The impact of different digital image techniques on contemporary graphic design

Dr. Ahmed Omar Mohamed
Assistant Professor Department of mass communication, communication College, University of Sharjah, UAE.

Abstract:
The aim of this research is to explore how technical changes (Photo digitization) combined with growing insights in cognitive science and socio-cultural transformations have affected personal photography. The increased manipulation of photographic images may suit the individual's need for continuous self-remodeling and instant communication and bonding. However, that same manipulability may also lessen our grip on our images' future repurposing and reframing. Memory is not eradicated from digital multipurpose tools. Instead, the function of memory reappears in the networked, distributed nature of digital photographs, as most images are sent over the internet and stored in virtual space.
Graphic designer's understanding of how to deal with the digital image by adding some effects to ensure the effective impact on the target audience of this design.

1- Introduction:
For several years now, graphic designers have had nearly all their tools in one place, on their desktop. However, this has not always been the case. In the past, having been briefed by a client who would usually know what form the job would be a brochure, annual report, press advertisement, poster, book cover, etc. The design would then have had to make a series of rough layouts on paper.

After discussing the roughs with the client, he or she would "work up" an agreed design, specifying details of elements such as type, illustration and photography. On receiving approval from the client, the next stage would be to gather or commission these other elements from other professionals. For instance, a marked-up manuscript and accurately drawn layout would be produced and sent to a commercial typesetter. The graphic design would finally prepare or specify camera- ready artwork, or the mechanical, by cutting and pasting physical pieces of typesetting on bromide paper onto boards to be sent to a repro house and converted first to film and to printing plates. All this took quite a long time and involved specialties and trade skills that have all but disappeared, although some traditional print reproduction methods, such as letterpress printing from lead type, are still used by enthusiasts.

Today, however, the computer is designed by the designer through computer graphics software to integrate images and data into a work of art that persuades the customer and the consumer in the advertised product.

The aim of this research:
- To explore how technical changes (Photo digitization) combined with growing insights in cognitive science and socio-cultural transformations have affected personal photography. The increased manipulation of photographic images may suit the individual's need for continuous self-remodeling and instant communication and bonding. However, that same manipulability may also lessen our grip on our images' future repurposing and reframing. Memory is not eradicated from digital multipurpose tools. Instead, the function of memory reappears in the networked, distributed nature of digital photographs, as most images are sent over the internet and stored in virtual space.
- Graphic designer's understanding of how to deal with the digital image by adding some effects to ensure the effective impact on the target audience of this design.

The impact of digital technology on the graphic designer:
(Unlike previous generations, designers now have digital technology as an allie and tool. Designers can now interface with various forms of technology in many different ways. Digital technology is now the way forward in the field of graphic design. 'Digital' language is the language of computers. Digital technology is now practically used in every form of machinery; from mobile phones to car engines. One of the most useful ways in which to utilize digital technology is through the use of computers. Digital applications used on computers give designers to

means to create, erase, manipulate and experiment with design.

There are many different forms of technological applications at the designers' disposal. Graphic designers and artists can use graphical computer programs such as Adobe Photoshop, Adobe Illustrator and many other professional applications to create images. There are literally endless possibilities of what a good and talented designer can use programs such as these for. There are other collectives of computer programs such as publishing applications (such as Quark Express and Adobe InDesign) and also 3D programs, such as 3D Studio Max and Rhyno. There are Internet applications (such as Dreamweaver and Adobe Go Live!). These applications are utilized using a Macintosh or Personal Computer. The applications have simple interfaces and can be easily).

(Andrew Kelsall – Module 220GD – Design Culture – Module Leader: Mark Williams Support: David Tidball - October 2001)

Learned by enthusiastic people within a good education. A mouse or graphics tablet is used by the designer to produce designs on-screen. Digital cameras, printers and scanners can be plugged into the computer to give the designer versatility and creativity. There are many benefits from using computer technology instead of more traditional methods. Methods of design in the past were all produced by hand and methods of print were vastly different. The impact of the digital revolution is profoundly affecting the ways in which designs are printed. For example, the days of using acetate type overlays, color selectors and 'cut and pasting' are pretty much now in the past. One great advantage of using computers is that applications contain tools which enable graphic designers to experiment with much ease. Therefore, designers now have more power with the use of new digital technology. Technology has given not just professional graphic designers and students in education the chance to express themselves in various ways, but it has given way for anybody around the world who is interested in design the chance to get themselves known.

Photography:

Digital photography has become one of the main image sources in new media, so much so that most photographers routinely manipulate their photographs on a computer. For many, the digital method has replaced the traditional processes of conventional photography involving film, exposure, developing and printing in a darkroom. Digital images have the advantage of being instantly transferable from the photographer, able to be immediately transmitted, copied, manipulated, published and stored, with little if no degradation in quality.

Nowadays, there is one question appears in our mind when we see a digital photo. What is Real? Much of what we see on TVs, printouts and films has been subjected to processes of digital enhancement or digital fabrication. Often the TV presenter stands in a blue or green screen' studio (a technique also known as "chroma key" that allows an electronic image such as a synthetic set to be shown or "dubbed", or superimposed, into a blue or green colored area behind a studio subject), yet what is broadcast is a merging of several sources creating a complete environment surrounding the presenter.

Taking photographs seems no longer primarily an act of memory intended to safeguard a family's pictorial heritage, but is increasingly becoming a tool for an individual's identity formation and communication. Digital cameras, camera phones, photo blogs and other multipurpose devices are used to promote the use of images as the preferred idiom of a new generation of users.

(Traditional graphic design forms could (and even should) be practiced by individuals depending on their relative skill, expertise and inclination. Recent development of traditional design as well as new media has expanded to new divisions, unprecedented collaborations and specializations in news intermediate fields. Currently a graphic designer connects various media into one multimedia form. Design and related disciplines as architecture, environmental design, programming production and other technical support staff are moving and changing their meaning).

(Graphic Design In The Age Of Interactive Media 7 – 5/1/2005)

Importance of Photography in Graphic Design

(Ever since photography has been around, it has been utilized as a key component of advertising. Look back at early advertising and you will most likely see an image that became a staple for that company. Illustrations were used early on, but photographic images capture an emotion. Photography has an emotional component to it, so select images that make you pause – not for shock value necessarily, but because they connect to your theme or story. If you see a picture of a happy kid on a cereal, you want that cereal to make you happy in turn. I think it is the defining feature of some ads, but of course you know there is also type, graphics, illustration.

As the saying goes, 'A picture is worth thousand words.' As a visual communicator, photography is essential to the graphic designer in diverse ways, since images can mean a lot in communication as

far as aesthetics are concerned.

Photography is also an important part of branding, hence the connection with graphic design. Graphic designers manipulate photos to communicate an idea. Some employers look for graphic designers with a photography background and vice versa). (www.designtheplanet.com/importance-of-photography-in-graphic-design/ Posted on December 02, 2013 under Graphic Design

Selecting which shot you should use can often be the most time-consuming stage within your process, especially when you might have upwards of 100 seemingly identical photos to choose from. When using a picture as the background of your layout, try to lose details: go darker, go blurry and your fonts and design will jump out and have much more impact.

When you have multiple images in a single layout, you have to keep searching for a way for them to work together, or you'll have to try and incorporate other elements. When you're dealing with 'art' style imagery, the other elements become really important as visual glue, such as symbols, typefaces, colors, borders, etc.

Don't start designing until you have all the imagery you know you'll be using. The quality, size and subject may well dictate the design direction as a whole. Good photographers make the designer's job easy, but if the photos are going to be combined with type later, it's always helpful to keep this in mind when shooting to really get what you want. Great photos with no place for text generally do not make for great design.

Why Every Graphic Designer Should Also Be a Professional Photographer

Many web and graphic designers enjoy photography as a hobby, and some even offer both design and photography services to clients. If you haven't yet taken much interest in photography or attempted to improve your understanding and appreciation for photography there are a number of ways that it can actually benefit your work as a designer.

If you are a web or graphic designer you may be wondering how you can specifically improve your skills or benefit from learning more about photography. here are a few of the most significant ways you can benefit.

- **Photo Composition and Design are Related:-**

One of the most significant factors involved in quality photos is the composition, or how the shot is laid out. For graphic designers, and web designers specifically, layout and balance are critical. While photography and design are separate they do share some of the same artistic "rules", and learning more about photographic composition can also help you with graphic design.

- **A Creative Outlet:-**

(As a web or graphic designer you probably spend countless hours at your desk on the computer. Photography can serve as an excellent creative outlet that allows you to get away from the computer (at least, until it comes time to edit or process your photos). Even though photography can give you a break from your typical work, it still allows you to use your creativity and to do something productive while you are getting that break from your regular work. If you photograph landscapes, nature, or anything outdoors, photography can provide an excellent change of scenery that you will be sure to appreciate.

- **Colors and Color Theory:-**

Something that photography and design share in common is the importance and impact of color. As a designer you are probably very familiar with color theory and the use of color in your design work. This experience and understanding will come in handy in photography, and chances are you will even learn more and improve your understanding of color through your photographic adventures.

- **Reduce Dependency on Stock Photos:-**

Designers, especially for web design projects, often need to turn to stock photographs. Sometimes your clients may have photos to use in their projects, but the quality of those photos can vary greatly. Even if your clients do have some quality photos, chances are you will still need to use stock photos at some point in the project.) http://www.vandelaydesign.com/why-every-designer-should-be-a-professional-photographer/ By Steven Snell – September 30, 2015

If you get more involved with taking your own photos and improve the quality as your learn and get more experience, it's possible that you could wind up using your own photos instead of stock in some situations. Whether it be for your own websites and projects or for clients, being able to reduce your dependency on clichéd stock photos can be a good thing.

- **Photography Services are an Excellent Complement to Design Services:-**

As I mentioned in the intro, some designers also offer photography services to clients. If you're just getting started with photography this may not seem like a viable option right now, but with some practice you may be able to expand your service options to include photography at some point in the future.

Photography can be an excellent addition to your design services, and you may even be able to get started by serving some of your existing design clients. Both the photography and design industries are filled with loads of freelancers and other service providers, so many creatives have found it to be difficult to earn a full-time income in one of these industries. If this has been the case

for you in the design industry, adding some part-time income from photography could close the gap that you need to earn a full-time income.

Metadesign:

Metadesign ((or meta-design) is an emerging conceptual framework aimed at defining and creating social, economic and technical infrastructures in which new forms of collaborative design can take place). (https://en.wikipedia.org/wiki/Metadesign)

(In philosophy or human sciences, meta means, what goes beyond or what is more comprehensive or fundamental. In computer science metadata is data that describes other data (data about data)). (http://www. Webster.com)

(One could describe any computer programming as a meta-language for interacting with a computer. Meta in consequence technology delivers not only content but also through its codes and structures, a specific meaning. This specific meaning is described by 'the meta information defining a relation between technology, structure, sign and content').

(Extended Markup Language (XML) and other tools for creating met information are examples of simple online applications (one step towards the semantic Web) and facilitate data mining and other more effective searching of information in the complex structures. Enforcement of the Meta design is not simple. It requires a new way of thinking, active contributors and not just passive consumers. The bottom-up relationship between consumer-designer is supposed to change from passive consumer trough active consumer, end-user, user, power users, local developers, domain designer to 'meta-designer').

(Fischer, University of Colorado, Meta design http://www.cs.colorado.edu/~l3d/ (2003))

On the other side, the develop design top-down will have to satisfy users needs with sophisticated User Centered Design.

Computer graphics grew out of the need to envisage the world around us, to test theories about how things might look before they were actually built. Computer graphics were developed in order to make it possible to interpret information and simulate actions.

The steps to follow when merging the digital image into the design:

1. Collecting some digital photos (taken by the researcher and others gathered from the internet).
2. All images were processed (color, clarity, resolution, color map and color value) through the Photoshop program, each image according to the design purpose.
3. The researcher did some color effects by water colors on external drawing paper and were scanned to be used in different designs.
4. Some of these images were merged with each other and with manual effects, taking into consideration that the identity of the image is not compromised or the design of the image is changed to reach the design idea that the recipient understands.
5. The addition of some effects on the design of images through the Photoshop and Illustrator programs to the final design identity that helps the recipient to understand and recognize the design.

From all above, the researcher tried to show the value of graphic designer's understanding of how to deal with the digital image by adding some effects to ensure the effective impact on the target audience of this design without changing taking into consideration respecting the ethics of the design work and not changing or falsifying the facts.

The first design: - Images overlapping with the use of some different techniques of digital image from the design of the researcher

Design Idea: Interference of photographs and manual color texture.
Method of implementation: Digital printing.
Material: Cotton paper texture.
Design Elements: A collection of different photographs, colors, grayscale shapes and some effects.
Technical analysis of the work No. (1):

This design showed the role of the photograph in the structural system of the abstract design, which is characterized by the flow, gravity, daring and movement achieved through the kinetic equilibrium and color in the design.
The second design: - Images overlapping with the use of some different techniques of digital image from the design of the researcher

Design Idea: Interference of photographs and manual color texture.
Method of implementation: Digital printing.
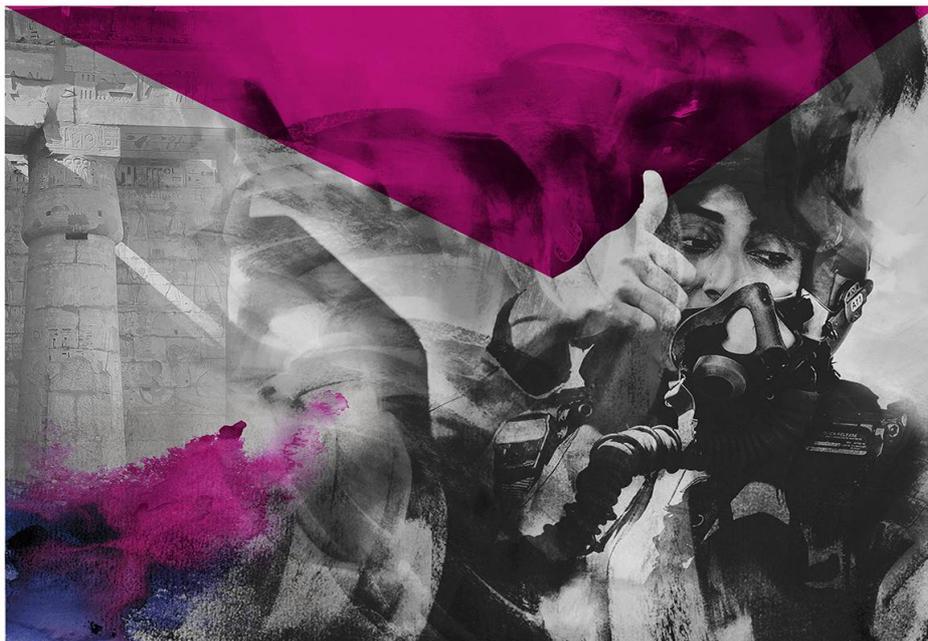**Material:** Cotton paper texture.
Design Elements: A collection of different photographs, colors, grayscale shapes and some effects.
Technical analysis of the work No. (2):
This design showed the role of the photograph in the structural system of the abstract design, which is characterized by the flow, gravity, daring and movement achieved through the kinetic equilibrium and color in the design.

The third design: - Images overlapping with the use of some different techniques of digital image from the design of the researcher

Design Idea: Interference of photographs and manual color texture.

Method of implementation: Digital printing.

Material: Cotton paper texture.

Design Elements: A collection of different photographs and colored, grayscale shapes and some effects.

Technical analysis of the work No. (3):

This design showed the role of the photograph in the structural system of the abstract design, which is characterized by the flow, gravity, daring and movement achieved through the kinetic equilibrium and color in the design.

The fourth design: - Images overlapping with the use of some different techniques of digital image from the design of the researcher

Design Idea: Interference of photographs and manual color texture.

Method of implementation: Digital printing.

Material: Cotton paper texture.

Design Elements: A collection of different photographs and colored, grayscale shapes and some effects.

Technical analysis of the work No. (4):

This design showed the role of the photograph in the structural system of the abstract design, which is characterized by the flow, gravity, daring and movement achieved through the kinetic equilibrium and color in the design.

The fifth design: - Images overlapping with the use of some different techniques of digital image from the design of the researcher

Design Idea: Interference of photographs and manual color texture.

Method of implementation: Digital printing.

Material: Cotton paper texture.

Design Elements: A collection of different photographs and colored, grayscale shapes and some effects.

Technical analysis of the work No. (5):

This design showed the role of the photograph in the structural system of the abstract design, which is characterized by the flow, gravity, daring and movement achieved through the kinetic equilibrium and color in the design.

The sixth design: - Images overlapping with the use of some different techniques of digital image from the design of the researcher

Design Idea: Interference of photographs and manual color texture.

Method of implementation: Digital printing.

Material: Cotton paper texture.

Design Elements: A collection of different photographs and colored, grayscale shapes and some effects.

Technical analysis of the work No. (6):

This design showed the role of the photograph in the structural system of the abstract design, which is characterized by the flow, gravity, daring and movement achieved through the kinetic equilibrium and color in the design.

The seventh design: - Images overlapping with the use of some different techniques of digital image from the design of the researcher

Design Idea: Interference of photographs and manual color texture.

Method of implementation: Digital printing.

Material: Cotton paper texture.

Design Elements: A collection of different photographs and colored, grayscale shapes and some effects.

Technical analysis of the work No. (7):

This design showed the role of the photograph in the structural system of the abstract design, which is characterized by the flow, gravity, daring and movement achieved through the kinetic equilibrium and color in the design.

The eighth design: - Images overlapping with the use of some different techniques of digital image from the design of the researcher

Design Idea: Interference of photographs and manual color texture.

Method of implementation: Digital printing.

Material: Cotton paper texture.

Design Elements: A collection of different photographs and colored, grayscale shapes and some effects.

Technical analysis of the work No. (8):

This design showed the role of the photograph in the structural system of the abstract design, which is characterized by the flow, gravity, daring and movement achieved through the kinetic equilibrium and color in the design.

The ninth design: - Images overlapping with the use of some different techniques of digital image from the design of the researcher

Design Idea: Interference of photographs and manual color texture.
Method of implementation: Digital printing.
Material: Cotton paper texture.
Design Elements: A collection of different photographs and colored, grayscale shapes and some effects.
Technical analysis of the work No. (9):

Design Idea: Interference of photographs and manual color texture.
Method of implementation: Digital printing.
Material: Cotton paper texture.
Design Elements: A collection of different photographs and colored, grayscale shapes and some effects.
Technical analysis of the work No. (10):
This design showed the role of the photograph in the structural system of the abstract design, which is characterized by the flow, gravity, daring and movement achieved through the kinetic equilibrium and color in the design.

Results :

1. There is an interactive relationship between color balance and motion between shapes (digital photographs) as design bases in the construction of graphic design.
2. There is a reciprocal relationship between the organization of design elements and the achievement of kinetic equilibrium in design.
3. The role of the digital image in the design and its ability to tighten the design structure and achieve movement in the design.
4. To take advantage of the color value of the shapes and use them in the design in a

This design showed the role of the photograph in the structural system of the abstract design, which is characterized by the flow, gravity, daring and movement achieved through the kinetic equilibrium and color in the design.

The tenth design: - Images overlapping with the use of some different techniques of digital image from the design of the researcher

manner that achieves the chromatic and kinetic equilibrium.

5. The artistic and aesthetic value of the digital image can be used for the balance and motion of the design as design elements in the construction of a successful graphic design.
6. Activating the role of design elements within (digital image), in achieving the design objective or the design idea and the construction of the graphic design.
7. The researcher benefited from the study of the rules of balance and movement in the presentation of design ideas using the computer programs (Photoshop and Illustrator) and the use of some effects that enrich graphic work.
8. The effects of modern digital printing can be exploited and their features can help the designer to implement his design idea.
9. The study of the aesthetic values of balance and movement when overlapping digital images by the researcher in the creation of different, diverse and innovative design ideas can be used in building of modern graphic designs that keep abreast of the tremendous scientific and technological progress in this

area.

Recommendations

1. Emphasis on the need to achieve motion and color balance between the forms of digital images in the construction of graphic designs.
2. Activating the role of design elements through the digital image in the design construction of the successful graphic work.
3. The necessity of adapting digital images to the design function or purpose of the graphic design 'Selecting the digital photo collection to suit its purpose and choosing the appropriate printing method'.
4. Activating the role of the internal movement in the design, through the optimization of the photographic images within the graphic work and distribution in a way that achieves the design idea of the work.
5. The need to pay attention to the work of create a thoughtful design and maintain the rules and foundations of a successful graphic design

presented to the public.

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