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**Photographs and Infographic Elements on Contemporary Nigerian Newspapers: A study of Vanguard, The Punch, Daily Sun and Leadership**

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**ABSTRACT**

*Newspaper publishers in Nigeria are becoming more conscious of the need to adapt to visual design formats in their bid to appeal to consumers. The visual design method involves the arrangement of information items such as texts, images, diagrams, pictures, or tables in a way that is visually attractive, perceptive, and easily understandable. This study sought to discover the current design patterns of four of the leading national daily newspapers in Nigeria: Vanguard, The Punch, Daily Sun, and Leadership, from September 2014 to August 2015. Twenty-four issues of each of these titles were sampled for the study. The emphasis was on the use of photographs and infographics as design vehicles to improve the navigation of newspaper pages and make them more reader-friendly. The study was anchored on the Gestalt theory of visual perception, and adopted the visual analysis method of research. The information obtained from the sampled newspapers was analysed using the Statistical Package for Social Sciences (SPSS) Version 20.0 to determine frequency, percentage score, average and ratios. Findings indicate that the newspapers published an average of one photograph per news page during the period. Photographs and infographics were predominally displayed in either 3 ½ columns by 4 inches deep or 4 columns by 3½ inches deep at the top right or left corner, or in the middle of the page.*

**Key Words:** Reader-friendliness, design vehicle, micro and macro white spaces, visual analysis, newspaper page navigation.

## **1. INTRODUCTION AND LITERATURE REVIEW**

Newspapers in Nigeria have adopted several visual design formats in their bid to appeal to consumers. The result has been an upsurge in visual orientation for newspapers with increased use of photographs, colour, illustration, information graphics, bold typography, and other graphic devices Ryan and Conover (2004). Virtually all the newspapers in Nigeria have adopted digital technology in their designs. This has signaled an end to the cut-and-paste era in the production of newspapers, which thrived until the 1990s. That was an era where texts were typeset and printed on composing machines as bromides, with graphic artists cutting and pasting the bromides on card boards, following the instructions of the sub-editors.

As Ryan and Conover (2004) have observed, digital technology has significantly changed how the total newspaper is produced. Thus, sophisticated technological software such as Page Maker, Quark Xpress, InDesign, Illustrator, and Photoshop combined to simplify the process of newspaper production in contemporary times. A study by Suraj and Timiyu (2011) on the design of information products at Ibadan that focused on magazines and specialised booklets indicates that readers were more interested in pictures than gray pages. The finding was exciting, though it would probably have produced more observations if the researchers were core journalism professionals. The study raised basic questions about the effective display of page furniture or elements, or issues of balance, contrast, unity, and the application of photographs, infographics, and other design vehicles. Equally noteworthy was the controversy between the use of capital letters and upper-and-lower case headlines and the appropriate point sizes for any content on the page.

Newspapers are products of design, and since design is a veritable tool of communication, it should be arranged to make the newspaper product not only meaningful but also understandable to the readers or its consumers. Early newspaper publishers in Nigeria were obviously not bothered by the visual appearance of their publications. This was not peculiar, as the global readership at the time was equally uncritical of the visual appearance of the early newspapers. A number of factors account for this scenario, but two of the issues that exacerbated the phenomenon were technological challenges and the absence or lack of eye tracking studies on newspaper readership. The *Lagos Observer*, which was published by J. Bagan Benjamin in 1886, was designed in three columns. Its April 17, 1886 issue, cited in Duyile (2007), had no headlines but published labels to designate specific advertisements. Equally remarkable is the fact that the *Lagos Weekly Record*, which was published by John Payne Jackson in 1890, did not feature headlines. The January 1918 issue presents a paper with a nameplate set in Roman italics that ran across the top of the paper. Labels that served as headings were also set across two-thirds of the page. The remaining section of the page was divided into three columns, where specific services were advertised.

Ernest Ikoli's newspaper, *The African Messenger*, published in 1921, was separated into four columns for advertisements. Each of these slots was given a label. *The Nigerian Pioneer* of January 14, 1921, featured a nameplate that was approximately two inches deep, while both the labels and text ran across the paper. There was no separation into columns. Even the *Nigerian Daily Times* edition of June 1, 1926, did not feature substantive headlines. The paper was separated into four columns, with labels in caps and mini heads in upper and lower caps. However, as newspapers evolved in the 1930s, they began to reflect ideals of professionalism. *The Nigerian Eastern Mail*, established at Calabar,

Cross River State, in October 1940 by J. V. Clinton, and praising itself as 'the Voice of the East,' was separated into four columns. Its visual design reflected a vertical composition and appeared to have understood the need for the use of photographs in its designs. The name plate was typeset in italics. On its part, *The Southern Nigeria Defender*, published in 1944 in Warri, Delta State, appreciated the ideals of professional design. Its name plate ran on four of the five columns, with a promotional headline above the masthead. Each of the three stories had a headline with a two-column photograph to illustrate the page.

*The West African Pilot* of January 2, 1943, was published in six columns. Its name plate ran across the six columns with a depth of two inches. The name plate was sandwiched by two advertisements on the left and on the right. A promotional headline was displayed across the six columns on top of the name plate, and another immediately below it. Each of the stories had a headline above it, while two head and shoulder photographs were also displayed along with these stories. *The Nigerian Citizen*, published weekly at Zaria, Kaduna State, in September 1948, by Alhaji Abubakar Imam, was designed in five columns. The name plate spread across two columns with a depth of two inches and was displayed prominently on the top left corner of the page. The lead story was displayed horizontally, across three columns with a three decked headline set in caps, and the associated riders also in caps. A photograph that was related to the story was displayed on half of a column with a depth of three inches. When the *Nigerian Tribune* appeared on the streets of Ibadan, in November 1949, it ran in four columns. The name plate spread across three columns, while the lead headline was set in all caps with the rider in upper- and- lower case types.

In the 1960s, newspaper publishers appeared to have begun to take considerable interest in the design of their publications. The nameplate on *The Nigerian Morning Post* edition of May 1963 was designed across two columns by two inches deep. It was displayed in the top left corner of the paper. The front-page headline had a kicker set at 36 points, while the lead headline was set at 84 points across four columns on two decks. The defunct *Daily Express* described itself as a wholly independent newspaper, uncontrolled by any government, political party, or foreign interest. Its issue of November 26, 1971, had the name plate on top, set across five of its seven columns, with a depth of one and a half inches. The name plate was sandwiched on both sides by classified advertisements.

In terms of layout design, the lead story was set across two columns, with the headline set at 72 points in Times Roman. The *New Nigerian* newspaper that was established in 1966 also featured unique designs. Its edition of February 14, 1987, cited in Duyile (2007), had the name plate spread across four of its columns and measured one and a half inches deep. It ran its editorial comments in a single column vertically on the left side of the front page, with news stories in the remaining five columns. Apart from its lead headline, set at 72 points in Sans Serif bold caps, and other headlines set in the same font but of diverse point sizes, it also featured a three-column photograph to serve as the furniture of attraction.

However, modern newspapers are now more conscious of the need to make their titles attractive to readers. This may have come from the influence of research findings on readers' perceptions of designs. One of these findings follows the development of the eye tracking concept by Widman and Polansky (1990). Holmqvist and Wartenberg (2005) remark that early newspaper publishers might have been encouraged to produce their newspapers without a visual design sense because there was a

virtual absence of feedback on readers' perceptions of design. The psychological concept of eye tracking during newspaper reading is a relatively recent phenomenon. Its methodology provides insight into how readers perceive newspaper spreads. Holmqvist and Wartenberg, who cited the study by Widman and Polansky (1990), assert that eye tracking during newspaper reading offers precise information 50 times per second on where readers are looking. The implication of this innovation is that the bigger the display items on a newspaper page, the greater the possibility of them being seen and remembered.

This postulation aligns with the study by Poynter Institute that suggests that most readers enter newspapers with front page headlines and large photos (Stark, 2014). What is discernible from the eye tracking studies in the Nigerian media scene is that, with its appreciation, newspaper publishers have begun to consider the visual outlook of their newspapers as products that should be properly packaged to attract readers or consumers. Given this scenario, it is informative that most newspapers that were produced vertically and in single columns have been redesigned as horizontal multi-column papers.

Several newspapers in Nigeria are now published horizontally on six columns. The *Daily Times newspaper*, which published on seven columns of eight ems each prior to and in the 1980s, redesigned the newspaper and collapsed into six columns of 9½ ems each. Apart from this, newspapers now make use of photographs or information graphics on their pages, a phenomenon that was not part of the bargain in the production of early newspapers. Udoh and Obot (2013) explain that early newspapers did not use pictures to communicate messages to their respective audiences. Citing *Iwe Irohin* in Nigeria, they assert that the publication in its first and early issues published scanty photographs or illustrations, stressing that the newspaper was essentially textual, with the only feature that competed with texts being the headlines. Equally noteworthy is the fact that early newspapers in Nigeria were not published with a considerable degree of photographic design consciousness.

Two forms of graphic design that have become dominant in the visual designs of newspapers in Nigeria are the flavour and informational graphics. Skirbekk (2011, p. 21) defines 'flavour' graphics as those that serve the same purposes as photography, while 'informational' graphics are those that are used when a story cannot be told by words with photographs, or flavour illustrations alone. Citing Evans (1978), he asserts that informational graphics have the additional feature of visually explaining spatial relationships, in the process simplifying and giving the reader a better understanding of the story. These two forms of illustrative materials have continued to dominate newspaper design in Nigeria.

Photographs were not regular features in early newspapers because of technological challenges. Westley (1972) explains that the use of photographic materials in newspapers was made possible by the invention of the camera itself and the etching process in the nineteenth century. He remarks that the zinc etched-screen half tone that was first experimented with in London in 1907, facilitated the reproduction of photographs on newspapers in all their variations of gray and black. Ijeh (2015, p. 58) postulates that Nigerian newspapers are experiencing the dominance of two types of photographic elements. These are the 'stand-alone' and 'picture news' stories. A stand-alone photograph is described as an independent photo on a page with its caption. Its essence is that it tells its own story and does not wait to be explained by the surrounding news or feature story before it is understood by

readers. On their part, picture-based stories are those in which photographs are displayed to authenticate the veracity of the stories and to make such stories better understood.

The main objective of this study was to examine the visual design formats of Nigerian newspapers, and recommend ways of improving the visual designs to enhance their readability.

**The Gestalt Theory of Visual Perception:** The work is based on the Gestalt theory of visual perception. The Gestalt theory is best described as a pattern or form of joined or arranged structure or format, and owes its origins to German scholars, otherwise known as the Berlin School, in the 1920s. The theory describes how people tend to organise visual elements into groups or unified wholes when certain principles are applied. The Business Dictionary (2017) defines it as a theory that proposes that what is 'seen' is what appears to be there and not what may 'actually be there' and that the nature of a unified whole is not understood by analysing its parts. According to Utriainen (2012), the Gestalt School's major theorists were Max Wertheimer, Christian von Ehrenfels, Wolfgang Kohler, Kurt Koffka, and Kurt Lewin. The theory is anchored on the tenet that the whole is greater than the sum of its parts. Wertheimer (1944, p. 84) summed up the thesis behind the theory when he noted: "There are contexts in which what is happening in the whole cannot be deduced from the characteristics of the separate pieces, but conversely; what happens to a part of the whole is, in clear-cut cases, determined by the laws of the inner structure of its whole."

Wertheimer's postulation was that the characteristics of an object could be observed from two perspectives: either as a whole or in parts. When observed from the perspective of the whole, the characteristics that are associated with the parts are lost in the observation. However, when the object is observed in parts, different pictures or scenarios that could not be observed immediately become evident. From the point of view of behaviour, a typical example is that of spectators watching a football match. Footballers become the centre of attention while the football field they are playing on is lost to memory. This is the figure-ground concept of Gestalt theory. Soegaard (2017) lists six principles that are associated with Gestalt perception theory. These are the principles of similarity, proximity, common fate, good continuation, closure, area, and symmetry. In the first principle, which is also called the law of similarity, he observes that the eye tends to perceive similar events in a design as a complete picture, shape, or group, even when those elements are separated. The shape, size, or colour of the elements are also said to influence similarity. Thus, when an object with a high degree of similarity is mixed with a group of dissimilar objects, the brain is said to devote time and energy to creating a link between them so that it can try to understand their relationship with each other.

The second principle of Gestalt perception is proximity. Soegaard (2017) explains that this law describes how the human eye perceives connections between visual elements. Thus, elements that are close to each other are perceived as related, especially when compared to those that are far away. The law of proximity allows the newspaper page reader, for instance, to use a photographic image to build relationships between other elements on the page. The third Gestalt principle is that of common fate. Rutledge (2009) remarks that this principle is vital to human perception of how things around them are or are not related to one another. They tend to perceive elements moving in the same direction as being more related than elements that are stationary or that move in different directions. The principle

of common fate is, therefore, vital to our perception of how the things around us are or are not related to one another. Good continuation is the fourth Gestalt principle of perception. As Soegaard (2017) remarks, the law stipulates that the human eye follows a pattern of lines, curves, or shapes in sequence to determine relationships between design elements. Thus, when we view an infographic element, our eyes tend to draw a line that connects different elements.

The Gestalt principle of closure applies when a complete figure is seen even when part of the information is missing. Skaalid (1999) is of the view that the law of closure is evident when humans see black circles covered by a white triangle, though it could just have been three incomplete circles joined together. Area and symmetry, as Gestalt principles of perception, refer to instances where humans perceive a smaller square to be on top of the other figure as opposed to a whole in the larger shape. Skaalid remarks that the principle of symmetry describes instances where the whole figure is perceived rather than the individual parts that make up the whole figure. Understanding Gestalt principles is particularly useful because it enables us to play with the principles of similarity to determine the sizes of headlines, or the principle of continuation to navigate the news pages of newspapers.

## **2. METHODS**

The study is essentially a form of visual analysis research. According to Sayre (2005), the purpose of visual analysis is to recognise and understand the visual choices that were made in creating the work of art that is being studied. The content categories are made up of colour, line, texture, size, images, diagrams, pictures, and tables. Vanderdonck (2003) describes the visual design method as the arrangement of information items in a way that is visually attractive, perceptive, and easily understandable. A modified sampling technique was adopted for this work.

Twenty-four issues of *Vanguard*, 24 issues of *The Punch*, 24 issues of *The Daily Sun*, and 24 issues of *Leadership* were sampled for this study over a period of 12 months, from September 2014 to August 2015. These resulted in a sample size of 96 issues of the selected newspapers. The population of the four daily newspapers during the period was 1,048, made up of 261 issues of *Vanguard*, 261 issues of *The Punch*, 263 issues of *The Daily Sun*, and 263 issues of *Leadership*. All the newspapers under review also published Saturday and Sunday editions as substantive titles, which were not counted as part of the sampled population.

Issues of *Vanguard* published every first and third Monday of the months under study, *The Punch* every first and third Tuesday, *Daily Sun* every first and third Wednesday, and *Leadership* every first and third Thursday, were examined. The sizes of news photographs and infographics were determined on the basis of the number of columns as well as the depth, and these were calculated in inches. The statistical software package employed for the comparative analysis is Statistical Package for Social Sciences (SPSS) version 20.0, with the aid of frequency, percentage score, average, and ratio for the information obtained from the Nigerian newspapers sampled.

### 3. RESULTS

#### **RQ1: What are the specific visual design patterns of the four newspapers?**

The purpose of the first research question is to determine to what extent the newspapers applied photographs and infographic elements on their front pages during the period of the study.

**Photographs and infographics on the front pages of *Vanguard*:** The newspaper applied news photographs and infographic elements to its front pages during the period. Table 1, which reflects the newspaper's performance in the use of photographs or infographic elements on the front pages, shows that the title made ample use of photographs and infographic elements. Of the 24 issues of the newspaper that were examined, 27 photographs or infographic elements were found. This shows that three of the issues had more than one photograph or infographic element on their front pages.

*Table 1. Front page analysis at a glance*

	FRONT PAGE			
	VANGUARD	THE PUNCH	DAILY SUN	LEADERSHIP
NAME PLATE DESIGN	13.50"	7.875"	7.875"	13.50"
WHITE SPACE: MACRO	22 (91.7%)	0 (0%)	0 (0%)	22 (91.7%)
MICRO	2 (8.3%)	24 (100%)	24 (100%)	2 (8.3%)
PHOTOGRAPHS/INFOGRAPHS	24 (27)	24 (28)	24 (20)	24 (25)
COLOUR	24 (100%)	24 (100%)	24 (100%)	24 (100%)
POINT SIZE: HIGHEST	96	72	96	96
LOWEST	18	18	18	18

**Photographs and infographics on the front pages of *The Punch*:** The newspaper's front pages gave adequate space to news photographs and infographics. According to Table 1, of the 24 front pages of the title that were examined, 28 photographs or infographic elements were found. This shows that four of the title's issues had more than one photograph or infographic element on their front pages.

**Photographs and infographics on the front pages of the *Daily Sun*:** The newspaper's front pages did not feature news photographs and infographic elements on all of its front pages. Table 1 shows that 20 front pages out of the 24 sampled issues of the newspaper were adorned with photographs or infographic elements. This shows that on four of the title's front pages, no news photographs or infographic elements were displayed.

**Photographs and infographics on the front pages of *Leadership*:** The newspaper's front pages also made ample use of news photographs and infographic elements. According to Table 1, out of the 24 front pages of the title that were examined, 25 photographs or infographic elements were found. This shows that one of the newspaper's issues had more than one photograph or infographic element on its front pages during the period.

**News page application of photographs or infographics:** The purpose of this section is to find out how the newspapers applied news photographs or infographic elements to their news pages.

**Photographs and infographics on Vanguard news pages:** The newspaper published one photograph per news page during the period of the study. Photographs and infographic elements were displayed in 3½ columns by 4 inches deep at the top right corners or middle of the pages. On Table 2, Vanguard had news photographs or infographic elements on its news pages in all 24 issues examined.

**Photographs and infographics on The Punch's news pages:** The newspaper published one news photograph or infographic element per news page during the period. The photographs or infographic elements were displayed in the middle of the pages and measured 4 columns by 3½ inches deep. Table 2 shows that the newspaper published news photographs and infographic elements on all its sampled news pages in the 24 issues examined.

*Table 2. Use of photographs and infographics in the news pages of the four newspapers*

	NEWS PAGES			
	VANGUARD	THE PUNCH	DAILY SUN	LEADERSHIP
WHITE SPACE:				
MACRO	14 (58.3%)	0.00%	3 (12.5%)	12 (50%)
MICRO	10 (41.7%)	24 (100%)	21(87.5%)	12 (50%)
	8 (33.3%)	22 (91.7%)	5 (20.8%)	14 (58.3%)
NONCOLOUR (BW)	16 (66.7%)	2 (8.3%)	19 (79.2%)	10 (41.7%)
PHOTOGRAPHS/IN FOGRAPHS	24 (3½cols x 4")	24(4 cols x 3½")	24 (4cols x 3½")	24 (3½ cols x 4")
POINT SIZE OF THE HEADLINES:				
LOWEST	36	36	36	40
NEWS HOLES:	40"	35"	30"	35"
LOWEST	5"	5"	5"	3½"
LAYOUT DESIGNS:				
	22 (91.7%)	24 (100%)	24 (100%)	24 (100%)
	2 (8.3%)	0%	0%	0%
SUBHEADS	4	0.00	0.00	0.00
LOGO TYPES	30 (100%)	30 (100%)	30 (100%)	30 (100%)

**Photographs and infographics on Daily Sun news pages:** The newspaper published one photograph or infographic element per page during the period. The photographs were often displayed either at the top left or top right on odd and even number pages, respectively, and measured 4 columns by 3 ½



inches deep each. In terms of the use of photographs and infographic element, Table 2 shows that the *Daily Sun* published news photographs or infographic elements on each of the news pages of the 24 sampled issues.

**Photographs and infographics on *Leadership news pages*:** The newspaper published one photograph or infographic element per page during the period. These photographs measured 3 ½ columns by 4 inches deep. While some of the photographs were displayed on the top left or top right flanks of the pages, others were in the middle of the news pages. Table 2 shows that the *Leadership* newspaper published news photographs or infographic elements in the news pages of each of the 24 issues examined.

**Opinion page application of photographs and infographics**

This section sought to find out how the newspapers applied news photographs or infographic elements on their opinion pages.

**Table 3. Use of photographs and infographics in the opinion pages of the four newspapers**

		OPINIONS			
		VANGUARD	THE PUNCH	DAILY SUN	LEADERSHIP
WHITE SPACE:	MACRO	14 (58.3%)	0. 0%	2 (8.3%)	10 (45.5%)
	MICRO	10 (41.7%)	24 (100%)	22 (91.7%)	12 (54.5%)
PHOTOGRAPH/INFO GRAPHICS		0.00	0.00	0.00	24(2.25" x 1½")
HEADLINES POINT SIZES:		36	36	36	36
HIGHEST	LINES: highest				
	LOWEST	24	24	24	24
NEWS HOLES:	HIGHEST	40"	25"	35"	27"
	LOWEST	20"	18"	20"	14"
PULL QUOTES		32	0.00	8	14

**Photographs and infographics on *Vanguard* opinion pages:** These were not common features on the paper's opinion pages.

**Photographs and infographics on *The Punch* opinion pages:** These were not found on the opinion pages of the paper.

**Photographs and infographics on *Daily Sun* opinion pages:** No photographs were observed on the opinion pages of the paper.

**Photographs/infographics on *Leadership* opinion pages:** The opinion pages often featured subject photos that served as illustrations for the articles published. These measured 2 ¼ inches deep by 1 ½ inches wide.

**Back page application of photographs and infographics**

The purpose of this section is to find out how the newspapers applied news photographs or infographic elements on their back pages.

**Table 4. Use of photographs or infographic elements on back pages of the four newspapers**

	<b>BACK PAGES</b>			
	<i>VANGUARD</i>	<i>THE PUNCH</i>	<i>DAILY SUN</i>	<i>LEADERSHIP</i>
NAME PLATE DESIGN	5.25"	4.5"	6"	3"
WHITE SPACE: MACRO	10 (40%)	5 (20%)	5 (20%)	15 (62.5%)
MICRO	14 (60%)	19 (80%)	19 (80%)	9 (37.5%)
COLOUR	24 (100%)	24 (100%)	24 (100%)	23 (95.8%)
NON COLOUR (B/W)	0.00	0.00	0.00	1 (4.2%)
POINT SIZES OF HEADLINES: HIGHEST	72	36	48	48
LOWEST	18	30	36	36
PHOTOGRAPHS/INFO-GRAPHICS	24 (13colsx16")	24(5.5cols x7")	24 (6colsx12")	24 (6colsx12")
NEWS HOLES: HIGHEST	12"	25"	42"	42"
LOWEST	3"	22"	35"	38"
PULL QUOTES	0.00	0.00	4	24
SUB-HEADS	0.00	0.00	0.00	0.00

**Photographs and infographic element on Vanguard back pages:** The newspaper's back pages had the highest number of news photographs or infographic elements on display during the period of the study. Its back pages are devoted to sports news coverage and sports thrives on big displays of action photographs, measuring 4 columns by 4½ inches deep. *Vanguard's* back pages also featured crossword puzzles that measured 3 columns by 5 inches deep, Sudoku games that measured 3 columns by 5 inches deep, and cartoon strips that measured 3 columns by 1 ½ inches deep. On Table 4, *Vanguard* had news photographs or infographic elements on its news pages that measured an average of 13 columns by 16 inches deep in each of the 24 issues examined.

**Photographs and infographics on the back pages of The Punch:** The newspaper's back pages were devoted to opinions by columnists and had standard-sized cartoon illustrations measuring 1 ½ columns by 3 inches deep on each of its issues during the period. These were displayed in the middle of the text. At the bottom left corner of the pages, the newspaper ran news photographs measuring 4 columns by 3 ½ inches deep. Table 4 shows that the newspaper published photographs or infographic elements on the back pages of each of the 24 issues examined.

**Photographs and infographics on the back pages of Daily Sun:** The newspaper's back pages were used for opinions by columnists, and offered four subject photos measuring 1 ½ columns by 3 inches

deep out of the 24 issues examined. These were often displayed in the middle of the text. Table 4 shows the newspaper's use of photographs and infographics on the back pages.

**Photographs and infographics on the back pages of *Leadership*:** The newspaper's back pages were also dedicated to opinions by columnists. It featured four subject photos measuring 1 ½ columns by 3 inches deep. The photographs and infographics were displayed in the middle of the text. The newspaper also offered cartoon strips measuring one column by 3 ¼ inches deep on the bottom right corner of its back pages. Table 4 shows that the newspaper applied news photographs and infographic elements to each of the 24 issues of the back pages examined.

**RQ2: How can the visual design patterns be improved upon to enhance the readability of these newspapers?**

The second research question seeks to determine to what extent the visual design patterns of selected newspapers can be improved to enhance their readability. All four newspapers made use of news photographs on their front and news pages, though the levels of usage and sizes differed marginally. What was missing or sparsely used in these newspapers were infographic elements. To ensure sustainable readership of these newspapers, more effort should be applied to the use of infographic elements. Infographic elements are visual elements that are composed of charts, maps, diagrams, and images that provide readers with ease in understanding the content of the attendant text. Infographic elements play a dual role in newspapers. They serve as design elements and also convey data. Pasternack and Utt (1990) explain that these elements can be used to grasp a story's information quickly, a suggestion that infers a need to place more emphasis on the "info" and less on the purely "graphic" presentations on a news page.

Cairo (2008) defines infographic elements as an all-inclusive and always up-to-date diagrammatic representation of data or information that is presented in the form of a diagram. Sancho (2001) aligns with this and posits that infographic elements represent an informative contribution carried out by means of typographic elements that can facilitate readers' understanding of events, actions, or news of significance and can serve as a substitute for text. It is also described by Santaella (2008) as a post-photographic paradigm, a postulation that suggests that it offers more support to newspaper readers than news photography. The use of infographic elements on newspaper pages offers the reader and the journalist countless possibilities that should be explored.

The new challenge facing these newspapers is the incorporation of infographics in their publications. Pinto (2017) explains that the challenge emerged from the field of journalism following observation of how the reader consumes information from the newspapers and the demands for fast and efficient communication. The benefit of infographic elements on newspaper pages is that they provide immediate and sometimes more interactive ways of communicating with the reader. Newspapers that seek to enhance their readability are, therefore, encouraged to adopt infographic elements on their news pages.

#### 4. DISCUSSION

The study examined the visual designs of Nigerian newspapers, with special emphasis on *Vanguard*, *The Punch*, *Daily Sun*, and *Leadership*. In the examination of the newspapers' front pages, 27 photographs were published on the 24 issues of *Vanguard* newspapers that were examined. *The Punch* newspaper published 28 photographs in its 24 issues, while the situation was slightly different on the front pages of the *Daily Sun*, which published 20 front page news photographs. *Leadership* published 25 photographs in its 24 issues.

In the examination of the news pages, it was found that *Vanguard* newspapers published one news photograph per news page. These measured  $3\frac{1}{2}$  columns by 4 inches deep and were displayed at the top right corners or in the middle of the pages. *The Punch* newspaper also published one news photograph per news page, usually in the middle of the pages, and measured 4 columns by  $3\frac{1}{2}$  inches deep. The *Daily Sun* newspaper equally published one photograph per page during the period. The photographs were often displayed either at the top left or top right corner on odd and even number pages, respectively, and measured 4 columns by  $3\frac{1}{2}$  inches deep each. *The Leadership* newspaper also published one photograph per page, and these measured  $3\frac{1}{2}$  columns by 4 inches deep. While some of the photographs were displayed on the top left or top right flanks of the pages, others were in the middle of the news pages. On the opinion pages of three of the newspapers — *Vanguard*, *The Punch*, and the *Daily Sun* — no photographs or infographic elements were published. However, the fourth newspaper, *Leadership*, featured subject photos that measured  $2\frac{1}{4}$  inches deep by  $1\frac{1}{2}$  inches wide and served as illustrations for the opinion articles published.

*Vanguard's* back pages had the highest number of news photographs or infographic elements on display. Its back pages are devoted to sports news coverage, as sports thrives on big displays of action or expressive photographs or infographic elements, usually measuring 4 columns by  $4\frac{1}{2}$  inches deep or more. It also features crossword puzzles that measure 3 columns by 5 inches deep, Sudoku games that measure 3 columns by 5 inches deep, and cartoon strips that measure 3 columns by  $1\frac{1}{2}$  inches deep. These photographs or infographic elements occupied a cumulative space of 13 columns by 16 inches per issue. *The Punch's* back pages were devoted to opinions by columnists and had standardized cartoon illustrations measuring  $1\frac{1}{2}$  columns by 3 inches deep on each of its issues. These were displayed in the middle of the text. At the bottom left corner of the pages, the newspaper ran news photographs or infographic elements measuring 4 columns by  $3\frac{1}{2}$  inches deep, with a cumulative total of  $5\frac{1}{2}$  columns and a depth of 7". On the *Daily Sun's* back pages, also devoted to opinions by columnists, four subject photos measuring  $1\frac{1}{2}$  columns by 3 inches deep were published. These were often displayed in the middle of the texts and had a cumulative total of six columns and a depth of 12 inches. The *Leadership's* back pages were also dedicated to opinions by columnists and featured four subject photos measuring  $1\frac{1}{2}$  columns by 3 inches deep. The photographs and infographics were displayed in the middle of the text. The newspaper also offered cartoon strips measuring one column by  $3\frac{1}{4}$  inches deep on the bottom right corner of its back pages. It also occupied a cumulative space of six columns and a depth of 12 inches.

These findings are in line with our theoretical framework of Gestalt theory of visual perception, which posits that separate newspaper units or design shapes can be joined to yield meaning to

readers. They also reinforce findings in the study by Suraj and Timiyu (2011) that readers preferred publications with pictorial rather than textual information. Furthermore, the findings support the results of De Haan, Kruikemeier, Lecheler, Smit, and van der Nat's (2018) eye-tracking study that measured the use of direct attention to visualisations on three different news platforms: print newspapers, e-newspapers on tablets, and news websites. Those results showed that news consumers do indeed read news visualisations, regardless of the platforms on which the visuals were published. Besides, the outcome of De Haan *et al*'s study was that visualisations were appreciated by readers if integrated into news stories.

The result also supports the postulations of Sturken and Cartwright (2001) that there has been an evolution from static to interactive infographics that has occurred in the last decade and needs to be adapted to. In static visualisation narratives (or news photography), graphics, charts, maps, and texts are mixed to empower story telling, while the background or related details are provided by the image. Thus, Nigerian newspapers have to adapt to the use of more infographic elements to attract readers to their titles. A study on newspaper reading with eye-tracking data from readers' actual interactions conducted by Holsanova, Rahm, and Holmqvis (2006) found that readers enter newspapers from two major perspectives. The first is that people read newspapers from a socio-semiotic perspective, while the second is through the application of an eye-tracking perspective to examine entry points and reading paths.

Generally, socio-semiotic research is concerned with the placement of eye-catching headlines in large font sizes and styles, as well as expressive photographs against a red background. These combine to grab the attention of the reader. Newspaper reading through entry points and entry paths is associated with paratexts, a concept coined by Genette (1997) to embody a group of practices and discourses of all kinds that are of common interest or a convergence of effects that seem to be more important to the reader. Holsanova, Rahm, and Holmqvis (2006) define paratext as thresholds to the texts, or a notion for the different accompanying texts that connect to the main texts and can function as a starting point, or an invitation to the reader. Paratexts, thus provide a central notion for creating, recreating, and interpreting newspaper spread semiotics.

## **5. CONCLUSION**

All the newspapers under study performed remarkably well in their display of news photographs. They were, however, short on their application of infographic elements. As a result, their ability to communicate in immediate and sometimes interactive ways with their readers has been shortchanged. For the newspapers to enhance their readability, they should adopt or make more use of infographic elements on their news pages. These infographic elements are the visual elements made up of charts, maps, diagrams, and images that enable readers to grasp a story's information quickly and, thus, understand the content of the attendant texts easily.

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