

Article

Graphic Design as scientific knowledge

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Abstract

Graphic design is a confusing term, even for designers themselves. Its history and social role are relatively unknown despite efforts made by many designers to answer those questions. There are many troubles when the term "graphic designer" is brought up. However, there is already enough epistemological knowledge to ease the discussion and maybe answer all of those questions.

Introduction

The graphic design field is going through an identity crisis due to its term, "graphic design." It's problematic even for designers themselves, and it's not surprising because this activity is relatively new (at least under this term) compared to others, such as medicine. Although this discussion has been brought up multiple times throughout history, there is still no consensus.

Using the scientific method is meant to contribute to the meaning of graphic design through the research of the term's meaning, etymology, and development across history and various cultures, including contemporary Hispanic and Anglo-Saxon influenced ones.

What is graphic design?

The definition of graphic design remains unclear and is a topic of ongoing debate within the academic community, as noted by Teal Triggs (2011) in her research published under the name *Graphic Design History: Past, Present, and Future*. Without a clear understanding of its history, it becomes difficult to ascertain the purpose and importance of graphic design.

Understanding the history of graphic design is necessary for its development. Until now, it has been developed through empirical efforts, which has made graphic design a reactionary field. The terms "graphic design" and "graphic designer" are polemic because they are tied to a technology (printing), as noted by Gui Bonsiepe (1994).

It is important to note that scientific research in graphic design has not been widely practiced and is not popular among designers. This negation of academic culture is spreading among professionals who graduate from universities under the name of graphic designers (Vanessa García, 2015).

From 1990 to 2022, there has been a significant increase in scientific research conducted by graphic designers. However, the research has predominantly focused on new trends in techniques, skills, methods, and processes related to graphic design, as pointed out by Sue Walker (2017). The assumption is that these new approaches better describe research statements or make them easier to comprehend.

Given the absence of a consensus on the history of graphic design, limited understanding of the problem it aims to address, and insufficient scientific research on the subject, it becomes imperative to challenge the entire concept and seek to answer the fundamental question: "What is graphic design?".

Importance of philosophy in graphic design

The lack of scientific support for practices in graphic design could be a mistake, as such practices may not be useful in achieving the expected outcomes, leading to unnecessary wear and tear and harm to production systems. Graphic design holds a significant position in the market and, like other professions, must undergo constant improvement to optimize practices and enhance efficiency and effectiveness. Achieving this goal requires scientific research.

The answers that may result from the question "What is graphic design?" can be helpful for the development of new technologies, the discarding of old practices that are not effective,

and the improvement of existing ones that can be optimized. It is a fact that improving the production system is one of the main consequences of scientific research, which justifies the need for scientific research in the field of graphic design.

Philosophy of graphic design

It is true that Graphic Design Ontology is an unexplored field, as previously mentioned, and academic culture among graphic designers is not widely practiced. However, discussions on the true purpose of Graphic Design and the problem it intends to solve have taken place prior to this one.

One of those who brought up this discussion long before was Frascara (1988), who ensured that Graphic Design goes beyond aesthetics and has a strong social responsibility. In his article "*Graphic Design: Fine Art or Social Science?*", he states that the objective of Graphic Design is to produce clear communications, but it is still a mixed activity between reason and art. According to Frascara, the focus of Graphic Design products should be primarily on information, with art limited only to the intuition that grows from the designer's experience, which allows for decisions that are difficult to quantify or explain rationally due to human behavior.

Later in history, Bonsiepe (1994) revisited the topic of Graphic Design ontology in his article "*A Step Towards the Reinvention of Graphic Design*". He criticized the term "Graphic Design" as being too limiting in the face of new events and technologies born in the digital and information era, which have reduced the graphic designer's job to visual solutions. Bonsiepe proposed a new term, "*Information Designer*", that could encompass all these new developments and proposed a set of skills necessary for an *information designer*.

On the other hand, Sue Walker (2017) also addresses the ontological question of what Graphic Design is, stating that "Graphic designers try to illuminate or explain things using graphic language, which may be verbal, pictorial, or schematic." She further explains that graphic designers collaborate with other professionals such as photographers, illustrators, and writers, among others, and like any other design field, aim to solve problems.

It is true that there may be more extensive discussions on the Graphic Design ontology in academic literature, but it can be difficult to find published research on the topic. However, it is worth noting that the cited authors in this work provide a competent summary to fully understand the discussion at hand.

Origin of Graphic Design

According to etymology, the word "design" originated from the Italian word "disegnare", which was mainly used as a verb to mean "to paint". It came from the Latin word "disegnare", which is a word composed of the prefix "de" used to refer to the singular third person, and the word "signare" which is the active present infinitive form of the verb "signum" that means "signal" or "indication". "Signum" came from the Proto-Italic word "sekno" which means "which is cut" (De Vaan, 2008).

Flusser (1993, cited by Frias 2005) suggested that the term "design" can be used in two ways - as a verb and as a noun. When used as a verb, it means to project, sketch, shape or

proceed strategically. When used as a noun, it means intention, plan, purpose, goal or form.

It's clear that there is almost no controversy around the definition of design. Therefore, it can be said that design is a project, a projection, or a replica of a phenomenon, achieved through the study of its form and behavior. The action of making those replicas is called design, and consequently, the designer is the person whose job is to make them.

While the term "graphic" came from the Latin neologism "graphicus," adopted from the Greek "graphikós," which means "related to the write or draw"; this word is composed of the verb "graphé," which means draw, paint, write, or description, plus the suffix "ikós," used to form adjectives. "Graphé" also came from the ancient Greek "gráphō," which means scratch or carve (The Century Dictionary, 1911).

The Real Academia Española (n.d., definition 1) defines "graphic" as belonging to writing or printing; however, it also states (n.d., definition 2) that it refers to an operation or demonstration represented using figures or signs. According to the Cambridge Dictionary of American English (n.d., definition 1), "graphic" means something "clear and powerful". It also defines (n.d., definition 2) it as related to drawing and printing.

In contemporary usage, a graphic is not always a drawing, painting, or writing, and printing is not necessary to produce graphics. However, every graphic is always a description. It is known that descriptions are details about a concept (person, object, event, etc.) that can be verified. To describe a concept, many resources can be used, such as bodily, oral, or written language, as well as drawings, paintings, photographs, etc. It is possible that the definition of the term graphic could have changed drastically on the way from Greek to Latin, thus making it difficult to fully understand its meaning today.

The oldest documented use of the term "graphic design" has been attributed to Frederick H. Meyer in the year 1917, when he used it as the name of his course at the California School of Arts and Crafts, now known as California College of the Arts, between the years 1917-1918. Meyer defined the course as one that dealt with the principles of lettering, commercial work, and various processes of reproducing drawings (Shaw, 2020).

However, by understanding what a graphic and design are, we can define graphic design as the job that devises, plans, and projects the creation of descriptions for concepts, such as persons, organizations, events, objects, etc. These descriptions can be made through different kinds of processes and techniques that respond to social events and market needs.

Conclusion

As Raúl Bellucia (2005) has stated, "basically, design is what designers create while designing", and by extension, graphic design is the work of designers who create graphics. All professions use scientific knowledge to create replicas and improve desired outcomes. Understanding graphics (composition, behavior, and processes) enhances the designer's abilities in their work. Therefore, if graphic designers aspire to improve their skills, it is essential to discuss the science that studies graphics.

The science that studies graphics should aim to decipher all the generalities, principles, laws, as well as their history and social role. It is a fact that graphic designers need to step up their game and start being more scientific, using epistemology and philosophy to improve the

products, processes, techniques, and technologies they use.

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