

ANALYZING DATA THROUGH INFOGRAPHICS IN CONTEMPORARY ARTS

تحليل البيانات من خلال المخططات البيانية في الفنون المعاصرة

Dr. Gamal Eldin Elkheshen

Graphic Design, Faculty of fine arts, Helwan University, Egypt.

جمال الدين الخشن

قسم الجرافيك – كلية الفنون الجميلة – جامعة حلوان، القاهرة، مصر

gamal.elkheshen@f-arts.helwan.edu.eg

ABSTRACT

Infographics have become common, especially with technological developments in the last decade, where the available data has become more accessible and needs to be visually organized through these charts. To find a relationship between text and image to the delivery of information within the space of contemporary arts through the relationship between the recipient and the artist and uploading the data, whether in a readable, audible, or even visual form. A method that the researcher relies on to link in a systematic way related to downloading and analyzing data within the artwork, and the researcher referred to the studies associated with sensory receptors and their role in perceiving the Artwork and their interaction with it through the physiology of vision and its role and linking it to the human brain engine, as well as the meeting point between each of the arts Contemporary and data that the artist seeks to enter through contemporary arts.

KEYWORDS:

Infographics, Data Visualization, Installation art.

الملخص

أصبح استخدام الرسوم البيانية شائعًا ، خاصة مع التطورات التكنولوجية في العقد الماضي ، حيث أصبح الوصول إلى البيانات المتاحة أكثر سهولة وتحتاج إلى تنظيم مرئي من خلال هذه المخططات. إيجاد علاقة بين النص والصورة وإيصال المعلومات ضمن فضاء الفنون المعاصرة من خلال العلاقة بين المتلقي والفنان وتحميل البيانات سواء في شكل مقروء أو مسموع أو حتى مرئي. أسلوب يعتمد عليه الباحث للربط بطريقة منهجية تتعلق بتنزيل البيانات وتحليلها داخل العمل الفني ، وأشار الباحث إلى الدراسات المرتبطة بالمستقبلات الحسية ودورها في إدراك العمل الفني في فنون مابعد الحداثة وتفاعلها معها من خلال فسيولوجيا الرؤية ودورها وربطها بمحرك المخ البشري ، وكذلك نقطة الالتقاء بين كل من الفنون المعاصرة والمعطيات التي يسعى الفنان للدخول إليها من خلال المخططات البيانية في الفنون المعاصرة.

الكلمات المفتاحية

الرسوم البيانية ؛ البيانات المرئية ؛ فنون التجهيز في الفراغ.

PREAMBLE:

The substantial technological development in data always gives the artist a new challenge to analyze all different sources of data to turn it into data visualization which; most artists seek to send a message from their artworks that make them focus on this relation between sender (Artist) and receiver (Art watchers) in installation art as an example, which is representing a goal in the artistic area based on intellectual and visual communication, the researcher tries to find this relation through the methodology of how infographic effect on the audience in installation art.

STATEMENT OF THE PROBLEM:

The research problem is looking for answers to the following question:

- What is the role of infographics in data visualization? How did some artists rely on it in their works?

OBJECTIVES:

- Learn about the relation between infographics and digital visualization.
- Find interactive content between audience and artists in installation work.
- Learn about the aesthetic values of infographics and how to use them in an art project.

METHODOLOGY:

The research follows a Theoretical and Practical framework through four steps.

- First: Defining the infographics (Data Visualization).
- Second: The technique methods of infographics in installation art (How to analysis data in installation).
- Third: list of artists using infographics as a tool in their work.
- Fourth: The research's practical framework (the researcher's subjective experience "Getting out of paradise" installation project).

LITERATURE REVIEW:

The infographic is a media art that has been practiced through artists to analyses data in their works; that's why many artists exceptional from graphics background made their works and studies on different kinds of infographics art as a technique in their artworks. However, these researches mainly focused on the infra using of this art; the researcher couldn't find any former research that studied the output of this art and the history, methods, and roots in skills (special in installation); however, the researcher added the Literature Review of infographics through four researchers that focused on it.

1- According to (author/Alberto Cairo) (Date/2017), this subject's main idea is Infographics: The Functional Art: An Introduction to Information Graphics and Visualization (Pearson Education (US)).

This research shows Why data visualization should be considered "functional art" rather than fine art; the author shows access to vast amounts of free information. With the right tools, we can start making sense of all this data to see patterns and trends that would otherwise be invisible. By transforming numbers into graphical shapes, we allow readers to understand the stories those numbers hide. In this practical

introduction to understanding and using information graphics, you'll learn how to use data visualizations as tools to see beyond lists of numbers and variables and achieve new insights into the complex world around us. (<https://ptgmedia.pearsoncmg.com/images/9780321834737/samplepages/0321834739.pdf>).

2- According to (author/Jason Lankow, Josh Ritchie, Ross Crooks), (Date/2012): the main idea about this subject is Infographics: The Power of Visual Storytelling. (John Wiley & Sons).

The list of facts supports the research idea; the research represents Infographics will show you the vast potential to use the communication medium as a tool by creating informative and shareable infographic content, wishes the explosion of data created and content shared in the Information Age has fundamentally changed the way we communicate today. Infographics and data visualization can convey your message concisely and engagingly that sets it apart from the noise. Infographics: The Power of Visual Storytelling shows you how to use visual communication to attract, inform, and even entertain your audience.

(<https://www.oreilly.com/library/view/infographics-the-power/9781118421598/>).

3- According to (author/Sandra Rendgen) (Date/2011), this subject's main idea is Infographics: Information Graphics. (Taschen).

A list of facts supports this idea: This unique book presents a fascinating historical perspective on the subject, highlighting the work of the masters who have created several breakthroughs that have changed the way we communicate. Information Graphics has been conceived and designed not just for designers or graphics professionals, but for anyone interested in the history and practice of communicating visually; the author shows that our everyday lives are filled with a massive flow of information that we must interpret to understand the world we live in. Considering this complex variety of data floating around us, sometimes visual is the best — or even only — way to communicate.

(https://www.researchgate.net/publication/221300514_Information_graphics_an_untapped_resource_for_digital_libraries).

4- According to (author/Sandu) (Date/2021), this subject's main idea is Infographic Design: Visual Storytelling with Information and Data (Gingko Press).

The research proposes a new method for solving the problem of Infographics and data visualization if they are graphic visual representations of information, data or knowledge intended to present information quickly, easily and clearly to the masses. This author explores the basic understanding of infographics and data visualization by explaining its history and the major types used.

(<https://www.booktopia.com.au/infographic-design-sandu/book/9783943330632.html>).

1. INTRODUCTION:

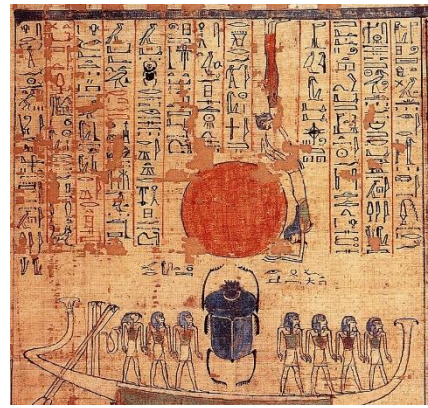
1.1 THE MEANING OF INFORGRAPHICS:

We are presenting data with design in an integrated visual form called Infographics. A distinction must be made between infographic and interactive data visualization, meaning any shape or graphic contains information. The importance of infographics is highlighted in being an excellent medium for delivering messages, regardless of their field. Educational, indicative, marketing, news, ideas for consumers, future customers, but in this research, we will see this relationship with contemporary arts, which's The degree of effectiveness when used to improve internal communication within organizational boundaries of brains to add data to the audience in the installation art, Leonardo da Vinci when he presented his Guide to Human Anatomy as written instructions supported by illustrations (figure 1), may think that our use of the

infographic appeared with the Internet or technology movements. Still, it begins with the art movements during art history, like the visual storytelling in ancient Egyptian walls (figure 2).

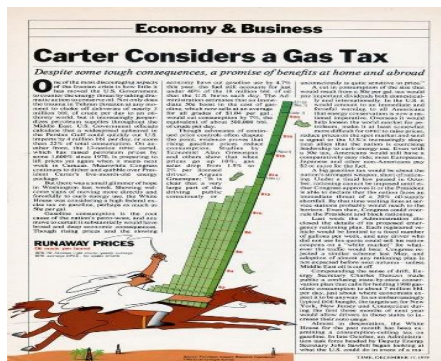


(Figure 1) Da Vinci, *Studies of water* c.1510, Red chalk, pen and ink (20.5 x 20.3 cm).
(Source: <https://www.rct.uk/collection/search/#/27/collection/912661/studies-of-water/>)



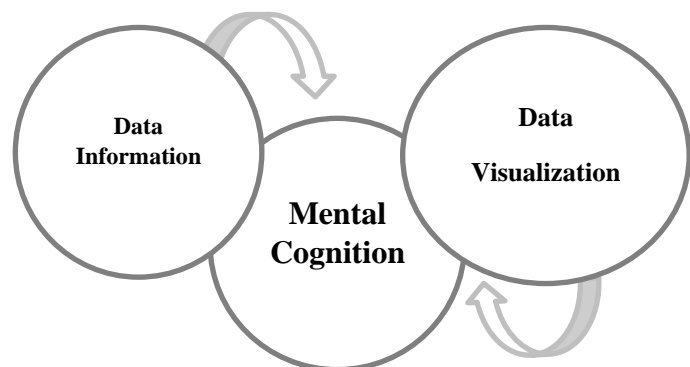
(Figure 2) *The Book of the Dead of AnhaiNun*, god of the waters of chaos, (represented by both the scarab and the sun disk).
(Source: https://en.wikipedia.org/wiki/Egyptian_mythology#/media/File:Nun_Raises_the_Sun.jpg/)

As for the modern concept of the term infographic that we know now, it dates back to 1979 by the British graphic designer "Nigel Holmes" (Figure 3), who used illustrations extensively in his illustrative publications on various scientific and marketing topics. In the early nineties of the last century, the term infographic was widely used to express the attractive illustrations of products, and the term information graphics was also used interchangeably with the term infographic. The first book that went into depth in explaining and detailing the strategies of infographic design is the unique book (Infographic: The Power Of Visual Storytelling) by its authors "Jason Lanko, Ross Crooks, and Josh Ritchie", which was published for the first time in 2012, in this book, the authors emphasized that any image that explains a particular idea, no matter how simple, is a form of an infographic. For example, traffic signs on the roads bearing simple shapes are a simple infographic.



(Figure 3) Nigel Holmes, *Illustration*, Time Magazine, 1979.

(Source: http://4.bp.blogspot.com/-EhTsluKmcE/UT4RV2Sci2I/AAAAAAAAAuw/QPagPr5doBM/s1600/Holmes_en_Time.jpg)

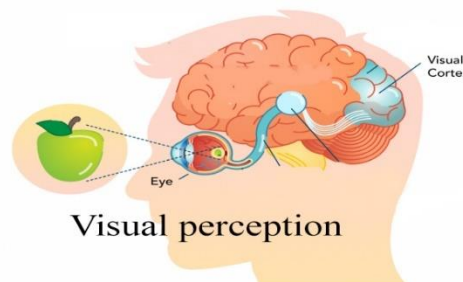


(Figure 4) The figure shows the interrelationship between the Mental Cognition and Data Information and data visualization.
(Source: Author)

1.2 INFOGRAPHIC AS VISUAL STIMULUS (MENTAL COGNITION)”

Infographics can improve communication with the audience, as most medical researchers refer to by Capturing ideas. Complex behaviors or knowledge are presented in a visual form that they easily assimilate. It can transfer as much information as possible in the minimum amount of time and space occupied by that information; It combines pictures and words to increase understanding of that information out and keep Infographics are visual representations of information, data, and accompanying information text, and is designed to present complex information more clearly than text alone, it uses words, numbers, symbols, colors and images; To deliver the message in mental cognition (figure 4).

Visual perception, which is a cognitive mental process that works to give meaning and interpretation of the visual stimulus, to reveal and process the characteristics of the image, so the researcher found that there are some indications that some artists worked on to address this perception, which included revealing the impact of the interaction between the two types of infographics (fixed / moving) (Figure 5) shows how the audience sees the visual, the enter eye as the figure shows the transmits layer then move it to the brain called (Visual perception), which allows light to be focused for clarity. And gives the brain to focus more and collect more data in a few seconds, the eye is transported to the brain, where they are interpreted in the primary visual cortex, and an image is perceived.



(Figure 5) Visual perception (Author)

1.3 THE AUDIENCE AND THE ARTIST:

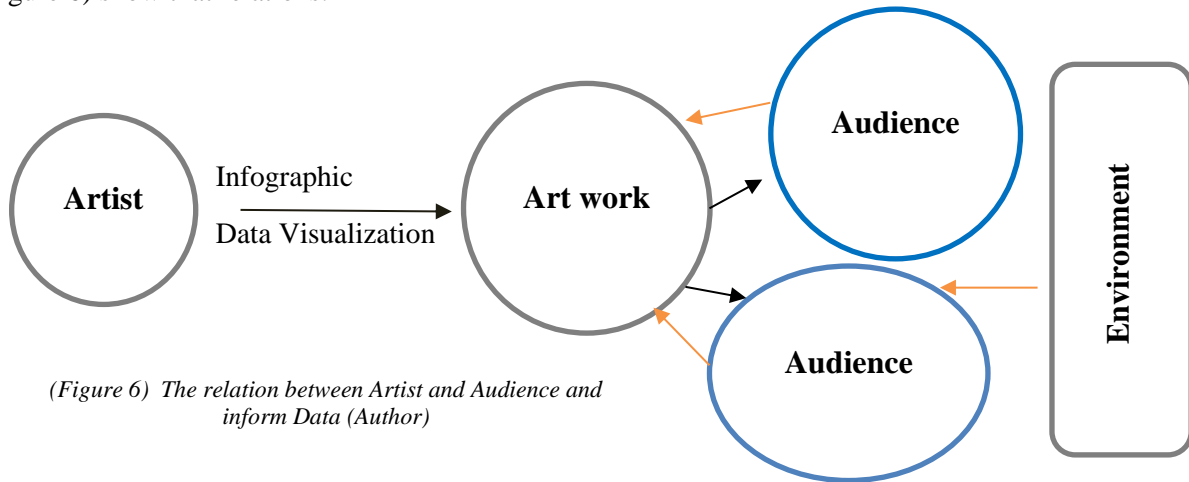
There are essentially four components in an art system: (Artwork, Audience, Environment, and Artist); there could be several relationships between different elements which might be meaningful and exciting in respect to an interactive artwork, such as:

- audience – artwork.
- audience–audience.
- artwork–environment.

The artist may play the role of the artwork system by adding information or data to the artwork. However, researchers still consider the artist and audience to play integral roles in the graphs and data visualizations that placed the artist as part of this visual system. Hence, the artist adds data, and the interaction between the artist and the artwork system is shown with a dashed line. On the other hand, the artist is not an integral part of the system as the audience (unless the artist is part of the audience). However, on the other hand, in the context of artworks that rely more or less on data entry, artists may be interested in obtaining feedback about the audience's interaction with the artwork. By adding information's, considering the artist as part of the system, there are two more relationships:

- Artist artwork.
- The artist's audience.
-

The artworks that we mentioned are all based on analyzing data that artists need to send to the audience in (figure 6) show that relations.



(Figure 6) The relation between Artist and Audience and inform Data (Author)

1.4 THE RELATION BETWEEN INFORGRAPHIC (DATA) AND VISUAL ARTS (INSTALLATION):

As we mentioned that Infographics (a clipped compound of "information" and "graphics") are graphic visual representations of information, data, or knowledge intended to present information quickly and clearly, some artists exceptional with the beginning of the contemporary movement started to use these visual elements to transfer this information or data, like in (figure 7), the American conceptual artist Joseph Kosuth in his work three chairs 1965, Kosuth tried to inform our data through this visual, abstract art by adding text panel as the dictionary definition of "chair" in one of the three installation objects (text, Image, object), In 1980 Tom Folland, write about The viewer's role studies of Kosuth artwork according to the viewer of three chairs; Folland is not shown the admire of beauty, but how the audience received Kosuth installation actual "artworks"—the concepts—emerge the readable text of the chair and how audience reflect on them, and how the text was an essential part of understanding the idea, that makes Kosuth in his next installation to spark the value of the text (in all his work) as analyzing readable data like (infographic).



(Figure 7) Joseph Kosuth, 1965, Wood folding chair, enlargement of the dictionary definition of "chair", text panel (61 x 76.2 cm), Moma Art museum, USA.

(Source: https://www.moma.org/learn/moma_learning/joseph-kosuth-one-and-three-chairs-1965)



(Figure 8) Joseph Kosuth, 1970, Information Room (Special Investigation) concept, Moma Art museum, USA.

(Source: <https://www.wikiart.org/en/joseph-kosuth/information-room-special-investigation>)

And if we back also to the same artist we will see in his most of his art projects leads through inferring data to the audience in his installation work like Information Room (Special Investigation), “Don’t Just Stand There—Read!” declares the headline of a 1970 review in the New York Times lamenting “the cultural nihilism of Conceptual Art” despite its ability to keep “scoring points, installation re-created within this exhibition. The reading room comprises two long wooden tables piled high with paperbacks from Kosuth’s library at the time (Figure 8). Kosuth tries to inform audiences by direct text message through his installation, by 1991, Kosuth reproduction of Champollion's discovery stone and this installation was added in Figeac, France, the birthplace of Champollion. As we see (figure 9), Kosuth reproduces the stone data on a large scale to make it clear as text information data with the same alphabetic organization.

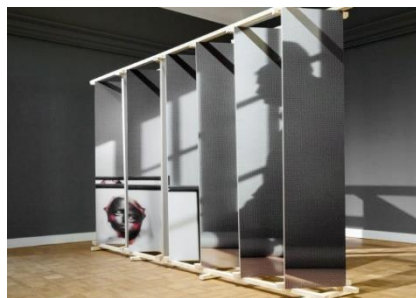


(Figure 9) Joseph Kosuth, 1991, installation enlarged version Champollion (Figeac), France.
(Source: <https://www.interviewmagazine.com/art/joseph-kosuth-digs-deep-under-the-surface-of-culture>)



(Figure 10) Jenny Holzer, 1989, iL.E.D. Display board, AIDS fund-raising event Guggenheim Museum, USA.
(Source: <https://www.guggenheim.org/artwork/24>)

The 1989 Jenny Holzer represents her installation based on info text through this lighting installation, which showed at Guggenheim Museum in New York, programmed to an insistent but silent beat, raced the length of an L.E.D. Display board installed along the winding inner wall of Frank Lloyd Wright’s spiral ramp. Her Installation for Bilbao—nine vertical L.E.D (figure 10), Signboards, each more than 40 feet high—transmit aphorisms in Basque, Spanish, and English. Developed over time, the texts were first written for an AIDS fund-raising event, jenny using a readable text in her installation signs as information data in a contemporary visualization form. With the development of technology, the installation display was also developed exceptional with the beginning of the new century Koehorst in 't Veld one of those who used the information data in his installation work (figure 11) through infographics based on text, Exhibition design for De Nieuwe Smaak at Rijksmuseum Twenthe.



(Figure 11) Koehorst in 't Veld, 2016, installation, Rijksmuseum Enschede, Netherlands.
(Source: <https://exhibitiondesignclub.tumblr.com/post/154977926900/exhibition->

In 2014 the Institute for Researching the Avant-garde exhibit in the Museum of Contemporary Art in Zagreb installation based on infographic art was organized by Negra Nigoević & Filip Pomykalo I Photography - Nikola Zelmanović I A project, (figure 12) the information data that designers and artists want to develop where shown through infographic data inside the installation show.



(Figure 12) Negra Nigoević & Filip Polyakov, 2014, installation, the Avant-garde exhibit in the Museum of Contemporary Art in Zagreb, Croatia.

(Source: <https://www.behance.net/gallery/19675999/Deconstruction-Construction>)

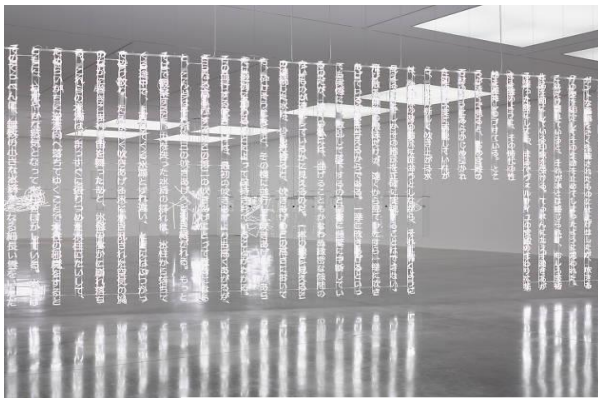
In 2012 the Italian artist and architect Luca Zevi represented Italy in the Venice Biennale (figure 13); the theme of Exhibition, Common Ground, Zevi, has interpreted the intentions he adds advanced technology experiments at an international level of the relationship between technological innovation and artistic inquiry, all working together to afford the quality of work and quality of life. In infographic design, he wants to infer data by letting the audience interact with the installation by Visual perception of the data and objects inside the installation.



(Figure 13) Luca Zevi, Venice biennale 2012, Venice, Italy.

(Source: <https://www.archdaily.com/green-economy-italy-pavilion>)

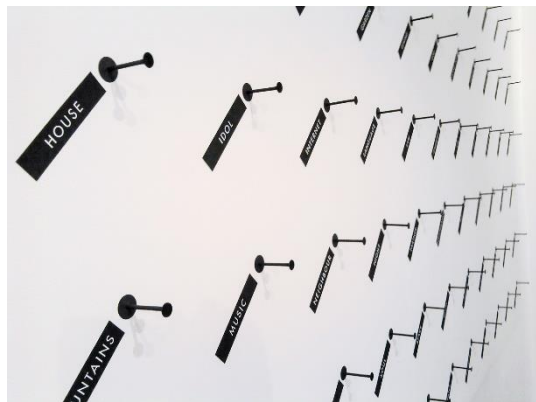
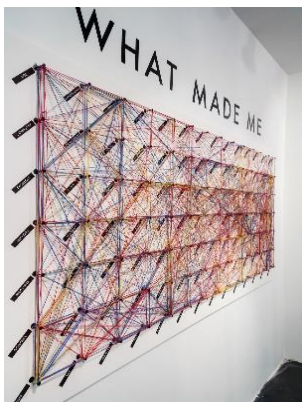
In 2020 the Welsh artist Cerith Wyn Evans will represent his neon text inspired by experimental classical music and Japanese Noh.(figure 14) His big, sprawling, humming white neons are real eye-pleasers. Their splintered, chaotic composition sits somewhere between hectic randomness and studied design. You search them for patterns as they thrum and vibrate and fill the room in his installation; he organized the data to be readable in parts and non in others. So we can say it's part of an installation that is based on data of Japanese kanji.



(Figure 14) Cerith Wyn Evans, A neon curtain of Japanese kanji White Cube Gallery, 2018, London, England.

(Source: https://whitecube.com/news/news_and_events/cerith_wyn_evans_and_white_cube_donate_come_II_to_the_hepworth_wakefield)

What made me Interactive installation exploring a concept of a large-scale visualization of information designed by the British artist Dorota Grabkowska (figure 15), commissioned by the Idea Birmingham and Birmingham City University, the installation was created to provide an interactive experience for visiting members of the public; each question was assigned to a different Colour and could be answered by connecting relevant words with a colored thread. Almost a hundred words were displayed alphabetically in a grid, giving the participants a wide choice of possible answers; through this visual language, the participants could share their feelings, influences, thoughts and inspirations, which made them who they are today.



(Figure 15) Dorota Grabkowska, Interactive installation, Birmingham City University, 2012, England.

(Source: <https://www.behance.net/gallery/4419469/WHAT-MADE-ME-Interactive-Public-Installation>)

(Source: https://whitecube.com/news/news_and_events/cerith_wyn_evans_and_white_cube_donate_come_II_to_the_hepworth_wakefield)

In 2019 the visualized Designer Dima Yarovsky these lengthy “terms of service” agreements from popular social apps (figure 16), including Facebook, Instagram, Snapchat, and Tinder, in his project, titled I Agree, shown in Bezalel Academy for Art and Design, Yarovsky teaching in this academy infographic design, he added in his installation that based on infographic all policy data agreements of social media apps, and how’s our data are unsecure.



(Figure 16) Dima Yarovsky, Infographic installation, Bezalel Academy for Art and Design, 2019, Jerusalem, Palestine.

(Source: <https://mymodernmet.com/social-media-policy-infographics-dima-yarovinsky/>)

In 2012, Carmody Groarke, the Bauhaus artist, added his infographics installation (figure 17), under this subject of art as life, he used Bauhaus-style colours and typography to design an exhibition about the celebrated art school at the Barbican gallery in London.



(Figure 17) Carmody Groarke, Infographic installation, 2012, the Barbican gallery in London.

(Source: <https://www.dezeen.com/2012/05/15/bauhaus-art-as-life-by-carmody-groarke-and-a-practice-for-everyday-life/>)

(Source: https://whitecube.com/news/news_and_events/cerith_wyn_evans_and_white_cube_donate_

Nicola Stäubli added an information screen for a walking exhibition that can be rolled up for storage and transportation using digital print on maple wood (Figure 19), 52 wood slats are held together with an internal cord providing an angled surface; the cross-section of the slats are designed as tongue and groove.

Dr. Gamal Eldin Elkheshen – DTAA21 – December 2021



(Figure 18) Nicola Stäubli, Infographic installation, 2010, Abteilung Naturfoerderung des Kantons Bern, Münsingen, Germany.

(Source: <http://www.nicola-staubli.com/screen/>)

(Source: https://whitecube.com/news/news_and_events/cerith_wyn_evans_and_white_c)

In 2021 the researcher presents his installation project based on data visualization; in the installation museum data of the virtual idea of (getting out of paradise) (figure 19), the researcher tries a lot of data information about apple nipples and people's sins the 20th century till now.



(Figure 19) researcher, 2021, Getting out of paradise, Data visualization installation Art, Arts Palace, Cairo, Egypt.

(Source: <http://www.gamalelkheshen.com/p/getting-out-of-paradise.html>)

2. SUMMARY OF MAJOR FINDINGS:

The overall results showed the high positive effect of infographics and data visualization in contemporary arts, and how artists need it to infer data inside any installation work, which should consider the relation between (Artists-(Data)--(Art)-(Audience)+(environment)) equation to develop the output of infographic installation studies.

3. RESULTS AND DISCUSSION:

The study aimed to find out the effect of The Data information and Ideologies of Thought in contemporary arts, and how artists can analyze the data in installation work of the questionnaire showed that through the ways of thinking and doing (represent the final artwork), the research also focuses on projects that based on infographic art and how artists converted into data visualization, and how it's essential to teach infographics to visual arts students and graphic design also.

4. CONCLUSION:

In this article, we presented the concept and role of each of the infographics and the analysis of data issued by contemporary arts, especially the preparation in the vacuum in various fields, and we explained what it means when we refer to the interaction of the infographic with the artworks as the main entrance to it. We have introduced the different types of interactions possible in Artworks of art installation and compared other interaction concepts.

Also, we set the scope of the definitions from the infographic context towards more specific interactive digital artworks related to the artist's role as sender and receiver within those works. Finally, we have presented interactions in the context of an interactive digital art installation in an open space. This type allows the artwork to have as many interactions as possible, taking spatial and environmental factors into account.

As we have seen those different artists, technicians and researchers define the interaction and the interaction of the artwork differently in data entry and the relationship of the infographic with it, and finding the different meanings and uses of the interaction will remove the confusion and clarify the vague concepts about the interaction among them as we noted in the article, the idea of interaction in data art and its impact on interaction concepts from several fields in contemporary arts such as new media, digital art, and infographic art.

We have observed that the approach and depth of interaction change from one domain to another. In the context of many of the projects addressed by the researcher, the diversity of interaction refers to a type of artist's control over media management, while in new highly interactive media interaction refers to the artist's ability to create and distribute content.

In infographic art as a tool of the artist, it refers to the user's control over the processing or output of the Artwork idea.

5. RECOMMENDATIONS:

After working through the paper, the researcher recommended it.

1. Offering broader perspectives in theorizing and criticism in reading infographic artwork through media and graphic studies.
2. The analysis of data visualizations that rely on Artworks needs to be familiar with those arts.
3. Create an infographic module in the graphic department.
4. The students should study infographic art as a graphic technique to advance modern trends in the artwork special installations projects.
5. Art universities should be holding artistic workshops for contemporary visual arts.

REFERENCES:

- Cairo, Alberto. (2017). Infographics: The Functional Art: An Introduction to Information Graphics and Visualization. (Pearson Education (US)), 34(2), 109-112. Retrieved from:
<https://www.pearson.com/uk/educators/higher-education-educators/program/Cairo-Functional-Art-The-An-introduction-to-information-graphics-and-visualization/PGM1028860.html>
- Lankow, J. Ritchie, J. Crooks, R. (2017). The Power of Visual Storytelling (John Wiley & Sons), pp 127-135. Retrieved from: <https://pdfroom.com/books/the-power-of-visual-storytelling-how-to-use-visuals-videos-and-social-media-to-market-your-brand/qlgyyoXxgMG>
- Steinkamp, J. (2001). My Only Sunshine: Installation Art Experiments with Light, Space, Sound and Motion. Leonardo, 81-83.
- Retrieved from: <https://studylib.net/doc/8877750/my-only-sunshine--installation-art-experiments-with-light>.
- Rickey, G. (1979). A Retrospective. New York: Guggenheim Museum.
- Retrieved from: <https://www.kasmingallery.com/news/announcing-exclusive-worldwide-representation-of-george-rickey>
- Ahmed, S. (2018) Interaction and Interactivity: In the Context of Digital Interactive Art Installation, Human-Computer Interaction. Interaction in Context (pp. 26-44): IGI Global.
- Retrieved from:
https://www.researchgate.net/publication/325471580_Interaction_and_Interactivity_In_the_Context_of_Digital_Interactive_Art_Installation
- Rendgen, S. (2011). Information Graphics. (Taschen), (pp. 91–100). Retrieved from:
https://www.taschen.com/pages/en/catalogue/graphic_design/all/44653/facts.information_graphic_s.htm.
- Sandu, I. (2021). Visual Storytelling with Information and Data (Ginkgo Press), (pp. 185-204). Retrieved from: <https://www.boffinsbooks.com.au/books/9783943330632/infographic-design-visual-storytelling-with-information-and-data>

Ahmed, S. U., Jaccheri, L., Sindre, G., & Trifonova, A. (2009). Conceptual Framework for the Intersection of Software and Art Handbook of Research on Computational Arts and Creative Informatics (pp. 26-44): IGI Global.

Retrieved from:

https://www.researchgate.net/publication/314687040_Conceptual_Framework_for_the_Intersection_of_Software_and_Art

Web Resources:

[http://artjournal.collegeart.org/?p=6993\(20-8-2021\).](http://artjournal.collegeart.org/?p=6993(20-8-2021))

https://www.researchgate.net/publication/339991304_Circle_Tales_Infographics_to_Tell_About_Contemporary_Art (12-10-2021).

[https://nottoscale.ch/works/infographic-and-illustration/\(9-10-2021\).](https://nottoscale.ch/works/infographic-and-illustration/(9-10-2021))

<https://www.khanacademy.org/humanities/art-1010/conceptual-and-performance-art/conceptual-performance/a/joseph-kosuth-one-and-three-chairs> (30-9-2021).

<https://www.artforum.com/print/reviews/199010/joseph-kosuth-59606> (14-9-2021)