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What is Graphic Design? Seeking a New Answer to an Old Question

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Abstract:
Since the term Graphic Design was coined by William Addison Dwiggins in 1922, the field has extended its boundaries and targeted solutions to much more complex visual problems than it was initially assumed. Moving in tandem with technological advances, graphic design has seen a lot of transformations both as an academic discipline and field of practice. This has brought to question most of the definitions of graphic design as they do not exactly reflect the full dimensions of contemporary graphic design practices. This paper points to the blurring boundaries of graphic design practices as they continue to thrive on the wings of modern technology and permeates almost every facet of human endeavor. It concludes by pointing to the difficulty in spinning a definition, thereby advocating for the need for teachers, students and practitioners to develop a proper understanding of the discipline, based on their own competencies to inform a focused and impactful contribution. The paper finally recommends a proper identification and integration of requisite technologies to the training structures of Graphic design. This would be an important step towards the diversification in pedagogic considerations to reflect the current trends and functions of today's graphic design.

1. Introduction

The idea of this paper sprang from the responses received from students anytime the question "what is graphic design?" was put in class. In all instances, responses sounded more like banalities than real explanations of the meaning of graphic design, and therefore did not reflect the current landscape of graphic design within which they themselves are operating. Consequently, their lack of confidence in their own efforts at definitions were always discernable from the giggles and wry smiles which followed their responses. Sometimes their bid to sound more comprehensive and intelligent push them further into making made several frantic efforts at delineation and conceptualization of facts, all in an attempt to come out with precise definitions for graphic design.

Interestingly, the situation is not very different even on the teachers' front. Graphic design discussions among senior members are dominated by issues relating to the scope and the current ubiquitous dimensions of the discipline. This has even extended into a debate about its nomenclature especially at the tertiary levels. Whilst some institutions consider Graphic Design as the key discipline that embodies various communication design components, others are of the view that Communication Design or Visual Communication Design is the umbrella term encompassing graphic design and other analogous disciplines.

The concern here has not got so much to do with who is wrong and who is right in any of the several debates concerning the scope and definition of Graphic Design or Communication Design. What is of utmost interest should be the blurring boundaries of Graphic Design functionalities which are eventually making the discipline loos grips of its command in the realms of communication. By the diffusion of its functionalities and consequent defilement of clear definition, Graphic Design naturally merges into the welcoming domains of many analogous disciplines which indeed make use of only the components within their major interests much to the neglect of the rather onerous duties of the discipline.

It sounds more than reasonable, therefore to suggest that a reflective understanding of graphic design that commensurate the current breadth of the discipline should be called for. This will not only enable students to observe their field of study from the right perspective but go a long way to stabilize their focus as students of one of the ever growing disciplines.

2. Defining the Indefinable?

The idea of defining graphic design today, conceived from the perspective of Graphic Design as it is practiced now, sounds more like defining the indefinable. In most cases, defining graphic design especially in our schools have always been relatively simple and could be drawn from the sort of general definitions found in dictionaries. In the Compact Oxford English Dictionary (2003) for example, Graphic design has been defined as "the art of combining text and pictures in advertisements, magazines and books". Extended into some degree of academicism, generic descriptions such as "the activity of combining typography, illustration, photography and printing for the purpose of persuasion, information or instruction" by Livingstone and Livingston (2003) have been considered more appropriate. Other explanations pay tributes to graphic design's ability to unify processes and expert arrangement of signs, symbols, words, and images for 'public exchange'; its positioning as part of the field of design (Aynesley, 2001); and its recognition as ubiquitous and conspicuous in several types of media (Helfland, 2001, p. 137).

These definitions obviously reflected the popularity of the subject as it has developed from the time William Addison Dwiggins coined the term "graphic design" in 1922 to the middle of the Twentieth Century. Graphic design has since continued to avail itself as a form of visual communication used to convey information to an audience, mainly relying on the creation, selection and organization of visual elements, thereby imbuing communication with greater meaning.

But the question is, should teachers, learners and practitioners continue to rely on to these rather simplistic definitions as reflective enough with all the technological infusions in graphics and graphic design practices with its far reaching effect on an ever growing audience? Could that not constitute a total affront to the highly skilled professionals within the discipline as well as its highly determined and aggressive learners?

No wonder the tenability of most of the definitions for graphic design have been brought to question in recent times for incongruity to the breadth of graphic design practices and the influence that graphic design has had in facilitating life in the 21st century. That graphic design has traversed the boarders of a clear cut definition therefore seems to be a popular observation that any ardent pursuant of the discipline could make. Simple definitions are becoming increasingly evasive for a field that Milton Glaser describes as having become highly segmented (Heller & Petit, 1998, pp. 149–155). This is visible in the wide range of formal educational experiences and technological tools that feed into and crossover with the subject.

In his reflections over this, McDonald pointed to both graphic design and professional practice as being in a state of flux. He described the graphic design field as a maturing one, influenced by rapid changes in technologies, and an increasingly global marketplace that have led to further specializations and liaisons with allied disciplines (Bennett, 2006). In this respect therefore, defining graphic design would require an extensive consideration and thoughtful integration of a number of variables, including technological advancements and transformations.

We are all witnesses to how technology is fundamentally altering our culture and the fact that graphic design profession is among the earlier fine arts and design disciplines to embrace the computer is well known. Today it is almost impossible to practice graphic design by relying only traditional hand processes only. Almost all practices and design procedures have been transformed into electronic output, thereby collapsing a lot of the once-separate functions of graphic design and production into a single effort, often under the control of the designer and their technological tools.

The consequence transformation represents new contents for the teaching, learning and practice of graphic design programmes. As noted in one of the collaborative briefings of the American Institute of Graphic Arts (AIGA) and National Association of Schools of Art and Design (NASAD) (2002), it is now a common assumption by employers that all graphic design graduates entering the job market from undergraduate programmes should be able to author text in word-processing programs; generate graphic images on the computer; take, make and manipulate photographs digitally; produce digital page layouts; understand issues related to output and electronic pre-press, at least in terms of file preparation; and choose appropriate technological resources for specific design tasks.

Besides the acquisition of print-based competencies, graphic design graduates are also expected to be significantly more employable if they possess a rudimentary ability to work in time-based multimedia (build image sequences, animate graphics), design motion typography, design information architecture, interfaces, and narratives for the Internet and design time-based media in cross-disciplinary projects (AIGA/NASAD, 2002).

One of the clearest upshots of all the extensions and expansions within the scope and functions of graphic design is that, it has become more inclusive than it has ever been. For most people, graphic design lend itself as an obvious choice in the quest to enter the visuals. People with specialization in vectors and mathematical algorithms for example are able to go straight into design and digital illustrations with vector-based applications. What that means is that, somebody with a skill in vector image generation will not be limited on what he can do anymore. Right away they enter into a huge freelance market of designing interfaces for mobile devices, application icons for phones, tablets as well as Internet platforms.

Today's graphic design market is thus saturated with everyone trying to jump into it. Consequently graphic design has also become one of the most competitive, open and forth-thinking disciplines ever known in the history of artistic practices, thereby pushing practitioners to wilder, wider and higher levels. As to whether the fact that people from diverse disciplines can jump into the field and associate themselves with it is a healthy sign is a question for the future. The bottom line however, is that, the huge expansion in the field and it consequent pro-inclusiveness has rendered the concept of graphic design almost indefinable.

2.1. Considering the 'Design' in Graphic Design

The observations cited above come with little or no surprise at all when the entire idea of Graphic design is considered along the lines of its root word "design" which is considered today in many other spheres of human activities including politics and democracy. Design for democracy for instance has become one of the catchy phrases in recent times. As indicated by AIGA in their resolution, "Democracy is designed", and thus the resolution to "continue to apply design tools and thinking to increase civic participation by making interactions between the governments and their citizens more understandable, efficient, and trustworthy" (AIGA, 2016).

And so the Danish Design 2020 Committee are certain in their conviction that, "design has come to mean more than giving form; it has increasingly become a strategic element in innovation processes in private enterprises and public organizations", for which reason its "unique combination of creativity and purposefulness has attracted a great deal of attention in recent years as a tool for innovation" (The Vision of the Design2020 Committee, 2011, p.6). According to the committee, disciplines outside of the design sector seek to understand and adapt the innovative capabilities of design by examining and copying the various stages of the design process, through which the design process is not only used strategically but also considered as a particular way of thinking (The Vision of the Design2020 Committee, 2011). Denmark being among the first countries in the world to adopt a design policy therefore sees a lot of reason for placing awareness on the potential of design for enterprises outside of the original design sector.

AIGA, in the same spirit, believes that Design possesses peculiar tools and thinking processes that could be applied to increase civic participation, and are therefore committed to ensuring that "Design for Democracy collaborates with researchers, designers, and policy-makers to demonstrate the value of design by doing valuable things" (AIGA, 2018).

Following a much similar vein as AIGA's position are revealing views concerning design presented by ico-D in their press release on the Montreal Design Declaration published in 2017. The declaration which aimed at proclaiming "the potential of design to achieve global economic, social, environmental and cultural objectives" outlined interesting "eight bold propositions" that define the "Value of Design" (including graphic design) in the contemporary world. They were as follows:

- Design is a driver of innovation and competition, growth and development, efficiency and prosperity.
- Design is an agent for sustainable solutions.
- Design expresses culture.
- Design adds value to technology.
- Design facilitates change.
- Design introduces intelligence to cities.
- Design addresses resiliency and manages risk.
- Design fosters development.
- Design improves sustainability and resiliency.

Moving beyond the traditional domains therefore, graphic design is now recognized as being more than simply a process of organization (though this is still an important aspect). It has been further defined as language, elements, artifacts and activities. Recent attempts to clarify its role encompass information, persuasion, decoration, magic, metalinguistic, and phatic functions (Barnard, 2005, pp. 14–18). It has been discussed in terms of vocabulary, grammar, syntax, rhetoric (Newark, 2002, p. 50) and as having elements such as space, unity, page architecture, type (White, 2002), harmony, balance, colour, light, scale, tension, form and content (Helfland, cited in Shaughnessy, 2005, p.18). Poggenpoh states that 'Graphic design is a part of your daily life. From humble things like gum wrappers to huge things like billboards to the T-shirt you are wearing, graphic design informs, persuades, organizes, stimulates, locates, identifies, attracts attention and provides pleasure.'

Summarily, John Heskett, (2002) stripped the essence of design in a definition that encompassed the human capacity to shape and make our environment in ways without precedent in nature, to serve our needs and give meaning to our lives.

2.2. Attempt at Re-definition

Now it is clear that, attempts at re-defining graphic design will require more particularities. This is deducible from the multiplicity in contemporary graphic design domains as discussed above. Today, describing one's self as a graphic designer is likely to yield a follow-up question such as "what kind of graphic design?" implying that the tenability of describing graphic design simplistically by the use of a language alone is disputed. It is therefore becoming increasingly necessary to define graphic design based on two major considerations – the characteristic intentions of graphic design to perceive ideas and problems and the characteristic duties of visualizing their ideas. In other words, a description of graphic design should largely be associated with the particular visual communication problem that needs to be solved and which graphic design procedures are required for their solution. By and large, this consideration, which has been mainly underpinned by the opportunities of modern technology, is what has blown the scope of graphic design to such an unimaginable proportion.

Graphic design has become part of general problem solving avenues, making uncontrollable inroads through social, religion, education, commerce and politics. Consequently, the design process is now considered by many as important means of defining and planning for any result oriented human activity whose outcomes are intended for quality living. It is for this reason that many western countries are riding on the backs of design activism to promote democracy in diverse fields of human endeavor. Graphic design by this means communicates for quality and enjoyable human existence through all the human senses.

As noted by Armstrong (2009) the height of technology infusion in the practice of Graphic design has quietly but surely thrusted an unprecedented universality into the foundation of the discipline.

Armstrong (2009) noted how designers currently create through a series of restrictive protocols with software applications molding individual creative quirks into standardized tools and palettes, launching us into an aesthetic transformation regime described by Manovich (cited in Armstrong, 2009) as monumental:

Specific techniques, artistic languages, and vocabularies previously isolated within individual professions are being "imported" and "exported" across software applications and professions to create shared "metamedia." Powered by technology, universality has moved far from the restrictive models of the past toward this new common language of, in Manovich's words, "hybridity" and "remixability" unlike anything that has come before (Armstrong, 2009).

As observed by Manovich (2003), new technologies have actualized the ideas behind the projects by designers and extended them much further than the designers originally imagined. Designers are now capable of interfacing with various forms of technology in many different unimaginable ways, to the extent that "technologies themselves have become the greatest art works of today" (Manovich, 2003, p.5). In this regard, designers, rather than becoming beneficiaries of technology as it pertained to the emergence of earlier technologies such as printing and photography, are now key contributors to modern technology, making graphic design and technology two sides of a coin. Arguably, the paradigm of design practice has not only shifted but indeed extended.

Considering the belief that a shift in paradigm is always informed by a "dissatisfaction within an existing theoretical stance" (Stuart-Hamilton, 1996, p.85), the shift in the nature and practice of graphic design towards the transformed technological taste of its audience should be expected. In other words, the argument that the current transformation in the graphic design landscape is essential for the current visual communication needs of the people is a reasonable one. As our society drifts towards ocularcentrism, the assertion that we are largely visual beings becomes truer each day and Graphic design in the contemporary society is continuously powered by the reality that a greater percentage of the information **transmitted in the human brain is visual.** Graphics designers have therefore assumed it a duty to transmit various forms of information visually to promote easy comprehension, comfortable learning and satisfying living. By this means, the impact of Graphic design directly affect what people do, how people feel and what people are. It was therefore not an over-exaggeration when Albert Nandi (cited in ico-D, 2017, p.2) suggested that "all people deserve to live in a well-designed world".

It is not difficult to conclude from the foregoing that, Graphic design has moved beyond the traditional practices of printing documents, designing logos, setting types and branding products.

Today, graphic design's definition extends into multiple levels of hypermedia. Its disciplinary transformation comes a long way around various media and continues to breach its limitation to video, prints and web.

Learners and practitioners of Graphic design continue to add to the roles, functions and scope of the discipline in tandem with persistent technological growth and expansion. Print and document publication in Graphic design now extends into electronic book designs in various digital formats. A mention of publication also means publishing for web based portals and blogs, mobile applications and mobile websites with micro sites, learning pages, web plus boards, templates and many others.

Learners and practitioners of Graphic design are limitless in their discussion of advertising materials. Label, posters and bill board designs extends into web banner ads and *Light-Emitting Diode (LED)* screen designs. Logo design includes the designing of sophisticated icons on hand held electronic mobile devices; Illustrators in graphic design are responsible for the production of digital illustrations, digital image creation and manipulation, digital cartooning as well as two and three dimensional animations. Layout designers also get busy with revolutionary screen interfaces displayed on OLED (Organic Light-Emitting Diode) display units as well as simple to complex web layout designs.

From the perspective of today's graphic designer, therefore, Graphic design products are website designs; they are electronic books in many different digital formats; they are digital icons; they are electronic device interface; they are computer games; they are complicated movie effects; they are virtual reality; they are electronic outdoor advertising systems; they are outdoor advertising graphics wrapped around vans, trucks, buses and cars; they are sophisticated digital prints, they are true visual experience intended to make life feels good and comfortable.

Correspondingly, the graphic designer's toolbox has also experienced a major expansion and diversification. In addition to pencils, pens, inks, papers, sketchbooks, rules, and other such traditional tools, a graphic designer's studio could not be described as one until it is equipped with, at least, a good performing laptop or desktop computer, appropriate creative software, graphics tablet with stylus, an image digitizer, studio camera, digital printer, top-end smartphone and reliable internet connectivity. These must be complemented by a conducive work space furnished with not just comfortable but appropriate set of furniture.

Graphic design has been uncontrollably set on wheels by technological intrusions compelling continuous changes, evolvement and spinning out a lot of subdivisions of specialties for learners and practitioners, whilst creating niches for many people to get involved at the same time. Does it not make sense therefore to situate all visual communications within the subsystems of Graphic design since in actual fact, all visual communications make use of some form of graphics?

3. Implications for Graphic Design Education

` First and foremost, the Ghanaian design educator must embrace the idea that for the modern prospective Graphic designer, both the ongoing educational and career moves into digital design make a lot of sense, for the fact that most of the technological dynamisms which impact their personal lives also impact their learning and working lives. Beyond the mundane school and work environment and practices, the youth are in continuous touch with training and tutorial applications in almost everything. These include do-it-yourself applications that avail themselves through mechanisms such as such as Lynda.com, YouTube and Vimeo.

Graphic design educators therefore cannot lose sight of the fact that the changing phase of graphic design is also attributable to the fact that many people are in the position to educate themselves. This is because the tools available for design, which are mostly technologically based are interactive in nature. This in itself is shaping up pedagogical experiences in graphic design, whilst making it possible for learners to explore beyond the limitations of classroom. Pedagogic expressions in graphic design now hinge strongly on metacognition and other constructivists teaching strategies. Becoming a successful graphic designer is therefore becoming more the case of interest and determination rather than the name of the institution one attends. This is rendering graphic design highly inclusive, rather than the exclusive tendencies that characterized initial training and practices.

Graphic design students and practitioners are also very comfortable sharing and learning about their trade, which by itself is souring higher and higher on the wings of modern technology. In this regard, it is also worth considering the fact that technology and creativity never take on a steady form, therefore, continuous change in the learning and practice of Graphic design is inevitable as we progress into the future. The only option left for teachers is to capitalize on the transformative potentialities of modern technology in *revolutionizing* their ways of delivery.

Graphic design educators therefore ought to be fully awake to both the threats and promises of the digital world to pedagogy especially, as online learning opportunities and wide range of online open sources for knowledge acquisition and skill training continue to bring one on one student/teacher interaction to question. As hinted by Clayton (2018) in his presentation on the concept of "disruptive innovation," higher education is about to be disrupted, and by disrupted he means severely threatened by these new online learning opportunities.

Clayton's solution to this was what he described as "t*he Innovative University"* which should aim at

> exploring how universities can find innovative, less costly ways of performing their uniquely valuable functions and ensure their ongoing economic vitality, thereby saving themselves from decline and possible disruption. The Innovative University reveals how the traditional university survives by breaking with tradition, but thrives by building upon what it's done best (Clayton, 2018).

Obviously the reasons for the need for Graphic design institution to adopt innovative approaches to their teaching are not farfetched.

The AIGA and NASAD believe that professional training in graphic design should aim at producing more than technical skill. Programme development should involve thoughtful and deliberate choices of appropriate technological instructions to problem-solving, visual studies, and theoretical issues. This is to ensure that relevant technology instructions are appropriately nested within the other competencies in the graphic design curricula, and that graphic design students will view technology as a means for achieving human-centered communication goals.

In this pursuit, certain relevant areas of graphic design training need to include technological components and be supported by software and hardware-oriented programmes. For print-based projects for instance, areas such as typography, photography, layout design and print production need to be considered for the necessary technological infusion.

It is also worth noting that, the explosion of new media has changed the work in design offices, expanding from print-based projects to include electronic communication. While some graphic designers specialize entirely in new media, most handle a mix of print and electronic work.

In addition to the print-based competencies listed above therefore, electronic communication procedures which are mainly driven by technology should be considered as important part of the Graphic Design training. These include time-based multimedia in image sequences and animated graphics, motion typography design, information architecture, interfaces and narratives for the Internet and the screen and time-based media in cross-disciplinary projects.

Suggesting a model for technology integration in the visual art curriculum for Ghanaian Senior High schools, deGraft-Yankson (2013) projected the following modules for Graphic Design studies:

Module	Description	Strands
Module I General Studies: The study of basic artistic skill sets such as the Elements and Principles of art, Colour theory, layout and composition through ICT.	a. Courses to be derived from this model should include the use of appropriate software and hardware to generate simple to complex two and three dimensional drawings both in vectors and in pixels. b. Courses should also aim at introducing students to the concepts of design elements and principles, colour theory, layout, composition, etc., and deepening understanding in their application.	*Topics to be considered should be derived from the following strands:* • Introduction to computer hardware and software for Visual Art. • Digital drawing (Vectors) with draw programs. • Digital drawing (Pixels/Bitmaps) with paint programs. • Digital Imaging (digitally generating with the computer and peripherals such as scanners, digital cameras, graphic tablets and other digitizers). • Creating the elements of design. • Organising the elements according to the principles of design (moving, sizing, transforming and sampling of digital images, etc.). • Layout • Typography • Colour theory (How the Computer perceives colour) – Understanding the colour space, colour models and gamut.
Module II Digital Art History and Research	Courses should cover topics that merge Digital Art with traditional art forms as they have developed and gained signification in the development of contemporary art and design practices. Various empirical investigations carried out in the discipline should also be studied.	*Topics to be considered should be derived from the following strands* • What is Digital Art? • Why Digital Art? • Digital Art Defence • Origin of Digital Art • The Scope of Digital Art • Exploring Digital Art Systems – Advance studies in Art hardware and applications. • Digital Art terminologies. • Digital versus Traditional Art forms – advantages and disadvantages • The future of Digital Art
Module III Computer Assisted Art I: 2-Dimensional	Courses should equip students with further skills and deepen understanding in the use of technology for the production of real time 2D artworks such as drawings, illustrations, communication designs, paintings, pictures and photographs.	*Topics to be considered should be derived from the following strands:* • Digital drawing • Digital Illustration • Deigning for Communication – Organisation of text and images for communicative purposes. • Designing for Textiles • Digital Painting • Digital Picture making (collage, mosaic, montage, letter cole, marquetry, etc.) • Digital Photography

Module	Description	Strands
Module IV Computer Assisted Art II: 3-Dimensional	Courses should equip students with further skills and deepen understanding in the use of technology for the production of real time 3D artworks in the areas of sculpture, ceramics, jewellery, basketry, leatherwork and other forms of product designs.	*Topics to be considered should be derived from the following strands:* • Introduction to 3D software • Introduction to 3D drawings • 3D Computer Modelling • Rendering
Module V Digital Input	Courses in Digital Input should expose students to the practical application of uploading images and data into the computer for processing.	*Topics to be considered should be derived from the following strands:* • Advanced scanning and digitization techniques • Digital Photography
Module VI Digital Output	Courses should expose students to the practical application of exporting a processed work back from the computer into the real-world as a tangible work of art (hardcopy).	*Topics to be considered should be derived from the following strands:* • Exploring various printing tools, materials, equipment and technologies such as Computer Aided Manufacturing, Image Making and others. • Understanding digital printing techniques • Experimenting with printing or projecting onto a variety of materials, such as film, canvas, cloth and metal. • Rapid prototyping
Module VII Multimedia	Courses to be derived from this module should introduce student to the rudiments of computer-based materials designed to be used on a computer that can display and print text and high-quality graphics, play pre-recorded audio and video material, and create new audio and video recordings	*Topics to be considered should be derived from the following strands:* • Introduction to multimedia systems • Multimedia applications • Introduction to presentational applications • Introduction to animations • Video editing basics • Audio editing basics • Web design/authoring
Module VIII The Internet	Courses should direct students in the appropriate and effective use of the Internet and Internet resources, with the aim of enhancing the study of Visual Art.	*Topics to be considered should be derived from the following strands:* • History of the Internet • How the Internet works • Browsing the Internet • Using search engines • Bookmarking • Downloading • Uploading • Chatting • Emailing • Internet ethics

Table 1

4. Conclusion

Graphic design today, represents the ability to graphically communicate and solve problems visually, through self-expression and spreading of ideas, concepts, feeling and values. It is a visual manifestation of problem solving, and it avails itself with people who have problem solving mentalities and are ready to live out their tendencies through emerging

technologies to reach a wide audience. Twenty-first century, graphic designers create within a wide network of divergent audience who possess the freedom to create and critique, and it is within this highly connected world that graphic designers are to continue developing innovative models for socially responsible designs aimed at solving visual problems and satisfying the insatiable visual demands in the screen generation. Much to their rescue, technological advancements have enhanced the functionalities of graphic design in terms of efficiency, creativity and mobility making them more ubiquitous and reachable. Graphic design is therefore contributing to expansive human existence by continually persuading, informing, identifying, branding, rousing, organizing, motivating, enhancing, engaging conveying meanings to divergent levels of life. It thus continues to be a sought after tool for artistic, economic, marketing and other forms of expression, whilst thriving persistently on advances in technology and online media.

But beyond all this, the future for graphic design solutions promises to be unimaginably effective in influencing behavior and affecting decision in a much broader sense as some governments are in the process of making design an even stronger driver of innovation. The responsibility of the graphic design educator in this regard, therefore, is to develop a proper understanding of the current trends in the discipline so as to be able to diversify instructions towards the training of a 21st century graphic designer who will operate in an era in which visuality has become cardinal to the general worldview of mankind. The answer to the question, what is Graphic design, therefore keeps deferring and overlooking into the future of modern technologies that have unpredictable tomorrow.

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