furthermore, most tuning parameters can be adjusted through default settings, eliminating the necessity of coding. "
— > good call, this definitely will become more accessible.

7.3 How to use the framework
Don't really have a lot of comments here.
One very zoomed-out thought:
What you are making is an AI tool that helps a designer. I think that this will impact what the role of a designer is: right now part of a designer's role is to create something that is visually pleasing. I think AI is likely to be very good in creating something that is 'nice' or 'looks good'. It will probably create what we as humans think is nice to look at, because that is what we feed it (again, our intuition). So looking at the role of a designer, I would say a more important part of being a designer will be to create something that is on the edge of what looks nice, something that puts us on the

edge of our seat. Because AI will generate what it thinks is statistically most relevant to create (what most people will like). As a designer, working with AI might involve counterbalancing this, and being better in finding out what others have not yet done, so what AI did not get as input in its data, but that is still fascinating to look at. But that's a personal and zoomed out thought :P!

Question 2:
How do you envision the frameworks' technical implementation?

This is an interesting question! There are actually many different technical approaches I would explore but here are some thoughts.

Loss function
When I envision a technical implementation, an important factor is to make use of existing models that are already trained on different datasets. These extensive models can be finetuned for a specific task, and thereby you can make use of the general knowledge incapsulated in these big models. This is in line with the framework you suggest. One technical challenge for me would be to make more use of the different modalities you have in the dataset. One technical hurdle involves integrating various data types within your dataset, including images and text. This diversity impacts the technical setup, particularly at the juncture where the adjusted model and the semantic dataset converge. This is the point where the finetuned model and the semantic dataset) meet. You need a loss function that can make use of both modalities. The loss function is used to optimize the model (so it is of great importance).

A recent trend in ML is to use two different modalities, such that they can learn from each other. This approach is called multimodal contrastive learning, a well-known example is CLIP (Paper here: https://arxiv.org/pdf/2103.00020v1.pdf, code here: https://github.com/openai/CLIP).
Clip has some interesting overlaps with your proposed model (although there are also important differences). Given the similarities and distinctions between CLIP and your model, employing a contrastive loss function, similar to CLIP's approach, would be beneficial for your framework. Sidenote, the contrastive loss function looks like this:

$$L_{NCE} = -\log \frac{\exp(\mathbf{z}_i \cdot \mathbf{z}_j / \tau)}{\sum_{k=0}^{N} \exp(\mathbf{z}_i \cdot \mathbf{z}_k / \tau)}$$

When asking for technical implementation, a loss function is usually something to mention, so
that's why I'm including it here. But feel free to leave it out

Representation learning CLIP's technical implementation could serve as a valuable reference for STEVE. CLIP (and many other contrastive learning algorithms) have shown promising outcomes, suggesting that your framework might adopt a contrastive training objective. This approach aims to cultivate semantic representations of a designer's creations, encompassing both visual and textual modalities. Essentially, the goal is to refine the customized model within your framework to grasp the semantic essence of visual design and its textual representation. Or to put it in simple terms: you optimize the customized model in your framework to understand the semantic meaning of visual design, and at the same time you also learn how this can semantically be represented in text.

Technical details
For technical details, I would suggest implementing this all in PyTorch, which is a very common machine learning framework for training ML models. PyTorch is python-based, offering dynamic computational graph construction (as opposed to static in frameworks like TensorFlow), which allows for more fiexibility in model development and debugging Technical details would also entail to use an adaptive learning rate, something like Adam or AdamW, to change the learning rate dynamically during training. Contrastive learning frameworks generally perform better for large batch sizes, because large batch size make the learned embedings (represenations of the data) more robust. Therefore I would suggest using a large batch size (which impacts the choice for a GPU, it needs to be quite big). As often is the case for these kinds of frameworks, I would also suggest to use GPU acceleration, to make the whole process computationally less intensive. Moreover, PyTorch allows for the use of Mixed Precision Training, to speed up training. Note that for training from scratch this whole process would not be feasible, it would cost too much time. So I am really focus-

ing here on finetuning (in line with what you are suggesting).

Platform

In your thesis you also write:

"...my interviews revealed that for some designers, the collection of references is an unwelcome task (4.4.1)".

I can imagine this. As you state yourself machine learning can also help with this process. My thought would be that there is some sort of platform needed, in which uploading your own work also benefits other use cases, for instance the platform could be a great way to organize your work, find old work, or push new works to a website, such that creating the dataset actually happens naturally.

Sebastian Berns

Question 1:
As a developer, what do you think of the framework?

In general, I think the framework is well formulated and has a good focus and scope (automated design feedback). I assume in the previous chapters there is much more information about the design process which helps developers to get an understanding of the way designers work. Below are a few points that I think might make the explanation of the framework more accessible for people with technical backgrounds.

What might be missing from the process is the formulation of the objectives and aims of the design process in the beginning as a reaction to a client brief. That is to say, a sort of de-briefing by the designers in the form of a description/illustration of the ideal result of the design process, or alternatively the design's general requirements. You will know better than me, if that is indeed part of the process and if it is explicit (e.g. someone prepares a document) or implicit (e.g. someone just keeps an idea in their head). I am mentioning this as the objective is important for evaluation in the feedback process. Personally, I would only be able to tell you what I think about a design proposal, if I know what it is for. An automated system would thus also require information on these objectives and/or the design requirements. This can range from things as trivial as "has to be greyscale" to more complex information such as "our budget is 4,000 euros".

The types of feedback are useful and could be extended to a more comprehensive taxonomy. For example, a further classification could be added. As far as I understand, 'semantic' and 'technical feedback' describe the content of the feedback, i.e. the focus of attention which could be called the 'feedback level' or 'feedback focus'. Similarly, 'verbal' and 'visual feedback' could be grouped as 'feedback modality', describing the type of feedback. This additional taxonomy might require further explanation in the text if it is not covered in a different section. Also, some examples could be helpful to illustrate the different types of feedbacks. For non-designers it might not be obvious what 'technical feedback' refers to.

I can imagine that this is feedback on the craft of graphic design, e.g. typographic details. But 'semantic feedback' was not entirely clear to me at first either. As a general side note, I think it would be helpful to guide the reader through the graphic and where possible link the flow of the text more tightly to the flow of the diagram. So far, I think the figure is not really referenced in the text and it might not be obvious that it is relevant. Furthermore, I understand 'verbal feedback', when contrasted with 'visual feedback', to be given by voice which is maybe not what you were thinking of. Is 'textual' or 'written feedback' a more accurate description? This is of particular relevance for feedback from an ML system, as most developers are likely to think of voice output as speech that was synthesised from text.

Regarding the flow of the diagram, there are two points. First, it appears as if the ML feedback comes after the Designer feedback. I assume that is not the case and I think the text describes this better, pointing out that the ML feedback can be requested at any point, supplementing feedback from other designers. That should be reflected graphically as well. Second, after the ML feedback there is a loop back to the Designer feedback, which would imply that there could be several rounds of consecutive feedback. I think this was supposed to point out an iterative design process. What is currently missing, though, is the update of the design in response to the feedback.

It might be helpful to separate two things here: (1) the flow of the process and (2) the taxonomy of the different feedback types and modalities. The former illustrates how the design process is augmented by the system, how and what point humans interact with it. The latter is the same for a human designer and an ML system and, together with further details, is important to understand the requirements of the system.

For developers, what is most important to understand are the following points.

1. Input: what information goes into the system?
   - Quite simple: one or multiple images
2. Processing: how is information processed from input to output?
   In the case of ML, learning task: which patterns is an ML model supposed to capture?
   And thus, data: what examples are necessary to provide information on these patterns?
   - Already well covered and justified
   - Sufficiently general to allow for different implementation approaches
3. Output: what information comes out of the system?
   - Covered by the taxonomy of feedback

How do you envision its technical implementation?

A feedback system as described in the text should accept as an image of the design to be critiqued. Optionally, additional textual information could be provided alongside the image. This could be a general request for feedback, a specification of the type of feedback according to the taxonomy, and of course information about the design objectives. While it would be useful to allow the input of multiple images, for simplification I will focus on a single image input. The expected output is written design feedback of the provided image that corresponds to the request (type of feedback) and in reference to the design requirements.

For the implementation of such a system, I would leverage an existing multi-modal model that can process both natural language and image prompts. I would start with the easiest approach and, in response to the results, successively invest more effort if necessary, following the stages outlined in figure 6.

The first inexpensive but naive approach would be to use the model out-of-the-box, focusing on optimising the input text prompt to elicit the desired output. While I don't expect the results to be very useful for a specialised audience of professional designers, this approach consists of the minimum necessary setup that does not require any model training.

A better model for design feedback could be obtained by fine-tuning an existing pre-trained model on a general dataset of text-image pairs that cover graphic and typographic design content. The accompanying text can be simple descriptions of the imagery, highlighting relevant information (e.g. design objectives), or specific design feedback, as long as it is appropriately marked as such

using simple introductions following the taxonomy of feedback (e.g. "as a senior designer my technical feedback is ..."). A very large amount of data is required for this fine-tuning step. This data can be a collection of images and texts from different sources and designers, as it provides general information about the relevant registers and terminology of design feedback. This step should result in a better model which is able to provide responses that are more useful for a professional design audience. The model could be used by many different designers with the downside that feedback might be very general, not adapting to specific stylistic choices of individual designers. The risk is that this leads to average unspecific feedback, which mostly benefits inexperienced and junior designers. Yet, it is necessary to learn the most prominent patterns in design feedback before customisation can be successful.

A personalised model can be built in the next step by using data specific to an individual designer, team, studio or agency. The type of data should follow the requirements explained in the previous steps, though less examples are necessary. Instead of a full fine-tuning, it might be possible to use low-rank adaptation methods (LoRA) to optimise only a subset of model parameters. This would allow for more customised feedback and the development of a style-specific design feedback agent.

Would it be possible to specify more technical details? For example, how would you do the fine-tuning, how would you technically suggest building a bespoke dataset? How can the dataset avoid being too biased if trained by one studio? Could there still be the change that referring to a more general dataset, it can still propose new things to the designers?

Building a dataset is not necessarily a technical question. The most important thing is to find a cost-effective strategy to obtain as much data as possible. Many big tech companies and non-profit organisations basically scrape the internet, with or without regard for copyright issues, first downloading all relevant material. The next step is then to clean the data to ensure its quality, removing duplicates and bad examples (however one might define that). In the context of a graphic design dataset, a bad example could be when the image of a poster has a description that a sufficient amount of people would deem unrelated to the poster (e.g. because it talks

about the event that the poster advertises rather than its design). What is important information in the context of design feedback is personal opinions from experts, which one might expect to find on forums/message boards of design communities that discuss and critique other designs. So, the question is which specific websites to scrape from and whether that is allowed or not. I'm aware that the design community in particular is very critical of copyright infractions.

When building a style-specific dataset, probably the designers themselves won't get around putting in some work themselves, providing written descriptions and feedback of design work (does not only have to be theirs). You have mentioned that Off Office already do this via some messaging channels. So, it might be possible to pull that information from there alongside the associated imagery. In any case, the point is to capture the personal register, terminology and style of specific designers, so there is no other source than the people themselves.

A personalised design feedback model is supposed to be biased, in particular towards the people it was customised for. Note that I am not proposing to train a general model only on the data of one studio. That is the third step. Before that I would fine-tune a more general design feedback model capable of critiquing any type of design work, with the limitation of potentially being too average.

Regarding a model that 'proposes new things to the designers'—
That is somewhat out of scope of a design feedback model. Yet, it is possible that such a model is still capable of proposing changes if you ask for it, as the foundation model was originally trained on very large corpora of text which surely includes some kind of example (lots of 'make the logo bigger' jokes). However, for such suggestions to be of high quality, we would need to ensure that there are some design-specific suggestions that respond to a given image in our general design feedback dataset. So, that would be another requirement to add to the data collection phase.

As for the fine-tuning—
Optimising a pre-trained model on a custom dataset (second step in my previous answer) is identical to training the model from

scratch. The difference being that instead of starting from random initial model parameters, we start from already optimised parameters, which typically makes things easier. I would not change any hyperparameters, unless I encountered problems with the training (loss does not converge, low output quality, etc).

Anton Lambert

Question 1:
What do you think of the framework?

As a brand designer I have some thoughts, but it looks like you already have gotten good feedback from others. I think the risks of generic solutions is quite big with an idea like this with the ML being what it now is (but who knows what it will be able to do in the future). Base Design's Creative Directors article about branding comes to mind https://thierrybrunfaut.medium.com/blanding-or-the-branding-paradox-5a4575i6cc0a. Where the industry is already dealing with this problem on a more human level.

As a developer I'm more doubting about if a 100% ML solution really is the best way of approaching this. I've only played around with them, and got especially limited experience with custom trained sets (they are just too cost prohibitive for us, and having good training data in the first place is very difficult). The other potential weak point I have seen is that most ML solutions on the market are good at the first 80-90% of producing or analyzing on something from my experience. An image made my midjourney or Dalle usually isn't 100% there, and texts from Chat GTP or other similar LLM usually also need quite some work to be production ready. How do you deal with the conceptual depth of a brand without resorting to overly generic solutions here... I don't know. Another challenge is the drift or amnesia of the models where they can forget or change over time, something that already is a issue within traditional brand where designers slowly drift away from the brand guidelines losing brand cohesion.

With this in mind the potentially of space for errors or too generic responses in the output of a model would be quite high. And helping with things like readability or brand alignment would therefore be quite hard.

Question 2:
How do you envision the frameworks' technical implementation?

The problem/challenge is quite difficult to solve in general, but if

I would try to resolve it I think my first approach would be closer to a GTP Agent cluster, where ML and general algorithm tools would take care of different aspects of the problem. Seen how a brand, or a layout is made out of multiple smaller systems and challenges, type size, color contrast and cohesion, layout, logo placement it would potentially be easier to make smaller models, or agents that would deal with them individually than to make one generic model that would be stable enough to give an overall impression. Using industry proven concepts like atomic design system etc. Then you can utilise ML for what it does best, making a cohesive, and easy to consume consolidation of what these agents have concluded.

That is my initial quick reaction. I might have missed things or misunderstood parts of your text so let me know if this is what you had in mind.

Luc Weytingh

Super interesting research! I tried my best to provide my full thoughts and considerations of the framework. If you have any questions don't hesitate to let me know.

I. As a developer, what are your thoughts on the framework?

The proposed framework aligns with my vision on the use of AI in the future. In my opinion, AI should be seen as a tool we collaborate with, instead of a replacement of our work.

I think the strength of the AI's feedback could lie in the retrieval of accurate references, combined knowledge from these references, and comparative material. The quality of feedback hugely depends on the quality of the data that the model was trained on. To this extend a staring point for such a framework is marked by extensive data labeling and dataset curation. I agree that AI could assist in curating this dataset by assisting in the labeling process.

The assistive tasks mentioned in your framework include providing verbal and visual feedback based on it's pre-existing knowledge and curated references. I would suggest to define more clearly if the feedback consists of referenced texts and images from the curated dataset, or if the feedback is generated based on the curated dataset. The former approach falls under information retrieval, and would provide only textual and visual reference that exist within the dataset as feedback. The latter approach falls under generative AI, an approach that generates new text or images based on it's training data. An example of information retrieval is Google, where a query text (in your case a design description) retrieves documents related to that query. An example of generative AI is ChatGPT or DALL-E, where query text leads to the generation of new text or images.

Note that there exist "hybrid solutions" for textual models. In the textual domain, besides fine-tuning one could instruct a generative model like ChatGPT to behave in a certain way, e.g. forcing it to reference documents from a curated dataset. In the visual domain, one could adapt a generative model like Stable Diffusion to generate design-like images by fine-tuning, but it would not generate

exactly the references in the curated dataset.

The choice between the above approaches is dependent on the desired role of the AI, and affects the type of dataset that should be created. Note that you can choose a different approach for the verbal and visual feedback part while they remain working together. For example, the verbal feedback could be generated, to be more versatile, while the visual feedback could find references from the curated dataset that refiect that feedback. To that extent, I would consider defining these two domains separately in the framework.

In your framework you define the use of transfer learning. To my understanding both tasks you define could be fine-tuning tasks. Transfer learning is a technique that is closely related to fine tuning. In transfer learning you use a pre-trained model and adapt it's output to be used in a new domain. Fine-tuning is a form of transfer learning where the weights of the entire pre-trained model can be changed. This analogy created by ChatGPT explains it in more understandable terms hahah

Imagine you're a chef trained to cook Italian cuisine, and now you want to learn to cook French cuisine. You have two main ways to approach this: one is like transfer learning, and the other is like fine-tuning, both concepts from the world of artificial intelligence (AI). Let's use this chef analogy to make it simpler:

Transfer Learning
Transfer learning is like taking your Italian cooking skills and starting to cook French dishes without changing the core of what you know about Italian cuisine. Instead, you keep using your Italian cooking techniques as they are (like how to make pasta) but add a few new French recipes to your repertoire. In the AI world, this is like taking a computer program that's good at one task and giving it a related new task, without changing how the original program works. You just add a bit more to it so it can handle the new task using the knowledge it already has.

Fine-tuning
Fine-tuning, on the other hand, is like you, the chef, starting to tweak your Italian cooking techniques based on what you learn about French cuisine. Maybe you learn a new way to make sauces

or use herbs differently, which improves your overall cooking. You're not just adding new recipes; you're adjusting your fundamental cooking skills to be better at making both Italian and French dishes. In AI, this means taking a computer program that's good at one thing, and then slightly changing how it works so it gets better at a new, but related task. It's a more in-depth adjustment compared to transfer learning.

So, in simple terms: Transfer learning is when you add new skills on top of what you already know without changing your foundational skills. Fine-tuning is when you adjust and improve your core skills based on new knowledge, making you better overall.

This is a simplified schematic of the two approaches:
- (after transfer learning) Pre-trained model > output > adjustment layers > new output
- (after fine-tuning) Pre-trained model > new output

The output marked in red can be a generic output and could present some biases that could be transferred to the new output (problem). In your framework I would therefore consider two separate fine-tuning steps, one for the generic graphical dataset, and one for the user-specific dataset.

2. How do you envision the frameworks' technical implementation?
The implementation depends on the choices outlined above, but I will outline one possible approach as an example.

Based on a combination of generation for the verbal feedback and information retrieval for the visual feedback:

The first step is curating a graphical dataset with both images and reference texts, and a user-specific dataset with images and reference texts.

For the verbal feedback, I would fine-tune a Large Language Model (LLM), e.g. ChatGPT, based on the (textual) references in the graphical dataset. Then fine-tune it again based on user-specific references.
For the visual feedback, I would use a model like OpenAI's CLIP to create a shared embedding (numerical representation) of the text

and images in the graphical dataset and personal dataset.

When Steve is asked for feedback, I would instruct the fine-tuned LLM include citations of references in the graphical and personal dataset, forcing it to adhere close to the Design literature. Then, I would transform the verbal feedback to the same representation as the visual dataset, and calculate a "similarity score" between the generated feedback and the reference texts and images in the curated dataset. References with a high similarity score could be presented as visual feedback to accompany the generated verbal feedback.

That's it, I hope my feedback is useful.