

PURPOSES

OF GRAPHIC

DESIGN

Mapping the theoretical and practical
approaches of the discipline.

Andrés M. Torres

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Mapping the theoretical and practical
approaches of the discipline.

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Faculty of Fine Arts

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Thesis submitted as partial requirement for
obtaining the degree of Master of Image Design.

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Porto, 2019

ACKNOWLEDGEMENT
ACKNOWLEDGEMENT

To Domenica Montes,
colleague, best friend, life partner and family;

to Miguel Carvalhais and Pedro Amado,
supervisors of the research and mentors;

to Sofia Gouveia, Daniel López, Isabel Barroso and Dinis Ribeiro,
colleagues and counselors;

to José Carneiro, Heitor Alvelos, Miguel Carvalhais and Susana Marques,
scientific committee of the course;

to Nancy Coronel, Jorge, Natalia, Walter and Gabriela Torres,
to Walter M. and Jorge A. Torres,
unconditional family supporters.

For making these two years in Porto quite rewarding and exciting,
for the sincere friendship and disinterested collaboration.

Endless gratitude.

In memory of Jorge Arturo Torres.

ABSTRACT
ABSTRACT

This research establishes graphic design as a heterogeneous discipline broader to the perspectives traditionally developed by the modernist ideologies. It aims to present graphic design in its historical activity, both retrospective and contemporary, in order to expose the diversification of the purposes it addresses. In order to do so, the research delves in several paradigms of design, its procedures and results. Later, it presents a categorization of graphic design purposes as a non-fixed framework. And finally, it presents a map based on the mentioned categorization to allow for a holistic understanding of graphic design.

This dissertation is framed within the antipositivist paradigm and the qualitative research as methods for the collection, analysis and production of information. It studies textual and audiovisual documentation from different sources of information and its interpretive analysis for the construction of knowledge. It reviews several important paradigms and movements in the history of graphic design starting from the twentieth century. The historical review focuses on studying diverse paradigms belonging to Modernism and Postmodernism. While the contemporary paradigms studied are User- and Human-Centered Design, Design Thinking, Participatory Design, Critical Design, and Speculative Design.

Ultimately, the research exposes the heterogeneity in graphic design practice and research. It demonstrates the insufficiency of the functional perspective to define the activity of the discipline, and reflects on the pedagogical implications that such condition would have on design education.

Keywords

Design research, Graphic design theory, Design education, Modernism, Postmodernism, Contemporary design.

RESUMO
RESUMO

Esta investigação estabelece o design gráfico como uma disciplina heterogênea e mais ampla do que as perspectivas desenvolvidas tradicionalmente pelas ideologias modernistas. O objetivo é apresentar o design gráfico na sua atividade histórica, tanto a retrospectiva como a contemporânea, a fim de expor a diversidade dos propósitos que aborda. Assim, a investigação aprofunda os vários paradigmas do design, os seus procedimentos e resultados. Em seguida, apresenta uma categorização dos propósitos do design gráfico enquanto uma teoria flexível. Finalmente, apresenta um mapa baseado na categorização mencionada anteriormente para permitir uma compreensão holística do design gráfico.

Esta dissertação está enquadrada pelo paradigma antipositivista e a investigação qualitativa como métodos para a recolha, análise e produção de informação. Deste modo, estuda documentos textuais e audiovisuais provenientes de diferentes fontes e a sua análise interpretativa serve para a construção de conhecimento. Revê vários paradigmas e movimentos importantes na história do design gráfico a partir do século XX. A revisão histórica foca-se em estudar diversos paradigmas pertencentes ao Modernismo e ao Pós-Modernismo. Enquanto que os paradigmas contemporâneos estudados são o User- e Human-Centered Design, Design Thinking, Participatory Design, Critical Design e Speculative Design.

Por último, esta dissertação expõe a heterogeneidade da prática e da investigação no design gráfico. Demonstra a insuficiência da perspectiva funcional para definir a actividade da disciplina e pondera sobre as implicações pedagógicas que tais condições teriam no ensino do design.

Palavras-chave

Investigação em Design, Teoria do Design Gráfico, Educação em Design, Modernismo, Pós-Modernismo, Design Contemporâneo.

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INTRODUCTION
INTRODUCTION

1.1. Contextual framework

Design is a complex concept to study. The term, being both a verb and a noun—a process and an output—is capable of acquiring different meanings and being used in different ways (Bannon 2012, 40). Its mere definition is subject to debate depending on the posture from which it is established. Or at least this is the state to which the term has reached in contemporary times. However, design emerged as an agent of modernism (Mazé 2016, 24). Functionalism and problem-solving were key concepts for the foundation of the discipline and traditional design education. Even to this day, most of the contemporary design activity and education is based mainly on these concepts as direct inheritance of modernist ideologies.

On the other hand, the theoretical and practical premises that do not fit into the condition of solving a practical and specific problem are discredited by the functionalist discourse. In this way, the functionalist discourse has positioned itself as the main catalyst and inherent purpose for design processes and results.

However, the functionalist perspective leads to a problem of definition when designating problem-solving as an inherent condition of design, since there is probably no profession whose disposition is not that.

All of them solve problems: police officers, math teachers, doctors, astronauts, politicians [...] To define Design by using a condition that is common to all professions results banal (Tejeda 2006, 146).

Over time, functionalism and problem-solving perspectives have made design to “become so intrinsically linked to the complex systems of commerce and innovation that it has essentially been reduced to a novelty machine” (Auger 2016, 16). For this reason, designers “must redefine the premises and purposes of the discipline beyond its Industrial Age inception and logics, e.g. mass-production, market consumption, economies of scale, corporate protectionism, etc.” (Mazé 2016, 22).

These modernist conceptual fragilities allow the possibility to create spaces to reflect, criticize, and theorize about design and its manifestations. In this sense, it is particularly essential to raise questions about assumptions present in design practice and research. Thus, and because this research focuses on graphic design, the key questions are placed as follow.

1.2. Research question

Does graphic design encompass additional purposes other than strict functionalism? If so, what are the contemporary purposes in design research and practice?

1.3. Objectives

As a general objective, this research aims to develop a map based on the categorization of purposes addressed in contemporary graphic design through a historical and literary approach in order to contribute to a holistic understanding of the discipline and its scope.

This can be divided into smaller, more specific operational objectives:

- a) To communicate the current state of research and development in graphic design through the compendium of reflective content around its purposes;
- b) To categorize the perceived purposes within graphic design activity according to the discourses and results present in the historical course of the discipline;
- c) To expose the categories of purposes and their relations to the studied paradigms.

1.4. Motivation

Functionalist approaches seem to be the ideal models in formal design education to guarantee the individual productivity when the students go into the job market. However, such perspectives exclude much of the graphic design activity made for purposes of educational, reflective and personal exploration. Design can also raise awareness at individual, disciplinary and public interest levels. In order to achieve this, designers must be willing to challenge assumptions.

Hence, this research challenges the assumptions regarding functional purposes in graphic design. It is not about feeding the old debate about whether design is art, or not. It is an inquiry driven by academic motivation in questioning the foundations of graphic design. The discipline needs a greater presence of theories that recognize broader approaches, rather than strengthening ideologies based on marketing and productivity with capitalist overtones. Ultimately, the main motivation of this research is to expose alternative perspectives and purposes to address graphic design practice and research.

1.5. Hypothesis

The functionalist purpose is not an exclusive condition to the activity—whether, theoretical or practical—of contemporary graphic design. The action spectrum of the discipline is broader and more receptive to other types or categories of approaches, and it is the task of this

project to research what those categories are and the conditions that define them. In addition, by defining this condition as an immanent property, any outcome achieved in the field would be reduced to what functionalism determines, thus imposing an authoritarian discourse against alternative postures. Subsequently, it could essentially remove much of the production and research resources for all of the purely ludic, experimental, reflective or even educational approaches.

1.6. Research design

According to Ian Noble and Russell Bestley, graphic design research projects can be formulated within two frameworks: a) Pure research, which prioritizes theoretical knowledge production without being concerned about the practical uses of it—like any predetermined commercial application— and; b) Applied research, for which creating practical proposals or solutions is the main objective (Noble and Bestley 2016, 14). The current project falls within the first category, being both the development and the theoretical outcome, the main focuses of interest in order to contribute to a better understanding of the discipline.

Noble and Bestley also implement to their process the guidelines proposed by Christopher Frayling for the research labor in Arts and Design: a) Research *into* art and design; b) Research *through* art and design; c) Research *for* art and design. To contextualize the reader, this project is framed within the *Research into art and design* category. This category establishes the discipline itself as the object of study through aesthetic or perceptual research, its historical development and the analysis of theoretical perspectives about the models and approaches in Design (Frayling 1993, 1-5).

In correspondence with the research question and the objectives to be achieved, the research is based on a *qualitative* approach. Although its limits of action may be complex to define, qualitative research is characterized by prioritizing the richness of deeper contents and meanings of individual ideas rather than behavior standards (Coutinho 2014, 26-27). In this logic, the qualitative perspective allows a greater exploration within the theoretical concerns exposed in the research questions and the objectives to accomplish for this project.

The qualitative perspective embraces a variety of methods according to the nature of the research focus. The current research is based on the analytical and historical methods proposed by Coutinho (2014). The analytical and historical research plan is particularly useful for collecting the necessary information through various sources such as documents, objects, records and contexts past or present. This approach is conceived for describing people, objects, contexts or events. Some of the procedures, sources and tools for data collection implemented are shown in Figure 1.

Research plan	Research focus	Type of data	Data source	Collection	Tools
Analytical / Historical	Facts and contexts (present or past)	Descriptions Analysis	Contexts Objects Records Documents	Analysis	Criteria

Figure 1. Procedures, sources and tools for data collection in analytical/historical research adopted from Coutinho, 2014.

On the other hand, it is essential to adopt consolidated protocols to ensure that the research and results obtained are trustworthy. The trustworthiness in qualitative research can be achieved through several specific strategies. This investigation confronts diverse points of view in order to obtain a more accurate or complete understanding of the phenomena to analyze. That is to say, it confronts information from different sources and contexts, although the collection of such information is done using the same method.

In this sense, the research delves into various existing textual and audiovisual documents from different authors, perspectives and contexts, including books, articles from magazines and journals, interviews, reports, lectures, conferences, web pages, and online blogs. In addition to the graphic work done by several authors throughout the history of graphic design. Thus, this research provides sufficient information to confirm the hypothesis and to build theory. This diversity of sources used during the investigation is what allows to consolidate trustworthiness of the results obtained.

The information gathered through the analysis of different documents give the necessary insights to develop a theoretical framework about the purposes of graphic design in its historical development, both retrospective and contemporary. Within this theoretical compendium, it is expected to identify emerging behavior patterns in the designers' approach. Such patterns are used to propose a broad categorization of graphic design purposes. Afterward, the cases presented during the theoretical framework are represented in comparative graphs using the categorization proposed and intensity scales according to each particular case. In this way, it is possible to determine which purposes are mainly addressed by certain design paradigms. And finally, according to the location of a paradigm in certain categories, a map of graphic design purposes is constructed in order to allow a holistic understanding in the activity of the discipline.

At the end of the research, it is important to reflect on the implications that this project has on how graphic design can be researched, practiced, learned and taught. In addition to mentioning some limitations of the research itself, and alternatives to continue developing future research on graphic design, its purposes, processes, methods, scope and results.

THEORETICAL
FRAMEWORK

2.1. Retrospective paradigms

Understanding the fields in which contemporary graphic design operates is an unfinished task if there is no space to visit the paradigms of the past. Many of the design approaches proposed today are the result or evolution of retrospective perspectives. The body of knowledge in design is materialized with the sum of postures as part of continuous historical processes. In this sense, this first part of the theoretical framework presents several paradigms of design research and practice in twentieth century in a direct and synthetic way —considering the amount of existing information plausible to be studied.

Although graphic design can be traced back to the origins of human existence, this first part of the research focuses its efforts on the study of twentieth century graphic design. The last century is the cradle of several main concepts to understand twenty-first century graphic design, starting with the Arts and Crafts movement (Bannon 2012, 40). The retrospective inquiry discusses design paradigms pertaining mainly to Modernism and Postmodernism until the arrival of the current century.

2.1.1. Modernism

2.1.1.1. Arts and Crafts

The impact of the Industrial Revolution is unquestionable (Meggs 1998, 132). It positioned a new ideological model to the political, economic, social and cultural development for humanity and its production processes. It was the catalytic event to the transition from the local and craft design —which already had an important impulse thanks to the Gutenberg’s printing press during the Renaissance— to the mass-produced design with a global standardization scope.

One of the most significant changes was the suppression of the ornament —understood at that time as a key element of beauty— and also the replacement of the manual finishing by the dehumanizing perfection of the machine. This intrinsic condition of the machinery revealed the interest of the time to increase the manufacture of goods while reducing production times and costs, promoting greater economic profitability. This situation meant the displacement of the craftsman and consequently the rise of the *Arts and Crafts* countermovement during the late nineteenth and early twentieth centuries (Meggs 1998, 133).

William Morris was the leader of this ideological approach which had serious disagreements with the Industrial Revolution. Morris — English architect, designer and textile master— rejected that model of mass production and convened what he called an adaptation of purpose

through fidelity to the nature of the materials and the designer's individual expression (Figure 2). His search was based on unifying art and crafts as a single category of production.

It was not so much the horror to the machine that prevailed in Morris's critical attitude, but rather the use that was made of it (Satué 1995, 94).

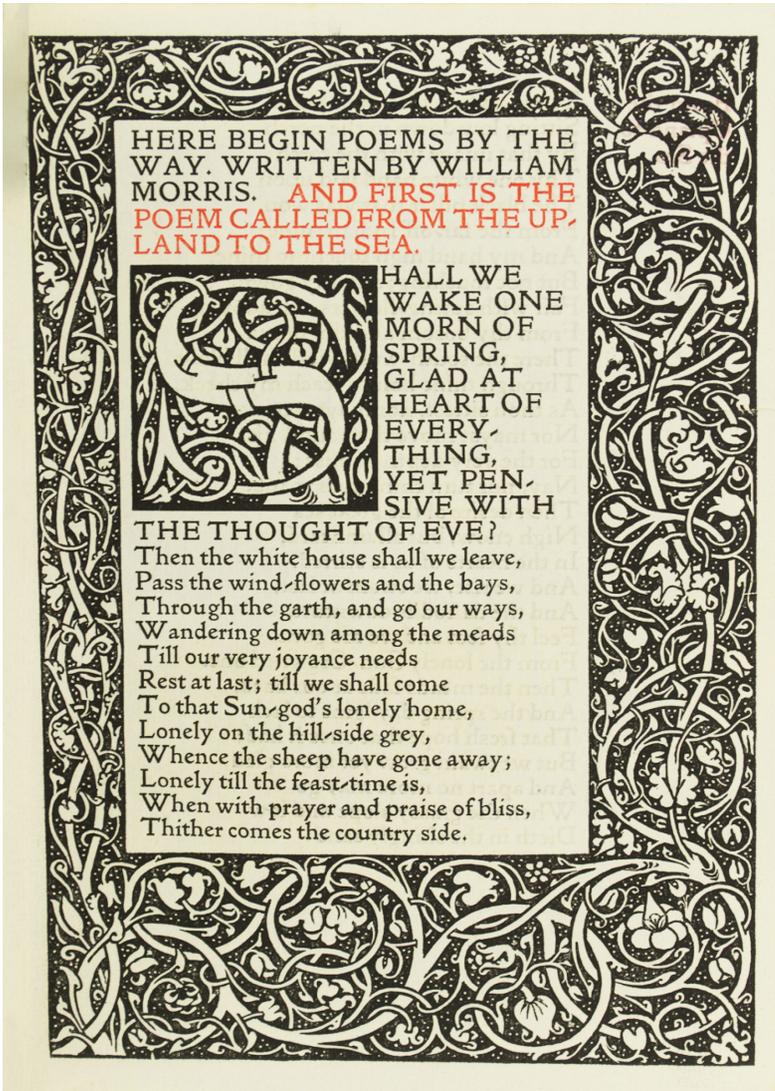


Figure 2. Poems by the way, editorial design by William Morris, 1891.

To a certain extent, the aspirations of the movement had mainly an aesthetic concern towards the everyday objects, which also had to be accessible to the entire population. All this without making use of the new methods of mass production since they denied the handicraft development.

Several artists and book illustrators joined the movement. Walter Crane's layout sketches made for his book *The Bases of Design* in 1898 show his interest in the double-page relationship as a unit form, and the use of margins for decorative effect (Figure 3). And although illustration and editorial design had a fundamental development, they certainly were not the only areas of interest for the movement. Emblems and trademarks were also being designed for several epoch presses. One example of this is the emblem made by Charles R. Ashbee for the Essex House Press in 1902 (Figure 4).



Figure 3. Layout sketches for the book *The Bases of Design* by Walter Crane, 1898.



Figure 4. Emblem for the Essex House Press by Charles R. Ashbee, 1902.

Unfortunately, a strong contradiction to these approaches was the fact that the books designed by Morris and his colleagues included a highly complex handicraft production (Figure 5) and therefore acquired high costs that could only be paid by wealthy people. This situation contradicted the noble idea of democratizing art. At the end of its time, the Arts and Crafts movement established an approach that, far from fulfilling its social objectives, got limited to an aesthetic experience that soon got replicated all over Europe. Its precursor, William Morris, tried to counteract this circumstance in his last years of life.

In any case, while Morris explored and enhanced past ideals that prevailed in the Renaissance, he also influenced the development of new approaches to design. Those future movements and statements would seek to unify not art with crafts but art with industry.

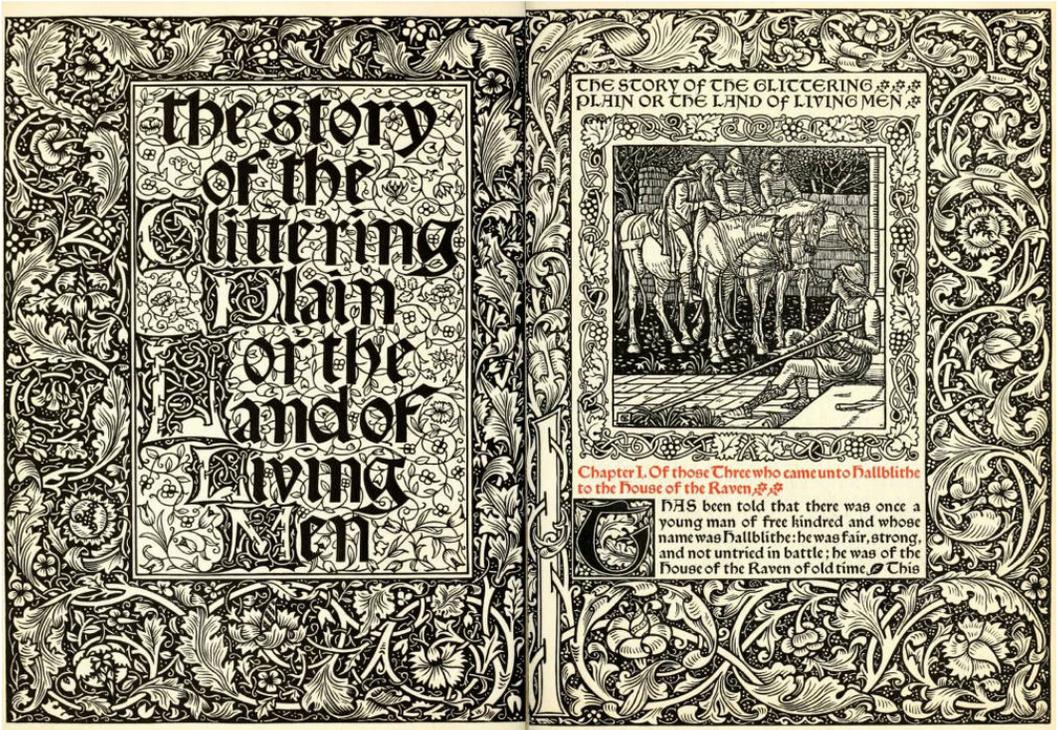


Figure 5. Title-page spread for *The Story of the Glittering Plain*, by William Morris and Walter Crane, 1894.

2.1.1.2. Art Nouveau

By the end of the 19th century, scientific rationalism was already increasing, and traditional religious beliefs were being challenged. This allowed art to assume a renewed role in society. This is how *Art Nouveau* arose, and its initial motivations coincided with Morris's proposals. Its impact was recognized internationally with a variety of denominations: *Art Nouveau* in France, Belgium and Spain, *Arte Nova* in Portugal, *Modern Style* in Anglo-Saxon countries, *Jugendstil* in Germany, *Vienna Secession* in Austria, *Nieuwe Kunst* in Netherlands, and *Liberty* in Italy. Its name suggested the intervention of a new, young and modern artistic approach, although it started with the same notions of the Arts and Crafts movement. Due to the time in which it was originated, Art Nouveau could perhaps be interpreted as a decadent manifestation—to its predecessors—of the late nineteenth century but also it can be understood as a reaction against the materialism brought by the Industrial Revolution (Meggs 1998, 190).

Art Nouveau gradually moved its formal exploration to remote insights, mutating some concepts as consequence. For example, materials derived from the Industrial Revolution, such as glass and steel, were incorporated into the movement's production. In the beginning of the movement, artists used to draw shapes irregularly to denote organic

forms. However, it was increasingly common to use regular and precise strokes in the contours of the figures besides a much more accurate construction, providing them a geometric, simple and industrial appearance. In other words, the movement aims to be the first aesthetic alliance with the industry and its productive possibilities.

From these new practices, designers in Germany and Austria also began to disassociate themselves from organic beauty in drawing in order to reinforce new paradigms and aesthetics. By doing so, they wanted to get involved in the economic, social and cultural changes of the imminent twentieth century. One example of this is the trademark designed for the German literary publishing house Insel Verlag designed by Peter Behrens in 1899 (Figure 6).



Figure 6. Trademark design for Insel Verlag by Peter Behrens, 1899.

In the midst of this, the American architect Frank Lloyd Wright, already recognized by artists and designers in Europe, defined organic design as an entity “in which the part is to the whole as the whole is to the part, and which is all devoted to a purpose... It seeks that completeness in idea in execution which is absolutely true to method, true to purpose true to character...” (Meggs 1998, 211). His work was also a key reference for the evolution of the initially curved features of Art Nouveau towards later geometric representations in the movement (Figure 7).

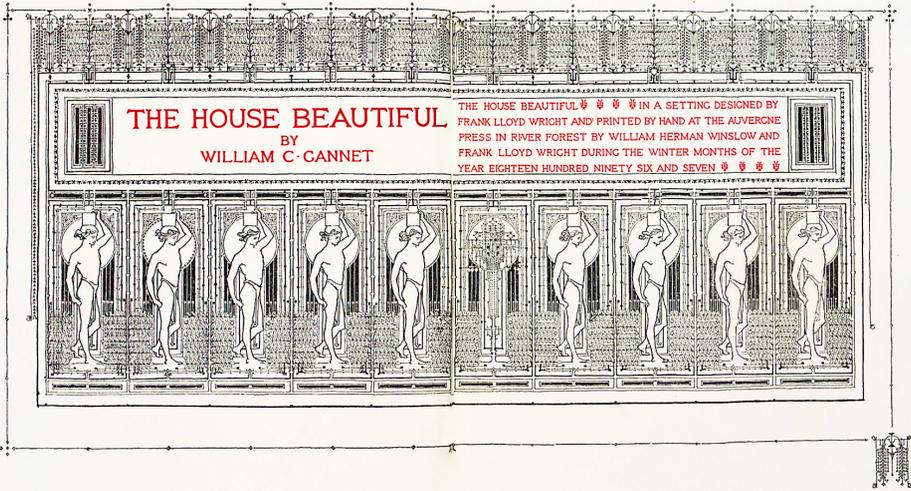


Figure 7. Title page design the book *The House Beautiful* by Frank Lloyd Wright, 1897.

1. Do not confuse with the *Glasgow School of Art*, institution where they met.

Meanwhile, in Scotland, the work of a group known as The Four was increasingly primordial. Its members were the sisters Frances and Margaret Macdonald, J. Herbert McNair and, as the most influential, Charles Rennie Mackintosh. They were also known as the Glasgow School¹. The group's contributions were concentrated in formal aesthetics through the use of geometric compositions and rectilinear structures (Figure 8). For the specialized magazine of the epoch *The Studio*, the purpose of The Four and its posters was to draw the attention of the pedestrian. This magazine contributed to the international recognition of both The Four and Art Nouveau in an important series of publications. This situation led artists and designers in other countries to follow this trend, although with different denominations.



Figure 8. Poster design for The Glasgow Institute of the Fine Arts and The Scottish Musical Review, by The Four, 1894-1896.

In Austria, for example, the Vienna Secession was a precursor to the ideological destiny for national art and design. Vienna's designers addressed some lectures of the Arts and Crafts movement with an eclectic exploration of new techniques and laid the foundations for the next avant-garde movements that followed the First World War. Experimentation in printing techniques and materials was a more than frequent feature. Self-initiated projects were the field in which the designers could transform and propose new ways of doing graphic design and then taking it to more embracing approaches in society. "Viennese designers were mostly their own clients, but their commissions went beyond fashionable society to the State itself." (Hollis 1997, 28).

Metallic inks on translucent paper, formats and special diagrams in their magazines, and unusual chromatic combinations distinguished the works of the Secession (Figure 9). This kind of formal divergences

resulted in the planning of each of the national movement's own programs, although pending from what its neighbors stated.

Not everyone participated in the same ideals or the same tastes; they were united, however, by the desire to see the designer elevated to a similar status to those of a painter or an architect, while producing objects that were well designed and affordable to all social levels (as cited in Satué 1995, 10).

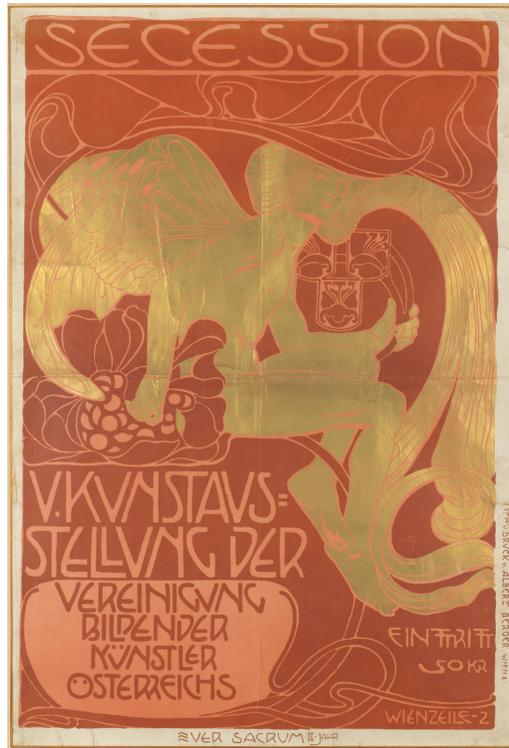


Figure 9. Poster design for the Fifth Vienna Secession exhibition poster by Koloman Moser, 1899.

So far, the discussion about what was the scope of Design and which roles should assume as their own did not cover issues beyond the organic and industrial aesthetics oriented to the trade. However, the architect Adolf Loos would question all the utilitarian development that his contemporaries have explored in all the branches of design. His theories flatly rejected all the aesthetic positions of the Arts and Crafts, and Art Nouveau movements. He called on designers, artists and architects to work for *functional simplicity* by suppressing any decorative motif that could be considered useless. For Loos, the condition of an organic design should not be aligned with the epoch's aesthetic notions —i.e. preference to the nature-evocative curved traces— but should be attached to human needs as a quality standard. It is important to mention that up

to this point graphic design as a profession was not yet established, and those who worked in this field were mostly commercial artists². The Vienna Secession moved away more and more from the floral forms to enter the much simpler and flatter figures. So geometric and modular construction, fidelity to materials and function were increasingly common standards. Once these objectives were met, the decoration was used only if it did not corrupt any of the previous terms. A new era in Design was imminent and inevitable.

2. In this context, a commercial artist is the one who produces works mainly to promote the purchase or consumption of products and services. The graphic pieces fulfill an advertising function, and their final purpose is to generate profit for the advertiser.

2.1.1.3. Werkbund and Gesamkultur

During the first decade of the 1900s, the interest in technical, cultural and social attributes kept growing. For Peter Behrens, German architect and designer, these conditions were reflected in the architecture and typography of each era. Behrens explored the design of geometric motifs and the use of sans serif modular fonts. His purpose was to work with what he considered to be the essential principle in any system of visual construction: basic and rational geometry (Figure 10).



Shortly after, the *Deutscher Werkbund* —German Association of Artisans— was founded in Munich with the intention of unifying art and technology for the common good (Meggs 1998, 227). Its leaders were Peter Behrens, Hermann Muthesius, and Henry van de Velde. Despite being influenced by William Morris, the German Werkbund differed in something essential: It accepted the value of the machine and mass industri-

Figure 10. Title pages design for Celebration of Life and Art by Peter Behrens, 1900.

al manufacturing for human development. Its idea relied on using design as a means to give *form* and *meaning* which the current production lacked. In a way, this philosophy was contradictory to the repudiation that Morris spread about the machine and to his search for returning to craftsmanship work as a primary means of production.

Moreover, as soon as Werkbund was formed, there was a fragmentation between the ideals of its leaders. Thus, *Gesamkultur* arose with Henry van de Velde at the head. Van de Velde prioritized individual artistic *expression* (Figure 11). On the other hand, Muthesius led Werkbund and argued that the *form* should be conceived solely by *function* removing any decorative element (Figure 12). Both pursued the same objective of establishing a universal philosophy of production in an environment constructed by humans through Design, although they proposed opposite paths to achieve it.



Figure 11. Title pages for *Also Sprach Zarathustra* by Henry van de Velde, 1908.



Figure 12. Poster design for the Deutscher Werkbund exhibition in Krefeld by Fritz H. Ehmcke, 1911.

Peter Behrens tried to reconcile and unify both perspectives without success. Many of his projects seemed to show greater affinity with the Werkbund —e.g. the graphic system for the AEG (Figure 13).

The work done for the AEG is recognized as being the first corporate identity in the history of graphic design (Boztepe 2012). Behrens designed a typographic family for the company, and did so with three objectives in mind: a) to distinguish the company's communications from all other printed material; b) to achieve a universal graphic system over a notion of individualized artistic ability; c) to denote values of high quality and performance in the company's products. These approaches can easily reflect visual exclusivity and distinction purposes, but also commercial purposes in search of greater consumption for the company. For graphic design this hierarchy of objectives represent a turning point towards *functionalism*.

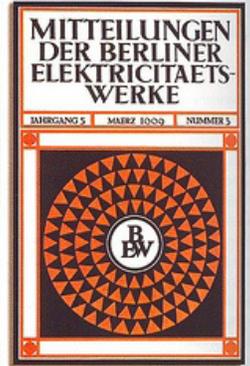
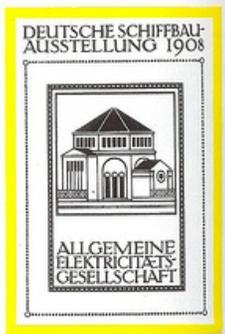
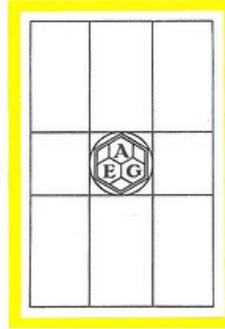


Figure 13. Corporate identity for the AEG by Peter Behrens, 1907.

In addition, in 1914 during the annual conference of Werkbund there was a debate between the standardization and rationalism of Muthesius against the individual expression advocated by van de Velde. The position of Muthesius proved to be the most solid and stable. Thus, the discourse of rationalism was consolidated with the creation of new works in architecture, art and design.

A design philosophy is merely an idle vision until someone creates artifacts that make it a real force in the world, and Werkbund members consciously sought a new design language to realize their goals (Meggs 1998, 227).

2.1.1.4. New Objectivity and Sachplakat

Previously the main concerns were centered on investigating the aesthetics of the object and defining if its means of production should be artisanal or industrial. But the current panorama actively involved *function* within the equation of Design, often as an attribute to measure the quality of a graphic piece (Figure 14). The questions regarding the discipline and its fields of action progressed gradually, each topic being a consequence of the previous one. This did not necessarily mean linear ideological progress, but branched —similar to the rhizome theory that

Deleuze and Guattari would develop decades later. Each idea could reach its own unusual conclusions. For example, the Russian painter Kazimir Malevich, who explored Futurist and Cubist paradigms, had created an elementary geometric abstraction that he claimed as new and pure (Figure 15). Malevich repudiated both the pictorial notion and the utilitarian function. He sought for a manifestation of feeling without any practical value, nor ideals that would lead to a definitive philosophy of art and design. Nevertheless, his line of thought can be interpreted as being much closer to that first pictorial notion despite wanting to be in a seemingly neutral posture.

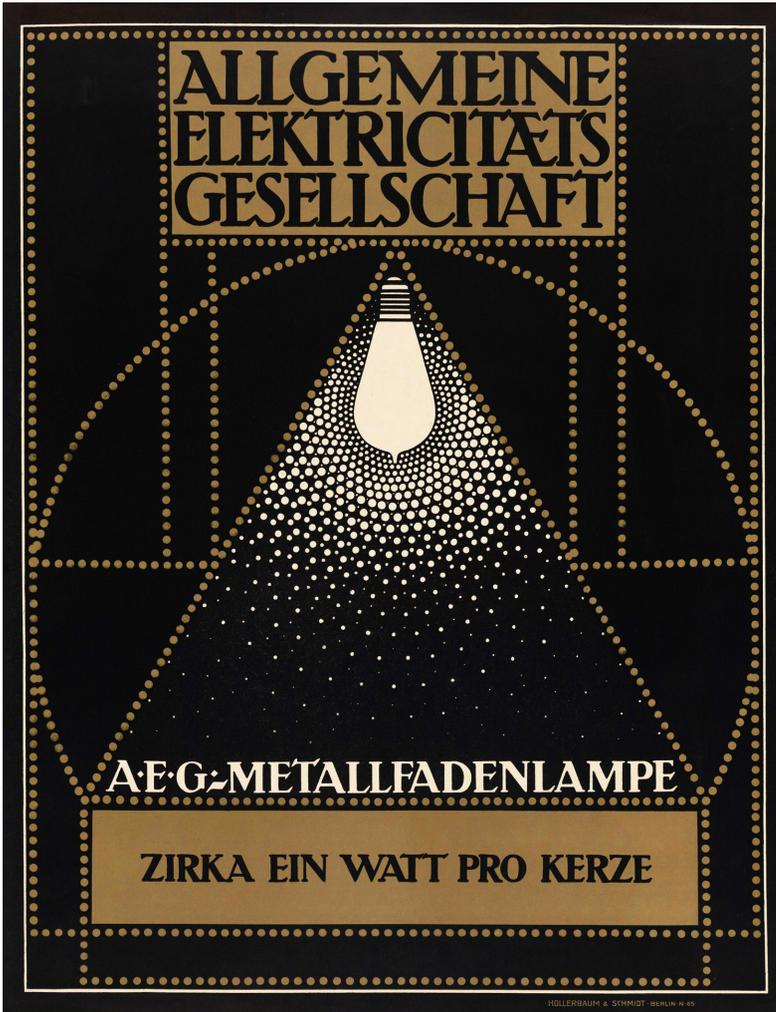


Figure 14. Poster design for the AEG by Peter Behrens, 1910.

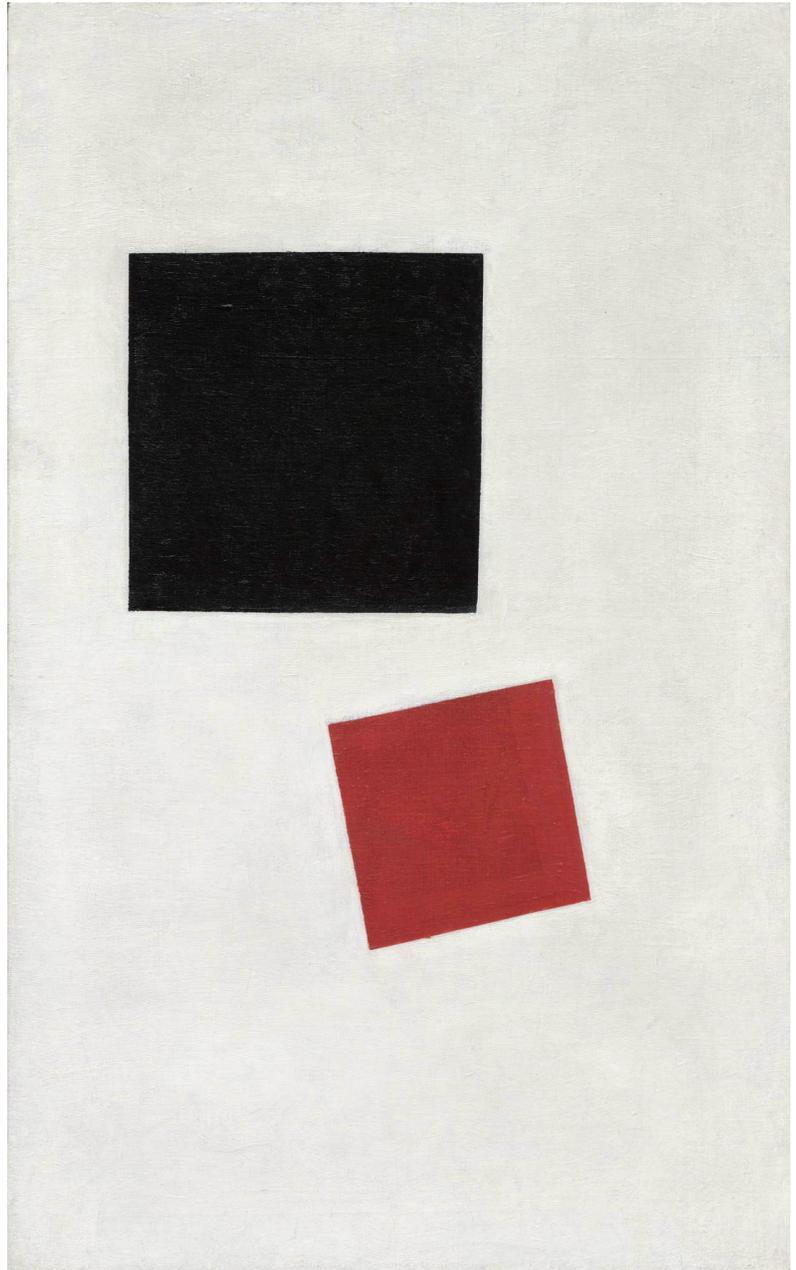


Figure 15. Black Square and Red Square by Kazimir Malevich, 1915.

In any case, there was clearly a majority collective intention to put function, simplicity and suppression of individual expression at the highest standards in graphic design. *New Objectivity* was the German ideological umbrella that covered all forms of communication—including architecture, literature and music—as the global posture to take these fields to a practical compromise and a commercial stance perceived as an inher-

ently American condition. It emphasized manufacture, technology, and function, in which artistic and stylistic concerns were subordinate to purpose (Meggs 1998, 227).

The *Neue Sachlichkeit* is Americanism, cult of the objective, the hard fact, the predilection for functional work, professional conscientiousness, and usefulness (Crockett 1999, 2).

In 1908 the German poster is no longer seen as an artistic expression, but rather as a *means of communication* between the *advertiser* and the *public*. It seeks to give a message with a unique and direct interpretation. This notion was called *Sachplakat* —which means “object poster”— (Figure 16). The *functionalist* postulate is much more absolute than the still pictorial work of the pioneers in graphic design as the new discipline of the epoch (Satué 1995, 119).



Figure 16. Advertising poster design for Manoli cigarettes by Lucian Bernahard, 1910.

For the next few years, visual communications —especially poster design— had two main missions during the First World War: to inform and to instruct people. The figurative language was the king in the graphic development of societies, since the message had to be much clearer, more convincing and more effective than before (Figure 17, Figure 18).



Figure 17. Military recruiting poster design by Alfred Leete, 1914.



Figure 18. Poster design for the exhibition of work by German internees in Switzerland, by Ludwig Hohlwein, 1918.

2.1.1.5. Dada and De Stijl

During the years of the First World War the avant-garde movements led the foundations of the arts. One of the most important approaches was the Italian *Futurism*. Its artists wanted to evoke the speed and the violence present in the technological progress of motor cars, airplanes, and the brutality of war in the main industrial cities of Europe. In terms of graphic design there was an interesting exploration for typographic development. Filippo Tommaso Marinetti —poet and leader of the movement— used the visual characteristics of the letters to compose his verses in chaotic layouts in an absolute replacement of images by words (Figure 19). This visual research established crucial premises for the *Dada's* movement release in Switzerland.



Figure 19. Poem from *Les mots en liberté* by Filippo Marinetti, 1919.

Dada aimed for a systematic criticism of the capitalist society and its logical-oriented processes. Its work consisted in the expression of irrationality, nonsense and anti-bourgeois premises. The main manifestations were typography, photomontage and collage (Figure 20). Kurt Schwitters, Max Ernst and John Heartfield dabbled respectively in those areas in a revolutionary and pre-surrealist manner, and they created the graphic and advertising design models that has perpetuated to this day. Their visual and conceptual approaches were so vital that, for some authors, it meant the birth of graphic design (Satué 1995, 129).



Figure 20. Dada Matinée design by Theo van Doesburg, 1923.

De Stijl emerged a few months after the Dada did. Both had a temporary parallel development, but also an ideologically opposite one. “The Style” —English translation for *De Stijl*— was a movement that initially emerged in 1917 as a Dutch magazine by Theo van Doesburg (Figure 21).



Figure 21. Logo and cover design for the *De Stijl* magazine by Theo van Doesburg and Vilmos Huszar, 1917.

As a consequence of the ideas that were materializing, *De Stijl* once again proclaimed as being its main objective the establishment of universal laws for harmony and balance in art through geometric abstraction. Thus, they could finally install the first steps for a new social order. To achieve this, the movement pretended that *applied art* would absorb *pure art*. Only after, art would spill that doctrine to architecture, to product design, to graphic design and consequently to society. The *De Stijl* framework consisted in the visual abstraction of form and color in search of a simplicity that is universally understood. “And they believed they had achieved this. That is why they called themselves The Style, not A Style. Absolute truth in art and design” (Dorst 2017, 126).

It is appropriate to mention the case of Dutch designer Piet Zwart, who created an interesting synthesis from the of Dada’s nonsense and irrational approach, and *De Stijl*’s formal and functionalist model (Fig-

ure 22). This initial hybridization ended up moving towards rational paradigms as he related to personalities of De Stijl. He considered that its basic notions were appropriate, although restrictive and dogmatic at the same time. So, he did not join the movement.

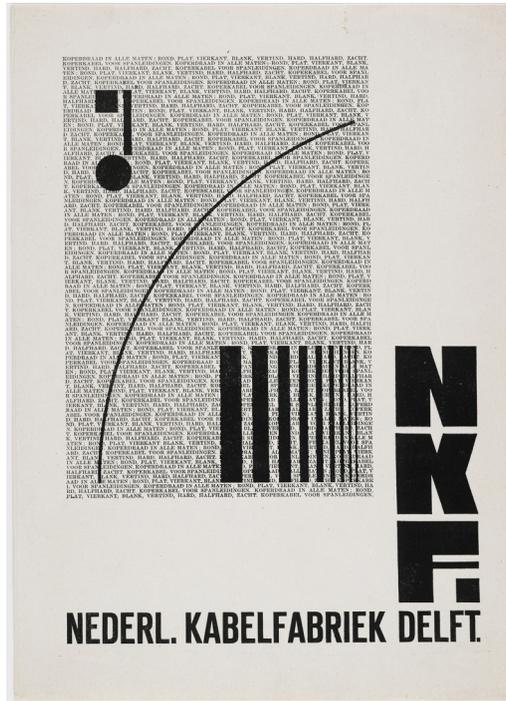


Figure 22. Advertising poster design for the Nederlandse Kabelfabriek (NKF, the Dutch Cable Factory) by Piet Zwart, 1924.

However, De Stijl widely collaborated in the construction of philosophical premises of the *Bauhaus* and the *International style* in typography, poster, editorial, and logo design besides other fields beyond graphic design. Actually, van Doesburg cooperated with the Bauhaus as an occasional teacher with free classes to reach a common interest oriented towards a functionalist paradigm.

2.1.1.6. Staatliches Bauhaus

The First World War was finally coming to its end and Germany needed urgently a full-scale renovation. In the previous years, the Werkbund had attempted to unify art with industry and imposed new standards on the aesthetic and functional features of design for the low-cost mass production of consumer products. The consequent advances of the movement did not find a stop in the war, but another justification to increase an ideology of universal design. Its work was reinforced in a German society hit hard by economic, social and political crises such as inflation

and unemployment. Therefore, establishing the discipline was proven to be an important contribution to the national renewal.

Henry van de Velde suggested the young architect and Peter Behrens's assistant Walter Gropius to direct two schools that soon would integrate as one. This institution was established as the *Staatliches Bauhaus* in 1919. The role played by the institution as a pedagogical and intellectual catalyst in the modernist history of graphic design—in addition to architecture and industrial design—results in an unprecedented scale towards the establishment of the discipline in commercial and advertising matters (Satué 1995, 147). Although graphic design was not considered a subject until the arrival of László Moholy-Nagy to the institution—from the Dada and De Stijl movements.



Figure 23. First Bauhaus seal by Johannes Auerbach, 1919.

In its first years, the Bauhaus expressed a more organic and craft affinities (Figure 23). Nevertheless, the institution soon inquired in a rational and geometric emphasis for absolute legibility in communication (Figure 24). In practical terms, to analyze the content and set visual hierarchies to it would build a functional reading order. Typography and photography were the main fields of study on the international level at the time the Bauhaus opened. For Jan Tschichold—calligrapher, typographer and book designer with an artisan background—and Moholy-Nagy some of the fundamental principles of typography were: a) It is shaped by functional requirements; b) the purpose of any typographic project must be to communicate its message in the shortest, simplest and most effective form possible. They rejected ornamentation because, opposite to rational design as they said, it interrupted the communicative mission of the text (Figure 25). In this logic, sans-serif type was proclaimed and used as the most functional type (Rössler 2017).

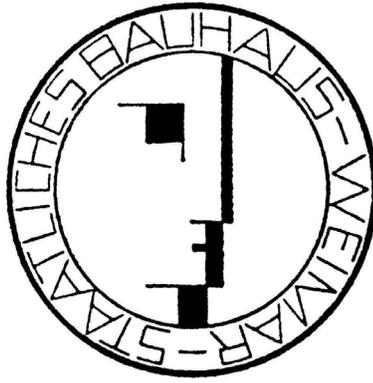


Figure 24. Later Bauhaus seal by Oskar Schlemmer, 1922.



Figure 25. Cover design for Elementare Typographie by Jan Tschichold, 1925.

Another interesting case is the norm developed by the typography professor Herbert Bayer to exclusively use lowercase letters in any communication piece. The Bauhaus society did not agree with the existence of two alphabets —two signs for each sound. For them, it was not necessary to use the double number of signs if the message is equally delivered with half. There were multiple projects to materialize these ideas. Bayer designed in 1925 what he called the *universal alphabet*, which was considered as a failed attempt (Figure 26).

Trying to fit almost forcefully the characters within circles, mostly of identical diameter (in a useless and absurd discipline), and resulting in a hybrid and unbalanced alphabetic set, with too many errors (Satué 1995, 153).



Professor Josef Albers also designed his own alphabet but conceived it for advertising use (Figure 27). The author believed that the reader could visually construct the missing unions of the letters when far from the piece. This project was censored by Moholy-Nagy, mainly because the letters had reading issues and even the alphabet was not completed.

Figure 26. Universal alphabet by Herbert Bayer, 1925.



Figure 27. Alphabet design by Josef Albers, 1926.

Several were the efforts to concrete a typeface that could suit a total geometrical construction, but it was not until the German designer Paul Renner proposed *Futura*. Nevertheless, it did not adopt the all-lowercase perspective. Definitely, Bauhaus had a serious trouble in unifying its strict self-imposed theories with the practical development. From a perspective of visual exploration, with no further purposes, these exercises are more than satisfactory. Evidently, that was not the interest of the school as a movement oriented towards rationalism and functionalism.

Regardless of some failures, Bauhaus had a colossal success in the aesthetic matter through formal minimalism that attracted a lot of professionals to keep developing and feeding the ideological prestige of the school (Figure 28). After all, Bauhaus is the biggest responsible for establishing order in a set of chaotic independent and unpremeditated activities and turn it to a field of knowledge with fixed theoretical and methodological bases. It laid the foundation of modern design as a transparent, useful, and functionalist activity (Bannon 2012, 38).

The structural model of the Bauhaus started with the New Objectivity movement, and culminated in 1933 due to the rise of the Nazi party. Some of the most important authorities of the school continued teaching their values in different countries. Jan Tschichold, particularly, went back to his calligraphy origins. He claimed that graphic designers should work in a humanist tradition to address the knowledge from master typographers of the past. Tschichold still believed in rational typography when it comes to advertising industrial production and other contemporary communications, but also believed it was folly to use it for a long running text, calling it a genuine torture (Meggs 1998, 289).



Figure 28. Universal correlation theory between the basic colors and forms by the Bauhaus professor Wassily Kandinsky is one of the most famous icons of the institution, 1923.

2.1.1.7. International Typographic Style

The immediate legacy of Bauhaus continued its ideals in a worldwide scope until the rise of the *International Typographic Style* —or *Swiss Style*— in the decade of 1950. It also had its sequential precedents in the Netherlands and Russia, but was mainly developed in Switzerland. Its practitioners based their work on sans serif type and mathematical grids since those were considered as guaranteed resources for achieving legibility and structuring of information. For them it is not a priority the graphic results, but to stick to the rules (Figure 29). Some detractors criticize that the movement has acquired a formula condition that always produces similar results. Advocates state that the purity of means does not imply visual reiteration as an inherent condition of the movement's processes, unless the designer is less talented in developing solutions. In order to avoid the binding definition between art and design, all personal and unconventional expression is not permitted. While scientific and universal procedures to problem-solving design are the priority to the correct delivery of important information.

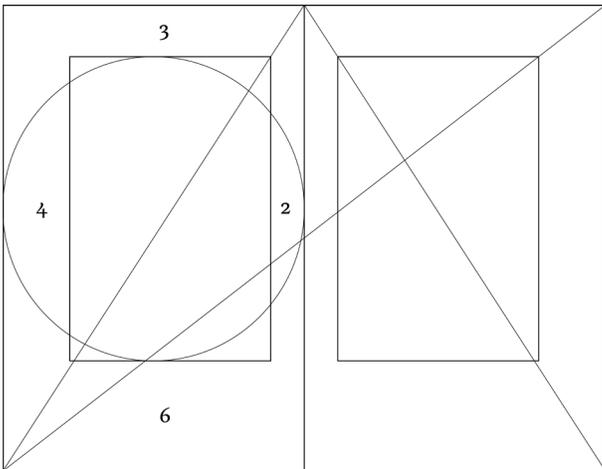


Figure 29. Secret canon of page proportions in the late Middle Ages, popularized by Jan Tschichold in 1953.

During this time, Theo van Doesburg, founder of *De Stijl*, wrote the *Manifesto of Art Concrete* to build a universal art based on mathematical construction. Zurich designer Josef Müller-Brockmann, editor of the movement's journal *New Graphic Design*, argued that graphic design

must not present the designer's personal and subjective feelings. The aim is to break down linguistic barriers through signs and pictographs to make information comprehensible around the world.



Figure 30. Norm poster design for an exhibition of Swiss industrial design by Ernst Mumenthaler and Theo H. Ballmer, 1928.

Graphic design started to attend fields not so explored by it before. Terms like *Information design* would enhance function as purpose for the discipline.

Informational design was defined as a synthesis of function, flow, and form. *Function* is utilitarian need with a definite purpose: to make information easy to find read, comprehend, and recall. *Flow* means the logical sequence of information (Meggs 1998, 313).

With this logic in mind, the human and its body dimensions—as long as the person's physical and emotional reactions—become the most important condition to evaluate the quality in Graphic design with scientific aims (Figure 31). The collective interest in achieving direct and effective communication through a universal visual language was evidenced by the creation of one of the most prominent typefaces of the time: *Neue Haas Grotesk*, mostly known as *Helvetica* (Figure 32). Over the next years, sans serif fonts would be widely used in countless projects regarding editorial design and visual identity (Figure 33).

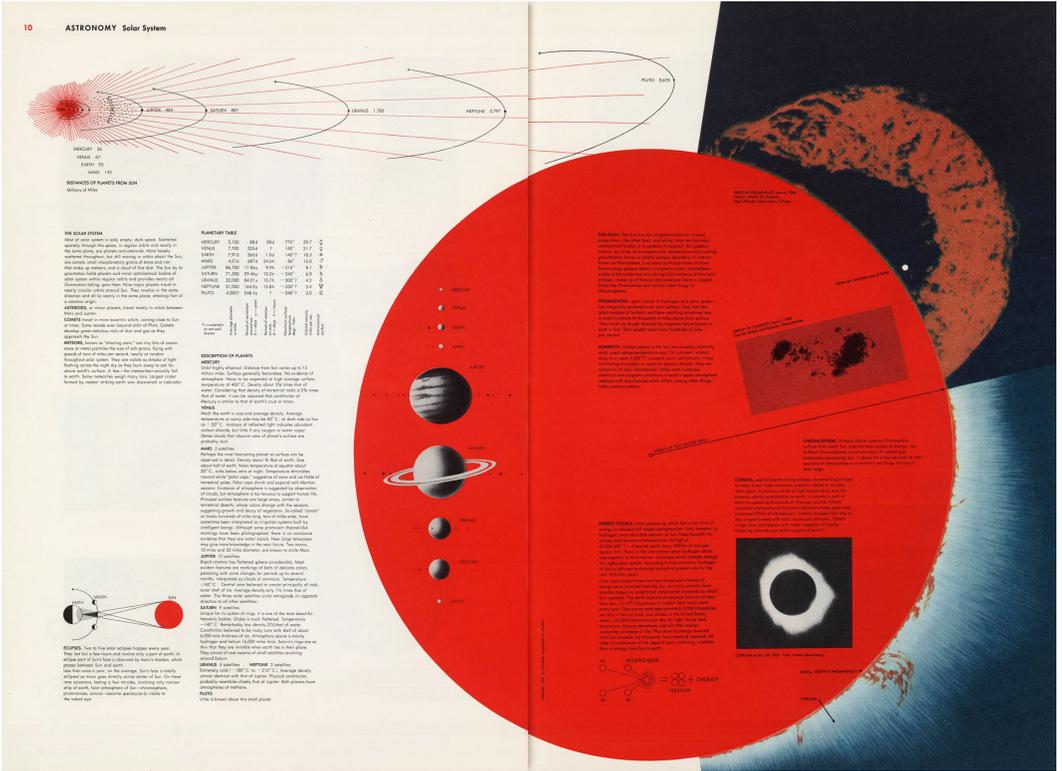


Figure 31. Editorial design for the World Geographic Atlas by Herbert Bayer, 1953.

Helvetica.
 Die Neue
 Haas Grotesk.
 Miedinger, 1957.

Figure 32. Helvetica typeface by Max Miedinger, 1957.

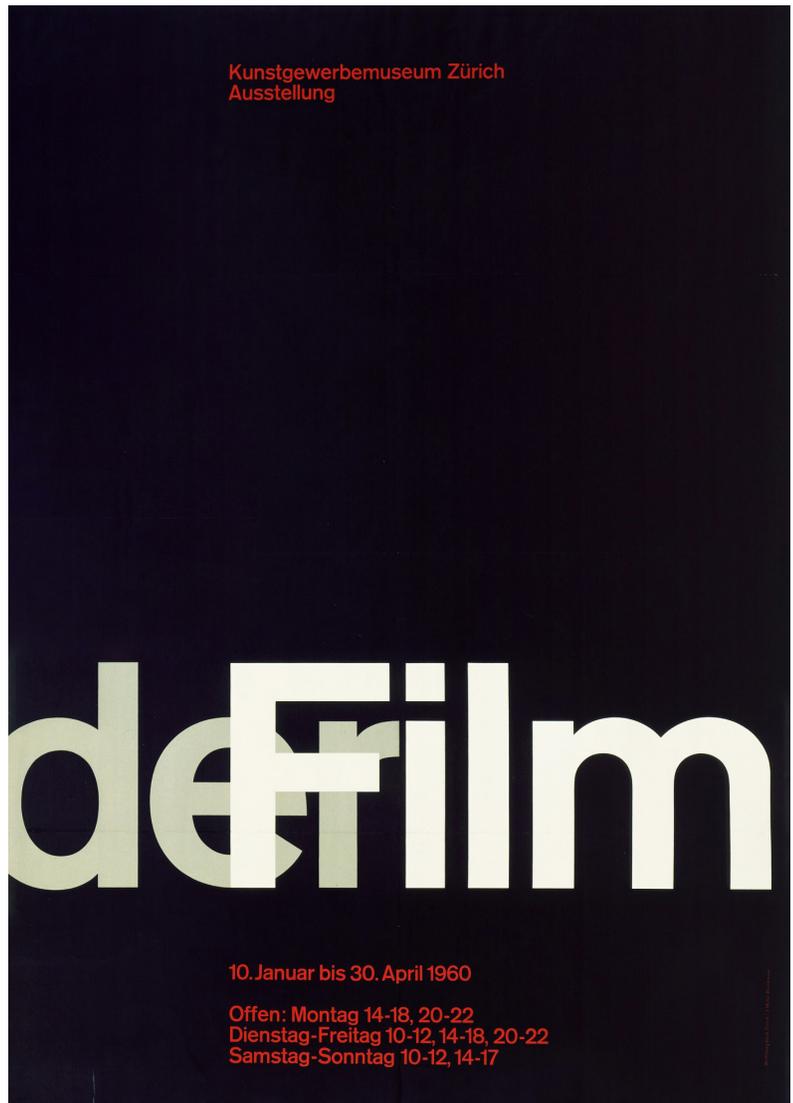


Figure 33. Poster design for Of the Film exhibition by Josef Müller-Brockmann, 1957.

2.1.1.8. American Style

Far from the movement's progress, in New York City, there were some divergences with the inflexible ideology of the International Style. Due to the competitiveness of the city, the conceptual and technical originality had significant value. In this line, graphic designers attended communicative function and at the same time satisfied their needs for personal expression. For the American Paul Rand, design should integrate both function and form to achieve a more effective communication (Figure 34).

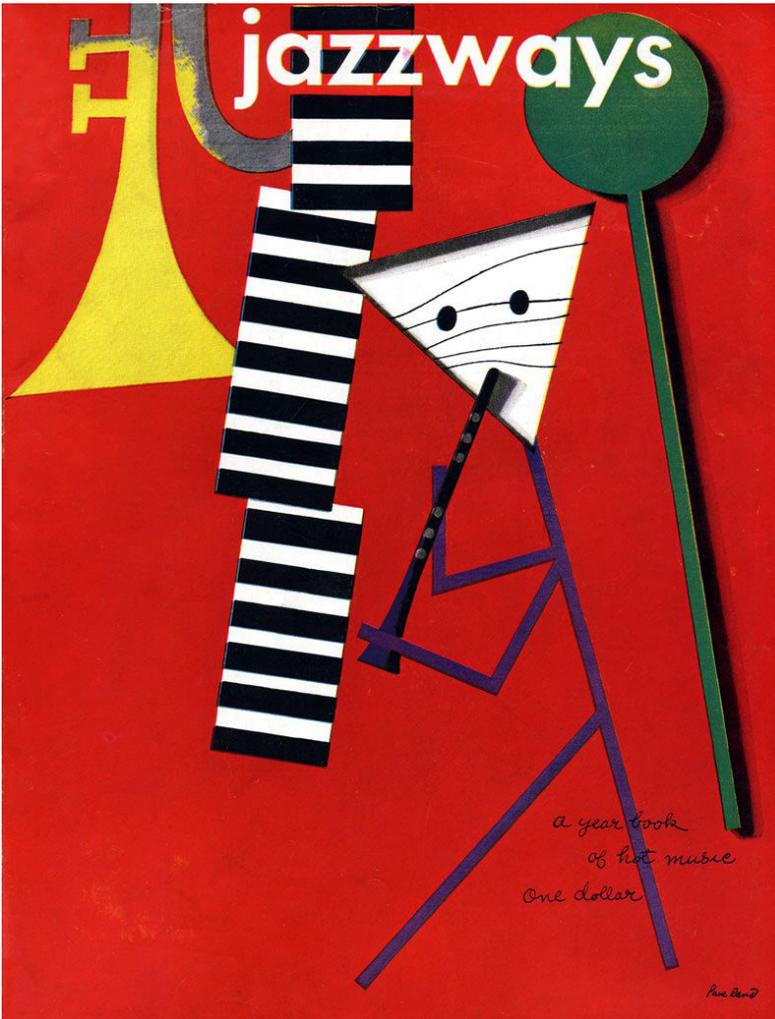


Figure 34. Yearbook cover design for Jazzways by Paul Rand, 1946.

This new exploration became more evident with the editorial design development of several magazines in the United States. Unconventional layouts, eccentric treatment to typography, and bold uses of photography and illustration (Figure 35). The work of Herb Lubalin led him to answer to his detractors that sometimes a designer needs to compromise legibility in order to achieve greater impact (Figure 36).



Figure 35. Cover design for Seventeen magazine by Cipe Pineles, 1949.



Figure 36. Logo design for Sudler & Hennessey by Herb Lubalin, 1959.

There was clearly a discursive contrast between European and American visions to approach the profession. Not to mention that technological advance during and after the Second World War turned toward consumer goods production. Capitalist ideologies allowed the fast rise of the American economy, affecting all the professional development of its societies. The popular phrase “good design is good business” is a prove of the epoch’s consumerist attitude.

With no doubt, the functional and rational view for graphic design would continue its imposing legacy. An important part of this idea is the growing popularity of corporate identity manuals at the time (Figure 37). However, it is also true that some of the dogmatic principles would be more deeply challenged by future approaches.

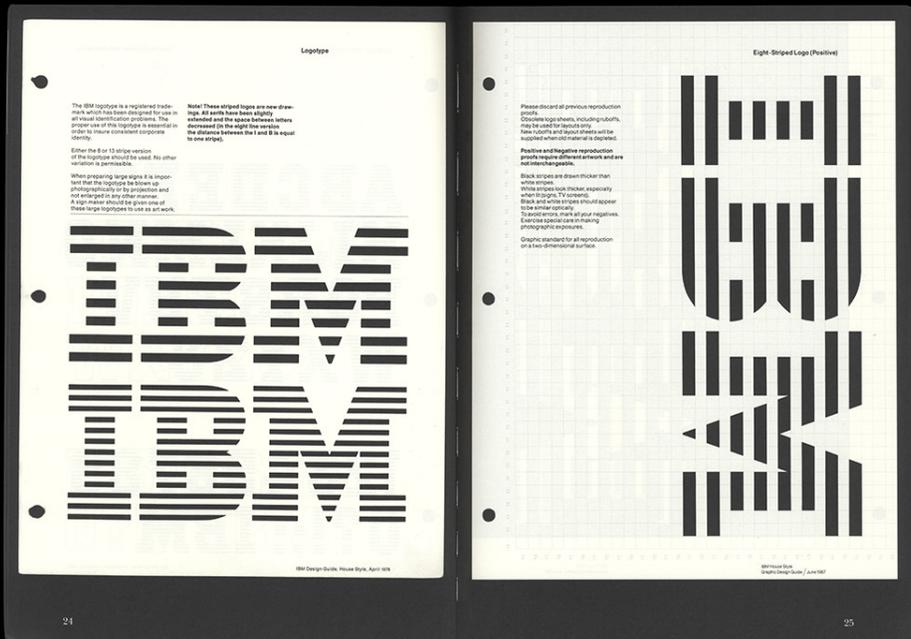


Figure 37. Graphic Standards Manual for the IBM identity designed by Paul Rand, 1972.

2.1.2. Postmodernism

The postmodernist movement has been a controversial topic for several years. Its practitioners have rejected the term, since it was understood as being part of modernism or even its mere sequel (Poynor 2003, 11). While for other authors this is the exact condition of the movement: not a rejection of modernist design, but a logical phase in its sequential development. And for more conservative designers, postmodernism was a paradigmatic retreat of the profession, an aberration for the historic development (Heller and Pettit 1998, 5).

Following the structure proposed by American graphic designer Jeffery Keedy, one of the main participants of the postmodernist movement, it is vital to first recapitulate at least superficially what modernism is by its inherent conditions:

Its primary tenet is that the articulation of form should always be derived from the programmatic dictates of the object being designed. In short, form follows function. [...] It is a formalist, rationalist, visual language that can be applied to a wide range of

circumstances. All kinds of claims can and have been made in an effort to keep Modernism eternally relevant and new (Keedy 1998).

In spite of being an unclear definition for those who are not previously familiarized with graphic design history, it allows Keedy to approach a description of what postmodernist design poses: A reaction, not rejection, to the established elitist forms of Modernism. Postmodernism handled intuitive and ludic languages as a product of the designer's personal involvement. Decision making was based on individual expression beyond covering merely communicative needs. This meant new ways of thinking design and, consequently, new ways of designing. Thus, designers realized that as mediators of culture, they could no longer take refuge in the solving-problem interest (Keedy 1998). In their eagerness to explore their expressive capacities, designers ignored grids, sought out complex spatial sensibilities, and introduced non-functional elements with references to historical design forms (McCoy 1998, 9).

One of the promoters of this paradigm was the German Wolfgang Weingart who, during his preparation as text composer, had serious limitations with formal exploration.

It seemed as if everything that made me curious was forbidden: to question established typographic practice, change the rules, and to reevaluate its potential (Weingart 2000, 112).

From his perspective, the modernist development of Swiss typography was based on limited conventions that soon got reduced to orthodoxy and formula. He decided to respond by delivering a free research on the basic relationships of the letters, its bodies, typographical color, spacing and inclination, testing the limits of legibility (Figure 38) (Poynor 2003, 20).

According to Philip Meggs, postmodern graphic design was basically developed in these major categories —which are deepened in the following pages: 1) First slight ruptures of International Typographic Style in Swiss design; 2) the *New Wave* movement, which in fact began with the research labor of Wolfgang Weingart; 3) contributions to *Anti-design* by the Memphis group during the 1980s; 4) retro, with revivals and reinventions of earlier forms from the modern design; 5) and the digital revolution that boosted even more the previous efforts (Meggs 1998, 432).

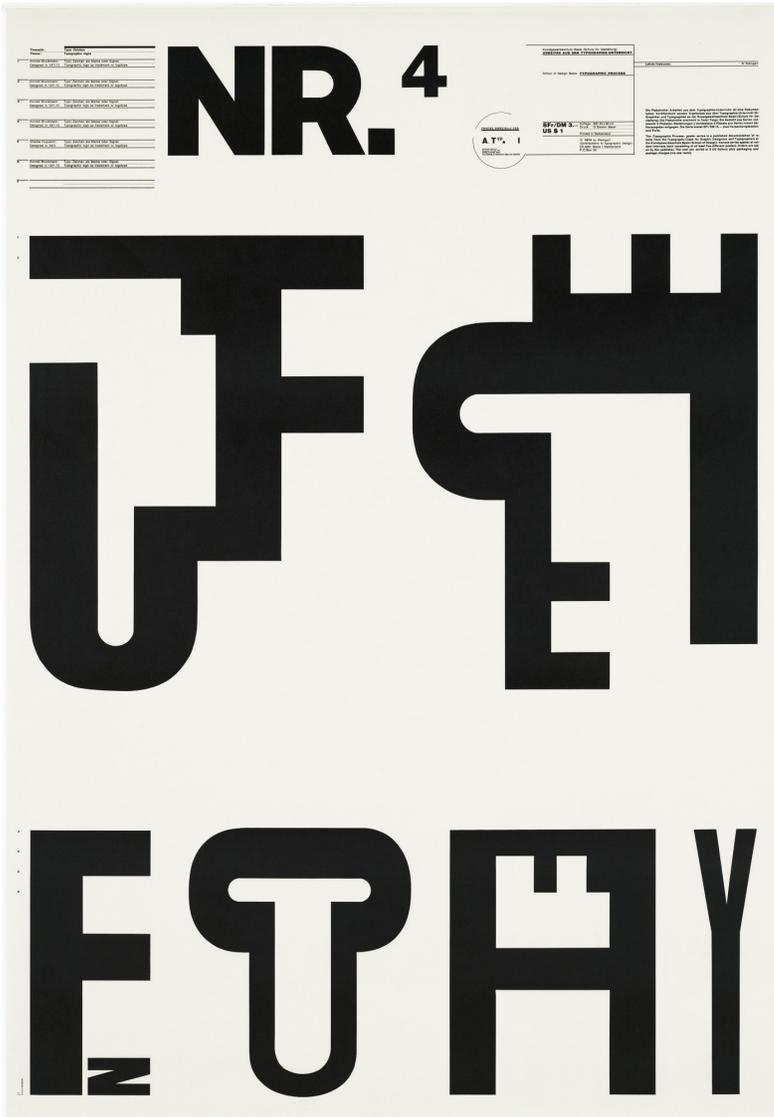


Figure 38. Typographic composition by Wolfgang Weingart, 1972.

2.1.2.1. Early postmodern scene

The Swiss context was the cradle for the origin of the International Typographic Style. In the same way, the first designers to explore beyond the interests of the rationalist movement were those also established in Switzerland. Initially, the formal experiments did not reach significant contrasts with respect to the modernist development (Figure 39). That is why they were perceived simply as expansions of its parameters. However, the first approaches to a postmodern scene were framed in fields such as poster design, typography and corporate identity (Figure 40).



Figure 39. Advertising design for Union by Siegfried Odermatt, 1967.



Figure 40. Advertising poster design for E. Lutz & Company by Rosmarie Tissi, 1964.

Basically, the exercises focused on the unusual manipulation of space and forms, compromising legibility in the process. When observing the results obtained by designers of postmodernism in its early stage, it is inevitable to remember the proposals made by previous movements — such as Dadaism— in terms of aesthetics and form. In fact, this formal similitude remains constant in the work of many graphic designers during the postmodernist period. Evidently, the work of these designers occurred in parallel to other events of greater coverage and relevance at that time. One of the most interesting for the purposes of this study was the manifesto *First Things First* published in 1964 (Figure 41). It was written by the British Ken Garland and signed by twenty other graphic designers, photographers and related students. The publication was a reaction against the advertising industry that, according to the signatories themselves, had reached alarming points in the graphic production in favor of consumerist convictions. This association advocated a change of priorities and purposes in purely commercial communications towards social, educational and cultural horizons. They longed for a greater collective consciousness of the world through the productive values of their trade (Garland 1964). The manifesto was revised in 2000 to adjust the main interests of the association according to the new era context, and also including many more important designers.

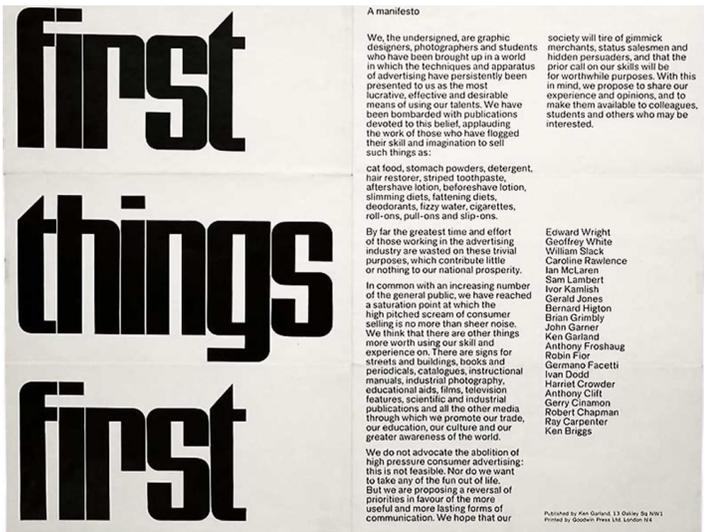


Figure 41. The First Things First Manifesto written by Ken Garland, 1964.

2.1.2.2. New Wave

From the last years of the 1960s, Wolfgang Weingart’s work had a fundamental development towards the emergence of a new wave in graphic design (Figure 42). The impulse for his experimental labor was the belief that the International Style became too prevalent that it had reached a state of stagnation.

Time-honored traditions of typography and visual-language systems were rethought. Why must paragraphs be indicated by indents? What other ways could be invented to divide text visually? Why not change weights in midword? (Meggs 1998, 436).



Figure 42. Typographic exploration by Wolfgang Weingart, 1965.

The results to these concerns showed a bold and intuitive visual richness using techniques such as collage, photomontage and typographic composition (Figure 43).



Figure 43. Exhibition poster Kunstcredit 1976/77 by Wolfgang Weingart, 1977.

At the beginning, as usual with proposals of an experimental nature, the clients for these projects came mostly from the educational and cultural sectors (Figure 44). Moreover, the business sector was not interested in using the postmodern graphic for its communications. The 1970s was marked by the emergence of corporate values in the communication design and the subsequent weakening of imaginative activity (Brooks 1980, 30). By this point, many experienced designers criticized the ideals disclosed by Weingart and his colleagues that design was an art form. They qualified the efforts and experiments of the movement as a passing fad.

For the critic Marc Treib, postmodernism's assault on the eye with pages of blips, slits, dots and zits was initially enjoyable, and exhilarating relief from ordinary design, but rapidly became exhausting and tedious (Poyner 2003, 26).

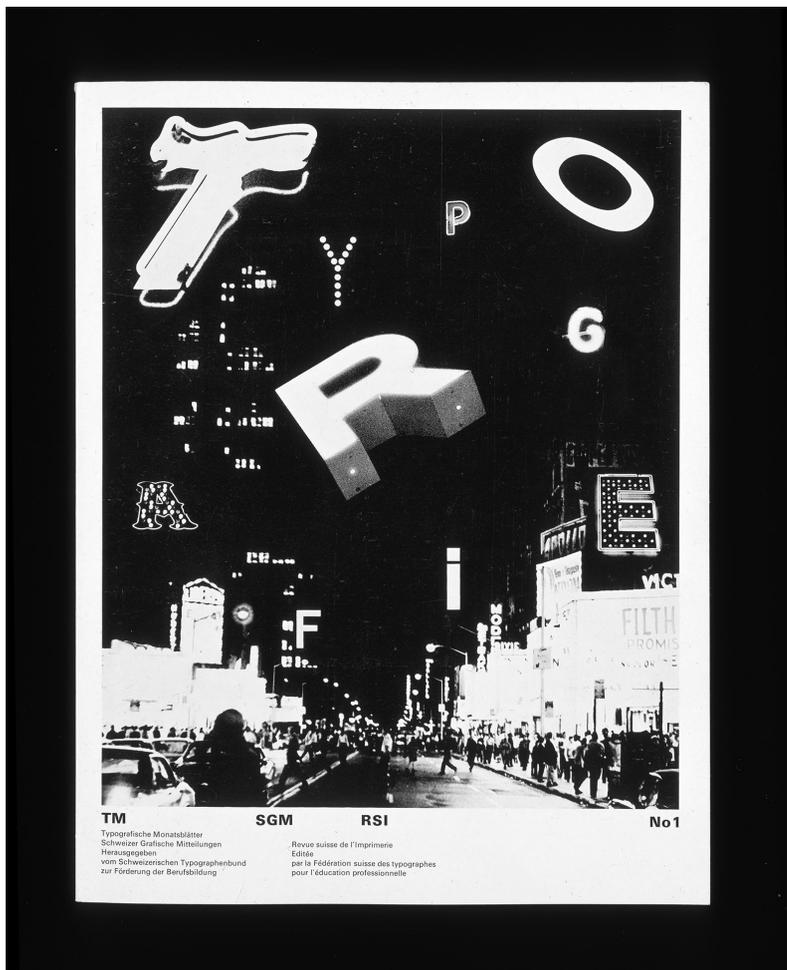


Figure 44. Cover design for the magazine *Typografische Monatsblätter* (Typographic Monthly Sheets) by Dan Friedman, 1971.

Nevertheless, the transgressive condition, in contrast with the modernist formal norms established as functional, served the New Wave movement to finally establish itself within literary criticism and theoretical development in graphic design (Figure 45). But the movement also achieved it as part of the entire postmodernist framework of the time, along with equally disruptive tendencies such as poststructuralism. Issues like deconstruction and appropriation are a fundamental part of the productive processes of the aforementioned paradigms.



Figure 45. Cover design for the Wet magazine by April Greiman and Jayme Odgers, 1979.

2.1.2.3. The Anti-Design and Punk ideology

The postmodern proposal was permeating more and more around the world. Its commitment to texture, pattern, color, disruptive proportions and playful composition were a focus of interest for graphic designers, but also for product designers and architects. These fields had a particular production in the Italian scene that began around the 1960s. This trend was known as *Anti-Design* or *Radical Design*. Both denominations widely expose the postmodernist objectives that arose globally at the time, and their influence would extend until twenty years later.

Within the outstanding development of the early 1980s is the work of the Milanese group Memphis. All their production adopted a dynamic of work in which the form did not follow the function, instead it became the reason for the design to exist (Meggs 1998, 442). Although their mer-

its are more focused on architecture and product design, their visual approach also became an important international influence. It is even interesting to notice how the movement proclaimed to be “The New International Style” (Figure 46).

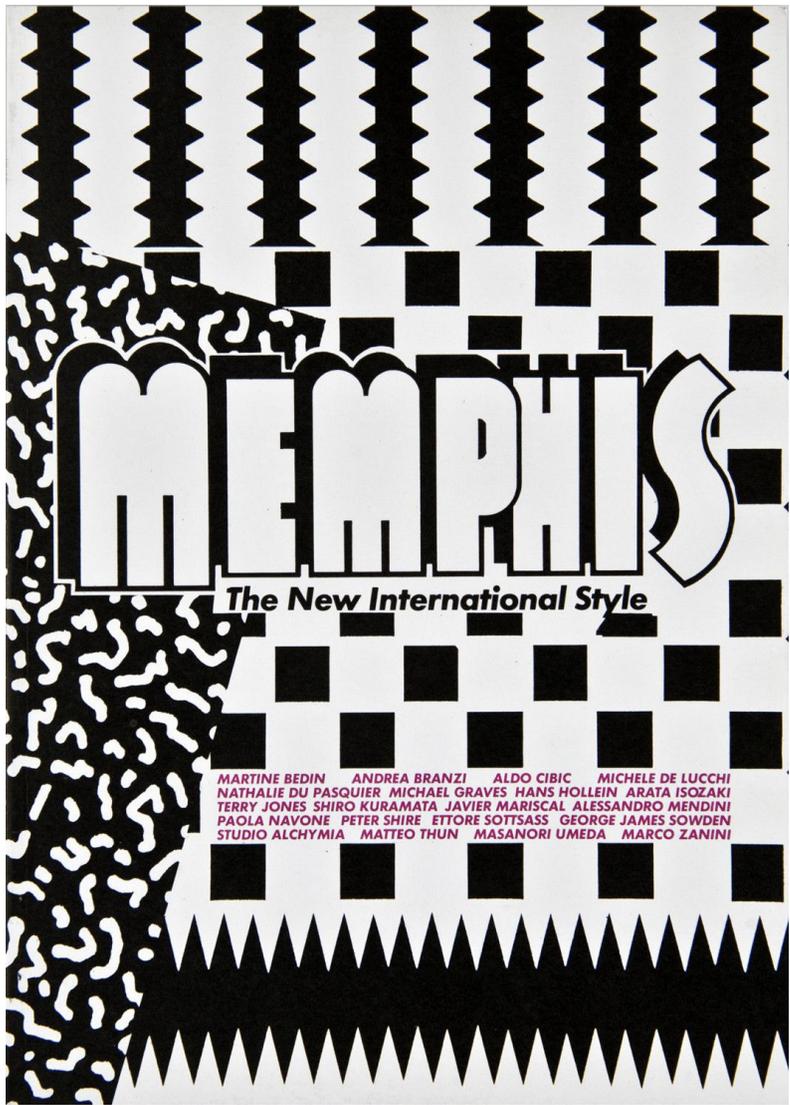


Figure 46. Cover design for the book *Memphis: The New International Style*, 1981.

On the other hand, British graphic design did not present a strong reaction to modernism. This may be because modernist production never had a leading role in the region (Poynor 2003, 32). The *Punk* movement—which began in the early 1970s—was on the rise, its ideals challenged the restrictive paradigms of society through music, as it happened in

other expressive and even scientific areas. According to the philosopher of science Paul Feyerabend it is necessary to question the totalizing models inherited from the modernist period. In his book *Against method: outline of an anarchistic theory of knowledge* he concludes that “the only principle that does not inhibit progress is: anything goes” (Feyerabend 1975, 14).

Following this direction, the work of British graphic designer Jamie Reid was especially distinguished for accompanying the iconic band Sex Pistols. The cover made for the album *Never Mind the Bollocks Here's the Sex Pistols* (Figure 47) was considered by many designers as the antithesis of harmonious professional design and as an unforgivable offense to aesthetic (Poynor 2003, 40).

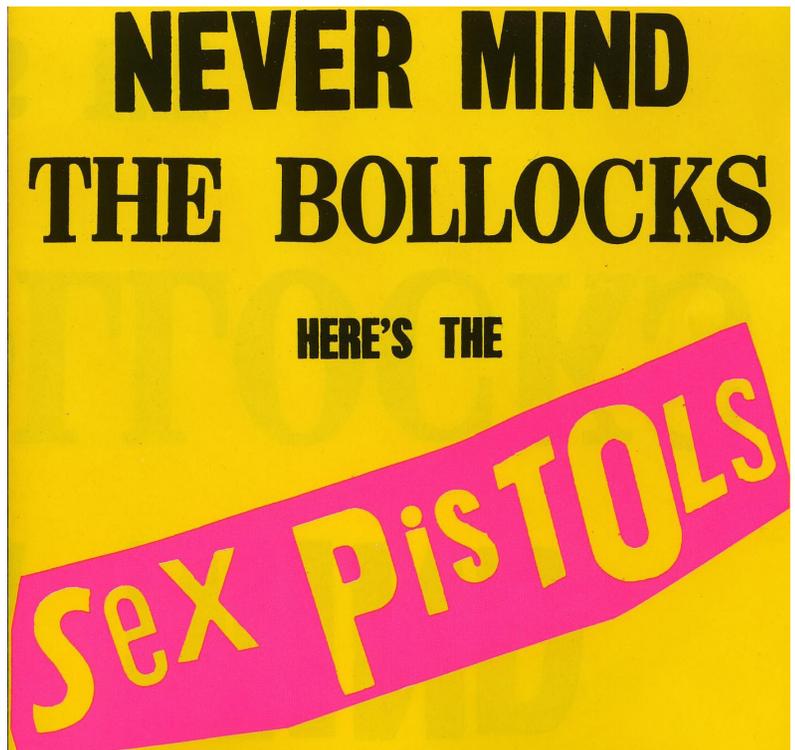


Figure 47. Cover design for the Sex Pistols album by Jamie Reid, 1977.

In the beginning, all punk graphics were excluded from commercial production in visual communications. This is because, besides the crude aesthetics, many of the creators were not established members of the discipline, as was the case of Reid. This situation spread the idea that anyone could design and that every graphic style or technical level was accepted (Poynor 2003, 40). Punk design in its rawest forms was not recognized by the professional mainstream of design, nor was it accepted as a valid form of design. But in the early 1980s some designers already used the same resources and strategies (Poynor 2003, 40).

Thus, this practice was replicated in various fields of graphic communication. In terms of editorial design, the iconic *i-D* and *The Face* magazines were launched in London in 1980. Both dealt with topics such as music, fashion, art and youth culture at that time. They emerged as part of this new wave in design, whose priority was esthetic innovation and experimentation with form over functional legibility. Terry Jones, *i-D* founder, coined the term *instant design* in order to describe his own work method (Poynor 2003, 42). A method based on ready-made imagery—a concept introduced by Braque and Picasso in 1912 (Tafari 1976, 90)—and that is obtained through manual techniques such as paper cuttings, photocopies and photomontage. In the same way, the continuous change in format, paper and graphic style was a characteristic condition of the magazine. The use of these resources exposed a framework in which designers did not act in a premeditated manner in order to communicate a message as clearly and quickly as possible—functionalist approach, rather they felt a commitment towards a personal and differentiating esthetic exploration (Figure 48, Figure 49).



Figure 48. Cover design for *i-D* no.28 by Terry Jones (direction) and Nick Knight (photo), 1985.

Four years later, in 1984, another important contribution for the post-modernist activity emerged. Emigre appeared in California by Rudy VanderLans and Zuzana Licko. Unlike the previous magazines, this project focused entirely on graphic design as a topic of interest (Figure 51).

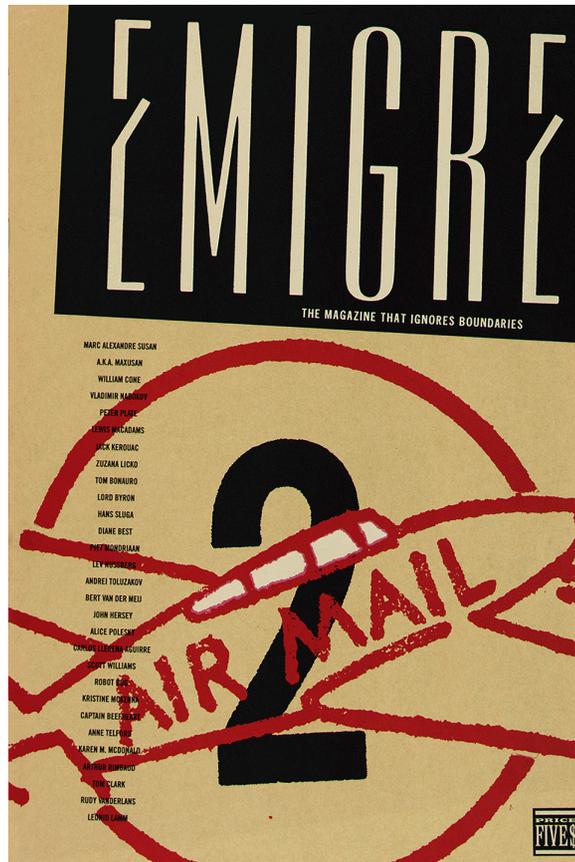


Figure 51. Cover design for Emigre magazine no. 2 by Rudy VanderLans (direction), 1985.

Emigre was distinguished by an extensive use of the new digital technologies of the time and its vast range of possibilities. In fact, the disorganized exploration of the new tools caused that postmodernism, once again, was assimilated as a mere style. The movement, initially reluctant to commercial objectives, became exploited in the commercial field over the years. “By the end of the 1980s, graphic design as a ‘style’ was an essential part of retail marketing” (Hollis 2002, 192).

In any case, many modernist designers attributed a communication and commercial incapacity to the postmodern graphics, declaring it to be a passing style, due to its lack of functional stability. Neville Brody devoted part of his work to dismantling this statement, as he had great success with his punk aesthetic in the commercial field.

The movement was by no means entirely anti-commercial ([Malcolm] ‘McLaren’³ says Brody ‘was always, ALWAYS aware of the possibility of commercial exploitation of any idea. I think this is one of the things people found so shocking about the punk movement; it blatantly embraced commercialism, and played the marketing games very openly’) but it was, nevertheless, anti-establishment and, more importantly, anti-TASTE (Farrelly 1986, 28).

3. Malcolm McLaren was a visual artist, musician, clothes designer and impresario. He was the promoter and manager of the Sex Pistols, among others bands.

However, for Brody the commercial success of his proposals was not due to the graphic style of the movement itself, nor to the communicative function in the design but rather to a commitment to the content. The content should be the priority element in graphic design, and he tried to prove it in his years as art director of *The Face* and *Arena* magazines. By observing the ideas of the content and translating them into the graphic plane in his projects, Brody said that design was not based on fashion issues and that style is a virus for the profession (Brody 1988).

In short, the Punk movement contributed greatly to changing the way in which graphic design was understood and practiced, first on a local scale and then propagating its ideals globally over the years. Conceived to question the rules that ensured the established good practices of functional design, punk graphics allude even to the history of art. “Dada had been against Art; Punk was anti-Design” (Hollis 2002, 188).

2.1.2.4. Deconstruction

Among the features that postmodern graphic design had, the most important ones were deconstruction, appropriation and authorship. The implication of these issues had a great impact on a practical level through *Retro* and *Vernacular design*. While at the theoretical level, it was increasingly common to produce texts about postmodernism and its intervention in different disciplines.

The concept of deconstruction was coined by the French philosopher Jacques Derrida in his book *Of Grammatology* during 1967. Its first translation into English was published only nine years later. The concept reached a great relevance at the beginning of the 1980s, giving it an important impulse for postmodern and poststructuralist philosophy. It was also in these years that designers became more aware of the theoretical and historical need to sustain the profession. Numerous platforms had emerged. Magazines such as *Print*, or the already mentioned *Emigre*, and also including academic proposals as *Design Issues* of the Massachusetts Institute of Technology or the book entitled *History of Graphic Design* by Philip Meggs. All of these projects, among others, were created to fulfill the need for theoretical awareness in the discipline.

During the years of rising popularity for the deconstructivist philosophy, several disciplines wanted to develop their own theories and

contributions to Derrida's approach. Architecture had a particular interest in acting within deconstructive conjectures. For its part, graphic design also wanted to be a platform to expand the hypotheses raised by this movement.

Rick Poynor's synthesis about the several authors and their theories deserves to be studied next. Deconstruction is based on dismantling categories that are contrary to each other—to cite his examples: inside/outside, mind/body, speech/writing, nature/culture, form/meaning—and making them function differently. That is to change their structure and make them function in a different way. According to the deconstructivist approach, these oppositions are not natural but cultural constructions that people assume as inevitable. Conceptually speaking, deconstructionism is so extensive and overwhelming that it is impossible to give an absolute definition (Poynor 2003, 46), even because in the exercise of doing so the deconstructivist paradigm would go against itself. However, it is still an interesting tool to analyze the production processes of external fields such as, in this case, graphic design.

According to Poynor; for the deconstructivist designer—despite knowing the historical roots of the profession and the position it must acquire in the present—it is problematic to apply the deconstructivist ideology. Poynor emphasizes that deconstruction was never a movement consolidated by adepts who declared themselves members of it. Nor that they organized exhibitions or launched manifestos communicating their convictions and program (Poynor 2003, 46). However, it is important to bear in mind that Derrida had stated that the concept of deconstruction should not be assimilated as a period, style or a temporary movement, but rather it is a process to analyze language, and therefore never will cease to exist (Lupton 1994, 47).

The problem that Poynor describes in the application of Deconstructivism to graphic design becomes evident when its meaning is misinterpreted. For example, the American graphic design historian Philip Meggs defines the term deconstruction as “taking the integrated whole apart, or destroying the underlying order that holds a graphic design together” (Poynor 2003, 48). For Poynor, this definition reduces the deconstructivist concept to, literally, a visual dismantling of a graphic composition, without a real change to its functions. This allows him to reject the example used by Meggs to define the deconstructivist idea with a specific work by Neville Brody (Figure 52).



Figure 52. Advertising design for Torchsong magazine by Neville Brody, 1984.

The image is an advertisement for Torchsong. It shows a character formed from the dismantling of the magazine's name. The idea of deconstruction is not complete, since it arranges the letters in a pre-established aesthetic structure. "The 'underlying order' has not been destroyed by this process so much as dynamically rearranged" (Poynor 2003, 48).

On the contrary, the work by Brody in the "contents" symbol for *The Face* magazine shows a much more interesting and representative approach to deconstructionism (Figure 50).

Likewise, the designers Chuck Byrne and Martha Witte specified a definition applied to design much closer to the theoretical origin of the term.

As the word itself suggests "deconstruction" refers to the breaking down of something (an idea, a precept, a word, a value) in order to "decode" its parts in such a way that these act as "informers" on the thing, or on any assumptions or convictions we have regarding it (Byrne 1994, 117).

Typographic design — as a fundamental part of graphic and editorial design — constitutes the most logical visual extension of the text as a favorite medium of language, which is Derrida's main object of study and his deconstructivist theory. In this sense, the authors present the idea that "type itself should do more than perform its basic historical function of being readable" (Byrne 1994, 117). Byrne and Witte extend this idea with those of other designers, including the aforementioned

Rudy VanderLans and Zuzana Licko from the magazine *Emigre*, and they insist that there are many ways to approach the content of a reading, and that both the type and the text may have other purposes other than being read. According to Byrne and Witte, these purposes can be illustrative, atmospheric, interruptive, and expressive in addition to—or beyond—mere legibility. They also mention an idea put forward by the renowned American graphic designer Paula Scher, “the legibility of type is dependent upon the goal: If it’s supposed to be legible, it should be. If it’s not supposed to be, it shouldn’t be”. Following this logic, it can then be determined that designers should be aware of their intention before attending a project. An unjustified approach would lead to a graph with a senseless aesthetic.

It is necessary to emphasize that these ideas were developed mainly by the end of the 1980s. The Cranbrook Academy of Art had a fundamental participation in the development of research and critical theory of deconstruction. In the poster for the 1989 undergraduate program in Design, made by its co-director Katherine McCoy, there are clear deconstructivist influences (Figure 53). The same thing happens in the publication of the *Cranbrook Design: The New Discourse* book in 1990 (Figure 54), which would later be moved to an exhibition. In both materials various terms are presented—some of which are practice/theory, form/content, authentic/simulated, cultural/natural, personal/universal, purist/pluralist, language/thought, art/science—with a clear approach of Derridean confrontation.

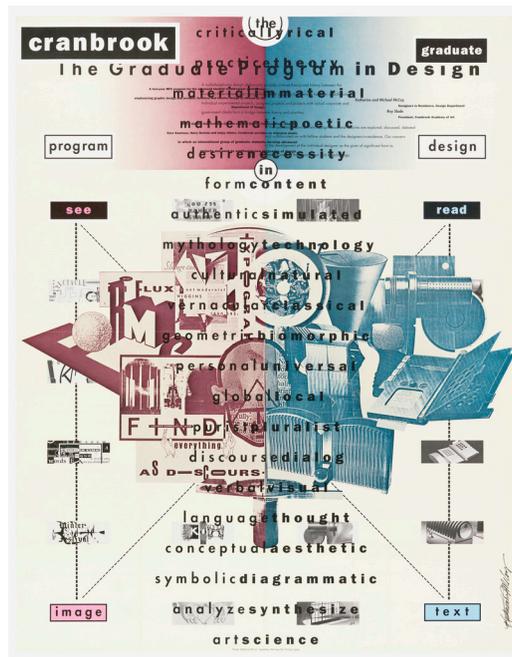


Figure 53. Poster design for the Graduate Program in Design, Cranbrook Academy of Art by Katherine McCoy, 1989.

KATHERINE McCoy
MICHAEL McCoy

Nothing pulls you into the territory between art and science quite so quickly as design. It is the borderline where contradictions and tensions exist between the quantifiable and the poetic. It is the field between desire and necessity. Designers thrive in those conditions, moving between land and water. A typical critique at Cranbrook can easily move in a matter of minutes between a discussion of the object as a validation of being to the precise mechanical proposal for actuating the object. The discussion moves from Heidegger to the "strange material of the week" or from Lyotard to printing technologies without missing a beat. The free flow of ideas, and the leaps from the technical to the mythical, stem from the attempt to maintain a studio platform that supports each student's search to find his or her own voice as a designer. The studio is a clubhouse that enables students

and faculty to encounter their own visions of the world and act on them — a process that is at times chaotic, conflicting, and occasionally inspiring.

Watching the process of students absorbing new ideas and influences, and the incredible range of interpretations of those ideas into design, is an annual experience that is always amazing. In recent years, for example, the department has had the experience of watching wood craftsmen metamorphose into high technologists, and graphic designers into software humanists. Yet it all seems consistent. They are bringing a very personal vision to an area that desperately needs it. The messiness of human experience is warming up the cold precision of technology to make it livable, and lived in.

Unlike the Bauhaus, Cranbrook never embraced a singular teaching method or philosophy, other than Saartinen's exhortation to each student to find his or her own way, in the company of other artists and designers who were engaged in the same search. The energy at Cranbrook seems to come from the fact of the mutual search, although not the mutual conclusion. If design is about life, why shouldn't it have all the complexity, variety, contradiction, and sublimity of life?

Much of the work done at Cranbrook has been dedicated to changing the status quo. It is polemical, calculated to ruffle designers' feathers. And

*****igorous

Figure 54. Page design for the Cranbrook Design: The New Discourse book by Katherine McCoy, 1990.

Jeffery Keedy was a student in this academy, and he played a significant role in the postmodernist discourse (Figure 55). He became involved in new ways of exploring in Design, considering it an exercise linked to popular culture beyond functionalism, so he rejected the notion of Design as a mere professional tool to solve problems (Poyner 2003, 53). In one of his texts, Keedy disagrees with the resistance imposed by modernist designers to paradigms that seek to explore broader objectives towards cultural inclusion. For him, contemporary graphic design must be subscribed and consistent of contemporary culture — in reference to the postmodern discourse of the time. In other words; it is context-dependent (Keedy 1994, 125).



Figure 55. Calendar design for Los Angeles Contemporary Exhibitions by Jeffery Keedy, 1989.

These statements are the fundamental basis throughout the postmodern program and they constitute a foreign perspective to functionalism. To this point, functionalism seems authoritarian because it does not consider external approaches as valid ones —on the contrary, it calls them mere passenger styles— and to establish itself as an intrinsic element of graphic design. Nevertheless, the postmodern theories did not stop there, but they developed more content in the next years. In the same logic, the American design critic, Ellen Lupton explains that, for Graphic Design, deconstruction was not dead, because it's not a style or a movement, but a way of asking questions through this work. Critical form making will always be part of design practice, whatever theoretical tools designers might use to identify it (Lupton 1994, 47).

2.1.2.5. Authorship in Retro and Vernacular Design

As part of the postmodern development, parallel topics emerged about the concepts and processes of New Wave, Anti Design, Punk and the Deconstructivist paradigm. One of such topics were appropriation.

Retro Design is based on historical revival from past decades production —subscribed into the growing research made by designers within their profession. It had an important participation during the 1980s. For some literary critics, this event shows that all styles that could exist have already been invented, stylistic innovation is no longer possible and there is nothing left to do than to imitate dead (Jameson 1983, 115). There is also a distinction between *parody* and *pastiche*, both terms widely used in Graphic Design. Although both are imitations or mimics of other styles, what separates them is a sense of humor. The parody seeks to highlight the peculiarities of the original in a funny way. While the pastiche omits the satirical sense in a neutral practice (Jameson 1983, 115). Regarding the validity of appropriation as a productive resource:

Graphic design has always borrowed images and approaches from other fields, especially the fine arts and popular culture; visual references of all kinds are an essential feature of its way of communicating. Are the countless appropriations of the last two decades essentially different? (Poynor 2003, 72)

Bauhaus



Ziggy Stardust

Figure 56. Cover design for the single Ziggy Stardust by the German rock band Bauhaus, 1982

Neville Brody, in *The Face*, designed the page dedicated to the band Kraftwerk that clearly evoked Russian constructivism (Figure 57). His interest was not to make an aesthetic replica, in fact he disapproved of such action. When Brody appropriated a work, he examined it, evaluated the meaning of it, and extracted the elements that were of interest to him. His priority was also not to accept the traditional rules and values he observed in such works. For him, the development in design during 1970 and 1980 was a recycling of ideas already explored (Wozencroft and Brody 2001).

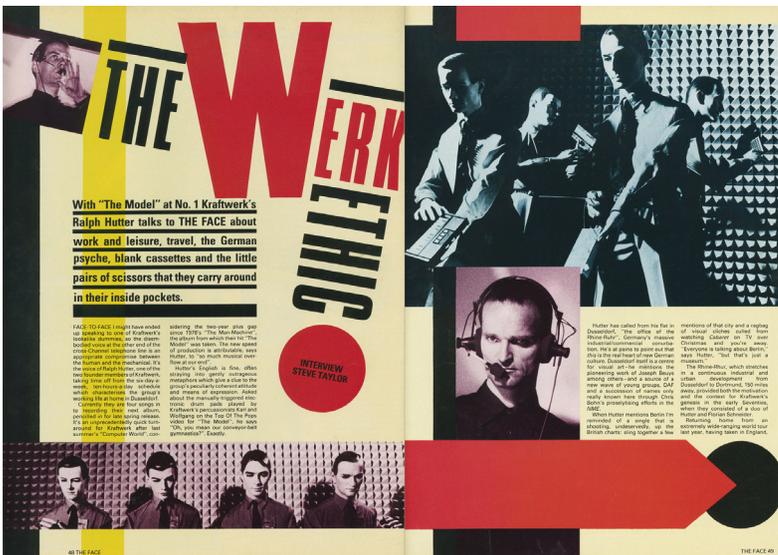
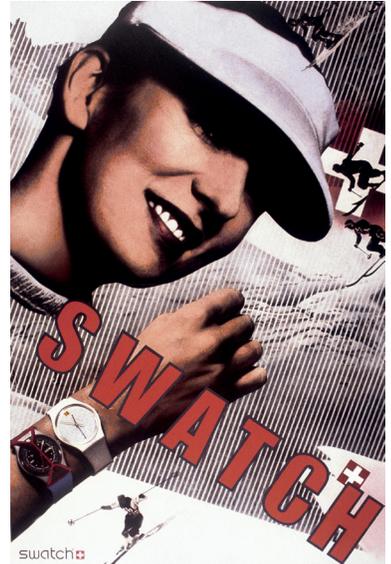


Figure 57. Page design for *The Face* magazine by Neville Brody, 1982.

An important designer in Retro design and appropriation was the aforementioned Paula Scher. One of her most recognized projects in this area is the clear allusion to the tourist poster made in 1934—as part of the International Style—by Herbert Matter (Figure 58) that Scher made on her poster for the Swatch watch brand (Figure 59).

Figure 58. Touristic poster design for Switzerland by Herbert Matter, 1934.

Figure 59. Advertising poster design for Swatch by Paula Scher, 1986.



The resource based on the historical revival was criticized by the Hungarian Tibor Kalman. From his perspective “designers abuse history when they use it as a fast track, as a way to give instant legitimacy to their work and achieve commercial success [...] Historical allusion and direct copying have been cheap substitutes for the lack of ideas” (Kalman 1998 2622). However, Kalman also made use of existing material in his work. In fact, his studio M&Co was a pioneer in the appropriation of vernacular design (Figure 60).



Figure 60. Print ad for the Florent restaurant by Tibor Kalman, 1987.

Vernacular design refers to the design made by people who have no academic preparation in the visual areas. Some examples can be the signs of stores or posters for social events. The main interest that vernacular graphic design denotes is its authenticity and expressive nature not contaminated by marketing strategies or the neatness and caution of the professional designer (Poynor 2003, 81). Kalman was interested in the invisible quality of vernacular design because, according to him, it is the purest, most honest and most direct form of communication. He appropriated the vernacular “without any qualms” (Poynor 2003, 81). This statement contradicted his rejection to Retro design, since both of them work on the graphic development of third parties.

Consequently, these issues discussed amounted to more complex issues during the second half of the twentieth century. Authorship was

widely treated, since postmodernism made way for it through its contents such as opposition, deconstruction and appropriation. The theory of the designer as author proposed that the designer should acquire greater relevance in the creation of content. This idea started from the historical presumption in which the function of graphic design was always to define the visual form of any discourse. That graphic constitutes a complementary plane—therefore, secondary—and the content is always the primary source of any communication. However, it should be also considered the fact that there are numerous projects initiated by the designer himself and that have no other content or purpose than the personal satisfaction of generating random marks. Its audience, if there is any, is limited to other designers (Poynor 2003, 140).

However, the model of the designer as author was rejected by various theorists, including the American critic Ellen Lupton. Replicating the concept “the author as producer” of Walter Benjamin, Lupton proposes “the designer as producer”. It rehearses the idea that the authors impose their visions and their individual discourse on the audience, while the producers do not prioritize their personal position, but rather that they must ask, “where will the work be read? Who will read it? How will it be manufactured? What other texts and pictures will surround it?” (Lupton 1998, 159). That premise starts from a purely functionalist perspective that seems not to be embracing enough, at least in relation to postmodernist development.

The eagerness to define the profession, its fields of action, and purposes do not achieve a definitive agreement, as it is evident. For the time being, since neither of the two approaches can be denied—given the extensive evidence that supports them, in the theoretical field and practical examples—both perspec-

tives must be declared valid in the activity of the graphic designer.

In other words; these approaches and strategies allow to understand that graphic design can assume an important cultural role, and at the same time evoke a functionalist character as is the direct emission of a message. Or even get away from it altogether, defying legibility rules in favor of personal expression or formal exploration. Certainly, each postulate was not entirely satisfactory among adepts and detractors. These theories sparked many debates and encounters between the more experienced designers on the one hand, and the young designers willing to question the inherited modes of the discipline on the other.

The vernacular, high and low culture, pop culture, nostalgia, parody, irony, pastiche, deconstruction, and the anti-aesthetic represent some of the ideas that have come out of the 80s and informed design practice and theory of the 90s (Keedy 1998).

2.1.2.6. Desktop publishing revolution

To this was added a constant series of technological advances that took place during the last years of the twentieth century and transformed human activity in the most diverse areas. Undoubtedly the most significant advance, for graphic design, was the appearance of the desktop computer. The powerful technology of digital computer hardware and software allowed to unify all the tasks of the designer in a single instrument. In addition, it gave the user unprecedented freedom regarding the manipulation of shapes, color, space and images. Obviously, this technological advance meant the expansion of the designer’s productive potential, thus leaving a free path for postmodern design and its formal exploration through new tools (Figure 61).



Figure 61. Poster design for the Los Angeles Institute of Contemporary Art by April Greiman, 1986.

Numerous graphic designers benefited from the digital potential, such as the aforementioned magazine *Emigre*, which showed a special role in the development of digital imagery (Figure 62). Its postmodern exploration is evidenced mainly in its layout structures, typographical development and illustrative compositions (Figure 63).

Despite all the development, postmodern graphic design was not yet consolidated as a valid approach for many recognized designers. For Massimo Vignelli, *Emigre* magazine was a national calamity, an aber-

ration of culture, a garbage factory, which in no way compared with the traditional quality of the Renaissance until the twentieth century (Poy-nor 2003, 148). This type of reactions exposes an old guard community accustomed to operate in a concrete way, which refused to consider new ways of working as valid, and whose careless rejection of the graphic norms that supported the development of so many designers was alarming (Poynor 2003, 148).

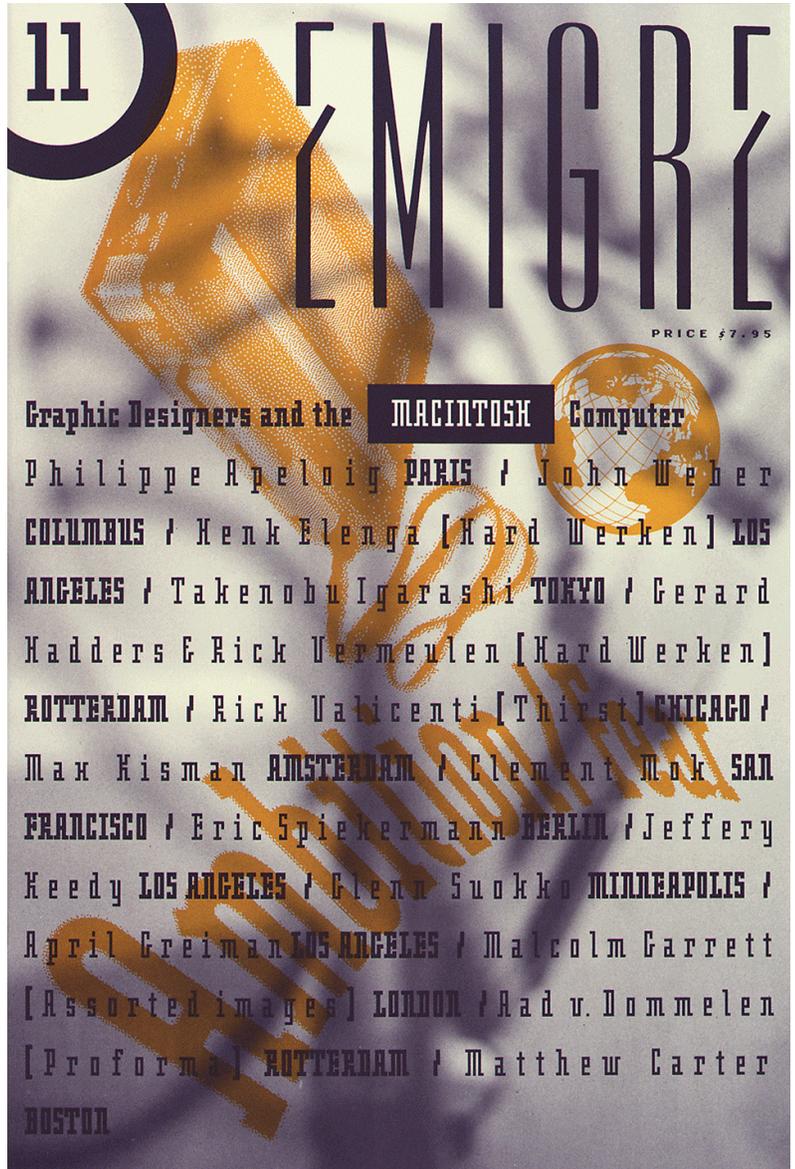


Figure 62. Cover design for Emigre magazine no. 11 by Rudy VanderLans, 1989.

punk graphics, where digital technology played a fundamental differentiating role. The Punk was handmade and economic, done with pen, photocopies, cuts and glue. While grunge, degraded and non-technological appearance, was the product of the extensive digital possibilities that allowed a new typeface every day (Poynor 2003, 65).

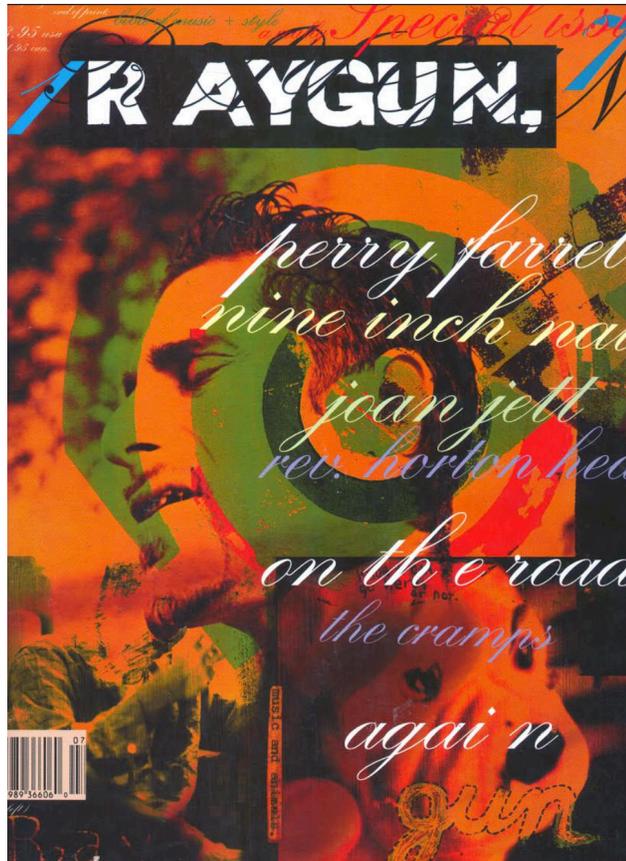


Figure 64. Cover design for Raygun no.17 by David Carson (direction) and Melanie McDaniel (photo), 1994.

The profession was reflected in that multiplicity of results and, together with technology, served as driver in the contemporary cultural development. “Design as a cultural activity, including aesthetic and personal expression, may be the essential source of values, emotions, and play that we all need in the digital domain” (McCoy 1998, 12). These ideas were reflected in several fields of graphic design. Perhaps one of the least expected to be affected was the design of visual identity. It went from being seen as the fixed, serious and static image of a company towards being able to present a variable and dynamic image (Figure 65). Ultimately,



Figure 65. Dynamic behavior of the identity designed for MTV by Manhattan Design, 1981.

“Postmodern thinkers no longer believe in absolute terms, in totalizing systems, in universally applicable values or solutions” (Poynor 2003, 11). The postmodern program took care of recognizing in the graphic design the expositions of a purely expressive nature that had not previously been considered as concerning the profession. However, because of its conceptual consequence—not to believe in absolute and totalizing systems—postmodernism would recognize as valid the functionalist agenda of modernism. Also, it would even accept an approach in which both paradigms could coexist. Therefore, Design can assume different roles:

Design as art is concerned with personal content and expression; design as science is concerned with the systematic presentation of objective information; and design as language is concerned with the audience’s reading or interpretation of text and content. [...] Certainly, graphic design will be the richer for the exploration of all three directions (McCoy 1998, 10).

In conclusion, there is—at least from the postmodernist perspective—a plurality of approaches. At the macro level, there are three types of approaches or purposes: pure, combined and applied. The pure purpose includes the exploratory, expressive, reflexive, and cultural genres. In the applied purpose lies the essence that validates the functionalist argument and defines its genres in political, social and commercial issues. While, in the combined both approaches coexist to realize a common interest, such as communicative and educational issues (Figure

66). The figure exposes the diversification of graphic design activity. It is built from the study of the different perspectives and cases present in the twentieth century graphic design.

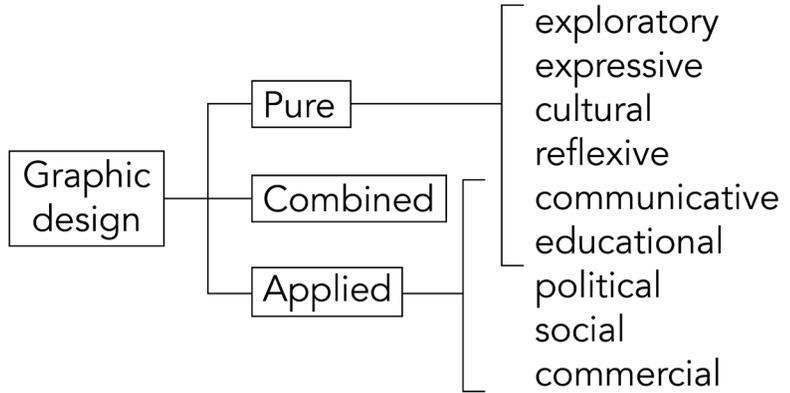


Figure 66. Map of approaches in Graphic Design by Andrés Torres, 2018.

Theoretically speaking, modernism aimed to employ a rational approach to applied knowledge. While postmodernism was interested in alternative approaches to embrace pure knowledge as a rejection to functionalism as the only way of action for the designer. However, in practical terms, both modernism and postmodernism operated within all of the different categories of purpose. Many of the previous cases reviewed are evidence of this fact.

In any case, this diversity of perspectives allows the construction of categories and their location on a map that, in turn, facilitates the understanding of the activity and scope of the discipline. Contemporary graphic design is likely to follow these paths. The study of its development, ideals, and examples may confirm the categorization proposed. Or, on the other hand, it may reveal if it is possible to submit new purposes that past graphic design was unaware of.

2.2. Contemporary paradigms

Defining the beginning of contemporary graphic design and tracing its development are complicated tasks. This situation happens as a consequence of the globalization processes in which contemporary society lives. The amount of information and unprecedented accessibility to it through digital media have definitely increased the complexity to the study of theories and practices existing in current times.

The most controversial aspect is probably determining which approaches should be considered as contemporary. To answer this concern, there are two identified routes to be followed: a) to identify unexplored, or

still non-existent, concepts in past times and which are relevant for contemporary graphic design, and; b) to address the paradigms closest to the present in chronological order. That is to say; a perspective that has been conceived and popularized several decades ago can still be considered as contemporary if it faithfully describes the activity of graphic design. Or also if it is defended by different authors in the most recent years.

Many of the ideas presented below share affinities with several concepts previously studied. Mainly because some approaches are the direct result of past ideals. Whether these approaches are conceptual extension of those past ideals. Or, on the other hand, those ideals are the background to different theories that today could be considered new or innovative. For these reasons, it was essential to have previously reviewed the past approaches. By doing so, it is possible to structure a deeper and more inquisitive body of knowledge for the purposes of contemporary graphic designers.

Having said that, the topics discussed below continue to be presented in a chronological order. Anyhow, it is useful to keep in mind that some concepts and paradigms emerged in similar years and maintained a parallel development and not precisely a sequential order.

2.2.1. User- and Human-Centered Design

User-Centered Design is an approach to design products, services, experiences and systems oriented to meet the needs and objectives of the user, in a particularly multidisciplinary and iterative process. The term was proposed by the American professor and researcher Donald Norman within engineering, design, technology and cognitive science fields in the book *User Centered System Design: New Perspectives on Human-computer Interaction* (1986). Eventually the concept took more flexible reins towards a holistic doctrine of design and its creative processes. For this reason, today it is possible to affirm that User-Centered Design does not focus exclusively on technological development and Human-Computer Interaction (HCI). However, there is a conceptual bifurcation in the definition of User-Centered Design: the first path is aligned with computational production perspectives, while the second path adopts a holistic design perspective. The different definitions are dependent on the background and interests of each author in particular. These two directions are evidenced, for example, in how two different researchers approach this same concept of User-Centered Design. In the book *Human Computer Interaction* (2008), Rajendra Kumar states:

User centered design is a philosophy in which the requirements and limitations of the end user of a computer product or computer interface are given extensive attention at each stage of the design process. (Kumar 2008, 96).

While Jorge Frascara in his book *User-Centred Graphic Design: Mass Communication and Social Change* (1997) opts for a social vision regarding to visual communication design in general:

Visual communication design as an activity directed at affecting the knowledge, the attitudes and the behavior of people. When visual communication design is defined this way, people assume a central role, and the visual decisions involved in the construction of messages cease to arise from presumed universal aesthetic paradigms or personal choices of the designer (J. Frascara et al. 1997, 3).

The main issue in User-Centered Design is that, as the name implies, all the stages and decisions taken during the design process prioritize the users, their needs, objectives and the interaction between them and the obtained outcome. In this sense, the two perspectives can be considered as valid. What distinguishes both perspectives are the fact that: Kumar's vision is totally focused on computer systems, that is, development of software and hardware. While the meaning Frascara gives to the term encompasses the various processes of creating results, including those involved with Human-Computer Interaction. This second position is more committed to the central object of study regardless of technology seen as a tool and as an outcome. Nevertheless, Frascara hesitates when he extends this idea to define the whole discipline of design and its activity when affirming that design "is a problem-oriented, interdisciplinary activity. There is a need to identify important problems and develop interdisciplinary strategies to deal with them" (Jorge Frascara 2003, 35). Probably the most convenient thing to do—in order to avoid falling into authoritarian and excluding definitions of design practices that do not fit into the problem-solving perspective— would be to specify the background context to which such a definition would respond. For now, it suffices to say that User-Centered Design is an approach that is distinguished by concentrating its processes and outcomes on people and their needs. Instead of forcing users to change their behavior to adapt to the product. Or instead of focusing, for example, on the needs of the designer, the client, the governments or the corporations. Although, in case any of these entities turns out to be the final user of the project, the concept would do apply. It depends on each particular project. Therefore, it is important to previously define; (a) who the users are, (b) what are their needs and (c) how they interact with the designed outcome or

result to achieve their goals. Although the outcome is what counts, this would be a direct consequence of the above-mentioned factors.

We have to stop thinking of design as the construction of graphics, products, services, systems and environments, and think about those as means for people to act, to realize their wishes and satisfy their needs. [...] This requires a better understanding of people, of society, and of the ecosystem, and calls for an interdisciplinary practice (Jorge Frascara 2003, 33).

In order to achieve this, it is essential that designers detach themselves from the operational model in which they depend on the client's request for a design intervention. Instead, the designer can take a proactive stance to discover social problems as an essential part of the discipline (Jorge Frascara 2003, 35). In this position, the designer operates as a project initiator and development coordinator in a multidisciplinary structure. Consequently, traditional design education requires an expansion into fields of knowledge that provide the necessary tools and sufficient background to participate in public domains and social responsibility (J. Frascara et al. 1997, 6).

Sociology is important because there is a need to contextualize the conception of the activity of the graphic designer in a frame of reference that overflows the specific bounds of the professional field and becomes grounded in the broader dimension of society. [...] The methods of enquiry used in sociology can provide graphic designers with useful instruments for the investigation of communicational problems (J. Frascara et al. 1997, 7).

This conception of User-Centered Design starts from the fact that the user is part of a complex society. Therefore, it is justified the use of methods belonging to the social sciences for the production of people's need-based results. In this sense, Frascara even refers to this design model as "people-centered design". Clear distinctions between both and other approaches are addressed later.

On the other hand, Frascara expresses his concern with design development oriented towards computer and machine systems. He recognizes the substantial financing and research within that area, and calls for a conceptual discernment between the computer as a tool for the production of design pieces and the computer as a means for the construction of communicational paradigms between programs and their users. In this sense, the idea of educating the designer in a double stream; traditional design education plus social sciences among other fields, is comparable to the level of academic and professional preparation that the Bauhaus sought to achieve: To combine the conception of form and

the control of technique as a synthesis between visual sophistication and the production of knowledge (J. Frascara et al. 1997, 8).

In any case, the research and development in User-Centered Design within the computational domains has attracted enormous attention among designers. “A significant amount of human factors work is now strictly focused on software and this and other disciplines may create a wide gap between the needs of industry and the skills of academia” (Wilson 2003, 26). This particular interest of the designers to delve into the field of Human-Computer Interaction is reflected in the number of concepts built for its strengthening:

User-Centered Systems Design (UCSD or HCSD or when the word “human” is used instead of “user”), User Experience (UX), User-Centered Design (UCD), Interaction Design (IXD) and Human-Computer Interaction (HCI) are areas of research that have taken up that call and are concerned with improving how people interact with computers. [...] What they all have in common is that they grow their methods and deliverables in response to changes in the technological landscape (Ritter, Baxter, and Churchill 2014, 33).

Each of these fields has its own particular vision on how to approach design. They show conceptual variations that are sometimes not perceptible and that seem to feed an unhealthy terminological diversification. However, being part of contemporary paradigms and, therefore, objects of study of this research, it is necessary to go through the principles, methods and objectives that are inscribed into their discourses.

Human-Centered Design has been defined as a design philosophy whose production processes and results prioritize understanding and addressing human needs, capabilities and behavior (Norman 2013, 9). According to Donald Norman, Human-Centered Design is the definitive solution for the frustration of people towards everyday objects (Norman 2013, 8). Its focus is not on technology, although it is an important part of its problem-solving processes:

Human-centered design is a product and service development process that starts with users and their needs rather than with technology. The goal is to use appropriate (adjective) technology to solve real problems, not simply to appropriate (verb) technology (Wilson 2003, 28).

The final result continues to be key. After all, it is what people use and directly interact with. Therefore, designers should consider a long list of requirements to ensure a positive experience in people when using their proposals. The included features are shape and form, cost and efficiency, reliability and effectiveness, understandability and usability, the plea-

sure of the appearance, the pride of ownership, and the joy of actual use, with a main focus on solving the problems and doing it in such a way that the result meets human needs and capabilities (Norman 2013, 219).

For now, the concepts of design centered on the user, on people or on the human do not seem to present significant distinctions. They continue to emphasize the importance of the public to whom the designer's effort must be directed. However, and to allow a holistic understanding of this paradigm, it is essential to discern characteristics that distinguish them from each other.

Foremost, it is possible to see as a first extension of (a) User-Centered Design to the aforementioned (b) People-Centered Design. In the first concept (a), the object of study is the user of the specific result or outcome, and there is a bidirectional interaction between these two. Subsequently (b), this user is understood as a person part of a social structure where the outcome operates at different levels, and the interaction occurs in a complex multidirectional network of people and the designed object. Finally, the concept moves towards (c) Human-Centered Design:

A related movement, Human-Centered Design (HCD), expanded the focus from the user in interaction with the system to considering how human capabilities and characteristics are affected by the system beyond direct interaction with the interface or system itself. Humans should be seen as the most important element of information systems and should be designed in. [...] In more recent work, dimensions such as gender, race, class, and power are also being explicitly considered with respect to people's interactions with interactive technologies (Ritter, Baxter, and Churchill 2014, 43).

In this sense, the three forms of design maintain interest in the same individual, but look at it at different scales or levels: from user to people to human. Each level involves a series of responsibilities and considerations of diverse nature that can move from one level to another. It all depends on the scope of each particular project. "The boundaries between which issues are defined as technical and which are organizational or social are considered to be malleable, not fixed, and need to be negotiated" (Ritter, Baxter, and Churchill 2014, 44).

While in User-Centered Design some of these implications were form, cost, reliability, usability, the pleasure of the appearance, the pride of ownership, and the joy of actual use, the implications more concerned to Human-Centered Design are gender, race, class, and power —as were all outlined above. In addition, Human-Centered Design tends to work for longer-term effects systems where:

New applications of technology should be seen as the development of permanent support systems and not one-off products that are

4. Inevitably, this idea of knowing and addressing to different kinds of needs and desires of the user or public brings up the theoretical principles of the Maslow's hierarchy of needs within psychology and marketing. This theory of both fields can play a fundamental role within the User-Centered Design paradigm.

complete once implemented and deployed. In other words, the way in which technological change alters the organization of activities, and what are likely ongoing interventions, need to be considered (Ritter, Baxter, and Churchill 2014, 44).

Then, it is possible to speculate: While more responsibilities are involved in the production processes—from personal joyfulness (Figure 67) to social welfare and human rights (Figure 68)— the designer moves from one form of design to the next⁴. At the same time, designers must practice more rigorous procedures to ensure that real changes are being made with their proposals.

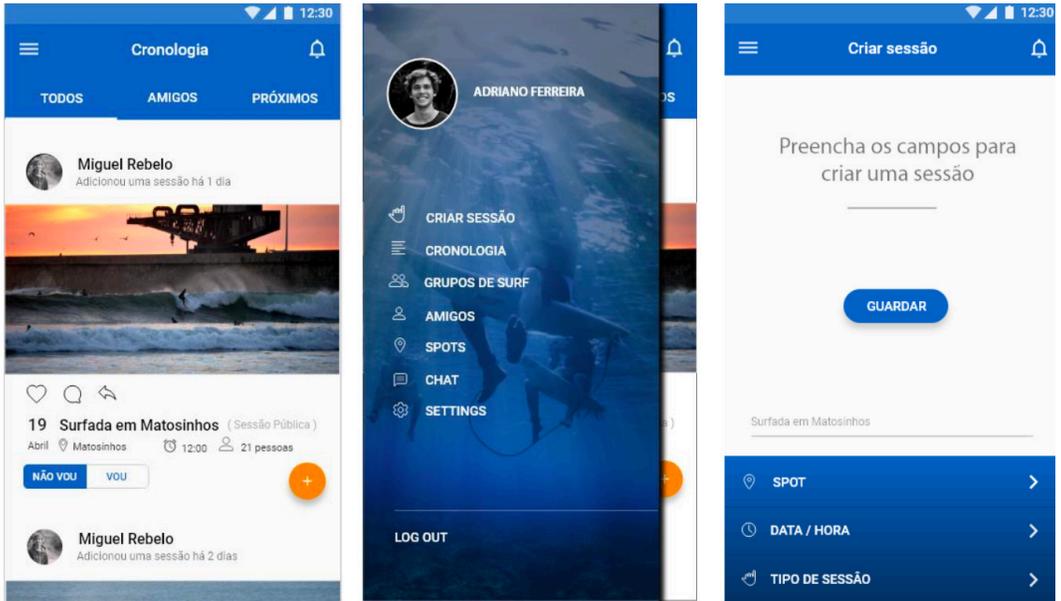


Figure 67. App design for group surfing by João Rebelo, 2018.

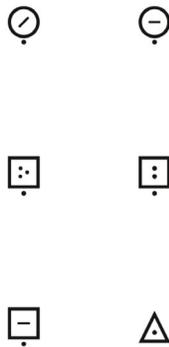
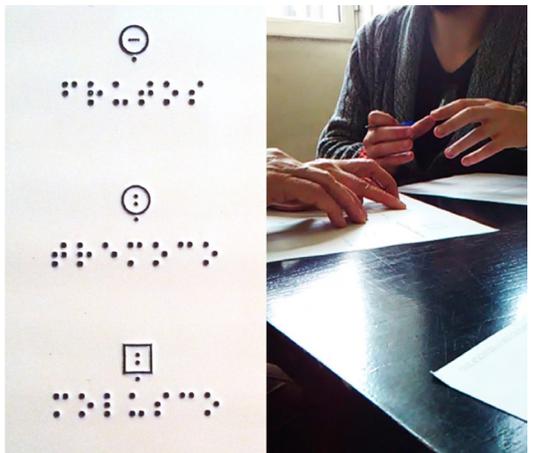


Figure 68. Pictogram design for the identification of allergenic foods in packaging by João Morais, 2016.



This process is generally based on four main activities: observation, idea generation (ideation), prototyping and testing. This procedure is characterized by being flexible and iterative, that is; once completed, the process must be repeated several times. With each new cycle, the designer collects more insights and gets closer to the desired solution (Norman 2013, 221). This approach to reach the definitive solution of the problem is comparable to the Double-Diamond Model of Design proposed by the British Design Council in 2005. The model illustrates the overall production process carried out by designers to solve problems in four stages; discover, define, develop, and deliver (Figure 69).

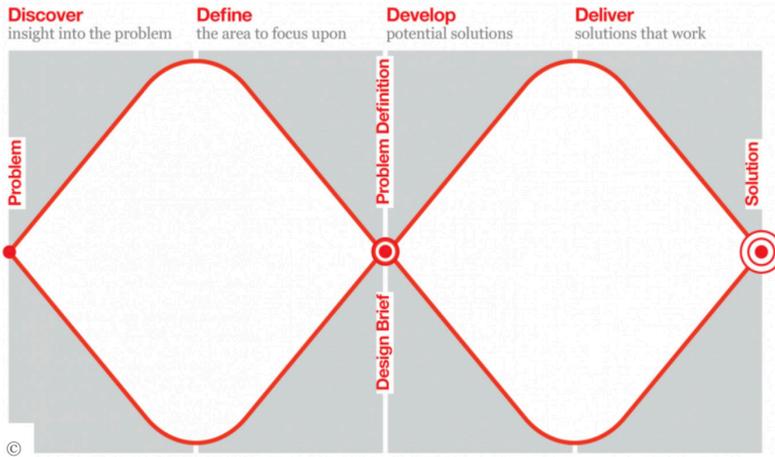


Figure 69. Double-diamond model of design, by the British Design Council, 2005.

According to Norman, Human-Centered Design and the double-diamond diverge-converge model are powerful tools of a design thinking that constitutes the hallmark of the modern design firm (Norman 2013, 219). This is because both focus on two main phases; finding the right problem (observation, ideation/discover, define), and finding the right solution (prototyping, testing/develop, deliver). A fundamental part of this process is that it must be supported by design research and market research:

Design wants to know what people really need and how they actually will use the product or service under consideration. Marketing wants to know what people will buy, which includes learning how they make their purchasing decisions. [...] The design specifications must include both factors: marketing and design, buying and using (Norman 2013, 224).

This need to establish a joint work between both disciplines responds to the capitalist market of Western cultures and the important influence that design has had on it, with an emphasis on the exterior fea-

tures deemed to be attractive to the purchaser (Norman 2013, 291). Therefore, states Norman, that the commercial factor is crucial during the production process and even when evaluating a product:

What are the requirements for a successful product? First, if nobody buys the product, then all else is irrelevant. [...] Second, once the product has been purchased and is put into use, it must support real needs so that people can use, understand, and take pleasure from it (Norman 2013, 226).

Norman continues later on:

Design is successful only if the final product is successful—if people buy it, use it, and enjoy it, thus spreading the word. A design that people do not purchase is a failed design, no matter how great the design team might consider it (Norman 2013, 293).

This introduces a commercial objective that had not yet been mentioned with regard to User-Centered Design. Norman's claims involve a risky discourse. Although design can acquire an important role in the buying and selling processes, granting that decisive value to those processes to evaluate design detracts the designer's work. And even more worrying; it constitutes a simplistic vision that reduces all the activity of the discipline to be destined for commercial ends, without considering another type of approaches that do not have this interest—such as experimental, academic, critical, or non-profit social work. This condition is reflected in the fact that the User-centered Design has been also called Universal Design (Wilkinson and De Angeli 2014, 616). In this sense, the most important thing is that the readers have to be able to identify discourses that seek to homogenize design within univer-

sal notions, and to understand that the discipline cannot be reduced to a single model. The best thing to do for designers is to discern the ideas that interest them the most for a specific project or context. Otherwise, there is a risk of monopolizing the practice and theory of design, something that is already being denounced by various designers, as it is shown later.

Norman's ideas about User-Centered and Human-Centered Design led to his concept called Activity-Centered Design (ACD) (Norman 2013, 231). Basically, it is a larger approach to design products intended for people all across the world whose behavior and needs should be addressed in the same product. In order to achieve this, the designer needs to focus on activities and not on individual people:

Let the conceptual model of the product be built around the conceptual model of the activity. Why does this work? Because people's activities across the world tend to be similar. [...] Activity-centered approaches are human-centered approaches, far better suited for large, nonhomogeneous populations (Norman 2013, 231).

However, several authors have pointed out the scarce research and description of its processes, methods and results, and therefore also does not play an important role in daily design practices (Williams 2009, 4). Activity-Centered Design could be considered an obsolete concept because its banner—focusing on the activities and tools that carry them out—is already implicit in the interests of User-Centered Design. There is no need to create a new concept based on that principle: “one cannot separate user from activity or tool when researching, designing, or evaluating the user experience of websites, web applications, help systems, documents, or genres, etc.” (Williams 2009, 4). This demonstrates an unnecessary and dangerous conceptual diversification in the dis-

course of this paradigm. In any case, a thorough research is required to determine the characteristics that would grant Activity-Centered Design its autonomy as field of study in design.

In any case, for Alan Cooper the perspective of Activity-Centered Design responds to a dynamic limited to understanding the “what” of user behaviors, when the designers should question why is the user performing an activity, task, action, or operation in the first place (Cooper et al. 2014, 14). In this sense, Cooper develops the concept of Goal-Directed Design (GDD) and its process in his book *About face: the essentials of interaction design* (2014). Interaction design is the practice of designing interactive digital products, environments, systems, and services focusing in the behavior study and design. Interaction design makes use of theories and techniques from traditional design, usability, and engineering disciplines for satisfying the needs and desires of the people who interact with a product or service. (Cooper et al. 2014, xx). Goal-Directed Design is a method to design such products in a world of digital technology where form, function, content, and behavior are so inextricably linked that it brought new design titles like information designer, information architect, user experience strategist, interaction designer and much more (Cooper et al. 2014, xx). In Cooper’s perspective, the graphic designer would play a role basically linked to the form development, which in turn supports the behavior and content components of the resulting products and services (Figure 70).

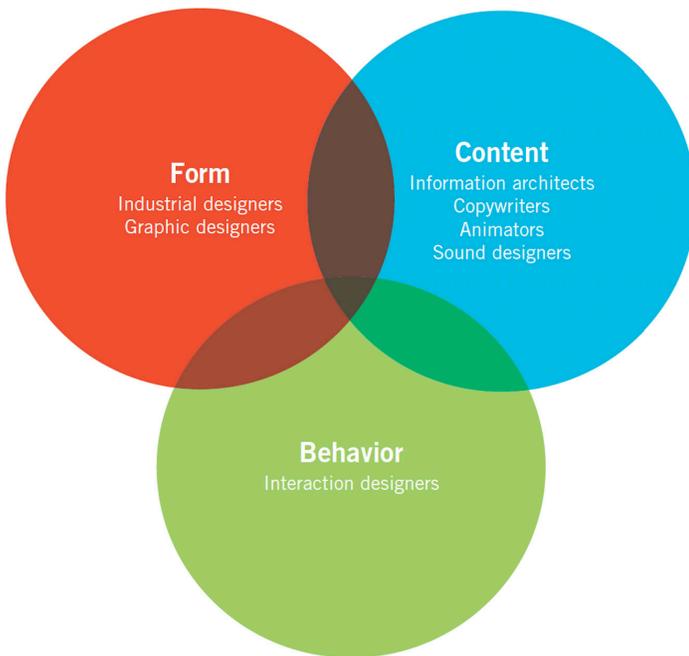


Figure 70. Roles within User experience (UX) design, by Alan Cooper, 2014.

In this logic, graphic design fulfills an aesthetic function without getting deeply involved in the conception of the product.

Manufacturers of consumer products realized that they needed to differentiate their products from functionally identical products made by competitors, so design was introduced as a means to increase user desire for a product. Graphic designers were employed to create more effective packaging and advertising (Cooper et al. 2014, 11).

However, graphic designers can be more involved in the processes concerning content and behavior. For this the designers need to learn to be researchers and to make use of explicit and systematic processes for defining users, establishing design requirements, and proposing interaction frameworks (Cooper et al. 2014, 23). Goal-Directed Design is an alternative that gather these characteristics and “provides solutions that meet users’ needs and goals while also addressing business/organizational and technical imperatives” (Cooper et al. 2014, 24). This process combines diverse techniques —such as ethnography, stakeholder interviews, market research, detailed user models, scenario-based design— during its six main phases: research, modeling, requirements, framework, refinement, and support (Figure 71).

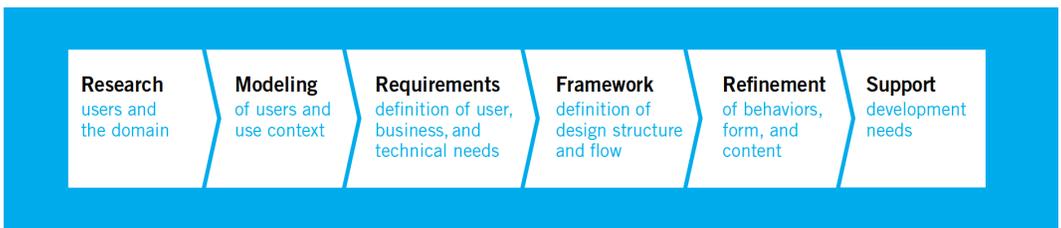


Figure 71. The Goal-Directed Design process, by Alan Cooper, 2014.

The research phase is based on gathering qualitative data about potential users of the product and other stakeholders through ethnographic techniques such as observation and contextual interviews.

The modeling phase synthesizes the information previously obtained in reiterative user behavior and work flow patterns. These patterns are used to create or model fictitious users also known as “personas”. In other words, these models or personas are detailed archetypes that gather the attitudes, capabilities, needs and goals shared by the interviewed users. It is also important to create and describe fictitious contexts where the persona would use the product since those contexts provide the different requirements that the development team must address in the phases ahead. This approach of describing contexts and designing according to them is also known as scenario-based design.

The requirements definition phase is where the developers discern the user, business, technical and functional needs that have to be met. The framework definition phase corresponds to creating the product concept and defining the product's work flows and general behavior. To achieve this, it is useful to propose diagrams, sketches and prototypes with creative methods such as brainstorming (Figure 72).

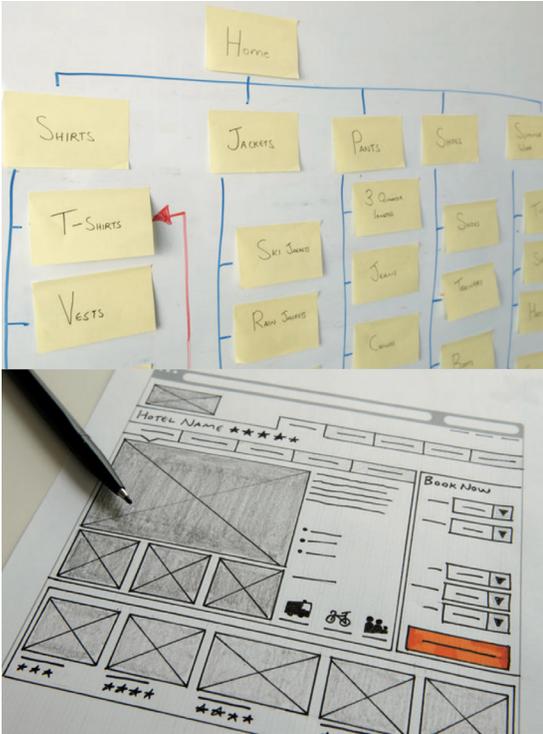


Figure 72. Diagrams and sketches to explore the workflow structures in web design for a hotel, by Richard Caddick and Steve Cable, 2011.

The refinement phase develops the ideas that best meet the goals with a high attention to detail. Graphic designers define and implement the visual system with type styles, icons, color, position, scale and other elements to establish a visual hierarchy in a compelling experience that denotes information, functionality and brand identity (Figure 73). In this regard, the concern of graphic design is to promote the economy of form, seen by Cooper as a value of good design (Cooper et al. 2014, 172). The economy of form is one of the par excellence concepts of the twentieth-century modernist paradigms present to this day, and it claims that design must use less to accomplish more.

Finally, the support phase is in charge of detecting and giving assistance for all the development challenges and technical questions that developers and stakeholders have encounter over time. The design concept must be kept integral, but certain technical aspects can change.

The process should iterate as many times as needed to improve the product and to ensure all the stakeholders' goals are been covered.

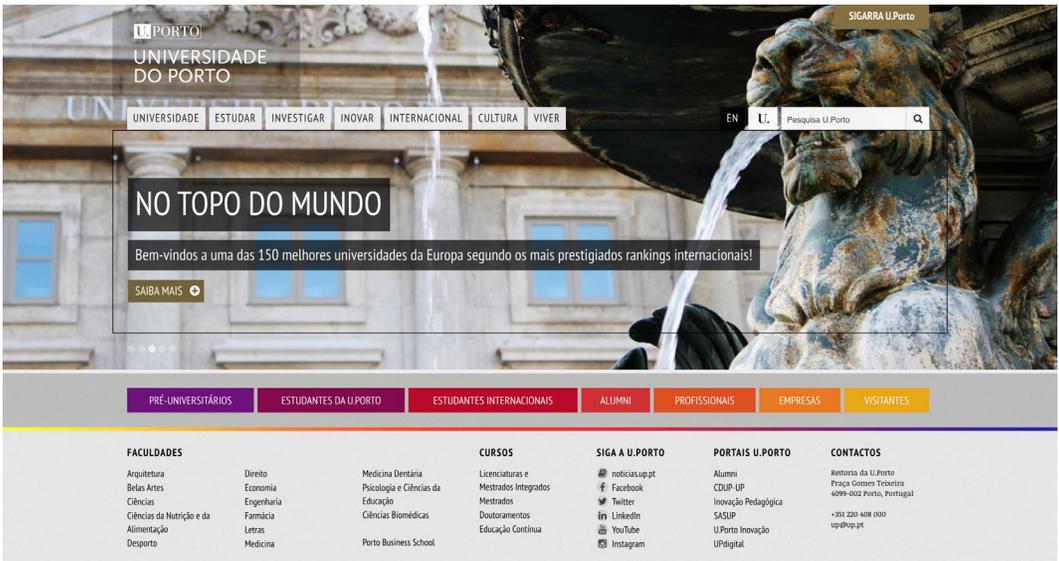


Figure 73. Current home page of the University of Porto website designed by Hugo Ribeiro in 2012.

Ultimately, Goal-Directed Design is a method to ensure clear and rational design decisions, and that the process is free of guesswork, the whim of creative minds, or the team members' personal preferences (Cooper et al. 2014, 29). It is a multidisciplinary process that mainly involves designers, engineers, business leads, and marketers for —respectively— addressing the users' goals, constructing the product, defining differentiation and market opportunities, and convincing costumers to purchase the product (Cooper et al. 2014, 156).

In recent years, various alternative methods concerning software development, user experience design (UX) and interaction design (IxD) have become increasingly popular. Some of them are Scrum, Agile and Design sprint. In fact, those methods and processes share identical approaches as Goal-Directed Design, with the advocate of particularly accelerating practices for developing products within few weeks or even days as one of the main differences. Given this condition, this research do not delve into those methods. Meanwhile, for the purposes of this research, it is important to highlight the vision of this design paradigm in assisting functional purposes in relation to the user's behavior and needs —in both ways of personal or social development, and in relation to commercial purposes.

In any case, it is pertinent to bear in mind that although these forms of design are driven towards rigorous methods and processes to achieve proven functional results, each project presents specific contexts that

should always be analyzed. “A one-size-fits-all approach seldom works to achieve the most productive, safe, and enjoyable design solution” (Ritter, Baxter, and Churchill 2014, 50). Author Jeff Sussna believes that design should no longer treat people as users. User-Centered Design is a fundamentally egotistical approach that define people solely in terms of their counterpart: the designer as the purveyor of solutions who ignores anything a person might do that is not directly related to the product or system being designed⁵. A theory where, “like a patient or child, the user is a figure to be protected and cared for but also scrutinized and controlled, submitted to research and testing” (Lupton 2006, 23).

Other authors go deeper and express a concern with the particularly technological world that practices such as Interaction Design and Human-Centered Design are creating. Designers must be more aware of the role they play in the advancement of computer systems intelligence over human intelligence, and to question to what extent these processes and methods are really oriented to either the human development or technological prevalence. Authors such as Haakon Faste propose adopting new models to design in an era where “it seems unlikely that human will stem their fascination with technology or stop applying it to improve themselves and their immediate material condition” (Faste 2016, 137). His scheme is based on the production and simulation of alternative histories and futures where machines systems could learn to design the hierarchies and compositions of human behavior in what he calls a Posthuman-Centered Design. Approaches of such nature are framed in more recent design paradigms such as Critical and Speculative Design, which are studied later.

5. Sussna, Jeff. 2016. “What Comes after User-Centered Design?” *Medium* (blog). <https://medium.theuxblog.com/what-comes-after-user-centered-design-d1ace893c976>.

2.2.2. Design Thinking

Despite becoming a popular topic in recent years, Design Thinking is a concept built since the mid-twentieth century. It is important to mention that the term “design thinking” does not refer to a homogeneous phenomenon (Ramírez 2018, 38). Currently, two main strands are identified, which, although having affinities between them, clearly constitute different ideas.

There is the concept of Design Thinking as a particular cognitive process “to regard and address problems, which stands in-between intuition and (logical) rationality” (Ramírez 2018, 41). According to this model, Design is considered the *third culture* or *third area* in education, being the Sciences and the Humanities the other two great areas of human knowledge (Archer 1979, 17) (Figure 74). Thus, Design is established as an autonomous approach to “practical knowledge based on sensibil-

ity, invention, validation and implementation” (Archer 1979, 17). In this way, it is possible to understand design as an activity that does not seek to achieve exclusively functional or aesthetic purposes. But it is about simultaneously attending both roles in the processes of production and communication of tangible and intangible goods.

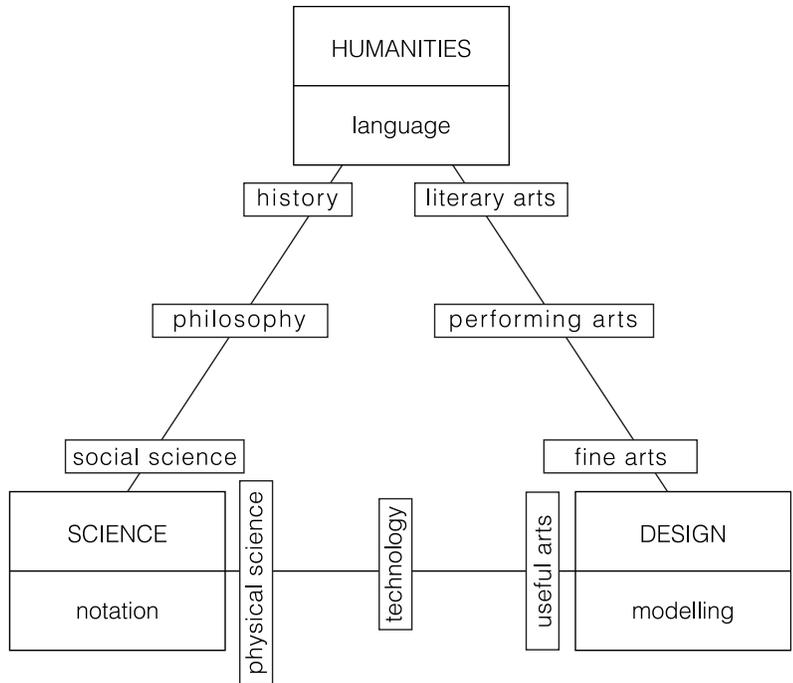


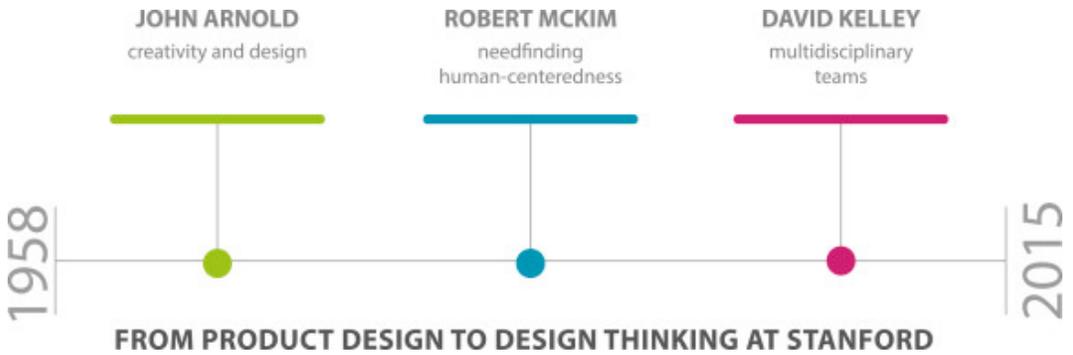
Figure 74. Diagram of the three areas of human knowledge by Bruce Archer, 1979.

These ideas were proposed in 1979, and evolved during the following years with important contributions from various authors. However, the first significant use of the term “design thinking” was made by Peter Rowe when he published his homonym book in 1987 (Jen 2017). At that time, the concept of Design Thinking did not focus on graphic design. It was a holistic vision of the production processes for understanding the methods used by (industrial) designers, and then replicating them in other areas.

Over the decades, a different mentality arose from the cognitive model that prevailed in the first years of the proposal. Thus, the spectrum of action of Design Thinking made its way into engineering, architecture, product design and finally acquired a business direction. The idea of a second Design Thinking emerges precisely from that change of conceptual direction, from the cognitive-academic model to the academic-business model.

This approach began in the early 2000s at the IDEO design consulting agency in the United States. David Kelley, as the company’s founder,

Tom Kelley and Tim Brown are the main promoters of the new model. In several publications of the company and its directors, there are various definitions of the term. For example, one of the agency’s websites —dedicated to offering Design Thinking online courses— promotes it as “a process for creative problem solving” (Stafford 2019). David Kelley, in a less precise definition, argued that it is “a method for how to come up with ideas. These are not just ideas, but breakthrough ideas that are new to the world, especially with respect to complex projects, complex problems” (Kelley 2016, 88). In an interview conducted in 2016, Kelley mentioned three contributions on which he based his hypothesis. The diagram (Figure 75) shows aspects such as creativity, the finding of needs, the human as the primary conditioning factor. And, finally, Kelley is credited for the component of working in multidisciplinary teams as a guarantee of holistic and innovative results.



On the other hand, Tim Brown explains his vision of Design Thinking as “a discipline that uses the designer’s sensibility and methods to match people’s needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity” (Brown 2008, 86). He also defined it as “a human-centered, creative, iterative, and practical approach to finding the best ideas and ultimate solutions. Design Thinking is just such an approach to innovation” (Brown 2008, 92). These ideas are reflected in the scheme presented by IDEO on its website (Figure 76). According to the consultant’s ideology, innovation is formed when a project is feasible, desirable and viable. Feasibility refers to functionally possible proposals in the foreseeable future. Desirability is considering the needs of people and what makes sense from their perspectives. Finally, viability refers to the likelihood that the proposal will become part of a sustainable business model. For IDEO, Design Thinking is the method to produce innovation through these three mentioned parameters.

Figure 75. The evolution of Design Thinking at Stanford, by Maria Camacho, 2016.

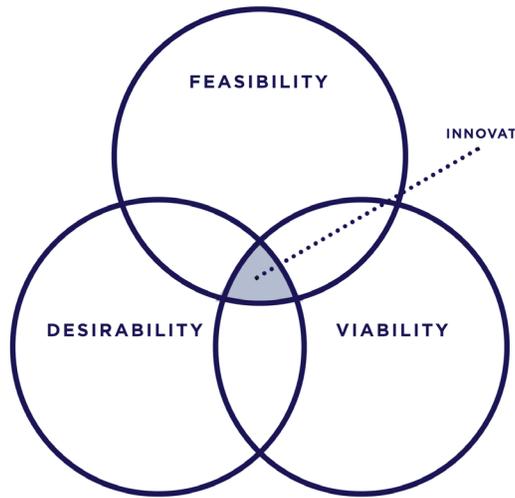


Figure 76. Scheme for innovation through the combination of three key concepts, by IDEO, 2019.

6. For example, for Tim Brown, the government of the United States should use Design Thinking to generate new policies in the country and thus solve many of the national problems. Thoughts stated in the article entitled *Capitalism needs Design Thinking*, 2014.

In short, Design Thinking —from IDEO’s perspective— is an iterative and practice-based method to solve problems of, apparently, any kind⁶ in multidisciplinary teams, using the designers’ production principles and criteria. This method is based on five steps: a) *empathize* by understanding the needs of the user; b) *define* the problem to be solved and the user’s parameters; c) *ideate* by proposing ideas to solve the problem through a brainstorm dynamic; d) *prototyping* the idea agreed as the best, and using low-cost resources; e) *test*, confirming whether the proposal really works or not (Figure 77). The process must be repeated until the result —product or service— is fully functional and resolves the problem according to the comments and reactions of the users, who become the main source of criticism in the process. In the words of the Dutch researcher and design professor Kees Dorst, IDEO’s Design Thinking basically focuses on three key points: a) the stimulation of creativity; b) human centered design, and; c) the importance of early prototyping (fail fast) (Dorst 2017, 26).

Stanford d.school Design Thinking Process

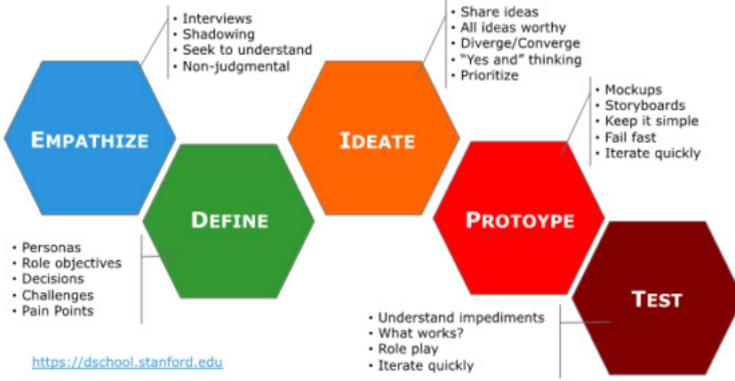


Figure 77. Design Thinking process by IDEO and the Stanford d.school staff.

The method began to gain strength in 2008, thanks to various publications by IDEO managers detailing its functioning. Since then, it has been taught in various companies and universities with the promise of obtaining innovative and creative solutions for any project. For example, IBM has adopted this method and currently offers online courses to anyone interested in learning its principles (Figure 78). Through their platform they claim that their students will be able to double the speed to enter the market, that they will have a 300% return on investment, and their efficiency will increase 75%.

The screenshot shows the top navigation bar with links for Enterprise Design Thinking, Framework (highlighted), Badges, Toolkit, and FAQ. The main content area features the heading "Design thinking re-envisioned for the modern enterprise" and a sub-heading "Enterprise Design Thinking: a framework to solve our users' problems at the speed and scale of the modern enterprise."

The Principles guide us

See problems and solutions as an ongoing conversation.



A focus on user outcomes
Drive business by helping users achieve their goals.



Restless reinvention
Stay essential by treating everything as a prototype.



Diverse Empowered Teams
Move faster by empowering diverse teams to act.

Figure 78. Enterprise Design Thinking online learning platform by IBM, 2019.

However, it has also been the target of many critics. One of the best known was that of the designer Natasha Jen in her talk entitled *Design thinking is bullshit* given in 2017. For Jen, Design Thinking has become a buzzword designating an overly simplistic method of the complex processes existing in a design project. In addition, it rejects the fact that the Design Thinking method deliberately suppresses critical thinking in the development of proposals—the ideation phase—by using brainstorming as the main source of ideas production (Jen 2017 2679). The definition that she has given to the famous IDEO method is:

Design Thinking packages a designer’s way of working for a non-design audience by codifying design’s processes into a prescriptive, step-by-step approach to creative problem solving—claiming that it can be applied by anyone to any problem (Jen 2017).

The definition of the method still seems insufficient. Bret Waters, professor of Design Thinking at Stanford University, said in his controversially entitled publication *Design Thinking is Not About Design* that:

Design thinking is an engineering methodology for developing successful products. Design Thinking has nothing to do with making something “pretty” and everything to do with making something useful. For example, an engineer could use it to develop an ugly machine that does its job beautifully⁷.

7. Waters, Bret. January 25, 2017. “Design Thinking Is Not About Design.” *Tivix* (blog). <https://www.tivix.com/blog/design-thinking-not-design>.

It is evident that there are many discrepancies in what Design Thinking really is, its scope and instruments. What is certain is that regardless of the performance and fidelity of its results, Design Thinking aims to inhabit the functionalist plane of design. Although this condition may vary, considering that the term alludes to two different concepts in their essences. For the purposes of this research, the main difference between both notions is that the first concept considers as being similar the aesthetic and functional purposes. Whereas, for the concept produced by IDEO, the priority for the result is to solve the initial problem and also that it is economically profitable. Although from Jen’s criticism there is no tangible evidence that the IDEO method really provides functional results (Jen 2017 2679).

With this important conceptual alteration “IDEO and the d.school—Stanford University—have hijacked the meaning of the term. As a result, many complex ideas underpinning historical Design Thinking have been washed off, forgotten, or supplanted by business jargon” (Ramírez 2018, 45) (Figure 79).

Design thinking is about **affinity diagrams, alignment, bodystorming, breakthrough solutions, card sorting, co-creation, creating experiences, customer engagement, customer journey, deep design, diary study, digital storytelling, empathy, extreme user, five whys, getting traction, hills, ideation, ideographs, integrated thinking, intrapreneurs, iteration, key performance, indicators, mind maps, playbacks, prototypes, radical innovation, return on investment, reverse card sort, satisfaction system, scale, scenario planning, seducible moments, segments, servicescape, social learning, sponsor users, stakeholders maps, summative testing, the culture of collaboration, the feedback loop, think-aloud protocol, tight-loop projects, and user outcomes.**

Figure 79. Business jargon commonly used by supporters of IDEO Design Thinking, by Natasha Jen, 2017.

One of the examples diffused by IDEO, and at the same time criticized by Jen, is the design of the magnetic resonance imaging (MRI) scanner experience in hospitals. General Electric needed to reduce the cases of children who were terrified when they underwent the scan. 80% of minors had to be sedated to be able to enter the MRI scanner and carry out the exam. This meant a large expenditure of human and economic resources, in addition to the patients' and families' discomfort. Doug Dietz, the industrial designer of the scanner, decided to use IDEO's Design Thinking method to address this problem. The result was the application of graphics on the MRI scanner and on the space around it. The team behind the project sought to simulate recreational experiences for children with thematic and adventure environments (Figure 80). For Dietz, the exercise can be considered a redesign of the entire experience, which ended up drastically reducing the number of children who felt terrified of using their machine. In the words of the IDEO founder, David Kelley, the percentage of patients who needed to be sedated was reduced to 10% (2012).



Figure 80. Redesign of experience with the MRI scanner for children, by Doug Dietz, 2012.

Definitely, it is the IDEO model that has maintained its presence —above the historical model of Design Thinking— in contemporary design circles. It is possible to extract, from this practice-based method, a functional purpose oriented towards the commercial success of its results (Figure 81). Although that is not the only purpose that its practitioners claim to address, since social interests has also been present in their proposals. In this sense, the Design Thinking method focuses on efficiency and effectiveness in functionalist, or business terms for the projects it intends to attend.



Figure 81. Design Kit Travel Pack cards by IDEO, 2018.

Another example is the project *Homeless 3419*, which aimed to raise awareness among people in the city of Baltimore of the alarming number of homeless (Figure 82). This would be achieved through a series of posters alluding to the theme. The project was intended to be the first phase among several to help those in need to improve their living conditions. However, no more information on the progress of the project and its impact has been found.

Ultimately, it is important to mention that, despite what many practitioners of Design Thinking may claim, there is no guarantee of obtaining the desired results when applying this design method. Its proponents may blame it on the novices and not on the method itself. When in fact each design project is part of a specific and quite complex context that such a simplistic method such as IDEO's Design Thinking is not able to completely address.



Figure 82. Identity design for the 3419 Homeless in Baltimore campaign, by Jennifer Cole Philips and the Graphic Design MFA program students at MICA, 2009.

2.2.3. Participatory and Collaborative Design

Participatory Design (PD) is a multidisciplinary approach characterized by the active involvement of all the stakeholders, especially end-users, as full participants during the whole production process. It covers fields such as graphic design, software engineering, architecture, public policy, anthropology, sociology, communication studies, and political science, among others (Muller 2010, 3). The conceptual core of this design paradigm is genuine participation. It “involves a fundamental adjustment of the users’ role from being merely informants to being legitimate and acknowledged participants in the design process” (Luck 2018, 5). The designers in PD highlight the value of democracy to civic, educational, and commercial settings for the improvement of internal processes, and the combination of diverse knowledge to make better services and products in an era where users themselves have to modify the complex new technologies (Muller 2010, 7). In this sense, the concept of participation is assumed as an ideology referring to questions of ethics, politics, democracy and empowerment (Bannon 2012, 41), pushing the traditional boundaries between users and designers.

The collective production approaches in design have been studied for several decades in Europe under the concept of Participatory Design — this being the term used prior to the current expressions of co-creation and co-design (Sanders and Stappers 2008, 7). In fact, Participatory Design originated in Scandinavia during the 1970s as part of a political context

where trade unions sought to empower workers in determining the shape of new technologies introduced into the workplace (Spinuzzi 2005, 164). In order to achieve this, there had to be developed new ways of designing.

In context of the *Design Participation Conference* held in 1971, Nigel Cross also pointed out this need for new approaches to design in order to “arrest the escalating problems of the man-made world and citizen participation in decision making” (Cross 1971). Such approaches would not only consider participation at the decision-making moment but also at the idea generation moment. Early Participatory Design started by stating that those affected by a design should have an opinion in the design process (Björgvinsson, Ehn, and Hillgren 2012, 103). Consequently, researchers and practitioners emphasized the idea of democracy as a value, as well as the participants’ tacit knowledge within the design process (Björgvinsson, Ehn, and Hillgren 2012, 103).

Over time, Participatory Design also emerged in North America. Although researchers had difficulty maintaining the same methodological tenets due to the fact that trade unions were not in a position to force participation, nor were they too interested in such projects (Spinuzzi 2005, 167). Hence the North American development has less intrusive techniques in terms of methodological procedures. In the same way, there have been different ways of addressing Participatory Design around the world depending on the value that each region gives to social democracy (Luck 2018, 2). However, the main interest in collaboration between all the participants in the design process maintains the same. That is why there is no need to delve into the diversity of perspectives separately in this research.

Today, Participatory Design is a well-established area of research and practice within many areas of design. Although the idea of user participation to design with respect to human needs is not new. In this sense, it is inevitable not to consider user/human-centered design when studying Participatory Design. Both have been addressed and compared by several authors. According to the blog *Design Practices & Paradigms* arranged by Susan Yelavich, PD is considered a subdivision of User- and Human-centered design⁸. While other researchers define PD as an evolutionary extension but independent of user/human-centered design, as it is shown later.

Certainly, the landscape of design had changed by the user/human-centered design as one of most powerful tools for improving consumer products and potentially reducing development risks. It allowed direct contact between designers and users in a time where traditional design approaches were accused of failing to engage with users and compromising commercial opportunities (Wilkinson and De Angeli 2014, 614). Similarly to User/Human-Centered Design, Participatory Design embraces the value of the participants’ individual contribution at every stage of the design process (Figure 83).

8. “Co-creation: Beyond Participatory Design.” February 8, 2013. *Design Practices & Paradigms* (blog). <https://designpracticesandparadigms.wordpress.com/2013/02/08/co-creation-beyond-participatory-design/>.

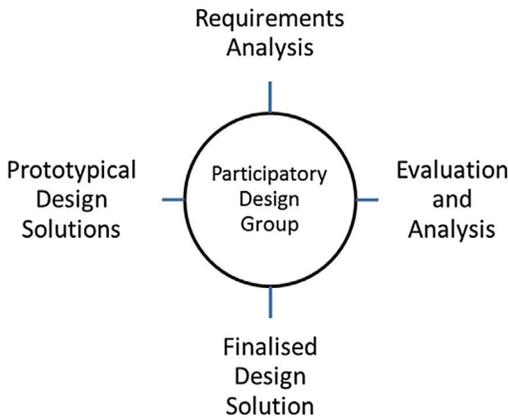


Figure 83. Diagram of the Participatory Design group at the core in the production processes and stages, by Christopher Wilkinson, 2014.

Nevertheless, for some authors, user/human-centered design cannot address the future experiences and challenges of people, communities, and cultures connected in such unimaginable manners (Sanders and Stappers 2008, 10). While both have several meeting points, the meaning of user involvement is not addressed in the same way. The distinction lies in the fact that within the user/human-centered approach there is a controlling attitude from the designer to work on behalf of the users but preventing them from having an active participation role. While in Participatory Design the work must be done with the users respecting their tacit knowledge and skills in shared authorship (Scariot, Heemann, and Padovani 2012, 2703). The transitional conception of the user as a passive informant towards the user as an active agent is the key factor for a conceptual evolution in collaborative-participatory design. Consequently, this condition provokes an important shift in the educational models of designers and researches subscribed within growing frameworks and paradigms that inevitably start to influence one another (Figure 84).

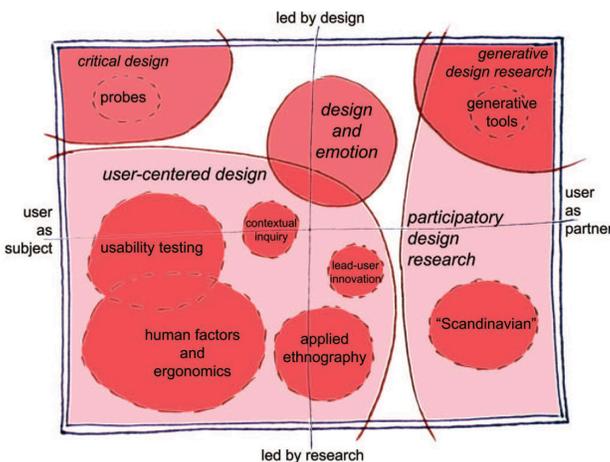


Figure 84. Landscape of some related paradigms of design research and practices, by Elizabeth Sanders and Pieter Jan Stappers, 2008.

Traditional design developed the perspective of the designer as the only purveyor of solutions in a relatively one-directional approach between the designer and the end-users as independent spaces. Participatory Design becomes the third space to bridge between these two primary spaces by finding a common language or mode of interaction for both parties to communicate and co-create (Muller 2010, 15). This third space or environment causes the exchange in the participants' roles in all the procedures, including the concept and knowledge development, and idea generation. According to Elizabeth Sanders and Pieter Stappers, the performance of the participants proceeds as follows:

- (a) The role of the user; the level of involvement and performance of the users depend on their expertise, passion, and creativity. They must receive the appropriate tools for expressing themselves.
- (b) The role of the researcher; in the traditional design process, the researcher was the translator between the users and the designers. In co-designing this person facilitates some tools for improving an already existing communication. Eventually, the researcher and the designer may be the same person.
- (c) The role of the professional designer; designers' highly developed skills in visual thinking, finding missing information, and conducting creative processes continue to be fundamental.

Nevertheless, it is also important to know that there are different levels of collaboration possible to occur between the participants within a given project. Basically, there are three of them (Kvan 2000, 413):

- (a) Mutual collaboration; participants are busy working with the other all the time and make decisions in conjunction.
- (b) Exclusive collaboration; participants are working on individual parts of the problem and occasionally asking the other for advice.
- (c) Dictator collaboration; participants decide who leads the whole process and makes the decisions.

In this sense, collaboration in design demands a greater sense of joint work (Kvan 2000, 413) and, in practical terms, employs an enormous amount of time, resources, and institutional commitment to achieve satisfactory results (Spinuzzi 2005, 169). Furthermore, there is a major concern and criticism from the designers' perspective to establish what type of user involvement is most appropriate to define for Participatory Design (Muller 2010, 5). At this point, it is better to define these clauses, as well as the methods and tools to be used, according to the particularities of each specific project. This is why "it's hard to find a good methodological explanation of participatory design" (Spinuzzi 2005, 163).

Still, Participatory Design has a large number of techniques available to proceed either in commercial, community-oriented or research

contexts in quite flexible ways. These methods are collected and explained by the researcher Clay Spinuzzi in three basic stages —remaining from the early Scandinavian approach (Spinuzzi 2005, 167):

Stage 1: Initial exploration work. Designers meet the users and familiarize themselves with the ways in which each party works. This stage involves examining technology use on site with assistance from ethnographic methods such as observations, interviews, walkthroughs and organizational visits, and examinations of artifacts.

Stage 2: Discovery processes. Designers and users understand and establish the work organization for envisioning the future workplace. This exercise allows them to clarify the users' values and goals, and also to agree on the desired outcome of the project. This stage is where the development team interacts the most through methods such as organizational games, role-playing games, organizational toolkits, future workshops, storyboarding, and workflow models and interpretation sessions.

Stage 3: Prototyping. Designers and users shape the artifacts in order to fit into workplace envisioned in the previous stage. The proposals ideation —as well as the whole process— must be iterated several times allowing users and designers to critically examine the impact of the incremental redesign through techniques including mockups, paper prototyping, and cooperative prototyping.

This procedure must be carried out in such a way that it addresses a democratic empowerment —giving users equal control of the product development and decision making— and a functional empowerment —enhancing the workplace features and hence the users' performance— based on mechanisms of co-determination, consensus and representation (Spinuzzi 2005, 167). This representation feature is intended for practical management of the

process since in many cases it is not opportune to involve all the users, especially when designing products that will be used by a huge number of people. In that case, working in the storyboarding or prototyping sessions could become cumbersome tasks. Therefore, in certain cases, it is better for users and designers to reach an agreement on who are the most representative users to be involved in the collaborative process.

The strength of Participatory Design reflects in the process used to achieve it, in its methodology. If PD is seen mainly as a design field or orientation it will eventually run the risk of articulating only a few general principles and then designers will retrofit existing techniques to accommodate them. Instead, Participatory Design must be understood as a methodology, which draws “on a coherent body of methods and techniques operating within a general research design under common methodological premises” (Spinuzzi 2005, 171). Methods and tools that help users to conceptualize products that reach their goals as well as Personas and Scenario-based techniques help designers to contextualize their research (Wilkinson and De Angeli 2014, 626).

Furthermore, designers in the future will make the tools for non-designers to express themselves creatively (Sanders and Stappers 2008, 15). This already seems to be happening with the presence of online platforms such as *Canva* (Figure 85). This website allows people who do not have the skills for visual thinking to create graphic pieces within few minutes based on tools previously defined by the development team. Among these tools are color, shapes, typography, and pay per use or free stock icons and photos, in predefined layout templates. These features promise non-designers professional lookalike results for creating all kind of visual pieces such as logos, posters, business cards, flyers, infographics, banners, among others.



Design anything. Publish anywhere.

Create an account, it's free. Canva is loved by beginners and experts, teams and individuals.

We'll use this info to help you get the most out of Canva.

Get started. It's free!

Already signed up? [Log in](#)

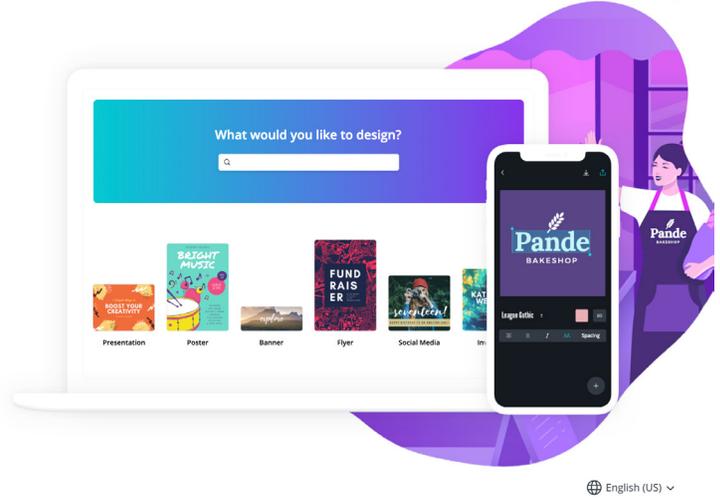


Figure 85. Canva homepage design, 2019.

Although this kind of platforms, made by designers, provide so many tools for non-designers to creatively express themselves, it does not actually reflect a profound participatory approach. *Canva* style approaches imply a dangerous path for design because they only involve co-creation in the later stages of the development process. It constitutes a discourse that barely uses participatory practices in order to become the latest trend in marketing and brand development. The recognized designer and educator Helen Armstrong's definition of the term falls within this risky perspective:

Participatory design requires user content for completion. Rather than delivering clean, finished products to a passive audience, participatory designers are creating open-ended generative systems. [...] We must look to the user for contribution, celebrating the unpredictability of responses and enjoying the serendipity of process-oriented work (Armstrong and Stojmirovic 2011, 15).

Participatory Design should not be reduced to giving users the baton of production at the last stages. In doing so, PD is being espoused as a powerful new tool for product naming, packaging, promoting and advertising in an already overcrowded marketplace (Sanders and Stappers 2008, 8). Another quick example of this is the NIKEiD application to customize shoe design (Figure 86).

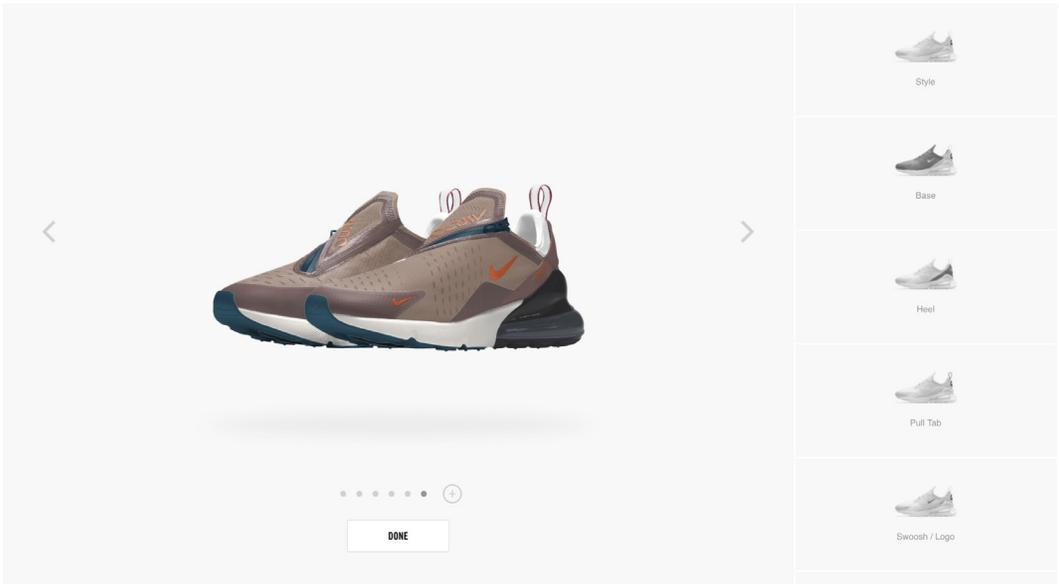


Figure 86. NIKEiD online application for shoe design customization, by Nike, 2019.

Once Participatory Design has entered into design research and practices, new menaces begin to emerge regarding the roles that it can acquire in its contemporary and future development:

Can we avoid the fate of the Bauhaus and its successor, modern design —i.e. becoming an overly rationalistic and somewhat elitist programme, filling the market with well-crafted functionalist modern design objects for mass consumption? Or is it an even bigger risk that Participatory Design [...] also ends up as the latest fashion in a further modern, market-driven, commodification process? [...] Is this how Participatory Design has become modern? Is the most efficient way to Participatory Design yet another heap of products and services, or is there still a search for participatory, designerly alternatives that go beyond the market agenda? (Bannon 2012, 39).

The challenge of contemporary Participatory Design is to establish itself as a holistic approach to move away from the mere artefacts and applications development towards new design practices and conceptions. Conceptions characterized by a long-term community-driven engagement for social and technological transformation in industry, public spheres and everyday life (Smith and Iversen 2018, 9). Unfortunately, it will take years for the design practice to shift away from the current consumer culture. After all, much of co-design proponents originate from business or marketing and not from design itself (Sanders and Stappers 2008, 8).

On the other hand, many researchers have been interested in involving the audience in the design process as co-creators for more socially responsible purposes. In 2006 it was carried out the project *Audience as Co-designer: Participatory Design of HIV Awareness and Prevention Posters in Kenya*. It used a participatory approach from the early stages of the project—not only at the final decision-making phase—in which local Kenyans, who had no prior graphic design training, co-designed AIDS prevention communication propaganda using their own visual language, cultural codes, and rhetorical narrative (Figure 87).



Figure 87. Poster design sketches for HIV prevention, co-created by locals Kenyans, 2006.

To conclude this segment, it is also relevant to mention the emerging concept known as Design Justice. Although it makes use of the main ideal of active inclusion of stakeholders in the development process of Participatory Design, Design Justice goes a step further by reflecting on how design results could be harming minorities not considered in the process. This emerging approach is defined as a field of design theory and practice—but also as a social movement—that challenges the matrix of domination. This is the term developed in feminist theory to refer to race, class, and gender oppression reflected on white supremacy, heteropatriarchy, capitalism, and settler colonialism (Collins 2002). In this sense, Design Justice seeks for an equitable distribution of design’s benefits through participation and community-based knowledge, focusing primarily on historically marginalized communities.

According to Design Justice advocates, there is a disturbing, though unintentional, propensity in design to think of the unmarked user as having access to powerful privileges such as U.S. citizenship, English language proficiency, access to broadband internet, a smartphone, no disabilities, and so on (Costanza-Chock 2018). This paradigm is estab-

lished as the balancing force for such design perspectives. It is also proposed as an autonomous approach to social impact design, design for good, and Participatory Design since Design Justice tackles the matrix of domination as its main objective. While Participatory Design can still be operated for and by socially excluding premises.

In order to achieve its purpose, Design Justice must work in the principle of collective participation. It gets done through the inclusion of “the perspectives and values of Queer, trans*, Black and POC (people of color), indigenous, migrant, decolonial, antiauthoritarian, and commons-based communities, among others” (Costanza-Chock 2018). One example project is the *Contratados* online platform (Figure 88). It was co-created by the “Centro de los Derechos del Migrante” (CDM) —Center for the Rights of the Migrant, the “Research Action Design” collective (RAD) and the “Studio REV”. Its mission is to help US-based Latino migrant workers —employed to operate in agriculture, construction, and other regularly low-paying work— to learn about their rights, and to create their own recruitment industry map for identifying fraudulent or reputable worksites. It also produces a series of comics, and radio shows to inform and instruct communities (Research Action Design [2010]).



Figure 88. Contratos homepage design, by CDM, RAD and Studio REV, 2019.

Ultimately, the confrontation against the matrix of domination and the heterogeneous inclusion of participants in Design Justice theory and practices go hand in hand. It is in this sense that Design Justice always

constitutes a participatory approach, but Participatory Design does not always nor necessarily imply race, class, and gender equality. The methods employed by Design Justice are, in principle, the same as Participatory Design. However, Design Justice is distinguished by a particular awareness of feminist theories, as well as indigenous, and local knowledge and practices, rather than universalist design principles (Costanza-Chock 2018).

2.2.4. Critical Design

The notion of critical design, again, was not conceived from or for graphic design exclusively. Its conception, as a term referring to a specific design practice, was given from product design with the English designer and educator Anthony Dunne in his book *Hertzian Tales: Electronic Products, Aesthetic Experience, and Critical Design* (1999). However, this paradigm progressively involved more related areas, including graphic design. This situation is not new, much less in the middle of the digital age and the globalization of the 21st century.

As a holistic concept, critical design is a model of thought and research whose main purpose is to question the assumptions of design itself and the production system in which it is framed. Critical design is directed to the technological industry and the dominant market that limits the everyday objects resulting from its activity. Subsequently, it extends to general social theory, politics, and ideology (Dunne and Raby 2013, 35).

In order to clarify the definition of the concept, Anthony Dunne and his colleague Fiona Raby propose the term “affirmative design” as opposed to critical design. According to their theory, affirmative design refers to all those paradigms, methods, processes and design products that aim to solve problems, to be functional and realistic. It is the conventional design whose success is measured according to how well it is sold and the elegant way in which the conflicts between aesthetics, production, ease of use and costs are resolved (Dunne and Raby 2013, 40-43). In other words, it is that “design that reinforces the status quo” (Dunne and Raby 2013, 34). To deepen into the distinctions and competences of these two terms, Dunne and Raby published in 2009 a project entitled *Work in progress*. In this work, they expose a list of features that would characterize affirmative Design in a first column (a), and critical design in the second one (b). Although the project is precipitated by reducing the design activity to an imprecise dichotomy, *Work in progress* is an interesting exercise mainly to understand the concept of critical design that Dunne and Raby have proposed and researched for several years (Figure 89).

A	B
Affirmative	Critical
Problem solving	Problem finding
Provides answers	Asks questions
Design for production	Design for debate
Design as solution	Design as medium
In the service of industry	In the service of society
Fictional functions	Functional fictions
For how the world is	For how the world could be
Change the world to suit us	Change us to suit the world
Science fiction	Social fiction
Futures	Parallel worlds
The “real” real	The “unreal” real
Narratives of production	Narratives of consumption
Applications	Implications
Fun	Humor
Innovation	Provocation
Concept design	Conceptual design
Consumer	Citizen
Makes us buy	Makes us think
Ergonomics	Rhetoric
User-friendliness	Ethics
Process	Authorship

Figure 89. Work in progress exposes the characteristics of affirmative design and critical design, by Anthony Dunne and Fiona Raby, 2009–2013.

From the previous chart, two narratives are constructed; on the one hand, there is a problem-solving oriented design, a process that seeks to provide answers according to what industry—based on innovative and ergonomic production—dictates, thus predictable consumers or users buy their products and services. While on the other side (b), there is a design oriented to problem-finding, to be the means to raise questions at the service of society through provocation and rhetoric so citizens and people can think, question and generate debate by their own. That is to say; critical design is defined as a mainly investigative posture, and not as a method with a certain structure. This critical position should be translated from commentary to objects that “pose questions, encourage thought, expose assumptions, provoke action, spark debate, raise awareness, offer new perspectives, and inspire. And even to entertain in an intellectual sort of way” (Dunne and Raby 2013, 43). In this sense, critical design is the antithesis of affirmative design and its approaches. This is because, instead of solving problems, providing answers and reducing uncertainty within the discipline, it increases its complexity and criticality. It does not simplify but rather diversifies the ways in which problems, ideas and design limits are addressed (Mazé and Redström 2009, 11).

While critical design began as a paradigm within product design, today it is easy to find various online platforms that already make use of the expression “critical graphic design”. One of the most recognized studios for working in this field is Metahaven. It is a design research collective located in Amsterdam and Brussels that focuses on addressing contemporary issues with social policy burdens. Their projects are based

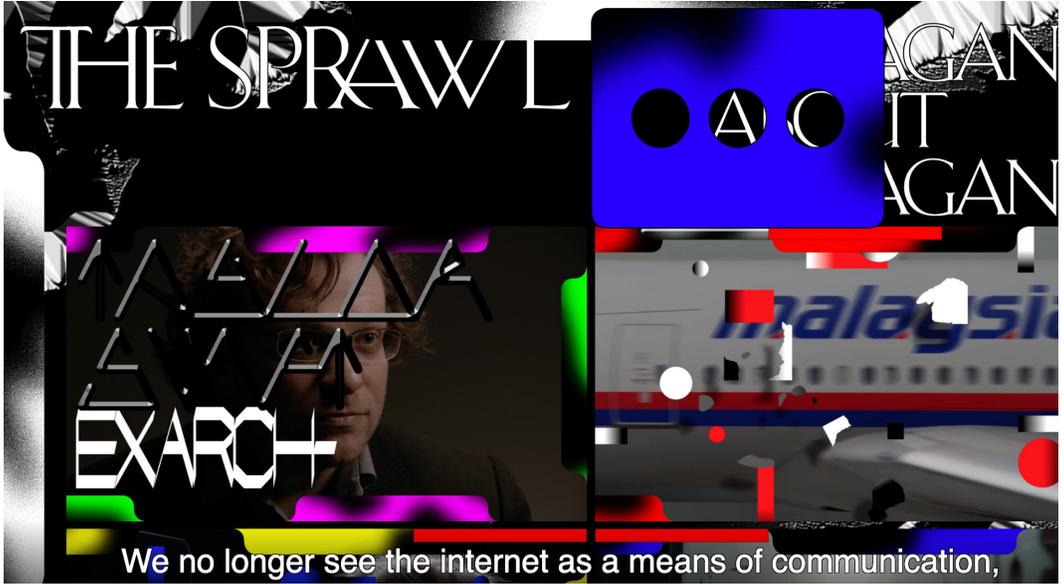
on a cumulative gathering of data, inquiry, imagination and speculation which informs and influences the studio's work in graphic and information design, branding and iconography (Van der Velden 2008) to expose political issues of international interest such as secrecy in organizations with a global impact. Among their projects is the film *The sprawl: propaganda about propaganda* (Figure 90) released in 2016.



Figure 90. Poster design for the film “The sprawl” by Metahaven, 2016.

This production, in documentary format, explores the “proliferation of internet-based propaganda today and its impact on both individuals lives and the wider geopolitical landscape” (Saxelby 2016, May 6). One of the main issues addressed is the shutdown of the Malaysia Airlines Flight 17 on Ukrainian territory. The objective of the documentary is not to know the truth of the analyzed events—which would be a journalistic work rather than a design one, but it is interested in exposing the impact that conflicting Internet data has on the experienced reality, both individually and collectively (Saxelby 2016, May 6). This is an example of how graphic designers go beyond the limits of the discipline to get involved in foreign territories, in this particular case, through criticism. The graphic used reflects concepts addressed in the content: secrecy, corruption, altered truths, fake news, and other aspects that

can cause confusion, anxiety in the citizens. The visual result can be bizarre or even ugly to many people, including designers. However, this notion accompanies the questioning concept posed by critical design, even towards the graphic design activity itself. It infringes many rules of typography, form, color, composition, hierarchy of information, and readability (Figure 91).



This type of practice, focused on making social and political criticism, is nothing new. Obviously, it is not an exclusive activity of current critical design. Many graphic designers worked making critiques in past years of the previous century. Several examples of this are collected in the book entitled *The Design of Dissent, Expanded Edition: Greed, Nationalism, Alternative Facts, and the Resistance* by the American Milton Glaser and the Bosnian Mirko Ilić, and whose last edition published to date was in 2017 (Figure 92).

Figure 91. Website for the film *The sprawl* by Metahaven, 2016.

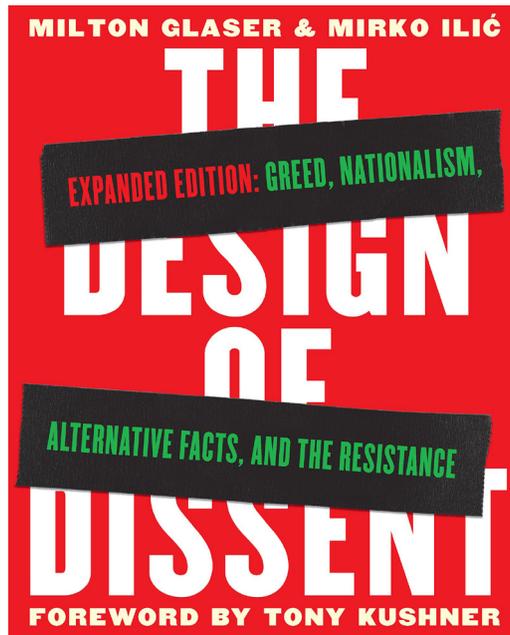


Figure 92. Cover design for the book *The design of dissent* by Milton Glaser and Mirko Ilić, 2017.

This publication presents more than 550 posters made by graphic designers from around the world over three decades. The book does not have a theoretical historical development, but rather it is a visual compilation of the posters with technical information of each work. Some of the issues addressed are: communism; geopolitical conflicts; war; peace; equity; food; animals; media; gun control; religion; among others (Figure 93).



Figure 93. Poster design Again? by Dan Reisinger, 1993.

In any case, the book makes it possible to clearly understand that many of the key concepts proposed by critical design have actually been explored and practiced for several decades. This is a vision that the American design historian in design Rick Poynor shares and judges in the following terms:

There is an old saying that every new generation thinks it has invented sex. That is also how it sometimes seems with graphic designers and critical practice. The old-timers just didn't get it — bless them! — but now, thanks to a mysterious sudden enlightenment, the new guard sees the situation of being a graphic designer more clearly, and more critically, than anyone ever managed to see it in the past⁹.

Evidently, criticality as a means of research for and through graphic design was not born with critical design. The concept and its practices already existed long before the term was proposed by Dunne. However, critical design emerged as a term to designate a way of thinking about a discipline that was in a generally uncritical state (Laranjo 2014), which was mostly governed by commercial principles. Critical design is concerned with dealing with unquestioned or little-discussed issues that

9. Poynor, Rick. September 9, 2011. "A Swedish Perspective on Critical Practice." *Design Observer* (blog). <https://designobserver.com/feature/a-swedish-perspective-on-critical-practice/30068>.

also present data collectively taken for granted. In this way, the term critical design ends up for “providing a necessary distinction from routine practice and awarding to kind of merit badge to designers or studios who deviated from the norm [...] The term also highlights an important transition in graphic design practice and education: from the designer as author to the designer as researcher” (Laranjo 2014).

For example, the project *Sexed Realities—To Whom Do I Owe My Body?* by the German designer Anja Kaiser, poses a theoretical and visual confrontation about the technological, cultural and economic forces that influence the body in the era of feminism in social networks. Through the use of various platforms —video installation, a website, and a bath towels collection— Kaiser gives a critical vision to new media (Figure 94).



Figure 94. Website design for the project “Sexed Realities” by Anja Kaiser, 2016.

Once again, the visual outcome of the project presents dysfunctionality aspects in terms of readability and information hierarchy. This incursion into chaotic and even ugly aesthetics is totally intentional. In principle, it is about prioritizing aspects that question established rules, both at a conceptual or content level —such as the roles played by technology on the way the female body is collectively assumed— and at an aesthetic or formal level —like disturbing the reading order through the use of distorted letters or a particularly disruptive chromatic use. However, it is possible that this constant reiteration in the visual aspect of many critical projects is perceived as a pretentious stylistic mask, which would be overshadowing the initial critical purposes. This supposes a serious risk for the original concept of the model, since it would be leading to the critical graphic design to a state in which it begins to turn into

a mere style, with certain visual characteristics (Figure 95). This could cause a stagnation in its scope and impact, “or worse, it will become irrelevant to society. For a discipline that aims to contribute to public debate —let alone social and political change— that would be disastrously wasted opportunity” (Laranjo 2014).

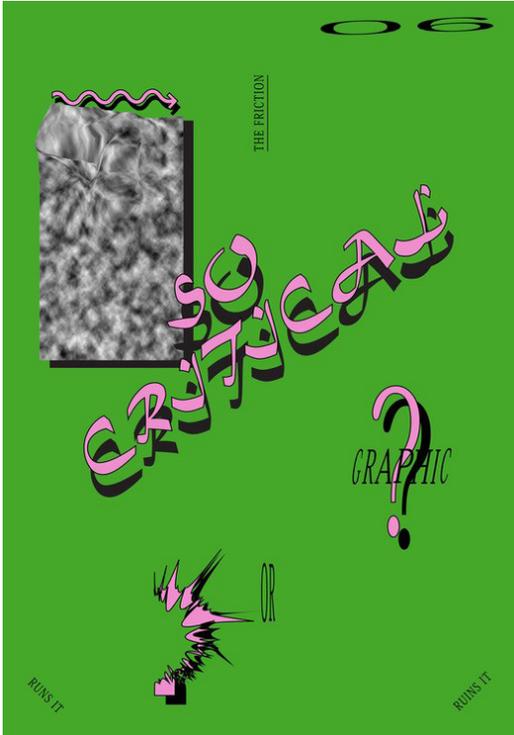


Figure 95. Poster design So critical by Darius Ou, 2013.

On the other hand, these graphic outcomes are not captivating for the majority of the public from an aesthetic and therefore from a commercial point of view. The conflict between theoretical paradigms and critical visual practices, causes that critical design cannot be widely recognized.

To be considered successful in the marketplace, design has to sell in large numbers, therefore it has to be popular. Critical design can never be popular, and that is its fundamental problem. Objects that are critical of the industry’s agenda are unlikely to be funded by industry (Dunne and Raby 2001, 59).

That is why many of these projects start from the academic field, and their results are certainly maintained at that level. And, to reach a greater diffusion, they are exposed in museums or exhibition halls.

With all these circumstances at first sight, it is evident that many of the projects of critical design could be perceived as products of some

kind of art. However, according to the precursors of critical design, there really are differences between both concepts, and for that reason it is important to know how to distinguish them:

Critical design might borrow heavily from art's methods and approaches but that is it. We expect art to be shocking and extreme. Critical design needs to be closer to the everyday; that's where its power to disturb lies. A critical design should be demanding, challenging, and if it is going to raise awareness, do so for issues that are not already well known. Safe ideas will not linger in people's minds or challenge prevailing views but if it is too weird, it will be dismissed as art, and if too normal, it will be effortlessly assimilated. If it is labeled as art it is easier to deal with but if it remains design, it is more disturbing; it suggests that the everyday life as we know it could be different, that things could change (Dunne and Raby 2013, 43).

In any case, there are no precise parameters that clearly distinguish critical design from art. For some designers who practice in the field of critical design, it is not particularly important or necessary that such distinction be given. The creator of the aforementioned project *Sexed Realities—To Whom Do I Owe My Body?* Anja Kaiser, refers to her work as “a platform to develop products like the beach towel collection, to tackle and question existing realities that are attached to our bodies. You can interpret it as art, but it's also fine if people just want to buy a towel and somehow get into the essay which comes with the user-manual” (Kaiser 2017 2695). Possibly, this would be one of the cases in which design is much closer to art than it is to science (Figure 96). Although, obviously, this would depend on each independent production.

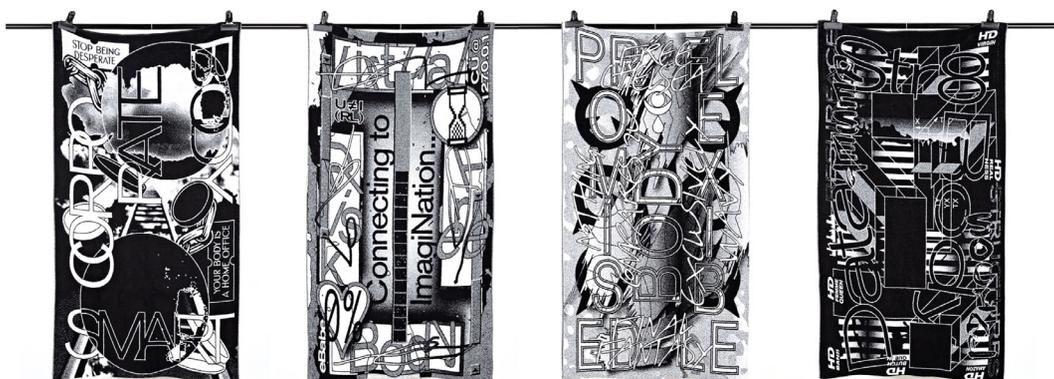


Figure 96. Beach towel collection for *Sexed Realities*, by Anja Kaiser, 2016.

In short, and as design educators have suggested several decades ago, criticality in design can be established in three possible ways: a) individual freedom; b) disciplinary discourse and; c) public interest (Van Toorn 1997). However, the design researcher Ramia Mazé develops this same triad framed in the context of critical design as an established model: (a) Individual freedom is associated with a reflective and self-conscious internal attitude about the designer's personal development and how it is positioned within the discipline; (b) the disciplinary discourse refers to the criticism that aims to challenge or change the paradigms and traditions generalized in the discipline itself and its community; and, finally, (c) the designers can address pressing phenomena of public interest in social and political issues. Certainly, these three modes of criticism regularly overlap, intertwine and influence each other (Mazé 2009, 379-397).

In any case, various designers see critical design as a pretentious label to attract community attention. “For designers who scorn the label, criticality in its many forms is intrinsic to graphic design and therefore a special term is unnecessary and redundant” (Laranjo 2014). The term “critical”, they argue, still remains unclear and subjective, which has unleashed an excessive and erroneous use of the term in magazines, books and websites of all kinds (Laranjo 2014).



Figure 97. Cover for the critical design magazine That New Design Smell.

For the purpose of this research, the essential thing is to identify the purposes that critical design pursues, although its results and effectiveness may be questioned. In the first place, it is possible to affirm that critical design leans towards a combined approach between pure and applied purpose. Although it does not attempt to fulfill a utilitarian function to solve problems, it does attempt to instill an academic debate towards theory and practice that, in this case, it would be questioning and possibly changing paradigms of the discipline itself and beyond.

“There are many possibilities—socially engaged design for raising awareness; satire and critique; inspiration, reflection, highbrow entertainment; aesthetic explorations; speculation about possible futures; and as a catalyst for change [...] Using design as a form of critique is just one use for design, as is communication or problem solving” (Dunne and Raby 2013, 33).

As it has been proved, critical design is far from any commercial purpose. In fact, the commercial interest—omnipresent in the discipline, according to the critical design discourse—is one of the most criticized purposes by the critical model, so it must move away from any position imposed by industry and marketing. Although, on the other hand, much of its development can be perceived as an aesthetic tendency under an eloquent label to seem more interesting. For Francisco Laranjo, this could mean a disastrously wasted opportunity for the model and for Design itself (Laranjo 2014), as he stated in his online platform dedicated to graphic design research as criticism, called *Modes of Criticism* (Figure 98).

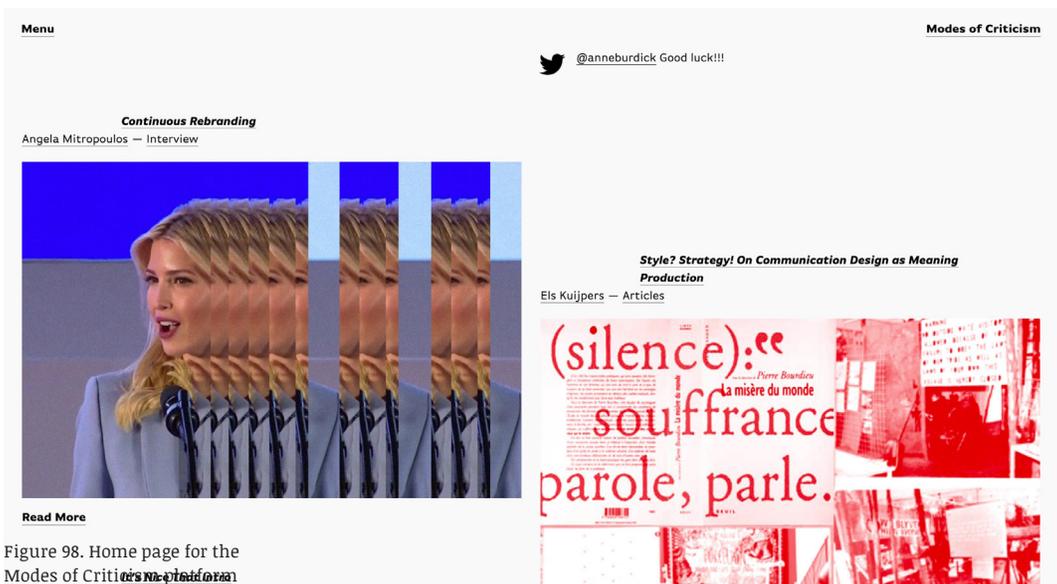


Figure 98. Home page for the Modes of Criticism website by Francisco Laranjo, 2019.

2.2.5. Speculative Design

Critical design has, in its broad definition, several ways of raising criticism and opening the debate on a particular issue. One of the most explored ways by researchers Anthony Dunne and Fiona Raby is *Speculative Design*. Their work *Speculative everything: design, fiction, and social*

dreaming (2013) widely covers this topic. Speculative Design is a form of design in which different types of fictitious scenarios are built —either environmental, political, social, economic, etc.— to propose design products that would be necessary in those unreal circumstances. This form of design can take different names that are regularly mixed, exchanged, replaced, and can sometimes generate opinion differences or confusion (Torres 2015, 41). These alternate denominations are “design fiction” and “design futures”. Although they may present subtle differences, all these forms of design respond basically to the same concept: they operate outside the normative contexts of mainstream or affirmative design. However, Speculative Design manages to distinguish itself by proposing narratives that unfold in future and fictitious contexts and what-if scenarios. In addition to developing much of their research and proposals with a strong technological involvement. The objective of this paradigm is not only to promote the debate on the technological development of the future, but it is also a means to analyze, criticize and rethink contemporary technology (Auger 2013, 2).

One of the most important aspects of Speculative Design is that it knows how to maintain its relevance to the contemporary community through the correct management of its feasibility. That is to say; its proposals must remain sufficiently plausible to maintain critical momentum and citizens’ attention (Auger 2013, 2). In order to establish the territories in which Speculative Design is expected to operate, Dunne and Raby elaborated a diagram based on the theories of the American futurologist designer and educator Stuart Candy in 2009 (Figure 99).

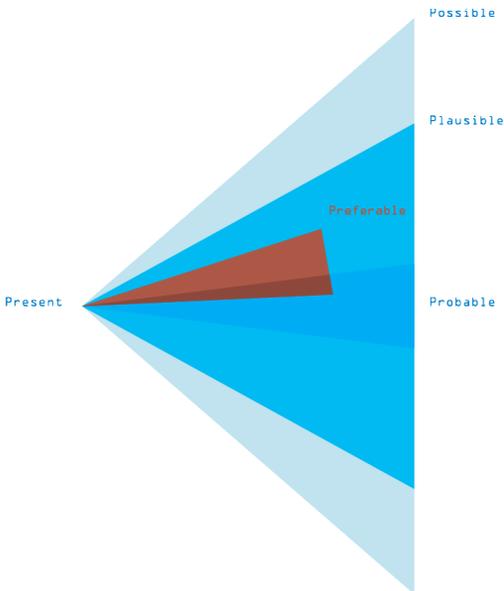


Figure 99. Diagram of potential futures by Anthony Dunne and Fiona Raby, 2013.

The diagram shows how the present can be directed towards different types of potential futures. The first cone, called “probable”, refers to the future with greater certainty to happen, and that would only be interrupted by extreme events such as financial disasters, natural catastrophes or wars. It could be said, therefore, that it is the most predictable and expected future type. “Most design methods, processes, tools, acknowledged good practice, and even design education are oriented toward this space.” (Dunne and Raby 2013, 3). The next cone, “plausible”, refers to events that could happen. This is the space for the planning and exploration of alternative futures, allowing a better preparation and security for the entities. The third cone describes “possible” though scientifically complex futures for them to finally happen. The last cone, for “preferable” events, is situated in the middle of probable futures and plausible ones. While the term “preferable” is subjective—it depends on the perspective of each person and their interests—it is currently determined by governments and industries, which grant a limited role to voters and consumers (Dunne and Raby 2013, 4).

According to Dunne and Raby, this need to establish alternative principles within the limits of design occurred as a result of the financial crisis that had a global scale impact in 2008. For them, it is unwise to continue with the same lines of thought established by visionary designers during the 1960s and 1970s. It is evident, they continue, the urgency to acquire design values based on an ideological rather than stylistic plurality (Dunne and Raby 2013, 9). They took as their antecedent the ideals of past counter movements such as Radical Design. Counter movements that were interrupted by what they call a hyper-commercialization of the discipline.

Design became fully integrated into the neoliberal model of capitalism that emerged during the 1980s, and all other possibilities for design were soon viewed as economically unviable and therefore irrelevant [...] There were no longer other social or political possibilities beyond capitalism for design to align itself with (Dunne and Raby 2013, 8).

An example of this approach is the fictitious newspaper that the American art group “The Yes Men” published in November 2008. It was an alleged special version of the New York Times proposing a possible future for July 4, 2009. All the news reported in this publication were false and presented in a humorous tone, such as the end of the Iraq war (Figure 100). It also featured false advertisements from companies such as Exxon Mobil, where the entity allegedly assumed responsibility for the aforementioned war. Approximately eighty thousand printed copies were distributed in different cities of the United States.

Although designing for future stability is a thought aligned with modernist paradigms, Speculative Design operates in the space between contexts that are not very likely to happen, but which would still be possible to occur. It constructs fictitious narratives that criticize systems and beliefs already installed. There resides its distinction from other models and ways of doing design.

Speculative Design uses narrative methods pertaining to art, literature, cinematography, science, politics, ethics. In order to “explore, hybridize, borrow, and embrace the many tools available for crafting not only things but also ideas —fictional worlds, cautionary tales, what-if scenarios, thought experiments, counterfactuals, reductio ad absurdum experiments, prefigurative futures, and so on” (Dunne and Raby 2013, 3). In this sense, Speculative Design is a particularly trans-disciplinary paradigm, and sometimes even operated within disciplines that are not usually directly related to the field of design.

“*Black Mirror*” is a British science fiction anthology television series created by Charlie Brooker in December 2011. This production explores the role of new technologies and their possible consequences for modern society. Each episode is placed in an alternative present or the near future to make social criticism with a tone often sarcastic and obscure.

Black Mirror is especially interesting because it bases almost every episode on the same principles as Speculative Design; nevertheless, designed fictional objects for everyday use, interfaces, technical artefacts and scenarios are very often the central part of the plot (Golub 2016, 30).

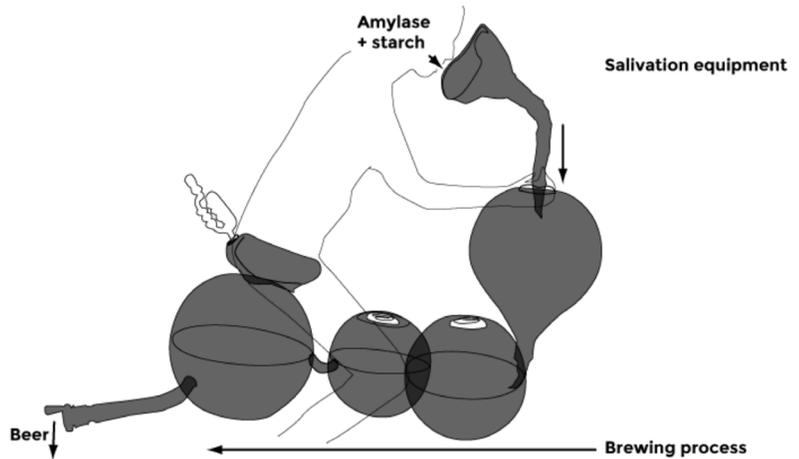
For example, in the episode “*White Christmas*” (2014) there is a software implanted in people called “*Z-Eyes*” and controlled by an external device. This system allows the users to have an extended reality experience with which they can do some recreational activities such as taking photographs or listening to music. It also allows blocking other users by turning them, within each personal interface, into blurred silhouettes and making the communication between the two users impossible. An already existing concept in social networks (Figure 101).



Figure 101. Z-Eyes performance when blocking a user in Black Mirror series, 2014.

One of the most criticized works of Speculative Design was *Republic of Salvation* by English designers and artists Michael Burton and Michiko Nitta in 2011. This proposal posed a fictional future in which the government would control the food rations to which the population could access depending on the number of hours and types of work that citizens would perform. An environment where the shortage of natural resources and large-scale famine would predominate, and where it would be necessary to design new methods to obtain food that allows, with a minimum amount of nutrients, to increase labor productivity. Then, citizens would develop their own ways of producing alcohol illegally by distilling homemade saliva and blocks of starch (Figure 102). *Republic of Salvation* was a widely criticized project. Like many other proposals of Speculative Design, it is accused of being a practice with a purely First World vision as it is detailed later.

Figure 102. Design of a system for the home production of alcohol through the saliva of people, by Burton and Nitta, 2011.



Meanwhile, the project *Reciprociti Bank* made in 2014 by the English designer Patrick Stevenson-Keaning uses graphic design as an important means to propose an alternative present about the relationship of people with their expenses and the economy. His proposal is the identity design for a fictional bank and the services it would offer (Figure 103).



Figure 103. Identity design for the Reciprociti Bank, by Patrick Stevenson-Keaning, 2014.

These services include credit cards with specific functions: for example, the *Protest card* is used to positively or negatively evaluate companies, in order to alter their social value in the *Social Responsibility Markets* (Figure 104). In addition to readers for such cards, cash machines that highlights the expenses made by the user, a series of corporate posters, and the design of a new currency in this new financial system (Figure 105). *Reciprociti Bank* is a criticism of the financial system and seeks that citizens reflects on how they spend their money.



Figure 104. Protest card design for the Reciprociti Bank, by Patrick Stevenson-Keaning, 2014.



Figure 105. Currency design for the financial system proposed by Patrick Stevenson-Keaning, 2014.

Another example of this paradigm in graphic design is *Genesis* by Mads Øvergaard in 2015. It is a visual identity project for a fictitious company in a dystopian future where water is scarce globally and access to it is controlled by the trans national *Genesis*. The designer of the project raises all the narrative and the context of the company, its way of operating and necessary resources for that including official documents, flags, passports, among others (Figure 106).

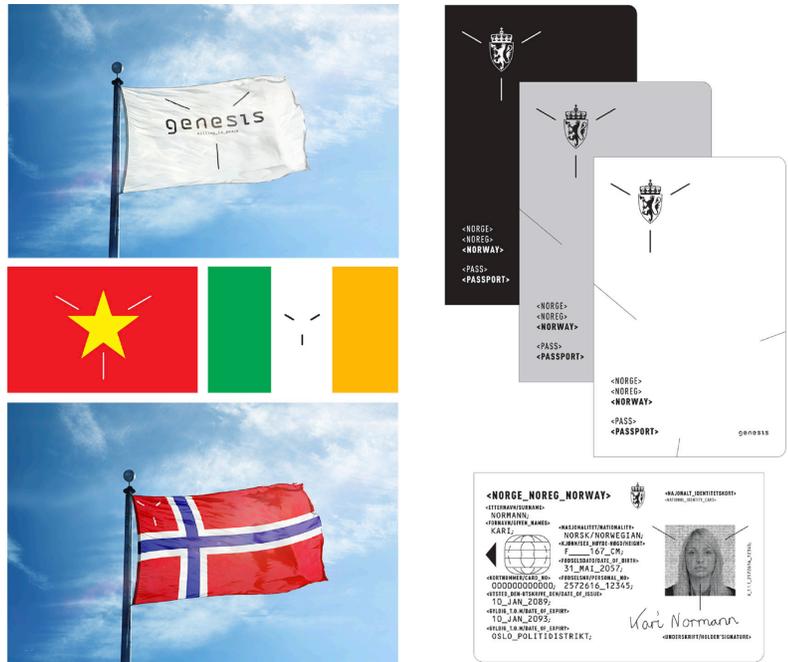


Figure 106. Visual identity design for Genesis by Mads Øvergaard, 2015.

For the graphic designer Francisco Laranjo, this approach to design presents severe flaws. Laranjo considers that Speculative Design prioritizes the production of objects for exhibitions, galleries and museums instead of being a research and emancipatory tool (Laranjo 2016, 26). In this sense, Speculative Design would be directed by and for a small public that has privileged access to artistic or academic institutions. This situation would mean the uselessness of the paradigm since it does not have impact outside of its usual circles. In addition to this, it is a practice carried out almost exclusively in developed countries, which does not consider the plurality of classes and cultures (Laranjo 2016, 27). On the contrary, it marginalizes them from their discourse by proposing hypothetical issues such as the scarcity of natural resources and large-scale famine —e.g. *Republic of Salivation*; while in the global south and East Asia these situations are everyday realities. However, for the American researcher and educator Cameron Tonkinwise the Eurocentrism

of Speculative Design is not an inherent aspect of the paradigm, but a “pernicious failing of all design, design education and especially design history” (Tonkinwise 2016, 24). This posture can be understood as an invitation to reconsider the roles that design should or should not develop in contemporary society;

Design could become pure research, freed of the demands of production, price or brand. Designers could stop listening to anything as tiresome as a brief, or a budget, or a marketing strategy, and get on with the altogether more congenial task of speculation and criticism instead (Sudjic 2015, 132).

In this aspect, there is an interesting meeting point with some modernist and social problem-solving approaches such as User-Centered Design. In the previously addressed segment corresponding to this paradigm, this same notion was mentioned in a reference by Argentine graphic design educator Jorge Frascara:

It is not sustainable to continue just reacting to clients’ request for design interventions. It is necessary to consider the discovery and definition of physical and cultural problems as an essential part of design (Jorge Frascara 2003, 35).

There seems to be a conceptual reiteration based on similar principles from apparently opposite paradigms, but approached in different manners. For this reason, Speculative Design should not be understood as a colonialist or ultimate approach to other forms of design. “This activity can sit beside mainstream design rather than replace it. The challenge is to keep evolving techniques that are appropriate to the times and identifying topics that need to be highlighted, reflected on, or challenged” (Dunne and Raby 2013, 44).

2.3. Conclusions

Following the extensive information gathering throughout this work, it is pertinent to note some final thoughts based on observed behaviors.

1. Design is heterogeneous.

The most immediate and self-evident reflection is the fact that, throughout the history of design, there have been multiple ways of practicing and theorizing about design. Not only several interpretations but also antithetical ones about what design is or should be, what kind of results designers should aim to, and what is the best approach to achieve those results

10. Eventually, this is a paradox since this statement is also placing design within a concrete perspective.

with. Design, in its broadest definition, cannot be fitted into conceptual models or methodological approaches belonging to a singular ideology¹⁰.

Furthermore, each particular paradigm and its procedures are unable to position themselves on top of the other ones as being more appropriate. This is because each paradigm responds mainly to their own interests without being able to really consider the ideals of all other paradigms. In fact, it would be too much to ask that each paradigm take charge of its internal issues and also to deal with issues of the other paradigms and thus to extend itself as a universal design philosophy. It is impossible to reach a unanimous agreement due to this heterogeneity of design.

Ultimately, any attempt to establish one form of design as universal only reveals itself, unknowingly, as insufficient to do so. At the same time, it is irrelevant and even harmful to the holistic concept of design. Some postures would end up being more affected than others. The only way of talking about holistic design—and simply “design”, without any labels—is to refer to it as the body of knowledge that is aware of each individual paradigm and their modes of interaction, instead of starting from the philosophy of a singular paradigm and using it to define the whole body of knowledge.

This may seem like an authoritarian position—which would suppose a dangerous discourse since the ideas of the previous paragraphs seek to discredit this type of perspectives. However, it should be kept in mind that the main interest here is rather to include and empower all forms of design at the same conceptual level.

In this sense, if all of the design paradigms are at the same conceptual level or validity, how should designers approach a design project? Should they adopt the processes and methods from all the different paradigms? The answer is no. This notion is reflected in the next succinct and correlated conclusion:

2. Design is context-dependent.

The designer must refer to each particular context in which a design intervention is needed or requested and then determine the appropriate approach according to that specific case. Each circumstance is unique.

For designers to decide which approach is the most appropriate for each context, it is essential that their education is particularly based on principles of theoretical and practical diversification. If their training focuses on developing competencies of a single nature, the range of possible outcomes or results may be compromised. Consequently, future research efforts would focus on strengthening a limited group of approaches or paradigms.

3. Design is expansive.

New proposals in design research and practice are speaking about the discipline as the sum of its various specific areas of knowledge. That is, new paradigms are not being built for and by separate domains like, for example, industrial design or graphic design. Contemporary development is proposed as trespassing all the traditional design domains including industrial design, graphic design, interior design, fashion design. Each domain is a concept that expands its terrains towards the other domains. Thus, forming a body of joint knowledge —referred to as Design— that even surpasses or exceeds itself towards the domains of other professions including software design, sound design and urban design in engineering and architecture to name a few. Although this situation is not novel, it is more common to see that the limits between different disciplines and professions become increasingly diffuse.

This condition does nothing but enrich design practices and research. However, it also hinders the discussion within a particular domain — like graphic design, in this case— without having to be involved with several theories of other areas. This has already happened several times during this research when including theories belonging to fields such as sociology, psychology, anthropology, among others. In this sense, contemporary design is particularly transdisciplinary.

4. Design is labyrinthine.

The expansive condition of design towards several fields of knowledge is what makes it more difficult to traverse and comprehend. With the variety of alternatives and postures to approach design, its study and understanding at a macro-scale is equivalent to being trapped in a labyrinth. Although a labyrinth is popularly known for having one entrance and one exit, in this example the metaphor would correspond to a labyrinth with multiple entrances and exits. That is, there is no single way to approach design, and there is no single solution to understand it.

Furthermore, each passage or path in this labyrinth has its own ramifications that all also interconnect to ramifications of other passages. The researcher continuously goes back and forth in the inquiry trying to discern patterns for theory construction. There is no linear scrutiny process. In this sense, it is also possible to think of the hypermedia configuration. Hypermedia is a non-linear medium of information interconnected in such a complex way to expose the details of a topic or phenomenon. This conglomerate of information and knowledge can grow indefinitely, gradually including more material in the form of text, audio, graphics, video, and hyperlinks (H. Nelson 1965, 42). One of the best-known examples of hypermedia is the World Wide Web.

Similarly, the philosophical concept of the rhizome developed by Gilles Deleuze and Félix Guattari is an interesting model to also understand the

complexity of design and its holistic activity. The rhizomatic concept describes a system of knowledge representation and interpretation in which theory and research are produced through multiple data entry and exit points that do not address linear or hierarchical subordinations (Deleuze and Guattari 1988). It is based on the botanical rhizome that has multiple and interconnected ramifications growing indefinitely over time.

Therefore, it is not uncommon that some issues in this dense research could not be deeply addressed. While others were partially developed, and some directly not included. Although this theoretical framework ends with Speculative Design, a concept coined in 2013, there are several new paradigms being proposed in recent years like Transition Design, or Design Justice—despite DJ did had a brief mention within Participatory Design. Recent paradigms that were not actively involved because of their scarce theoretical and practical development, which should also come from a variety of sources and researches both advocates and detractors. For the moment it is best to wait a few more years to see the impact that these and other new approaches will have on the ways of doing and thinking about design. This diversity of approaches further evidences the low feasibility of the conception of a universal paradigm for the discipline. Any paradigm that pretends to extend its ideals towards a universal approach reveals itself as a paradigm that is naive and unaware of the history of design.

However, this diversification in design can also be dangerous. The management of an overly broad conceptual diversity can lead to a complete state of inaccuracy, uncertainty and complete chaos. It is common to find terms that for instants seem confusing or that do not have relevant conceptual differences that justify their usage. Quick examples of this diversity are some of the terms used related to the Us-

er-Centered Design paradigm: User Experience (UX), User Interface (UI), Interaction Design (IxD), Human-Computer Interaction (HCI), Human-Centered Design (HCD), Activity-Centered Design (ACD), Goal-Directed Design (GDD), Contextual Design (CD). As well as terms related to Critical Design: fiction design, futures design, antidesign, radical design, design for debate, discursive design, design art, futures-caping. And there's more to where these came from. Regularly, they get all mixed up and interchanged. The reasonable thing to do is to maintain some balance and not to disperse ideas too much in an excessive terminology, which sometimes can produce too much chaos and confusion.

5. Design is tripartite.

There seem to be three main postures in design theory and practice development. The first one is framed within the modernist production discourses conceived from the industrial revolution through rationalism and functionalism. The rapid growth of industrial societies strengthened capitalism and consumerism, thus establishing these production systems as global dominants to this day. Design works mostly within this framework.

There is a second path which basically renounces to operate within the structures of the previous posture. Known as Postmodernism, it concentrates its efforts to propose alternatives for the seemingly expired Modernism. According to this perspective, Modernism would be cutting off part of the potential and production of design. This dichotomy is equivalent to the proposal—mentioned earlier in this research—entitled *Work in progress* by Anthony Dunne and Fiona Raby. Their project basically divided design activity in affirmative design and critical design. The first one corresponds to the functional design whose success is measured according to how well it is sold, being this

kind of design the predominant and thus inherent to status quo. While critical design is proposed as the counterpart of affirmative design, and critic of its procedures. It is also related to the historical confrontation and constant alternation between the Modernism and Postmodernism dichotomy. To cite previous paradigms, there was in the last century the International Typographic Style and, later on, the *Anti-design* ideology appeared. In current times, there is Design Thinking and Speculative Design. However, dichotomies in design may not be an accurate answer to understand the complexity of its functioning. In this sense, it is necessary to establish a meeting space between these two visions.

Therefore, the third posture does not deliver its own mindset, strictly speaking. That is because it actually constitutes the development in design that, in some way, operates from the two previous postures. Although thinking about a joint activity may seem contradictory, there are particular contexts in which this may occur. Designers should also consider the implementation of mixed methods and perspectives for the study of phenomena, the creation of products or services, and the transition of societies.

Either way, there is a kind of reiterative consensus that design, and the ways in which it is researched and practiced, must take a new lease towards deeper and meaningful purposes for the discipline itself and humankind.

DISCUSSION
DISCUSSION

Design emerged as an agent of modernism (Mazé 2016, 24). Its project was to improve the production processes of the everyday artifacts through a series of principles regarding formal, technical and economic concerns. Soon, the principles of modernism —and western cultures— became the universal standard for design, its development processes, and quality values. From the modernist perspective, design is a universal practice that considers people as having the same characteristics in interests, concerns and behaviors. This being the cause that justifies the submission of such universal principles in design:

How can one person work across so many different domains? Because the fundamental principles of designing for people are the same across all domains. People are the same, and so the design principles are the same (Norman 2013, 239).

Since it was its origin context, traditional design education keeps these modernist values ingrained as its perpetual heritage. In industrial and post-war societies such perspectives were relevant and appropriate to the context. It is not about throwing away every claim of modernism —which is saying too much. However, over time, modernist design reached a stagnation point for addressing capitalist and consumerist concerns by focusing on exterior features attractive to the purchaser. In the long term, traditional design education fell into three definite statements —today seen as myths:

a) Design is good; b) Design makes people's lives better; c) Design solves problems. Of course, design can be and do all of these things but it has become so intrinsically linked to the complex systems of commerce and innovation that it has essentially been reduced to a novelty machine [...] Once these myths are exposed, a new form of design becomes possible —more responsible, more intellectual and more creative. A design that embraces complexity, understands its history and essentially asks a lot of questions (Auger 2016, 16).

Problem-solving to get the ultimate correct solution, and the pursuit of timeless that supposedly transcends its own era are the clichés responsible for the banality in the majority of graphic design (Keedy 2015) as models made to emulate conventions of “good design”. Furthermore, problem-solving is not the right term to define design since the orientation of every profession is pretty much the same. It is not exclusive to design. Hence, defining it through an all-professions condition results inaccurate (Tejeda 2006).

Designers need to let go of these modernist myths that have established design as a novelty machine for commerce and innovation,

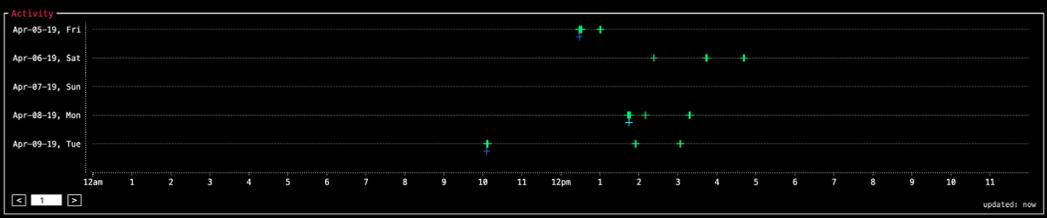
otherwise there is a risk of monopolizing the research and practice of design. Especially today, where design is seen as a tool for addressing mainly commercial purposes in the information age through social media. Nowadays, there are several websites for buying followers, likes, and bots that simulate human interaction thus artificially increasing the number of visits to position messages and influence people. Data is more profitable than ever.

For example, the application *Data Selfie* exposes the information that Facebook extracts from the user's activity in the website. It operates in the background while the website is in use and collects data about what the user posts, watches, clicks, likes and also the amount of time spent in every post and page. Through a series of natural language processing and machine learning algorithms, the application creates a detailed profile about the user's behavior regarding personality prediction, religious and political orientation, activity and shopping preferences, among other information (Figure 107). The summary of the information extracted from the author of this research reads: "You're a laid back, liberal male who eats out frequently and doesn't prefer style when buying clothes and is less satisfied in life than most."

Figure 107. Data extracted from the author's profile on Facebook, by Data Selfie, 2019.

\$ Date Selfie **Andres**
 \$ Summary You're a laid back, liberal male who eats out frequently and doesn't prefer style when buying clothes and is less satisfied in life than most
 Share via Facebook or Twitter

\$ Online a few seconds ago
 \$ Total 44.72 hours (since May-18-18)
 \$ Legend looked _ liked _ link clicked _ typed



Top friends (10 of 125)

Time spent (in sec) on friends' posts

2696	
2035	
1054	
967	
835	
820	
810	
683	
544	
543	

updated: now

Top pages (10 of 317)

Time spent (in sec) on pages' posts

1474	
1301	
1146	
615	
475	
448	
408	
368	
354	
299	

updated: now

Top Likes (10 of 32)

Likes for posts, photos or videos

4	
3	
3	
2	
2	
2	
2	
2	
2	
1	

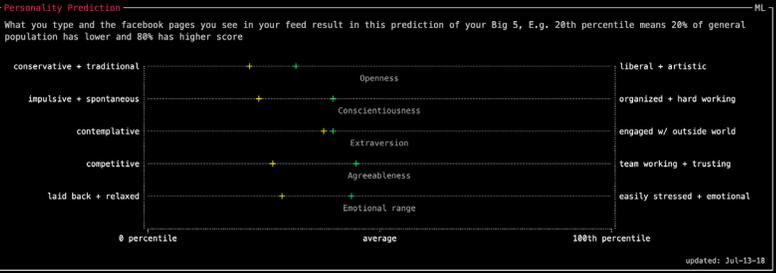
updated: now

Categories NLP

Relevance (0 to 1) of general categories from recent content that you have looked at, they aren't necessarily directly referenced

- 0.47 automotive and vehicles / motor shows
- 0.44 automotive and vehicles / boats and watercraft
- 0.38 art and entertainment / theatre

updated: Jul-13-18



Other Predictions ML

Based on pages in your feed, the percentile is in relation to the general population

- 54th percentile Intelligence
- 43rd percentile Life Satisfaction
- 71% Male (psychological gender)
- 48% Leadership

updated: Jul-13-18

Shopping Preferences ML

Based on what you type your personality (Big 5), values and needs are predicted and these preferences can be produced

- Not likely to prefer quality when buying clothes
- Likely to prefer style when buying clothes
- Likely to prefer comfort when buying clothes
- Not likely to be influenced by brand name when making product purchases
- Not likely to be influenced by product utility when making product purchases
- Not likely to be influenced by online ads when making product purchases
- Not likely to be influenced by social media when making product purchases
- Not likely to be influenced by family when making product purchases
- Likely to indulge in spur of the moment purchases
- Likely to prefer using credit cards for shopping

updated: Jul-13-18

Health + Activity + Other Preferences ML

Based on what you type your personality (Big 5), values and needs are predicted and these preferences can be produced

- Not likely to eat out frequently
- Not likely to have a gym membership
- Not likely to like outdoor activities
- Not likely to be concerned about the environment
- Not likely to consider starting a business in next few years

updated: Jul-13-18

Data Selfie is a valuable project to become aware of the scope and sequels that design can represent in contemporary societies. Definitely, design is not the only responsible that has placed societies in these alarming situations, but it is undoubtedly an important influencing factor in shaping perceptions and behavior.

Perhaps this is not surprising – design today must redefine the premises and purposes of the discipline beyond its Industrial Age inception and logics, e.g. mass-production, market consumption, economies of scale, corporate protectionism, etc. [...] Increasing reflexivity is especially at stake for “post-industrial” design. Design today engages in society in unprecedented and powerful ways, yet our traditional education is still based on the Industrial Age concerns about material production and consumption (Mazé 2016, 22).

Nonetheless, what are the other purposes that graphic design should aim to? If designers are to refuse modernist approaches and traditional design education, then what are the paths to follow? There is such much more that graphic design can accomplish. In fact, alternatives have been explored for several decades through postmodernist approaches, just as modernist perspectives have kept evolving for the new technologies. Currently there are so many perspectives, visions, models and paradigms of design being proposed. The exclusively modernist approaches do not longer reflect the activity of many design researchers and practitioners.

Today, designers are operating within the academia, art world, public realm and developing world claiming a place for design in relation to a range of “other” people, practices, values and futures than those traditionally served by design (Mazé 2016, 22).

The contemporary designers’ job is to reflect and discern the discourses that enrich their activity and that of the whole discipline from a holistic posture. In this sense, this research makes use of dialectics as an interesting resource to stimulate the critical analysis of pre-established postures and to present an integral synthesis of graphic design development. This research tracks the contemporary graphic design practices and theories, and exposes alternative perspectives to the expired universal notion of the modernist ideology. This is a particularly complex labor since it implies delving into decades of design research and practice. However, it is possible to establish a set of primary notions in a project proper of unceasing research.

Understanding what design is and what distinguishes it from other human activities, its scope, purposes, methods and effects, has been of particular interest to many researchers and practitioners from within

and outside the discipline. The poster designed by Michael Bierut in 1992 for the American Center of Design 100 Show is an allegory of the collective interest in design and also a strong stimulus for the present research (Figure 108).

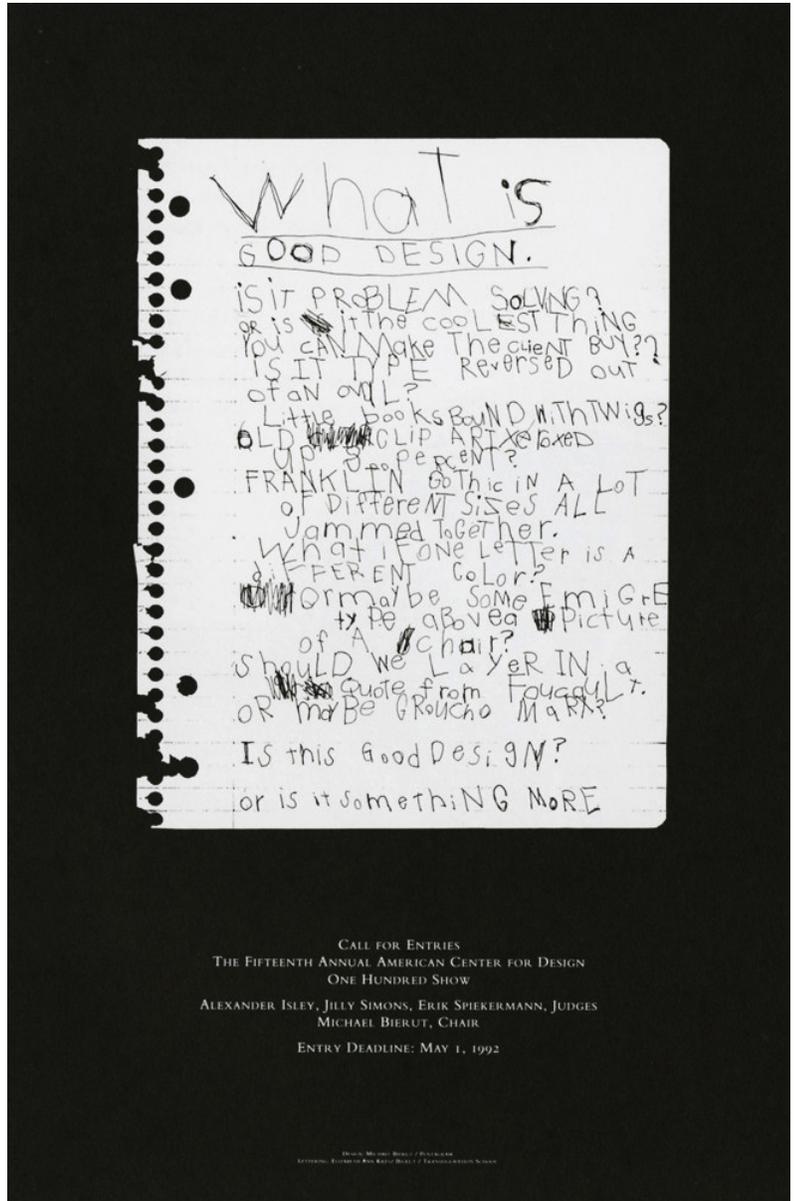


Figure 108. Poster design for the American Center for Design 100 Show, by Michael Bierut, 1992.

When researching design as the object of study, there is a core idea to notice: Design is a *fuzzy concept*. That is, a concept whose boundaries of application can change considerably according to certain conditions or contexts, instead of being strictly fixed. A fuzzy concept is vague to some extent, lacking a fixed and precise meaning, without being, however, totally meaningless or uncertain (Dietz and Moruzzi 2010). Its conceptual accuracy is achieved only through further specification of the context in which the concept is being used. In this sense, design can submit several definitions depending on the context it is being theorized and practiced. It involves so many perspectives that in the end design can be a mess. Besides the paradigms and concepts studied in this research, there are numerous additional concepts like eco-design, sustainable design, green design, environmental design, socially-responsible design, inclusive design, design for the other 90 percent, design for need, reflective design, interrogative design, emotional design, conceptual design, contextual design, slow design, dissident design, task-centered design, transformative design, universal design, among many others (Tharp 2009). This diversification of design, indeed, complicates the study of the discipline's activity. It constitutes a sort of labyrinth through the diverse existing postures. However, it is a labor that needs to get started if graphic designers want to better understand the scope of the discipline in contemporary societies. First is to inquiry some of the main paradigms, and describe their processes, methods and results. During the information gathering, behavior patterns start to emerge. Once this process is done, it is pertinent to propose a model to inform designers about the main roles of such design paradigms.

One way to accomplish this is categorization. To work on categories of graphic design development is a useful medium to achieve understanding of its activity. The categorization is a mindful exercise to apprehend knowledge (Langer 2014). Nevertheless, it is fundamental to keep thinking about design as a fuzzy concept. Hence, any categorization developed in this research also matches to the fuzzy nature of design. It cannot be established as an inflexible theory. The diverse categories are able to exist simultaneously within a single paradigm or, to be more accurate, a single graphic design project. It is helpful to remember that, after all, accuracy of fuzzy concepts is achieved only through context description of the study object.

3.1. The four fields of design

At the end of the retrospective design paradigms' inquiry, it was possible to propose a provisional diagram with some of the main objectives in the twentieth century graphic design activity (Figure 66). It highlighted the design activity in three ways: Pure, applied and combined. Then the proposal exposed categories at a deeper level of specificity: exploratory, expressive, cultural, educational, communicative, political, social, and commercial. This first scheme is a helpful starting point to build a more accurate one for the holistic activity of design. Including to it, of course, the visions of contemporary paradigms.

The book *Discursive design: critical, speculative, and alternative things* published in 2018 by Bruce Tharp and Stephanie Tharp presents a proposal for the categorization of design activity. The development of the categorization theory in the book is rather short since their main interest is, as the book title implies, discursive design —mainly concerned with speculative and critical visions for design. And although the authors present their proposal for categorization from and for industrial design, it is reasonably compatible with graphic design and, therefore, with the purposes of this research.

The Tharps' proposal formulates four categories: commercial, responsible, experimental, and discursive (Tharp 2018). Before describing them, it is essential to insist that these categories are not fixed concepts. As was outlined before, any categorization of graphic design activity is correspondent to the fuzzy essence of the discipline itself. Regularly, a design project has different purposes at the same time and also at different intensity scales. In any case, if it is necessary to establish the purposes of design in its purest states, these four fields constitute an interesting approach.

3.1.1. Commercial

In this category, graphic design research and practices are concerned with the economic benefit that result from its activity. Its proposals are driven by and for the market. It is one of the activities most traditionally addressed in design, including in contemporary development. Hence, it constitutes and reinforces the status quo in the discipline. Furthermore, this concept corresponds to what Anthony Dunne and Fiona Raby denominate as affirmative design. Ultimately, the designer in this category is concerned with creating desirable products and promoting their consumption in order to generate profit from it. The purpose of commercial design is to make money, and its success is measured in the amount of sales achieved. Its main fields of study and action would be the marketplaces.

3.1.2. Responsible

This category is referred to socially responsible design. Traditional design has also an extensive development in this field, perpetuating to this day. Its proposals are driven by and for humanitarian service to those people largely ignored by the market —e.g. minority communities, and environmental issues. The designer in this category is not concerned with generating profit in the long term, but to serve the disregarded. The purpose of responsible design is to help the needy, and its success is measured by its contribution to the disadvantaged. Among its main fields of study and action would be the daily context of the people in need and some assistance establishments like, for example, hospitals, charitable foundations, among others.

3.1.3. Experimental

When it comes to creating form and shape, traditional design has mainly adopted what the market and social causes determine. Instead of that, this category is concerned with the exploration, experimentation and discovery of the form in aesthetic and communicative terms. It has no greater interest than experimenting with the form, the capabilities of the materials, the techniques and the tools. Since it is more concerned about the aesthetic aspect, it is possible to talk about design as art from this category —not to say that aesthetics is the only or strongest interest in art, and yet it is one of its most affiliated features. The purpose of experimental design is to explore with the form, and its success is measured in aesthetic terms and technical involvement. Among its main fields of study and action would be the graphic designers' studios and their creative communities.

3.1.4. Discursive

Graphic designers who act with a discursive purpose are concerned with communicating ideas that provoke debate within and about society. Its proposals are driven by and for a criticism and questioning posture. Anthony Dunne and Fiona Raby refer to it as critical design —as a direct counterpart of affirmative design. Although Bruce and Stephanie Tharp place critical design within discursive design along with Speculative Design and other related practices —such as adversarial design, anti-design, design fiction, radical design, reflective design, un-design, etc. The designers in this category are concerned with increasing awareness

about the prevalent commercial and consumerist mechanisms in today's societies. It is more related to rhetorical discourses and therefore, together with the experimental purpose, it is subject to controversy due to the uncertainty of whether discursive design is directly art or not. In any case, the purpose of discursive design is to provide questions and criticism, and its success is measured by the rhetorical depth of its discourse. Among its main fields of study and action would be exhibitions, symposiums, galleries and academic communities.

3.2. Purposes of graphic design

Although theoretically these four categories may seem opposite and incompatible, the Tharps recognize the practical interaction between two or more purposes at the same time in the same design project. For example, in relation to the two most contrasting fields; it is possible that a designer proposes a project with a discursive interest and that, in the end, also produces a certain amount of economic and commercial gain. It is entirely feasible. However, such profit would have to be generated as an unintentional consequence of the designer. Or, at least, it could be intentional but not one of the main motivations for the realization of the project. Bearing this in mind, it is possible to represent the interaction of purposes in graphic design activity through a four-set Venn diagram (Figure 109).

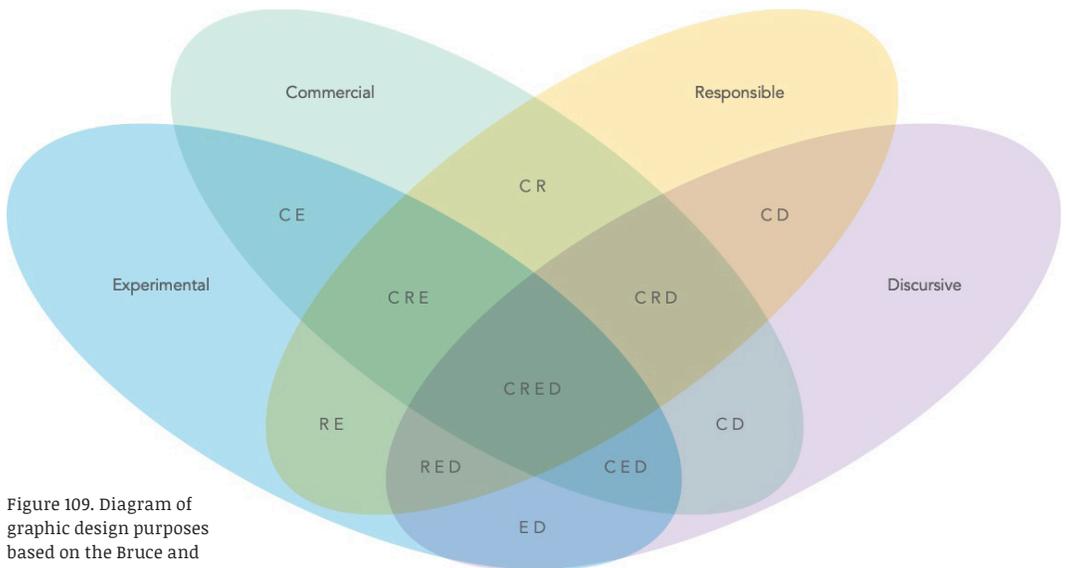
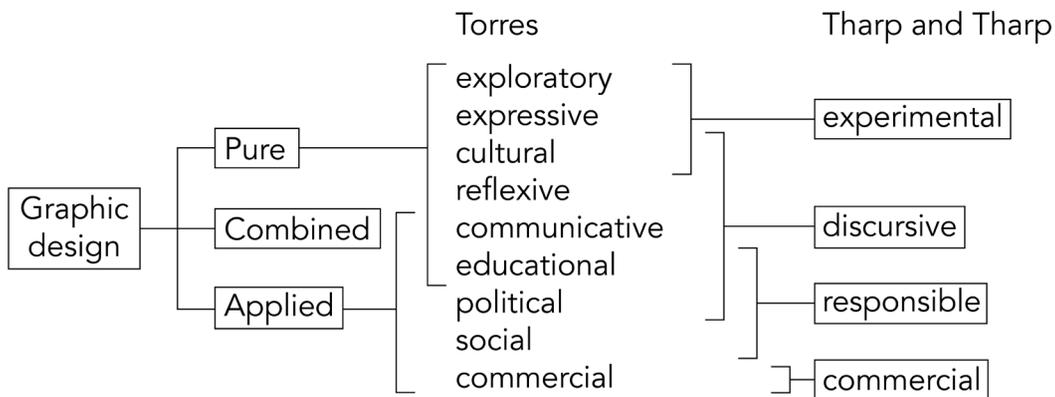


Figure 109. Diagram of graphic design purposes based on the Bruce and Stephanie Tharp's theory, by Andrés Torres, 2019.

Moreover, it is possible to reveal new insights when certain categories meet each other. In order to expose this idea more deeply, it is pertinent to see how the Tharps' categorization relates to the purposes exposed in earlier chapters of this research (Figure 110).



As the graphic shows, there are several purposes belonging to the same category. Such purposes imply a breakdown of the categories to which they belong. For example, the experimental category has two purposes pertaining only to that category: exploratory —understood as the designers' mere curiosity to play with form and its aesthetic capabilities—and expressive —more related with the designers' personal expression, their thoughts and feelings¹¹.

Furthermore, there are purposes belonging to different categories at the same time. An example of this is the cultural purpose that belongs to both the experimental category and the discursive category. This refers to the overlap that may occur between different categories and that was previously exposed (Figure 109). In short, other purposes may arise within the same category and also in the interaction between categories. In this sense, it may seem that the Tharps' categorization could go further to discern the activity of certain projects that operate with more specific objectives. Subsequently, it would contribute to better understand the activity and scope of graphic design in broader terms.

The first proposal starts from a more general state for the projection of graphic design and establishes three broad purposes: pure purpose, combined purpose and applied purpose. In this structure, there is a sequential transition from design as formal exploration to design as profit generation. From this point, it is possible to conceive a more specific categorization to show the spectrum in graphic design activity: exploratory, expressive, cultural, reflexive, communicative, educational, political, social, commercial.

This categorization aims to inform graphic designers about the plurality of approaches they can adopt for a freer and more conscious exercise of the

Figure 110. Graphic design purposes and its relation to the Tharps' categorization.

11. It may be helpful to think about this in more practical terms. Consider a designer who uses her or his state of mind to create a typeface. Through principles of basic composition such as position, scale, direction, color, and texture designers can evoke their sadness, joy, anger, etc. It does not matter if the public does not directly relate those states to the result. Undoubtedly these exercises are within the scope of the graphic design and its production processes. Ultimately, it can be seen as if expressing emotions through graphic design was the brief.

discipline in practices and research —emphasizing alternative approaches to those that historically have been established as inherent to graphic design. Once designers have a greater awareness of different interests, it is possible to have greater guarantees for the future development of graphic design. A development based on all pure, applied and combined purposes.

Graphic designers have been working in such fields for several decades. In fact, their historical and contemporary development has informed this research. That is why, once proposed a categorization for a more detailed understanding of graphic designers' activity, it is pertinent to see how such categorization can reflect the purposeful diversity within certain projects. For example, a radar chart can show the behavior of a graphic design piece with respect to the nine categories of purpose, and using intensity scales according to how much each project satisfies each category (Figure 111).

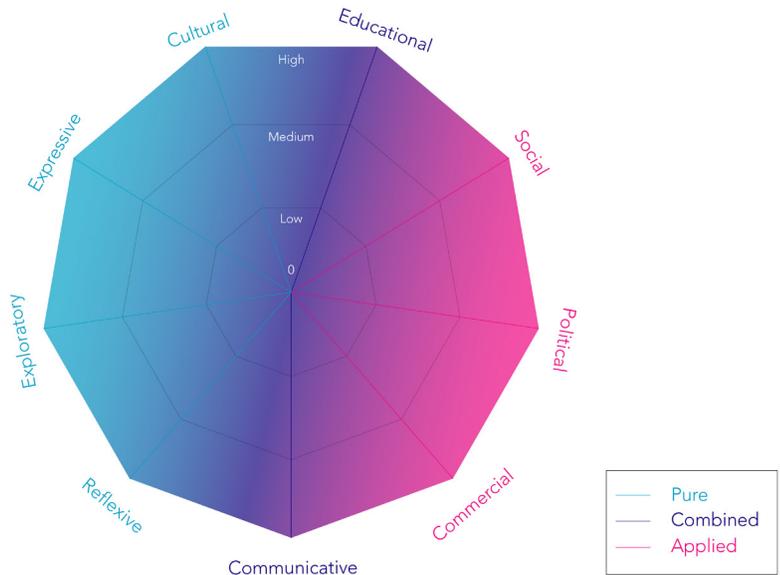


Figure 111. Base radar chart to show the purposes addressed within a graphic design project, by Andrés Torres, 2019.

From this base radar chart, it is possible to expose its application using as example the radar chart itself —or *purpose radar chart*— as a graphic design piece with specific purposes (Figure 112). The purpose radar chart uses form, position and color as tools to illustrate what are the purposes of the chart itself. Firstly, it certainly has an exploratory purpose regarding to form although it is not one of the most important ones. Instead the purpose radar chart has a more cultural purpose. It aims to make graphic designers reflect upon their own activity, to communicative the diversity of possible approaches to graphic design, and also to serve as a pedagogical tool. It does not seek for any personal expression of its author, to have any political connotation, to attend to a social cause, nor to generate profit.

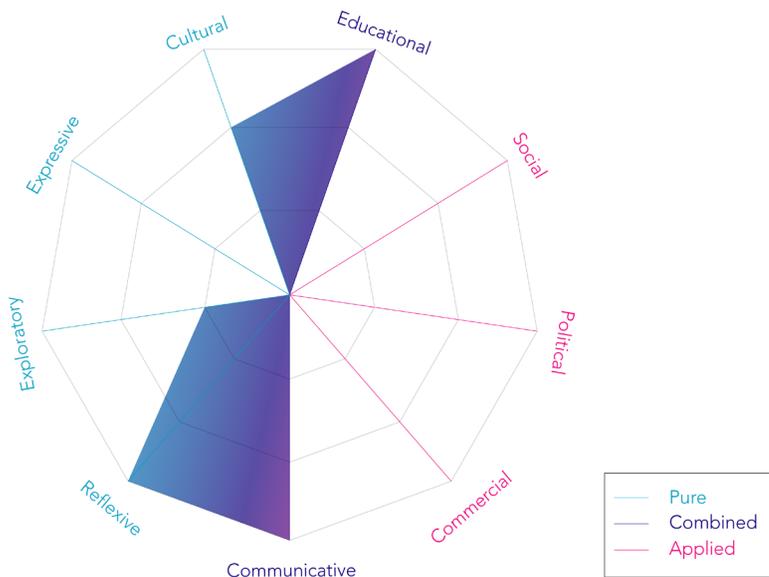


Figure 112. Purpose chart to illustrate the purposes of the chart itself.

Thus, it is possible to obtain an image that brings together several projects pertaining to the same design paradigm —such as those previously studied— to understand which the major interests of such paradigm at major levels are. It could be applied also to study the activity of a specific designer, or perhaps certain periods of space and time —e.g. which were the main interests for graphic designers during 2019 in Porto, Portugal.

However, for the interests of this research, it is relevant to tackle the design paradigms previously studied. With this exercise it is possible to propose a general map for the graphic design activity according to its addressed purposes. The more cases that are included in this exercise, the more the results reflect the real condition of a certain paradigm and, subsequently, of the discipline. Nevertheless, representing a broad sample of cases is an exercise that requires a considerable amount of time, and therefore should be carried out in future research. For practical purposes, this investigation is limited to representing the cases exposed during the theoretical framework of the same. That is, four cases for each of the nineteen design paradigms studied, giving a total of 76 charts. Once this exercise is completed, it is possible to set final conclusions for the investigation.

3.3. Map of graphic design purposes

The purpose of the radar chart is to expose the different purposes addressed in the projects presented in the previous chapters of this research. Each example is individually graphed, and then the four examples of each design paradigm are superimposed in a common chart —or

paradigm chart. In this way it is possible to see how the four individual examples relate to each other, and at the same time it exposes if there is a purpose that is more or less persistent within the same paradigm.

With this tool, designers are able to understand their own (or other designers') practice within the discipline, and it may encourage them to expand their activity to unexplored frameworks. Moreover, in the long term, this tool aims to contribute to the establishment of design as a heterogeneous activity with multiple purposes to address, and not only nor mainly those purposes that modernist and traditional discourses recognize as authentic and inherent values. The results obtained from each individual and group case are presented on the next pages.

The Arts and Crafts movement operated mainly for pure and combined purposes (Figure 113). It had a particular interest in the hand-crafted work and organic form in visual communication and everyday objects. However, the complexity in the production processes and the unaffordable prices of its works were outweighed by the practicality and effectiveness that the large-scale industry possessed.

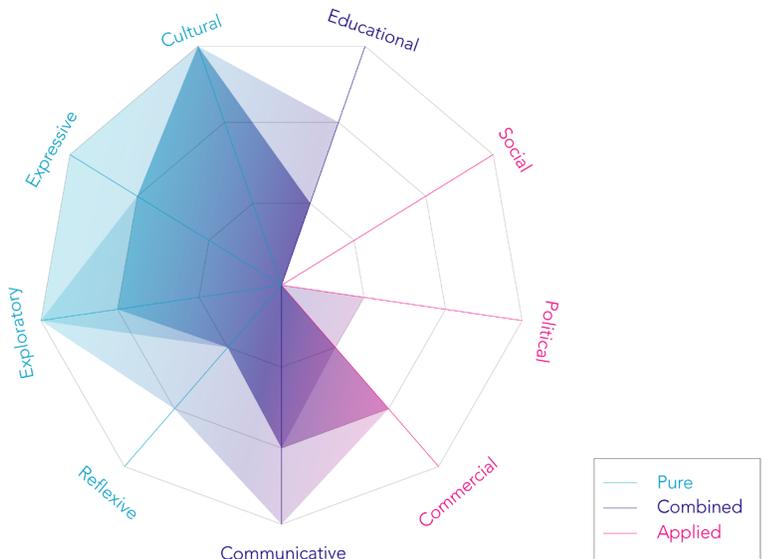
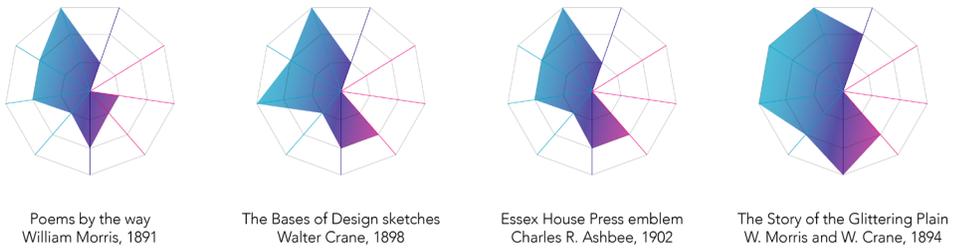


Figure 113. Purpose charts obtained from Arts and Crafts projects.

The Art Nouveau movement also ventured into the visual form as a cultural means of expression and the exploration of materials, since many of its practitioners were artists. At the same time such artists used their knowledge to address commercial purposes of different advertisers of the time (Figure 114). The discipline of graphic design as such did not exist yet, although the Art Nouveau movement is a fundamental antecedent.



Insel Verlag trademark
Peter Behrens, 1899



The House Beautiful
Frank Lloyd Wright, 1897



The Scottish Musical Review
The Four, 1896



Fifth Vienna Secession poster
Koloman Moser, 1899

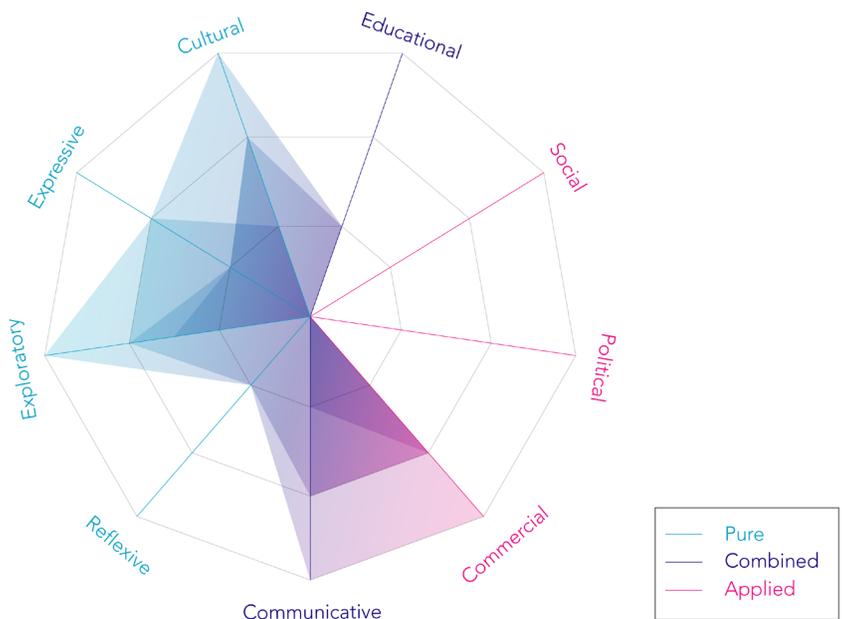
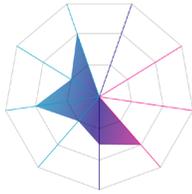


Figure 114. Purpose charts obtained from Art Nouveau projects.

The Werkbund and Gesamkultur movements emerged with similar perspectives and objectives, although they developed their work in different ways. In any case, the desire to establish rational values towards clear and direct visual communication prevailed. The interest in exploration and expression through form was reduced (Figure 115).



Celebration of Life and Art
Peter Behrens, 1900



Also Sprach Zarathustra
Henry van de Velde, 1908



Deutscher Werkbund poster
Fritz H. Ehmcke, 1911



Corporate identity for the AEG
Peter Behrens, 1907

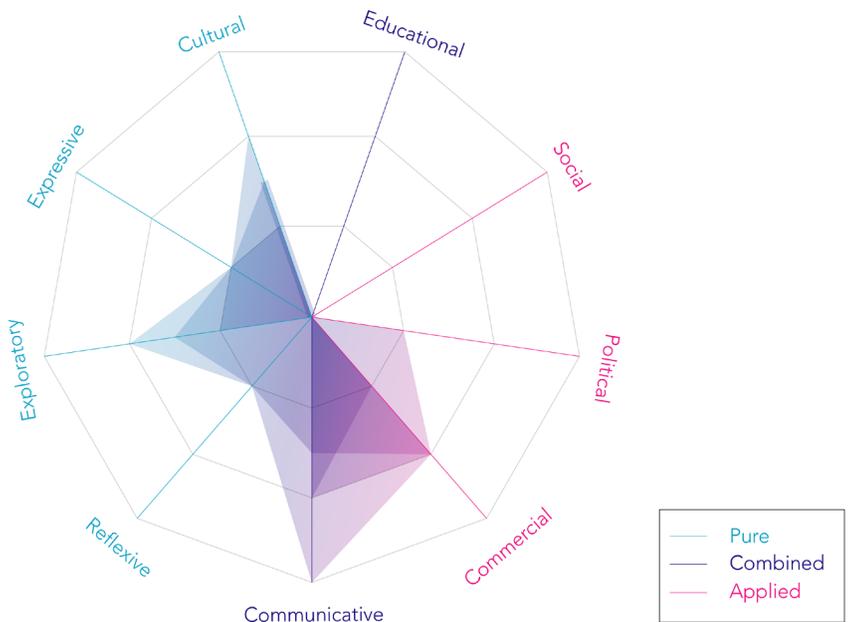
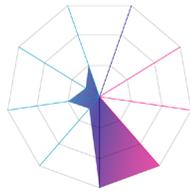


Figure 115. Purpose charts obtained from Werkbund and Gesamkultur projects.

With the development of the previous ideals and the first years of the First World War, graphic design was widely used as a means of accurate communication, with no opportunity for multiple interpretations or confusions. New Objectivity and Sachplakat used figurative graphics as the common practice, and the experimentation with the form was unusual (Figure 116).



Poster design for the AEG
Peter Behrens, 1910



Advertising for Manoli cigarettes
Lucian Bernhard, 1910



Military recruiting poster design
Alfred Leete, 1914



Poster for work exhibition
Ludwig Hohlwein, 1918

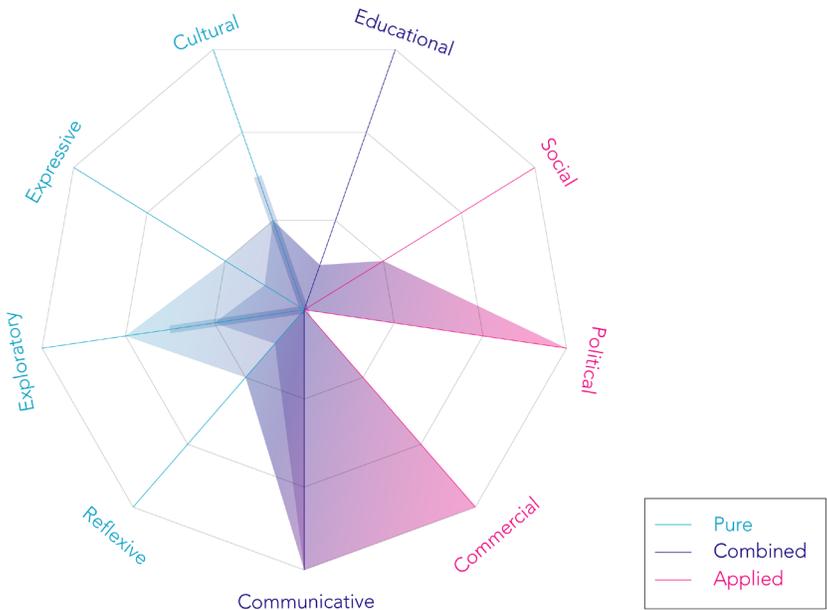
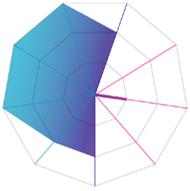


Figure 116. Purpose charts obtained from New Objectivity and Sachplakat projects.

Dada and De Stijl presented important ruptures of past ideals. Part of their proposals corresponded to the uncertainty that the war caused worldwide. Although in later years they also approached seemingly universal values through basic geometry and minimalist production (Figure 117).



Poem from *Les mots en liberté*
Filippo Marinetti, 1919



Dada Matinée design
Theo van Doesburg, 1923



Logo for the De Stijl magazine
T. van Doesburg and Vilmos Huszar, 1917



Advertising for the NKf
Piet Zwart, 1924

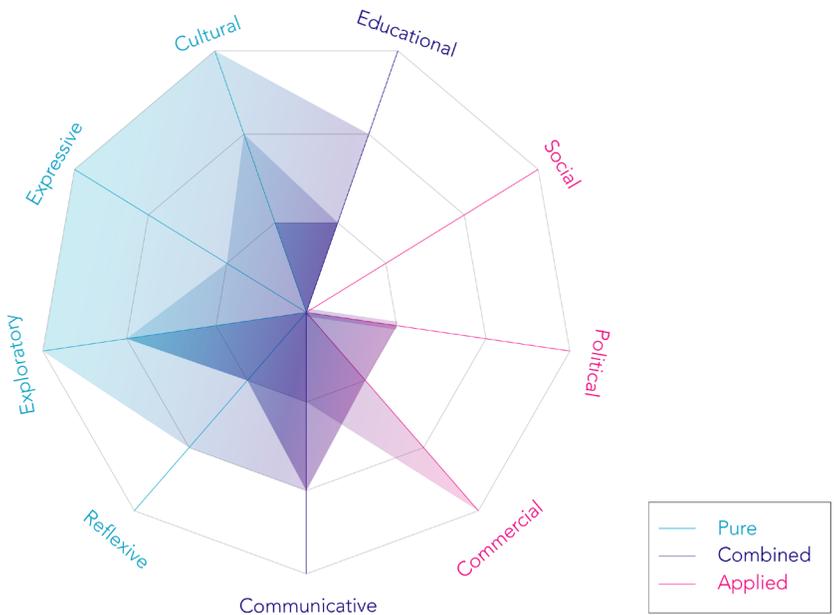
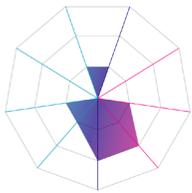


Figure 117. Purpose charts obtained from Dada and De Stijl projects.

In many ways, Bauhaus settled formal values for effective visual communication and graphic design. For that reason, it is considered one of the first schools of the discipline. However, several of its proposals differed greatly from the rationalist perspective it professed. In many cases they were projects that did not meet their objectives. In any case, with these projects, the Bauhaus experimented extensively with the form. Experiments without major function (Figure 118).



Bauhaus seal
Oskar Schlemmer, 1922



Cover for Elementare Typographie
Jan Tschichold, 1925



Universal alphabet
Herbert Bayer, 1925



Alphabet design
Josef Albers, 1926

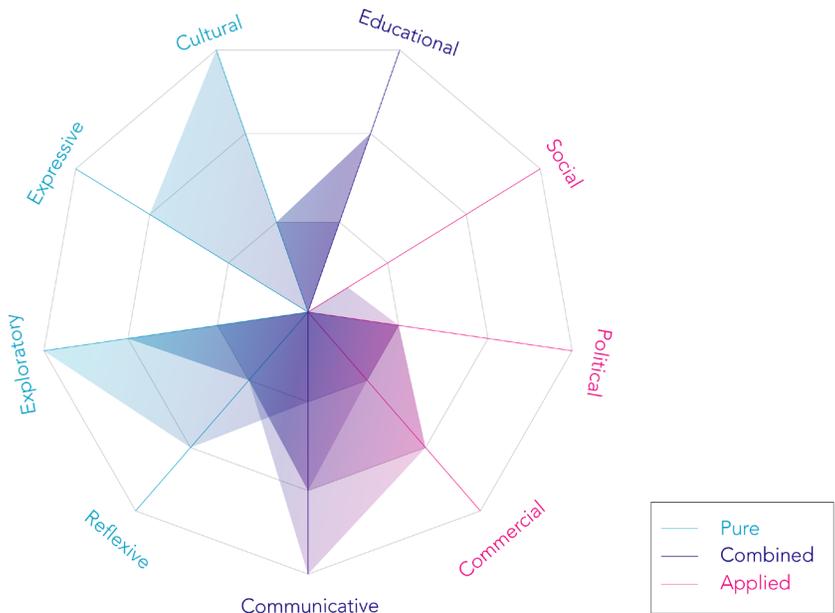


Figure 118. Purpose charts obtained from Staatliches Bauhaus projects.

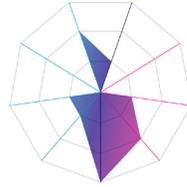
The International Typographic Style adopted the rational perspective to achieve universal communication through the simple, minimalist and direct form. In this way, several of its proposals were and continue to be used as pedagogical resources for the apprentice designer. The commercial purpose was also widely addressed in this paradigm (Figure 119).



Poster for a design exhibition
E. Mumenthaler and T. Ballmer, 1928



World Geographic Atlas
Herbert Bayer, 1953



Poster design for an exhibition
Josef Müller-Brockmann, 1957



Touristic poster design
Herbert Matter, 1934

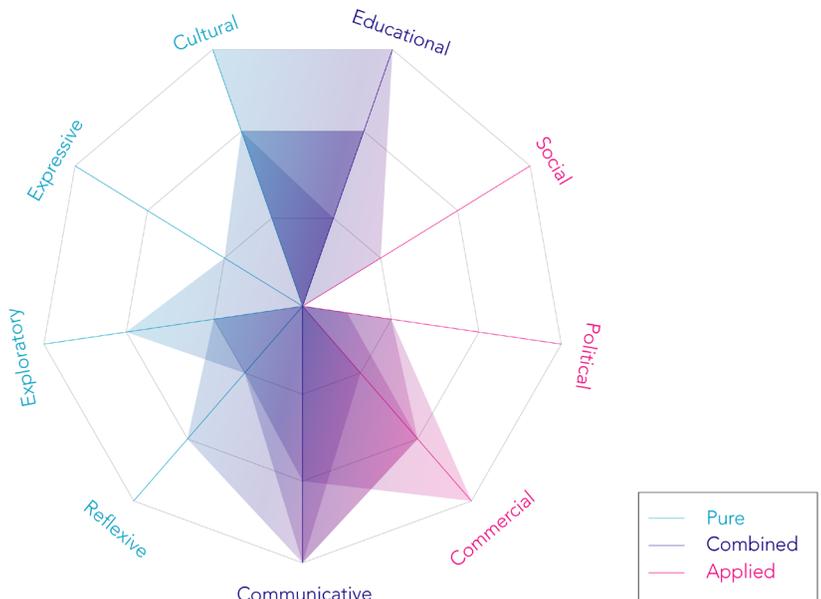


Figure 119. Purpose charts obtained from International Typographic Style projects.

After several pioneering designers moved to the United States, the production of graphic design reached a point of stagnation in which the expression and personal style were used as differentiators. Therefore, exploration and expression were widely requested by companies to distinguish themselves from their competitors (Figure 120).



Cover for Jazzways magazine
Paul Rand, 1946



Cover for Seventeen magazine
Cipe Pineles, 1949



Logo for Sudler & Hennessey
Herb Lubalin, 1959



Graphic Standards Manual for IBM
Paul Rand, 1972

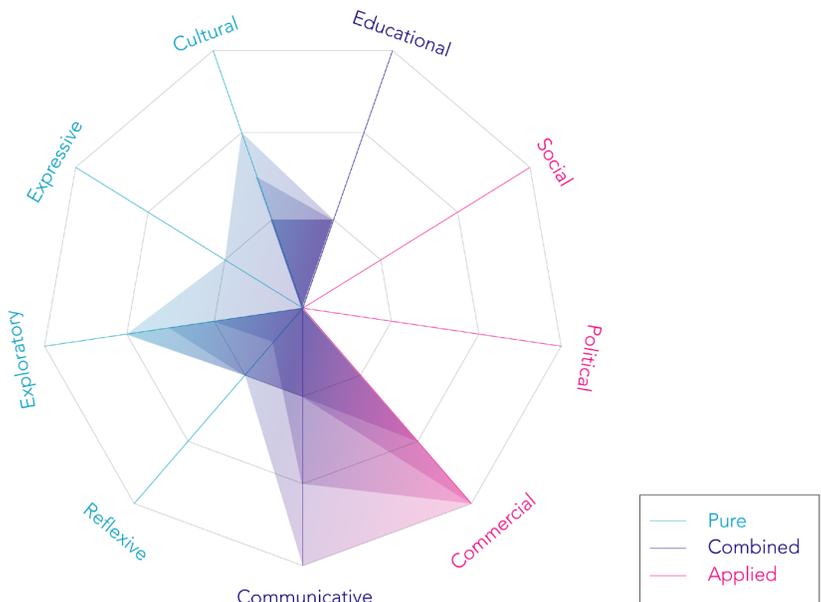
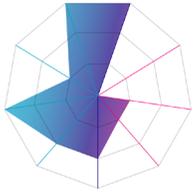


Figure 120. Purpose charts obtained from American Style projects.

The stagnation points to which many design paradigms and movements arrived in Europe led important designers to explore fields different to functionalism and rationalism. Designers began to sacrifice legibility and to test the communicative capacities of the form and its properties, and also used it to for combined purposes (Figure 121).



Typographic composition
Wolfgang Weingart, 1972



Advertising design for Union
Siegfried Odermatt, 1967



Advertising for E. Lutz & Company
Rosmarie Tissi, 1964



First Things First Manifesto
Ken Garland, 1964

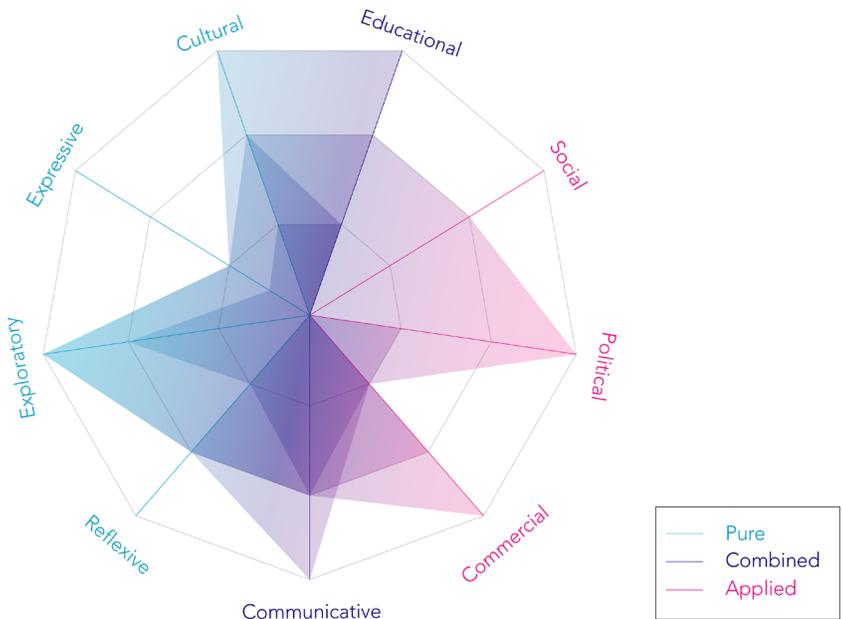
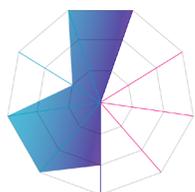


Figure 121. Purpose charts
obtained from Early
postmodern scene projects.

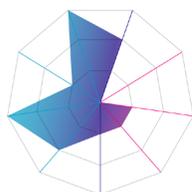
New Wave designers took exploratory development one step further. At the beginning this radical rupture was mainly developed by and for educational and cultural entities. It took some years to also be adopted to for-profit companies in various countries (Figure 122).



Typographic exploration
Wolfgang Weingart, 1965



Exhibition poster Kunstkreis
Wolfgang Weingart, 1977



Cover for Typografische Monatsblätter
Dan Friedman, 1971



Cover for the Wet magazine
A. Greiman and J. Odgers, 1979

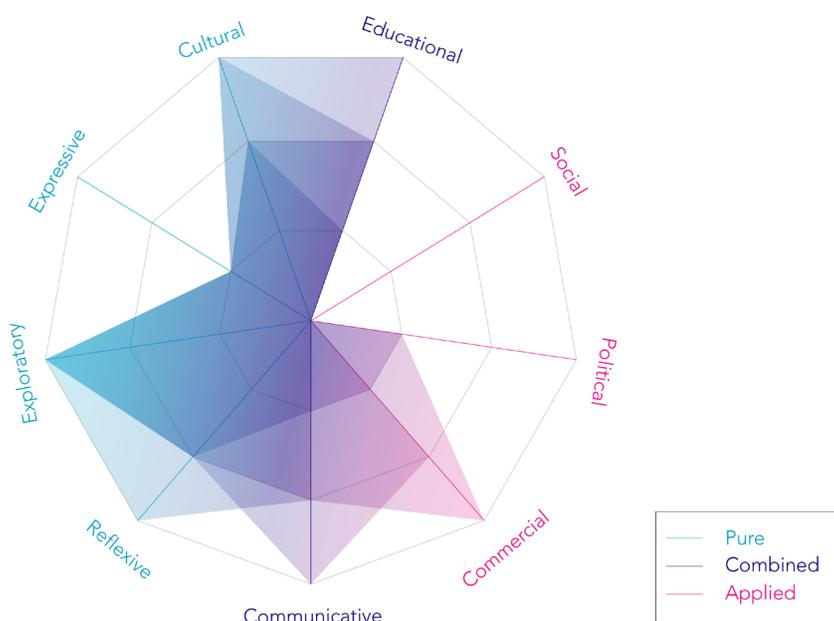


Figure 122. Purpose charts
obtained from New Wave
projects.

Postmodern development was widely accepted by Western culture with paradigms such as Anti-Design and Punk. Designers continued to break the conventions of graphic design and rational communication, this time in proposals aimed at the masses (Figure 123).

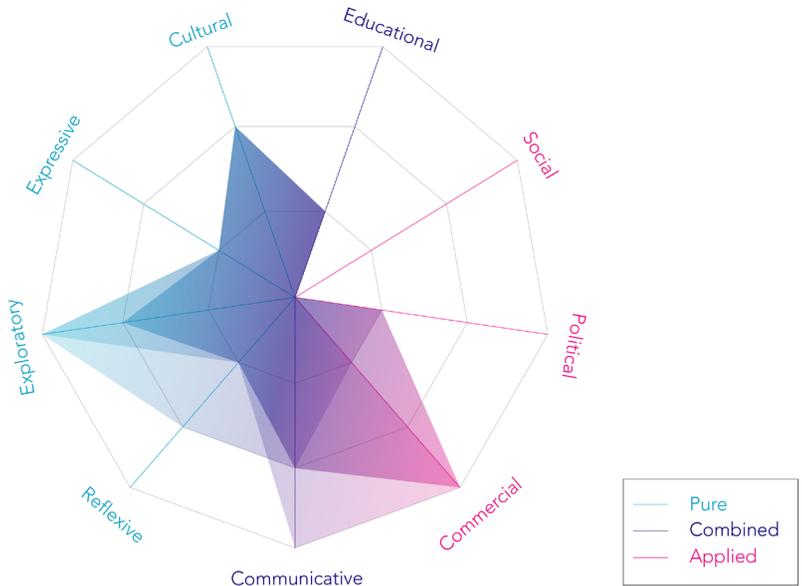
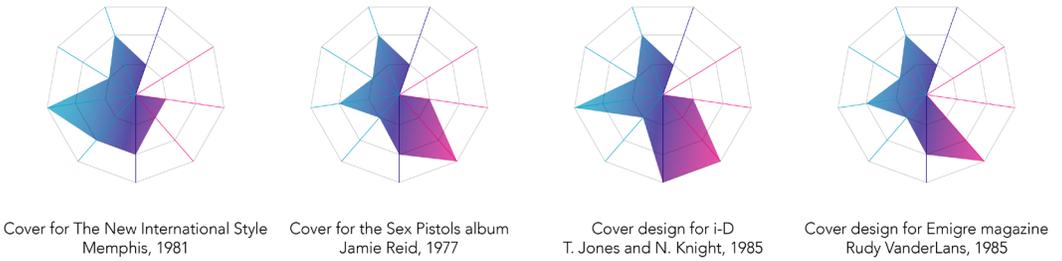


Figure 123. Purpose charts obtained from Anti-Design and Punk projects.

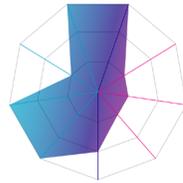
Deconstruction was a concept proposed within the field of post-structuralist philosophy. In this sense, it maintained much of its activity mainly in the educational and cultural domains. In any case, it is also possible to find several examples with commercial intentions present especially in popular magazines of the time (Figure 124).



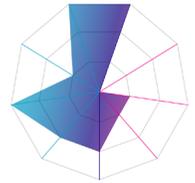
Advertising for Torchsong magazine
Neville Brody, 1984



Contents logo for The Face
Neville Brody, 1984



Poster for Cranbrook Academy of Art
Katherine McCoy, 1989



L.A. Contemporary Exhibitions
Jeffery Keedy, 1989

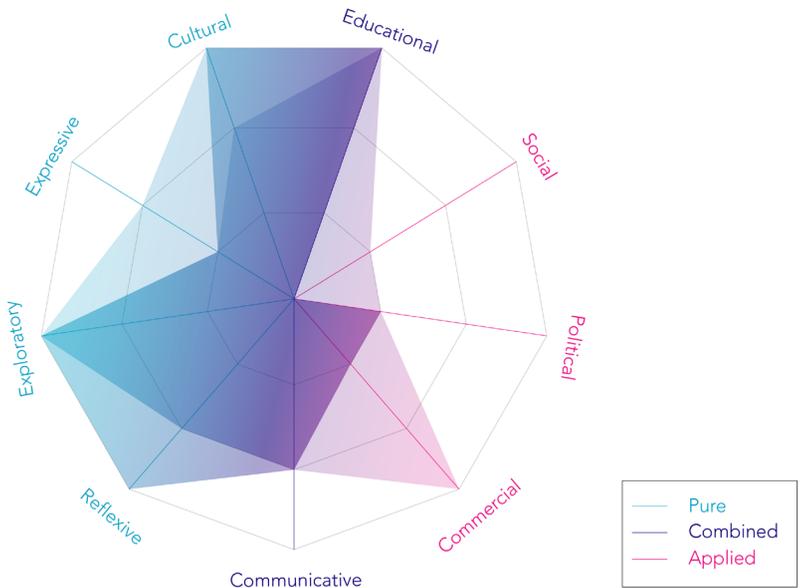
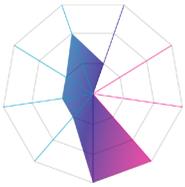


Figure 124. Purpose charts obtained from Deconstruction projects.

During the 1980s, appropriation became a widely common practice. It consisted in taking proposals from past decades, and replicating their imaginary, adopting it for the contemporary context. From the traditional perspective, this exercise meant a serious fault of authorship. In any case, this practice was quite popular, even today, in the cultural and commercial domains (Figure 125).



Cover design for the band Bauhaus
1982



Page design for The Face magazine
Neville Brody, 1982



Advertising design for Swatch
Paula Scher, 1986



Print ad for the Florent restaurant
Tibor Kalman, 1987

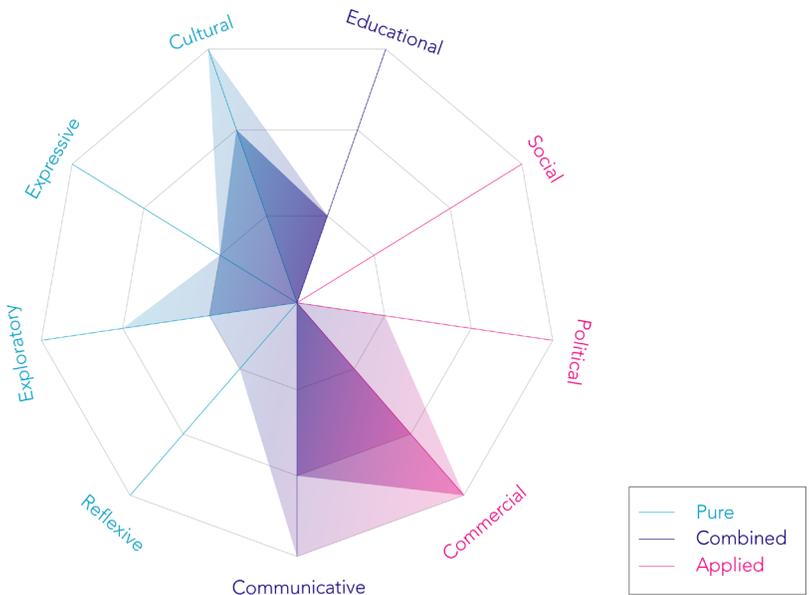


Figure 125. Purpose charts obtained from Retro and Vernacular Design projects.

With the appearance of the personal computer, designers delved into a deep experimentation with respect to its technological capabilities. This meant a diversified production between the different categories of purposes, from basic or pure interests to more practical and applied proposals (Figure 126).



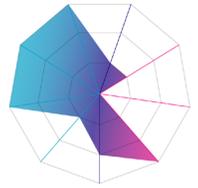
L.A. Institute of Contemp. Art poster
April Greiman, 1986



Design for Emigre magazine
Rudy VanderLans, 1989



Cover design for Raygun no.17
D. Carson and M. McDaniel, 1994



Identity designed for MTV
Manhattan Design, 1981

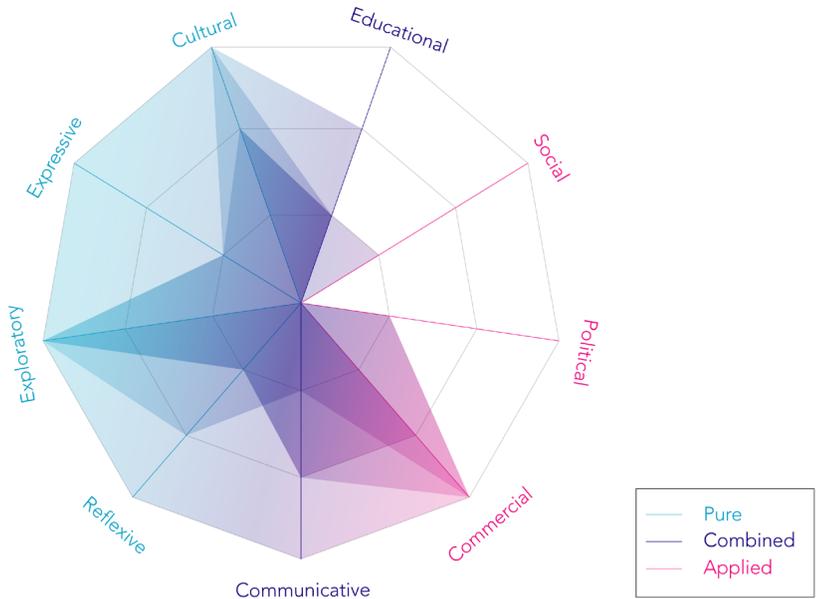


Figure 126. Purpose charts obtained from Desktop Publishing projects.

The technology allowed graphic design to become more deeply associated with engineers and software developers. In this way, meeting points and common ideals were proposed between these fields of knowledge. Mainly functionalist and rationalist values, more typical of engineering, were presented in the User-Centered Design in order to achieve more social, educational and commercial purposes (Figure 127).

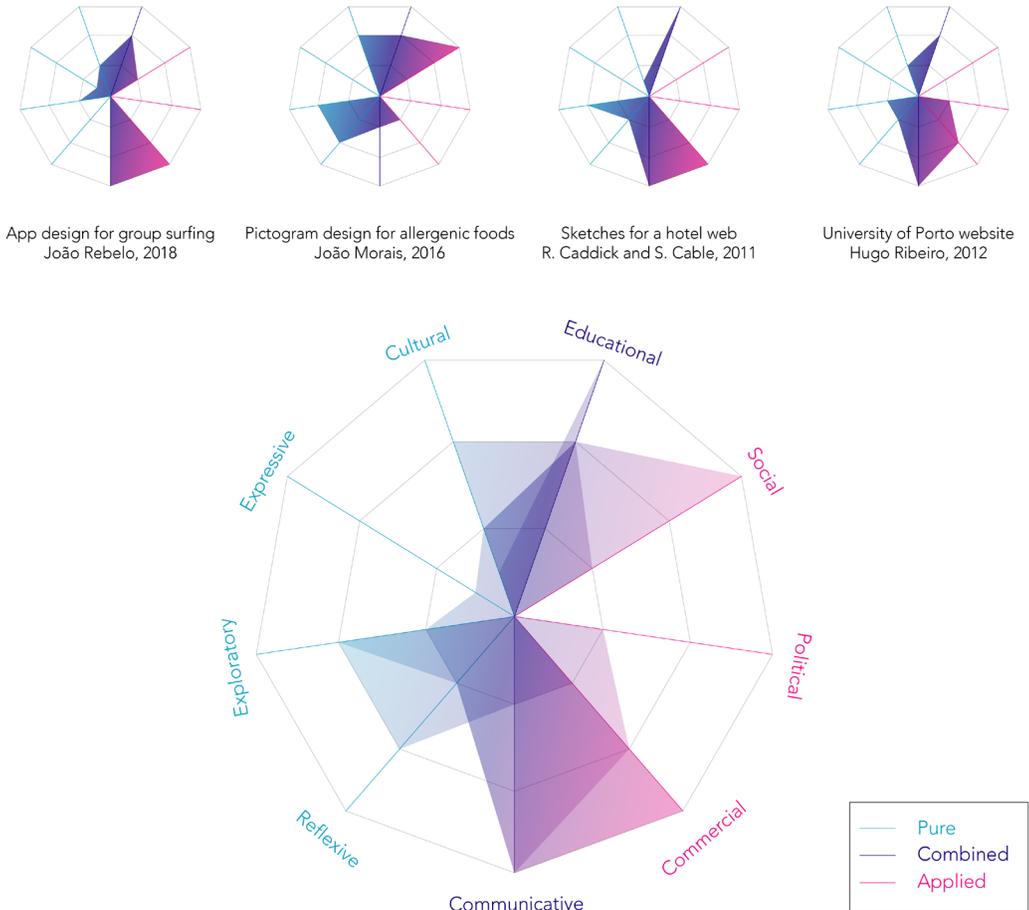
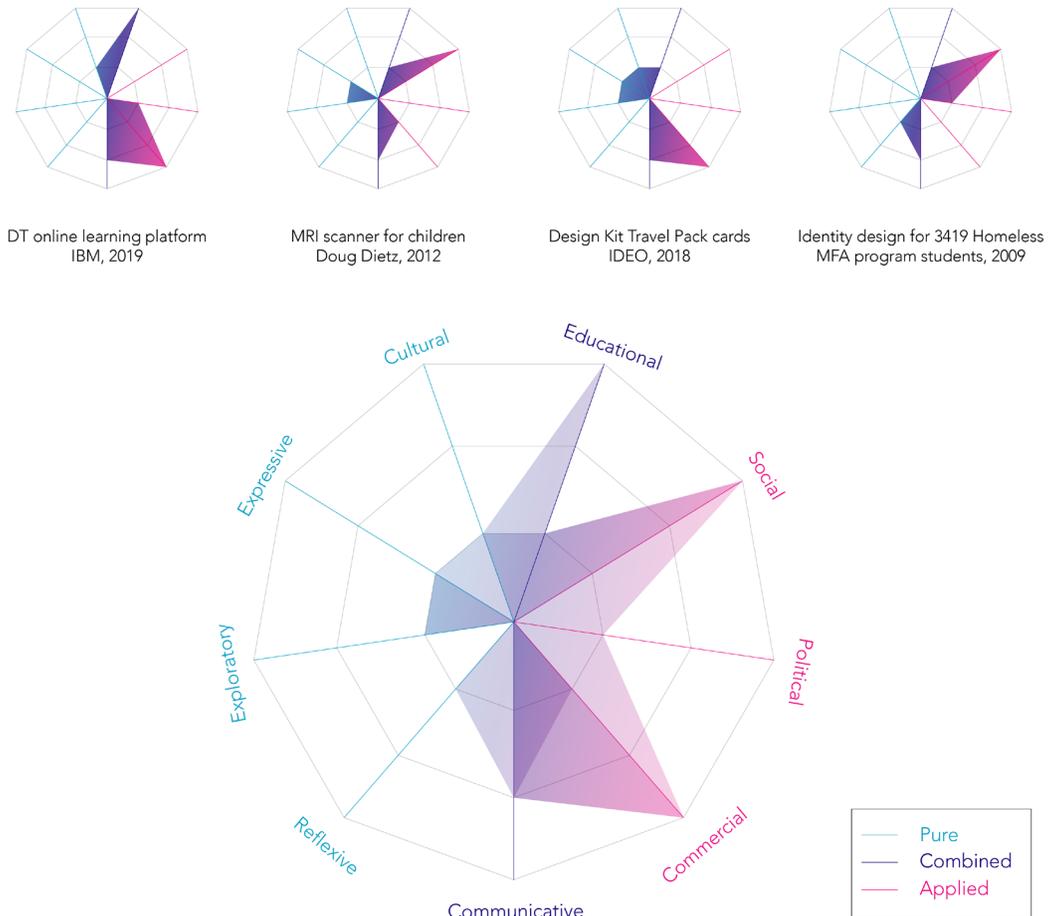


Figure 127. Purpose charts obtained from User- and Human-Centered Design projects.

Design Thinking, as described in previous chapters, has two different definitions. The proposal most known today, from the IDEO consultancy, establishes Design Thinking as a method to obtain practical solutions to problems of various kinds. Interestingly, it is difficult to locate examples that effectively use the method. It cannot be deduced that a project belongs to this paradigm only by seeing the results obtained —similar situation to that of User-Centered Design. However, the most popular examples are pursued for applied purposes, practical solutions for problems of an educational, social and commercial nature (Figure 128).

Figure 128. Purpose charts obtained from Design Thinking projects.



Participatory Design does not have a preferential behavior towards certain types of purposes. Its main interest is to actively involve stakeholders, especially users, in all stages of production. In any case, the graphical examples show a slight tendency to address applied purposes through social and commercial causes (Figure 129).

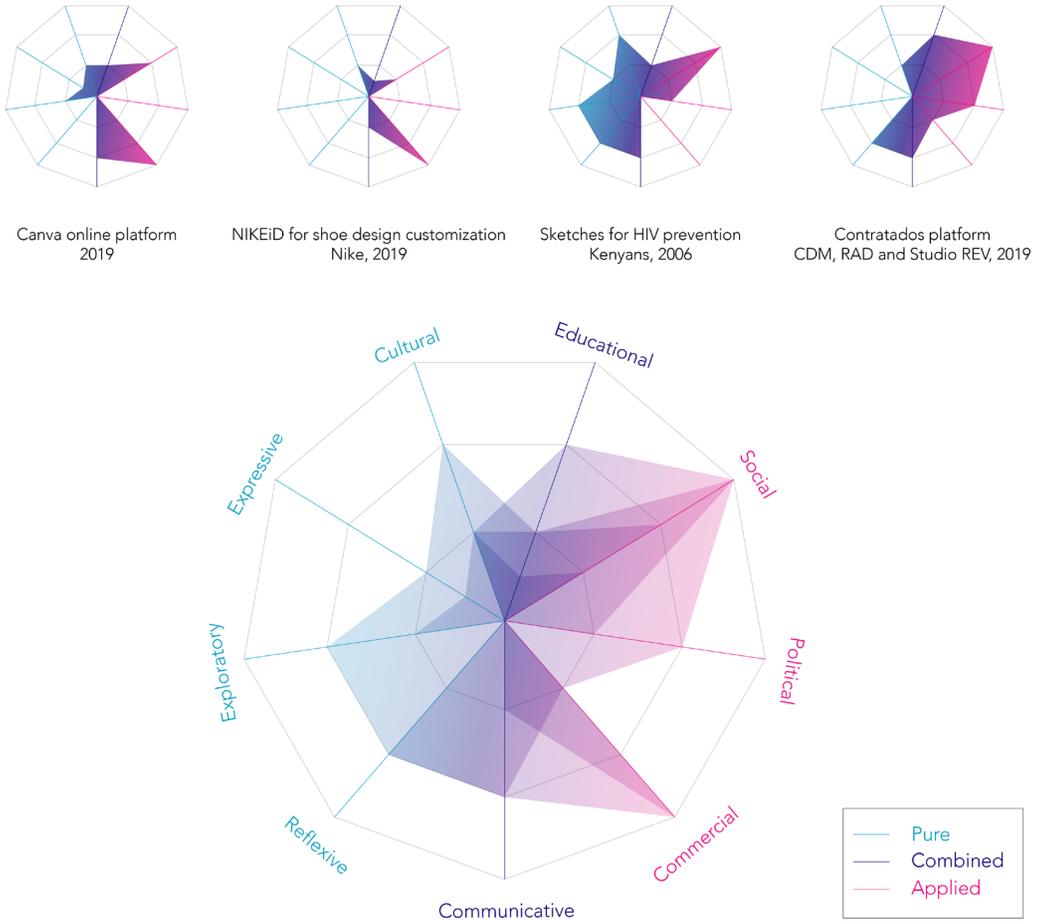


Figure 129. Purpose charts obtained from Participatory and Collaborative Design projects.

Critical graphic design was proposed to question the ideals that several functionalist paradigms profess in current times. Its interest is not to propose solutions to the situations it questions, but simply to encourage reflection. It can be presented in the personal scope of designers, with respect to their discipline or to situations of public interest. One of its main focuses of criticism is commercialism, although it certainly also acts in that area (Figure 130).

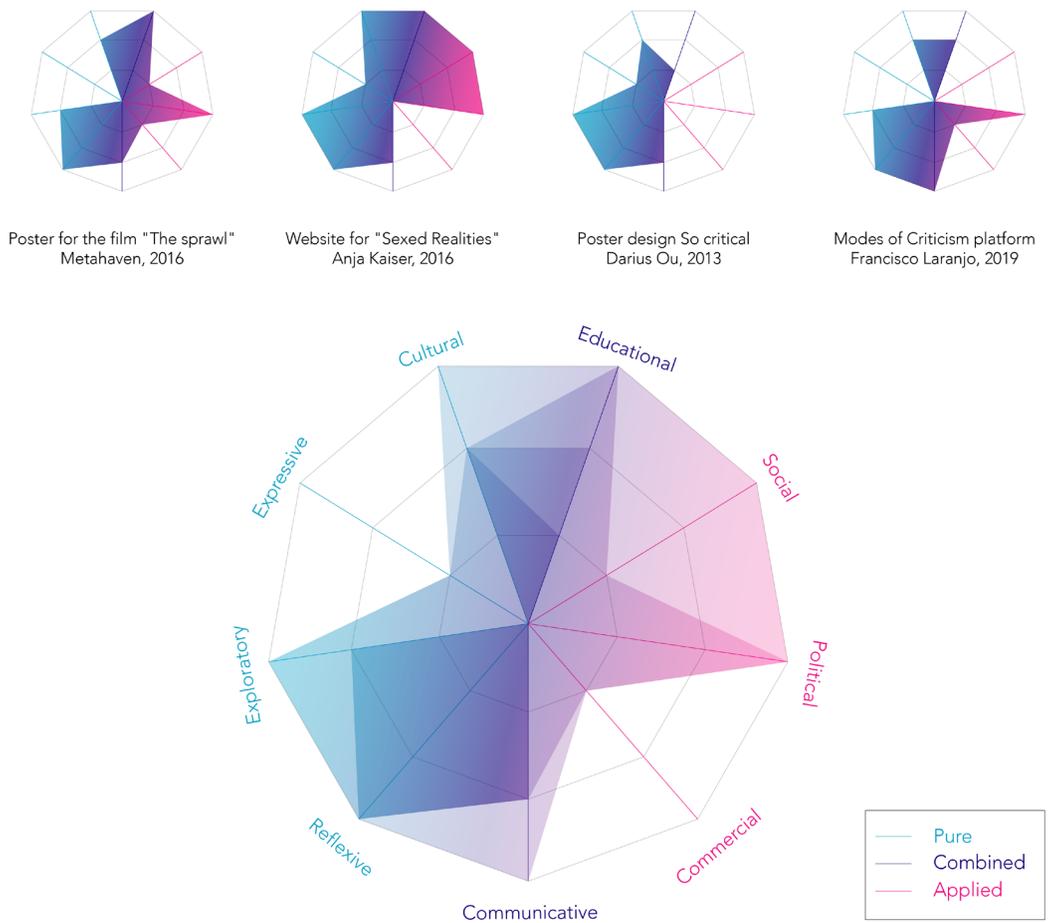


Figure 130. Purpose charts obtained from Critical Design projects.

Speculative Design uses narrative resources to create fictitious and alternative scenarios of the world. Then it proposes design solutions for such scenarios. In the narrative sense, Speculative Design presents a quite exploratory development. Although at the design level it is not always the case. This paradigm continues the role of Critical design in order to question ordinary situations with reflective, political and social purposes (Figure 131).

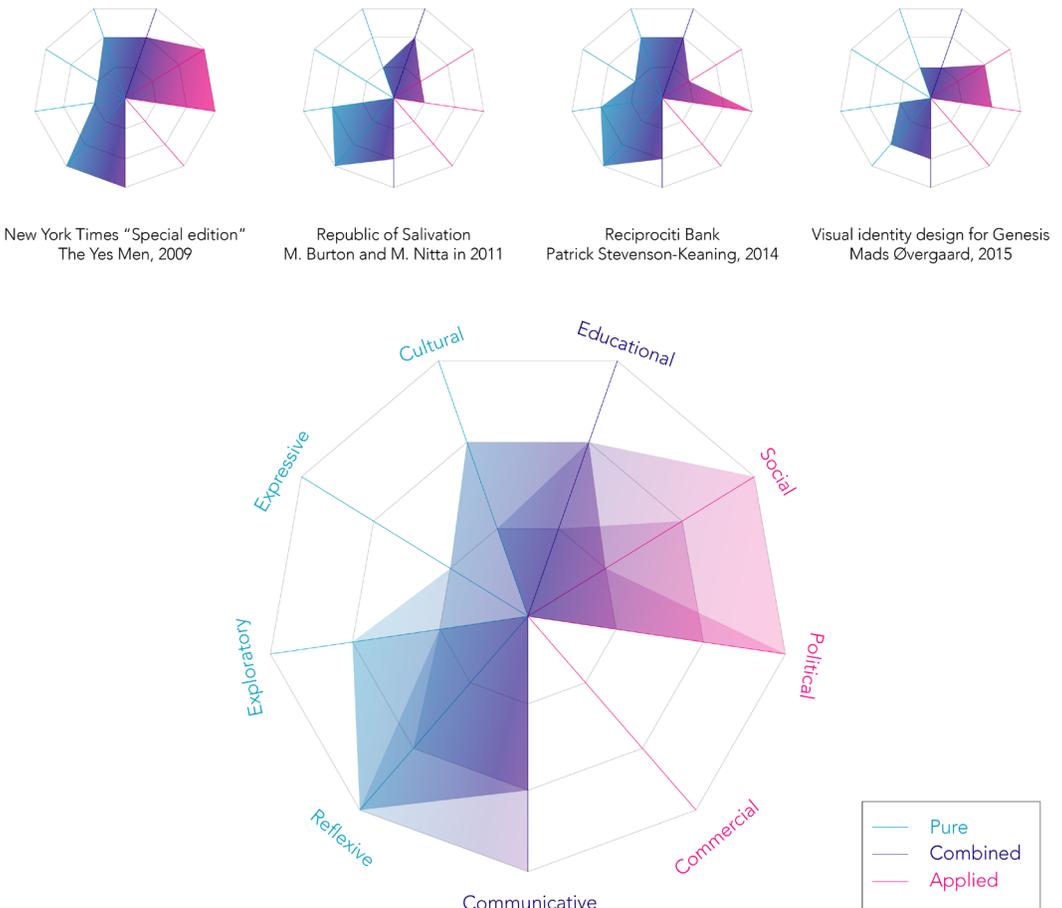


Figure 131. Purpose charts obtained from Speculative Design projects.

Once the nineteen paradigms are represented in the radar chart, it is possible to verify that there is no regular or constant performance at a general level. The activity of the paradigms does not present a linear transition from one category to another. Instead, there is a diversified activity over time. It is dispersed among the different categories of purpose.

However, there are some tendencies at a particular level to consider. This is possible because some paradigms present a major interest for certain purposes. This behavior is not unexpected at all, since many of the paradigms were proposed specifically to address certain purposes.

The first tendency occurs when observing the charts of Arts and Crafts, Art Nouveau, Werkbund and Gesamtkultur, and New objectivity and Sachplakat. There is a sequential transition between those paradigms that goes from the pure purposes to applied purposes. After that, there is a discontinuity on the part of Dada and De Stijl which present mainly pure purposes. From this point, the same previous tendency occurs in the consequent paradigms of Staatliches Bauhaus, International Typographic Style, and American Style. Postmodern approaches were developed mainly for pure and combined purposes especially in its early stages and New Wave. The clear exceptions were Anti-design, Punk, Retro, and Vernacular design, which also had an important development for the commercial agenda. On the other hand, during the desktop publishing revolution, there was a strong tendency to formal exploration that could also serve commercial interest. This condition is reflected in a radar chart which covers an important part of the whole activity spectrum.

With respect to contemporary paradigms. There is a clear evidence that shows how User- and Human-Centered Design, Design Thinking, and Participatory Design concentrate their efforts mainly to address applied and combined purposes. While Critical and Speculative Design have an important activity within the pure purposes. However, they also inhabit in the applied categories even when, theoretically, the practical answers are not the objective of these paradigms.

In fact, the contrast between theoretical ideals and practical development is a situation that exists throughout the history of graphic design. This is because each particular project needs to develop its own rules and conditions in order to address the particular context in which it is been produced. These ideas are directly related to the perspectives of Design as a heterogeneous and context-dependent activity, both previously described. This is not to say that designers should no longer work on paradigms. They encapsulate concrete forms of thought with clear methods, processes, and objectives that have been proven as extremely useful tools. Instead, the idea is to encourage graphic designers not to commit to a single form of thought and action. The tug-of-war of apparently contrary perspectives enriches graphic design, and becomes a defining feature of the discipline.

Finally, with the results obtained, it is possible to build a map that allows a holistic understanding of graphic design activity, including the categories of purposes and the relationships with the paradigms studied throughout this research (Figure 132).

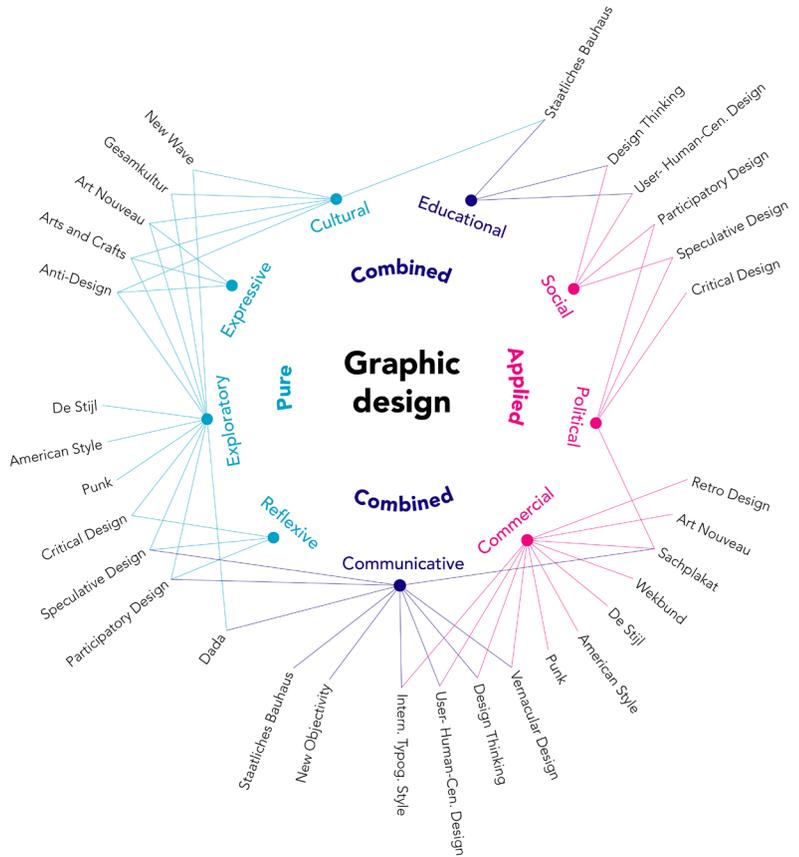


Figure 132. Map of graphic design purposes and paradigms by Andrés Torres, 2019.

It is essential to bear in mind that this map does not show the exclusive purposes addressed in each paradigm, but instead the most common ones based on the information obtained by the radar charts. A more precise map can be constructed to the extent that more cases of study are analyzed in the previous stages. For the moment, this proposal constitutes a first approach to be able to understand more completely the graphic design and its scope. Both the radar charts and the map of purposes are tools to expose alternative agendas for graphic design to those that modernist and functionalist has traditionally professed. In the long term, they may also contribute to provide more accurate definitions and insights on graphic design. The collective recognition of alternative ways of thinking is a great responsibility of contemporary designers, who are already practicing these forms of design¹² and whose statements should also be reflected in theoretical research and literature.

12. There are several online platforms where it is possible to find all kinds of graphic production. Unfortunately, the time in this research has not been enough to study these platforms in greater detail. Without a doubt, Behance is one of the most popular, followed by other examples like Designspiration, booooooom, and 36 Days of Type.

CONCLUSION
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As has been noted throughout this research, graphic design has many faces. While the decades pass new paradigms, new programs, and new objectives continue to appear according to what each movement, institution or collective believes to be the best and necessary for society and for the discipline itself. To a certain extent, the history of graphic design has been marked mainly by two theoretically opposed philosophies. On the one hand, there are positions related to Modernism, such as the rational and functionalist approaches, which has operated mostly for social, political and commercial purposes. While on the other hand are postures related to Postmodernism, which professed a more liberating and exploratory impetus. This can be framed as design as rational problem-solving and design as reflective practice (Bannon 2012, 46). However, this false dichotomy operates differently in practice, since both fields continually invade the space of the other. Thus, it becomes too simplistic to describe the history of the discipline.

However, when delving into more particular postures and approaches, there seems to be a rather dense framework that makes it problematic to obtain the big picture of graphic design and to grasp the nuances of its landscape. The constant updating and replacement of certain paradigms by new ones only complicates the work for the inexperienced or beginner designer who, in the best of cases, should be able to identify most of such paradigms and their fundamental features. In any case, this is a work that is worth tackling in order to ensure that the education of future designers does not corner itself in a single ideology. Monopolizing the practice and discourse of graphic design will lead the discipline to a point of stagnation, from which it can escape only with the emergence of another countermovement. This is how conceptual diversification occurs, which at some extent may seem excessive. Even pushing the designers to have to reinvent the wheel repeatedly. This can be avoided when design education programs embrace a more inclusive stance of different paradigms. A stance somewhat apart from consumerism, commercialism, and functionalism where the designers are mere operators who offer their knowledge without raising any questions about themselves, their discipline or the reality that surrounds them. It is essential to bet also on alternative options, more exploratory, expressive and reflective ones, where designers not only apply what they have learned but also question, criticize and challenge those values. Therefore, designers may not need to reinvent the wheel every time in a while, but they could keep working on the diverse existing paradigms and concepts.

Ultimately, the research fulfills its objectives of relating a wide variety of paradigms in order to allow a broader understanding of graphic design. It exposes that the modernist approaches are not enough to define the discipline, neither they are the only ones being practiced and

researched. Nevertheless, this research also falls short in relation to the enormous amount of information available to be studied. This is also due to space and time requirements in which this project is framed. Furthermore, to talk about graphic design in the broadest possible terms, it is necessary to analyze other contexts besides Western cultures. Such work should be carried out in future investigations with more extensive and appropriate conditions. For now, however, the final recommendation for the reader is to reflect on the ideas and challenges raised during this research, and the pedagogical repercussions that these entail for contemporary and future educational programs in graphic design.

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This research establishes graphic design as a heterogeneous discipline broader to the perspectives traditionally developed by the modernist ideologies. It aims to present graphic design in its historical activity, both retrospective and contemporary, in order to expose the diversification of the purposes it addresses. In order to do so, the research delves in several paradigms of design, its procedures and results. Later, it presents a categorization of graphic design purposes as a non-fixed framework. And finally, it presents a map based on the mentioned categorization to allow for a holistic understanding of graphic design.

This dissertation is framed within the antipositivist paradigm and the qualitative research as methods for the collection, analysis and production of information. It studies textual and audiovisual documentation from different sources of information and its interpretive analysis for the construction of knowledge. It reviews several important paradigms and movements in the history of graphic design starting from the twentieth century. The historical review focuses on studying diverse paradigms belonging to Modernism and Postmodernism. While the contemporary paradigms studied are User- and Human-Centered Design, Design Thinking, Participatory Design, Critical Design, and Speculative Design.

Ultimately, the research exposes the heterogeneity in graphic design practice and research. It demonstrates the insufficiency of the functional perspective to define the activity of the discipline, and reflects on the pedagogical implications that such condition would have on design education.

DESIGN RESEARCH, GRAPHIC DESIGN

THEORY, DESIGN EDUCATION,

MODERNISM, POSTMODERNISM

CONTEMPORARY DESIGN.