

An Analysis of Design Components of Award-winning Newspaper Pages

Stephanie Hays

*Communication Design
Elon University*

Submitted in partial fulfillment of the requirements in
an undergraduate senior capstone course in communications

Abstract

The design of newspapers has evolved significantly since their inception, lately focusing on using photography, infographics and modular design to capture the audience's attention. This study examines the design components that award-winning newspaper pages from the Society for News Design's Best of News Design awards and what the pages have in common and the kinds of dominant imagery they use. The research discovered that the dominant media takes up the vast majority of the page, headlines run small, pages contain large amounts of white space and there are several images per page. The most common dominant media across all sections was photography.

I. Introduction

Newspaper design has had many changes over the years, and has focused on the different dynamics between a variety of components, including image size, headline size, white space, and the number of photos. As designers try to find the best way to present stories, methods for laying out pages in newspapers have evolved.

In the 1960s, newspaper design was characterized by tight pages that were packed with content on the front page. Newspapers began to shift toward larger gutter sizes, more hierarchy, and standard typefaces. By the 1970s, modular design became more popular, creating focal points that increased readers' ability to easily scan the text for information. Photographs also became the dominant graphic element on the front page.

The 1980s saw the launch of *USA Today*, which had many different points of entry on its front page. These entries allowed readers to easily locate articles or stories that interested them within the newspaper, which increased how scannable the design was. During this time, most newspapers (66.7 percent) featured two photographs on the front page, with 96.2 percent using a dominant photograph (Utt & Pasternack, 1984).

Graphics and thumbnail images became more popular in the 1990s, as they were paired with points of entry to help cater to visual readers. By then, nearly all newspapers were using color, color photography, color graphics, and modular layout (Utt & Pasternack, 1995). The early 2000s saw an increase in the use of color, information graphics, and stories packaged together. Modular design became the typical layout

Keywords: Newspapers, Design, Photography, Infographics, Modular Design
Email: shays2@elon.edu

option for newspapers (Harrower, 2002). This research looks at news design over the past year (2017), and the qualities that characterize award-winning newspaper pages. This study will give an overview of what is common between different newspaper sections and how it varies geographically.

II. Literature Review

The Audience

When understanding why particular designs are considered better than others, it is important to consider what attracts a reader's attention and what keeps it. While initial interest in a page doesn't necessarily mean the design is good, it does provide insight into what designers need to consider when creating a page that effectively displays the article in a way that captures the audiences' attention.

Readers are immediately drawn to particular design elements. A study of Nordic newspapers found that the most important factor is large size, then the position of the article (the upper left draws attention in western cultures because people read from left to right and top to bottom), then drop quotes or fact boxes, then a large photo, and finally clear axial symmetry (Homqvist, 2005). Leckner (2012) concluded that the main cues that draw readers in are the main images and headlines. Readers typically enter a page through the main photo or image, then move on to a large headline or photo, and then finally to text.

According to Bergstrom's (2008) book, *The Essentials of Visual Communication*, one element in a design should draw the reader's attention, such as a large image or heading. Thus, the size of the dominant image is an important factor to consider because it helps establish a clear hierarchy and point of entry for the audience.

Different aspects of design

The main variables explored in this research fall under five main categories, white space, headline, dominant media, color, and number of images.

White space

Tsai, Wang, Liu, & Hong (2014) define white space as the empty space that exists around different elements of a page layout, which includes columns, lines of type, photos, graphics, and more. White space is also sometimes referred to as negative space when the actual color of the space isn't white, but has no text or subject matter within it. The authors also state that white space helps to separate elements, which gives them greater prominence from the background.

According to Bergstrom, images and headlines will also garner greater attention if there is ample white space surrounding them. Therefore, it follows that white space would be a common tool on award-winning pages because a designer will want to bring attention to an article or imagery that goes with it.

Headlines

Headlines today are typically aligned left, are wider rather than narrower and sometimes include decks (Harrower, 2002). In order to make the hierarchy of a page clear, it is also important to make sure that the size of the headline is sufficient to make it stand out from the rest of the page. According to Bergstrom (2008), the size of the headline also doesn't need to be excessively large if it is surrounded by white space because additional space gives it a greater impact.

Dominant Media

Using photography is common in newspapers, and as mentioned earlier, is often a way for readers to enter the page. But the kind of photo or dominant imagery also affects how quickly the audience looks at a page. According to Leckner (2012), pictures may be divided into four different types: information graphics, maps, drawings, and photos. Photos attract readers regardless of the subject of the article it is associated with, and if the photo is natural, it will be looked at longer than a staged photo. Photos with faces in them are also looked at earlier than photos with objects (Leckner).

Staged photos and photo illustrations are defined as, "Photos that have been altered with gradients and blurs, images that have been created by compositing two or more images and images of people who

have been removed from their backgrounds.” These have also become much more common in newspaper front pages, and photos are used in 86.3 percent of newspapers (Leckner, 2012).

As a pictorial element, infographics require more effort from readers, but they also make content more easily accessible and looked at sooner (Holmberg, 2004). Illustrations are often used for abstract concepts. Drawings that are based on the tone of a story, instead of a direct representation of the people, are also often common in features pages (Harrower, 2002). Overall, dominant art is typical used on newspaper front pages. In 76.2 percent of newspapers, a single photo is used as the main art, while 10.2 percent used an illustration or photo illustration. 4.9 percent of newspapers used illustrations; 4.6 percent used a photo package, and 0.8 percent used headline art and infographics (Morris II & Haight, 2018).

Color

According to Bergstrom (2008), color in newspaper design is often seen as a way to grab the attention of readers through contrast with the black and white background of a paper. Now that most newspapers print certain pages in color, color often is used functionally, to attract, inform, structure, teach, and create the correct atmosphere that fits with the content. However, studies have found that color doesn't necessarily grab a reader's attention first, but does help increase reading time for an accompanying article (Leckner, 2012).

Currently, 98.7 percent of newspapers use both colored text and color photographs on their front page, making color a popular design choice (Morris II & Haight, 2018). Research has also found that 46.2 percent of newspapers use two or three main photographs on their front page and 12.1 percent of newspapers only use one photo (Morris II & Haight, 2018).

How visuals interact with words

Of course, there is more to excellent news design than just the individual components of each page. In de Vries' (2008) “Newspaper design as cultural change,” he explains that there are three main areas of newspaper design projects: a technical and typographic side, editorial and component ideas, and systems thinking to adjust processes for clients (2008).

de Vries also discussed how designers need to focus not just on the aesthetics of pages, but how they relate to their audience and reflect their culture. Visuals should be seen as a necessary part of a newspaper and thought about at the conception of stories instead of at the end to give the design team time to best reflect the content of an article.

Media logic framework

While page designs vary significantly for different articles, topics, newspapers, and sections, there are still commonalities that can be found among top-tier designs. By expanding the current research about the common characteristics of newspaper designs and focusing instead on what makes a page an award-winning design, this research will provide insight about the proportions and statistics of particular page elements and the similarities and differences between newspaper sections.

This research is similar to other studies of award-winning design, such as by Beyers (2006), which focuses on the presence of four main components in websites of a variety of news organizations. The same framework used in Beyers' study, the media logic of new media, is applied in this study. Media logic is defined as, “The particular institutionally structured features of a medium, the ensemble of technical and organisational attributes which impact on what gets represented in the medium and how it gets done” (Beyers, 2006). Therefore, the focus of this research is also on the technical attributes of design, and not on how they relate to the actual content of the articles.

While award-winning design is based on the relationship of visuals to the article and the best way to explain a story to readers, this research will focus on the individual components that make up each page. But it is important to realize that following the exact proportions and numbers detailed in this paper won't guarantee an award-winning design.

III. Method

For this research, the award winners were used from the Society for News Design's "The Best of News Design 38." This competition is an annual event where newspapers around the world submit their best designs in a variety of categories. Winners, ranging from "World's Best Designed," to Best in Show, Judges Special Recognition, Gold, Silver, and Awards of Excellence, are determined by a variety of judging panels. There were separate teams consisting of five people on each panel, including news, features, long form, visuals, and world's best. Two conflict judges would step in in case a judge was asked to examine a page from his or her own paper.

"The Best of News Design 38" contained the winners from the 2016 calendar year. Only winners from certain categories were used. Pages that won for single-day photography, multi-day photography, infographics, redesigns, combination print and digital, portfolio (individual and staff), illustrations, and magazines were not counted.

Coding scheme

Pages were coded for a variety of topics, including:

Page details

- The name of the paper
- The newspaper's location
- The section a page was published

While the other two categories were easily taken directly from the page details in "The Best of News Design 38" book, pages were attributed to four different sections: news, opinions, features, and sports. Pages that were in the news section counted as news, pages in the sports section counted as sports, pages in the opinions section counted as opinions and all other pages counted as features, including business, arts, travel, and lifestyle. Obituaries were always counted as news.

Pixel-based

- Total pixels on the page
- Size of the dominant image
- Size of the dominant headline
- Amount of white space

Pages were coded by opening jpeg images in Photoshop and measuring the number of pixels on the page. Boxes were drawn around the largest image on a page and the largest headline, and the number of pixels in the selected area was recorded.

For white space, the page was converted to grayscale and then bitmapped, so that all pixels below the 50 percent threshold became black, and anything above that threshold became white. In that way, all the white pixels could be counted as the white space on the page.

However, there were limitations to how white space was measured. Because bitmapping counted all pixels that were below 50 percent black as white, portions of photos that were lightly colored were also counted as white. Also, text that was lightly colored was counted as white space, despite not being white.



Figure 1.

As seen in *Figure 1*, the image on the left has a fair amount of lightly colored blue sky that houses the headline. In the bitmapped image on the right, it is counted as white space because of its light color. While not actually white, it contributes to the feeling of airiness which gives it an effect that is similar to white space on a page.

Additional details

- Number of images
- Color or black and white page
- Dominant imagery on a page

The number of images on a page was determined by counting separate photographs, illustrations and infographic sections.

When determining the type of dominant imagery was on a page, four different categories were used: photo, photo illustration, illustration, and infographic. The definitions of the different categories are as follows:

- *Photo*: Any snapshot of a real-life event with little to no editing
- *Photo illustration*: Heavily edited or staged photographs that have additional elements beyond just a picture
- *Illustration*: A hand-done or computer generated drawing
- *Infographic*: Graphic giving an in-depth explanation of a certain topic, often through numbers

After coding the data, the results were tallied in an Excel spreadsheet, and calculations were done to determine:

- Percent dominant image
 - Percent headline
 - Percent white space on each page
-

These percentages were then analyzed by country and by section to determine the geographic and sectional differences in each image.

IV. Findings

Overall results

Overall, 495 award-winning pages were coded. Of the 495 pages, there were 18 countries represented and four different sections.

On average, the dominant image was 49.20 percent of a page, the dominant headline was 3.96 percent of a page, 60.41 percent of the page was white space, and there was an average of 6.72 images per page (see Table 1). These percentages add to more than 100 percent because on some pages, the headline was on top of the photo, or the photo counted as some of the white space, which causes some pixels to be double or triple counted.

Table 1: Overall results

Dominant Media Image	49.20%
Dominant Headline	3.96%
White Space	60.41%
Average Number of Images	6.72

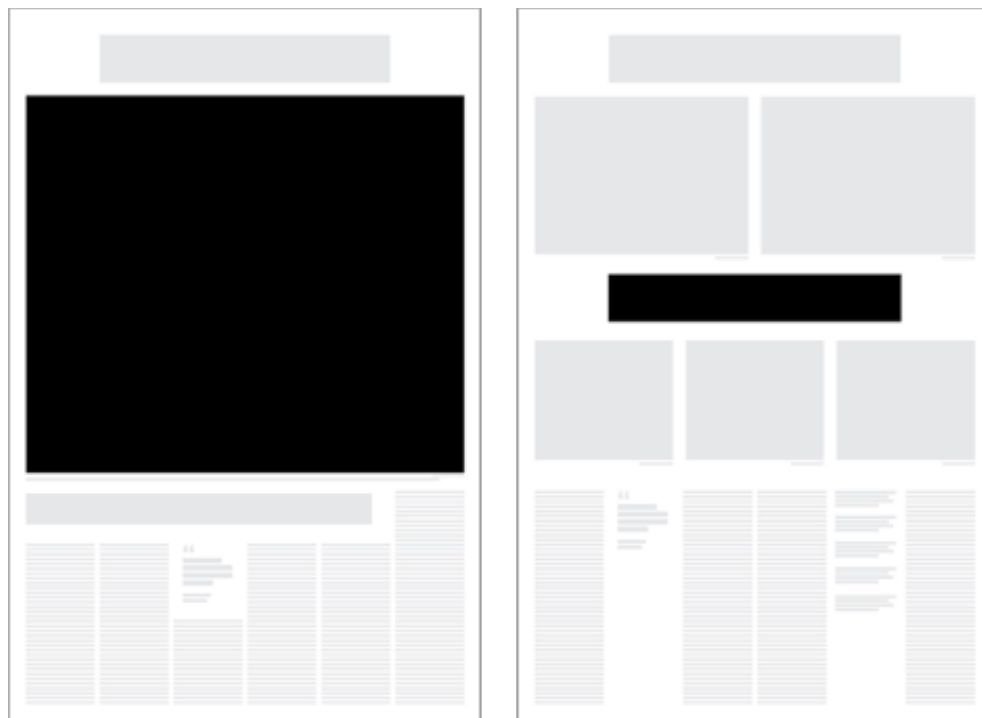


Figure 2. Left: A sample page shows the size of the average dominant image (49.20%).
Right: A sample page shows the size of an average headline (3.96%).



Figure 3. Left: A page that shows the average amount of white space on a page (60.41%).
Right: A sample page that shows the average number of photographs on a page (6.72).

Regarding the kind of dominant media images on the pages, 49.49 percent of the dominant media was photography, 29.9 percent was an illustration, 11.11 percent was a photo illustration, and 9.49 percent was an infographic (see Table 2).

Table: Overall dominant media results

Kind of dominant media image	Percentage
Photo	49.49%
Photo Illustration	11.11%
Illustration	29.9%
Infographic	9.49%

The vast majority of the pages were printed in color; 94.34 percent of all pages were in color and only 5.66 percent were in black and white.

Results by section

Results were also calculated based on what section of the newspaper pages were printed. As indicated in Table 3, the sports section had the largest dominant images (54.73%), opinions had the largest headlines (5.28%) and the most white space (66.51%), and sports had the most images per page (9.68).

On the other side, the news section had the smallest dominant images (44.53%), sports had the smallest headlines (3.17%) and the least white space (57.94%), and opinions had the fewest number of images per page (4.19).

Table 3: Section results

	Percent dominant image	Percent headline	Percent white space	Number of images per page News
News	44.53	4.84	60.1	6.35
Opinions	49.96	5.28	66.51	4.19
Features	52.04	3.41	61.74	5.82
Sports	54.73	3.17	57.94	9.68

For the news section, the dominant media was 44.53 percent of the page, the headline was 4.84 percent of the page, white space was 60.1 percent of the page, and there were 6.35 images per page.



Figure 4. Left: A sample news page with the average dominant image (44.53%).
Right: A sample news page with the average headline (4.84%).

For opinion pages, the dominant image was 49.96 percent of the page, the headline was 5.28 percent of the page, the white space was 66.52 percent of the page, and there were 4.19 images per page.



Figure 6. Left: A sample opinions page with the average dominant image size (49.96%).
Right: A sample opinions page with the average headline size (5.28%).

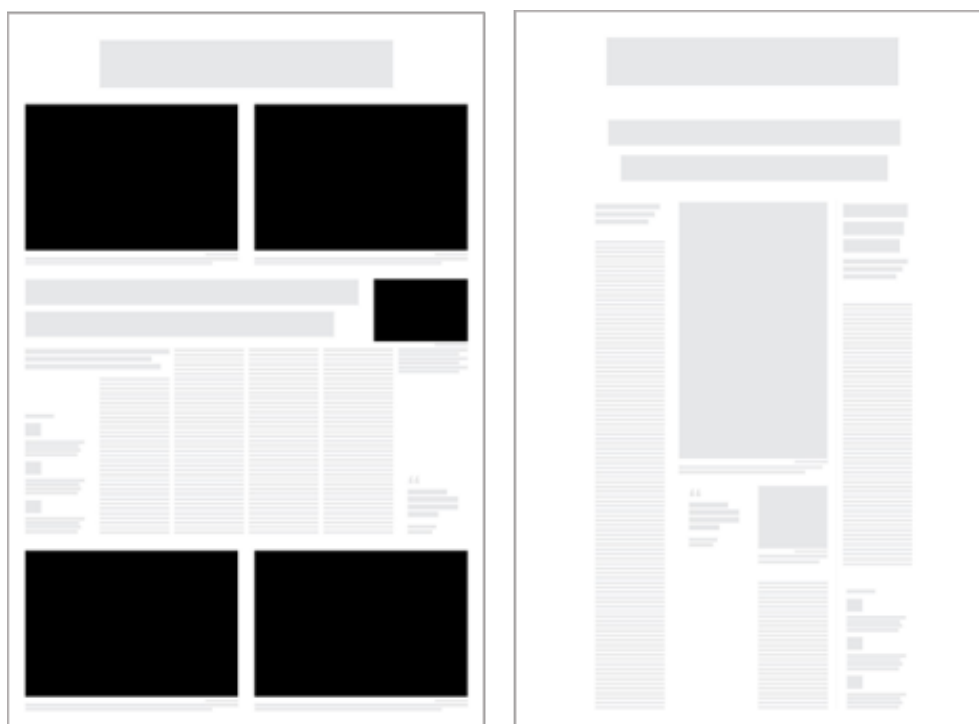


Figure 7. Left: A sample opinions page with the average number of photos (4.19%).
Right: A sample opinions page with the average amount of white space (66.51%).

The features section had an average dominant image that was 52.04 percent of the page, an average headline that was 3.41 percent of the page, the white space was 61.74 percent of the page, and an average of 5.82 images per page.

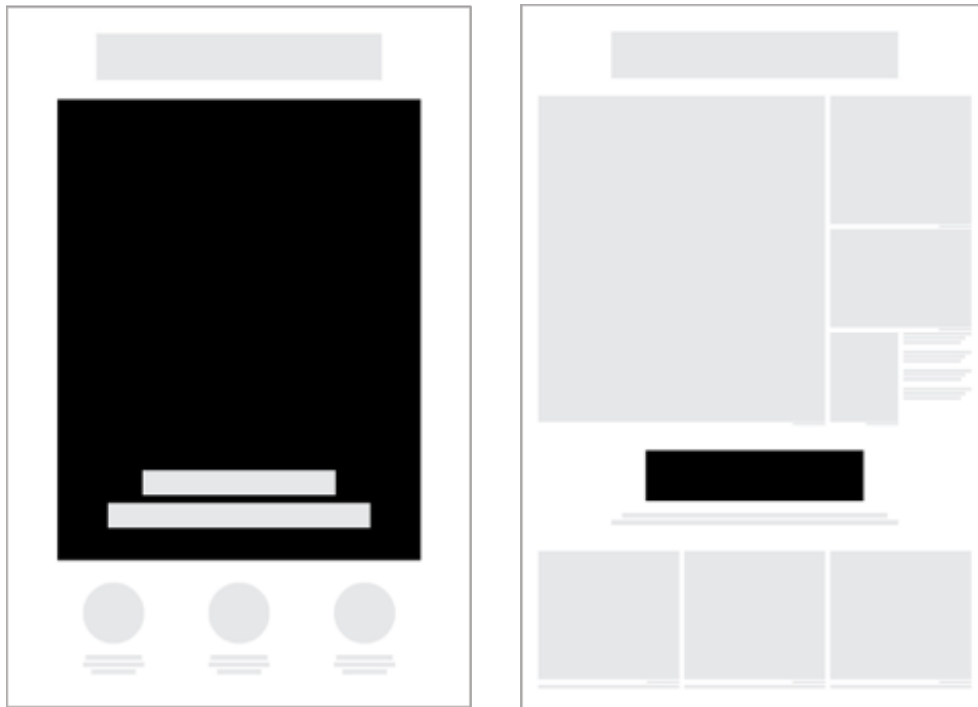


Figure 8. Left: A sample features page with the average dominant image (52.04%).
Right: A sample features page with the average dominant headline (3.41%).



Figure 9. Left: A sample features page with the average number of photos (5.82).
Right: A sample features page with the average amount of white space (61.74%).

Regarding sports, the dominant image was 54.73 percent of the page, the headline was 3.17 percent of the page, the white space was 57.94 percent of the page, and each page had an average of 9.68 images per page.



Figure 10. Left: A sample sports page with the average dominant image (54.73%).
Right: A sample sports page with the average dominant headline (3.17%).

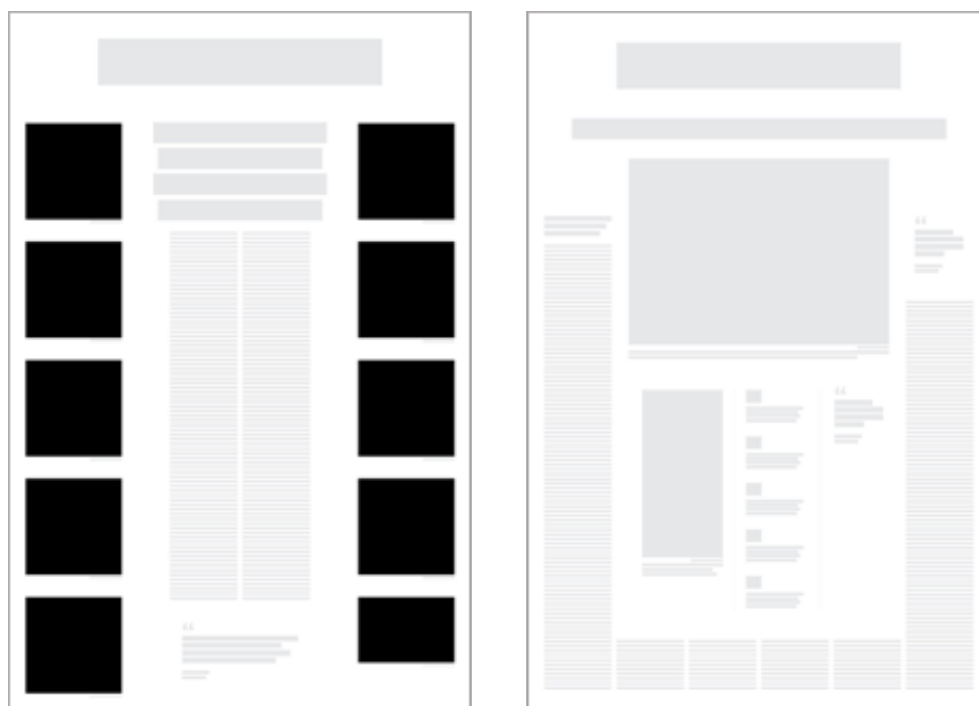


Figure 11. Left: A sample sports page with the average number of photos (9.68).
Right: A sample sports page with the average amount of white space (57.94%).

The dominant imagery of the sections also differed. News and sports used photography the most often (60.85% and 55.56% respectively) while opinions and features both used illustration the most (61.29% and 42.31% respectively). Features was also more likely to use a photo illustration than any other section (17.69%) while news was more likely to use infographics than any other section (11.91%).

Table 4: Section dominant image results

	Percent photo as dominant media	Percent photo illustration as dominant media	Percent illustration as dominant media	Percent infographic as dominant media
News	60.85	9.79	17.45	11.91
Opinions	22.58	9.68	61.29	6.45
Features	30.77	17.69	42.31	9.23
Sports	55.56	6.06	33.33	5.05

Results by country

Results were also analyzed based on the country newspapers were published. There were 18 different countries that were represented in the study. Some newspapers had a significantly larger number of data points due to them winning more awards. For example, the United States won 310 different awards, making the results for the U.S. much more of a comprehensive look at news design. The country that got the second-most awards, Canada, only received 45. And on the other end, Peru and El Salvador only won one award each. As a result all of the data for Peru and El Salvador comes from just a single page, which doesn't give a comprehensive look at that country's news design. Table 5 provides a list of the number of awards won by each country.

Country	Number of awards won
United States	310
Canada	45
Germany	24
Sweden	18
China	16
Oman	11
Ecuador	11
United Kingdom	10
Denmark	9
Mexico	8
Belgium	7
Brazil	7
United Arab Emirates	6
Argentina	5
Colombia	4
Portugal	2
El Salvador	1
Peru	1

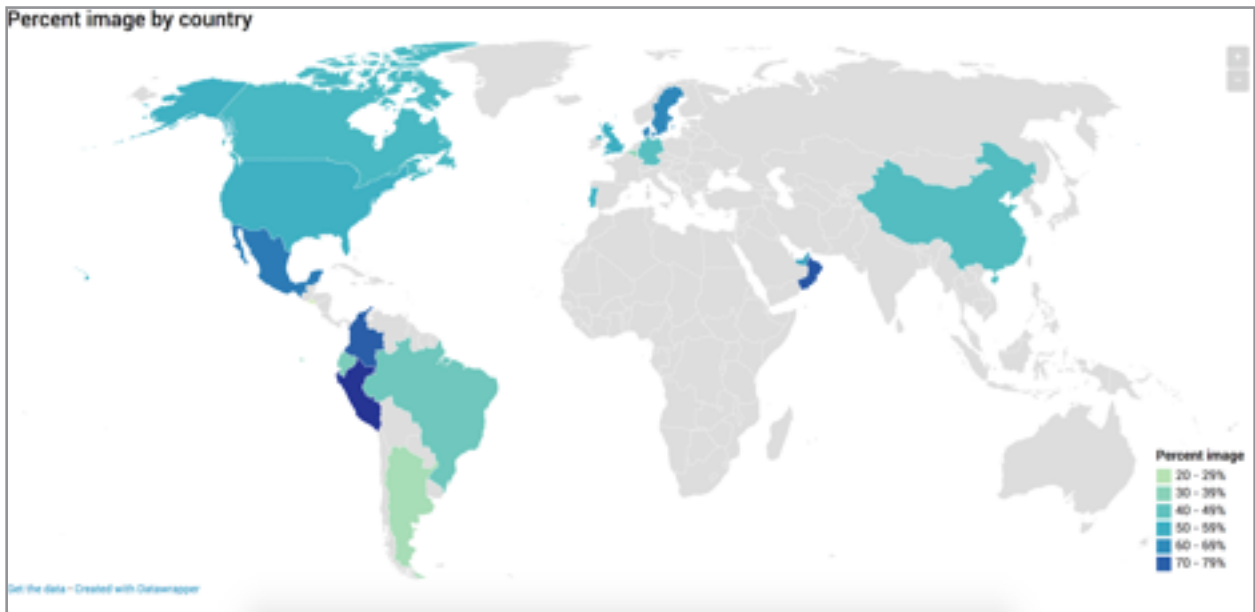
Below are the results by country from highest to lowest for four different categories:

Table 6

Country	Percent image	Country	Percent headline	Country	Percent white space	Country	Number of images
Peru	79.26	Peru	12.38	Ecuador	87.87	El Salvador	25
Oman	72.15	Germany	8.72	El Salvador	87.2	Mexico	17.25
Colombia	70.37	Mexico	7.43	Portugal	79.05	Ecuador	16.73
Mexico	64.46	Portugal	7.36	China	75.41	China	16.69
Denmark	61.64	Brazil	7.06	United Arab Emirates	74.51	Colombia	10
Sweden	61.03	El Salvador	6.81	Argentina	68.75	Brazil	9.14
United Arab Emirates	53.3	United Kingdom	6.24	Colombia	65.32	United States of America	6.9
United Kingdom	50.08	Argentina	5.82	Brazil	64.62	United Arab Emirates	6.33
United States of America	49.44	Belgium	5.69	Mexico	64.11	Oman	5.82
Portugal	48.44	Sweden	5.41	Germany	62.47	Argentina	4.6
Canada	45.72	Canada	4.29	Peru	60.81	Germany	4.29
China	43.02	Denmark	4	Oman	59.23	Portugal	3.5
Germany	41.88	United Arab Emirates	4	Canada	58.88	Belgium	3.43
Brazil	36.35	Ecuador	3.43	United States of America	58.45	UK	3.1
Ecuador	32.72	United States of America	3.28	Belgium	56.68	Sweden	2.67
Belgium	28.58	Oman	3.08	Denmark	56.01	Canada	2.44
Argentina	23.39	Colombia	2.27	United Kingdom	51.77	Denmark	2.33
El Salvador	13.98	China	1.67	Sweden	51.54	Peru	1

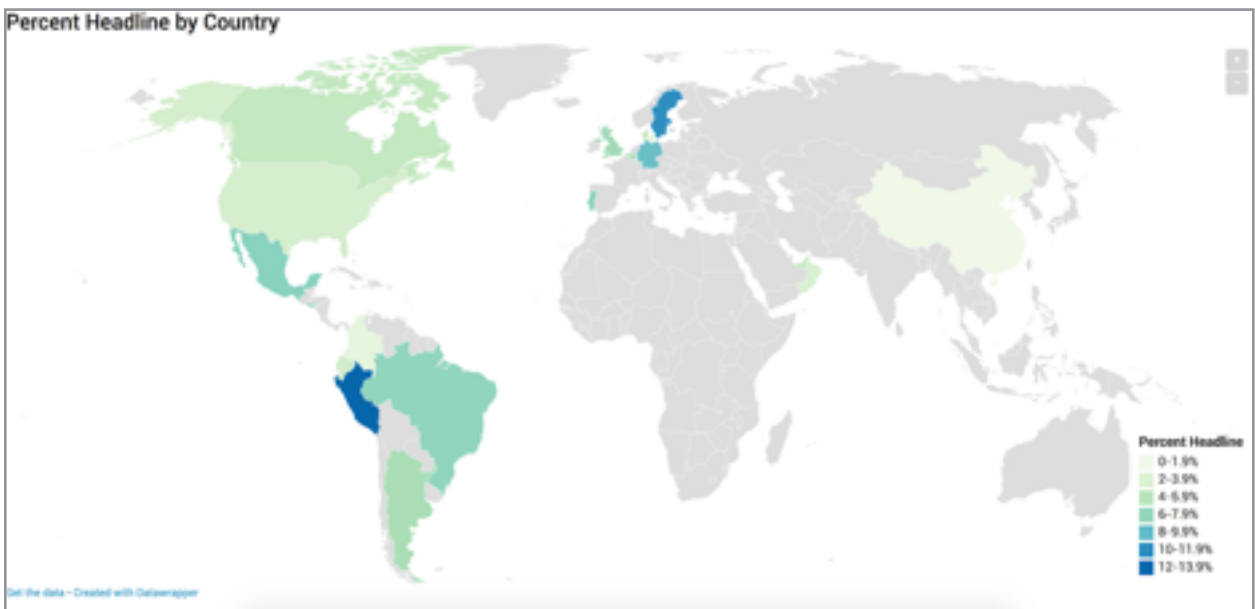
Percent image

Peru had the highest percent image (79.26%), while El Salvador had the lowest (13.98%). The United States of America had the ninth most percent image (49.44%).



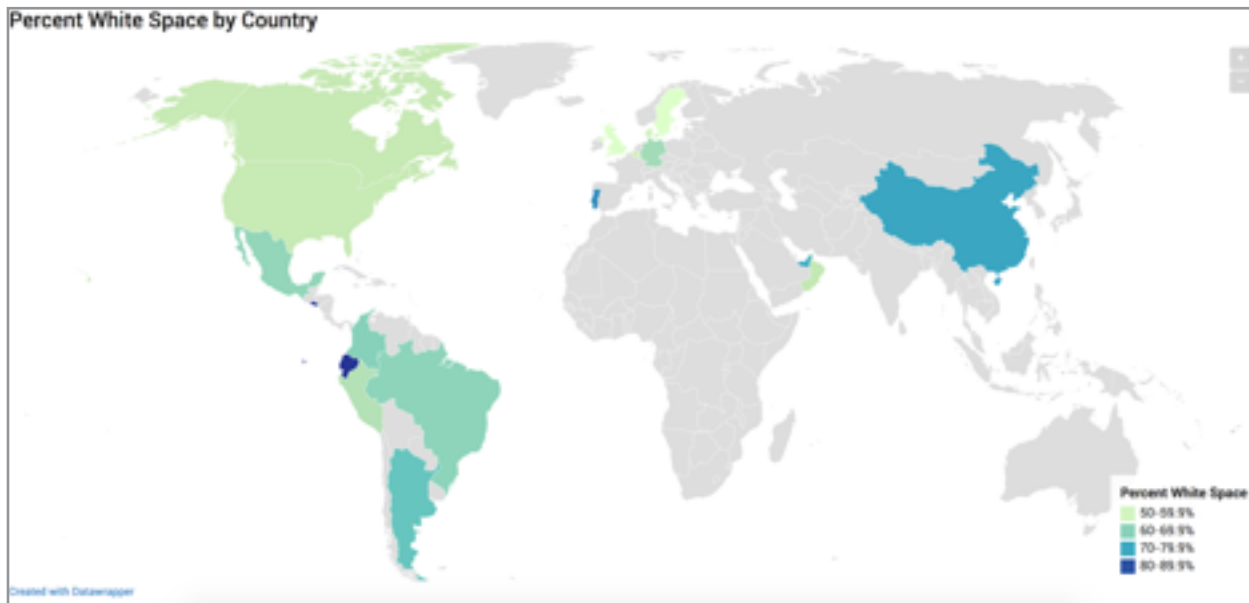
Percent headline

Peru had the highest percent headline (12.38%), while China had the lowest (1.67%). The United States of America had the 15th most percent headline (3.28%).



Percent white space

Ecuador had the highest percent white space (87.87%), while Sweden had the lowest (51.54%). The United States of America had the 14th most percent white space (58.45%).



Number of images

El Salvador had the highest number of images (25), while Peru had the least (1). The United States of America had the seventh most number of images (6.9).

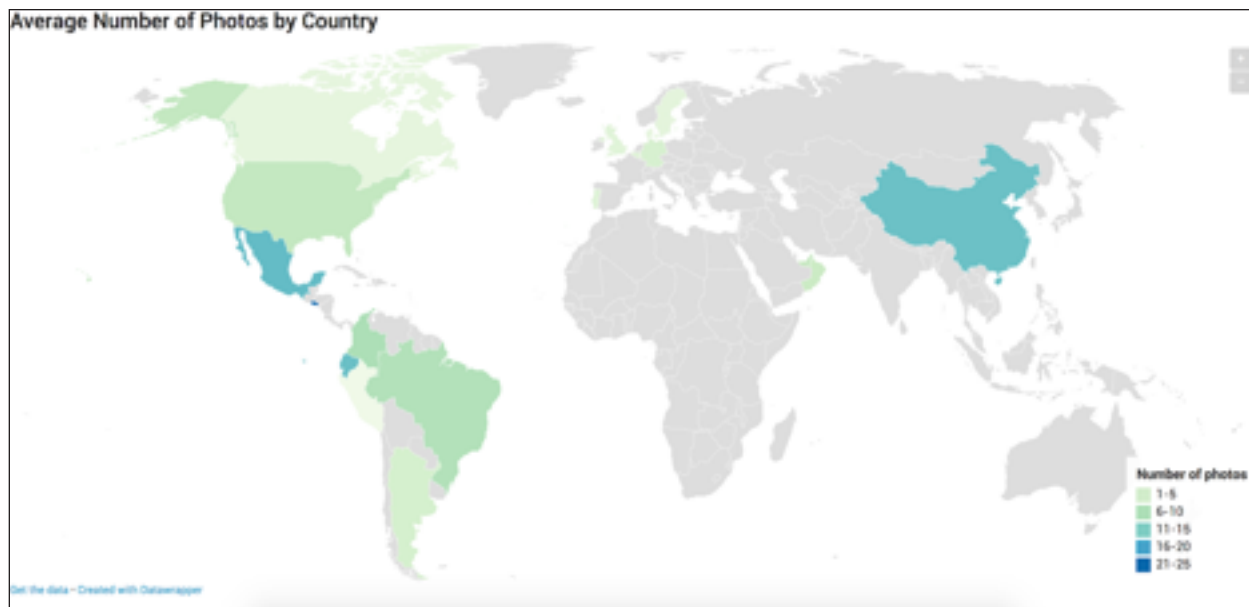


Table 7 provides the dominant image results by country from highest to lowest.

Table 7

Country	Percent photo as dom. media	Country	Percent photo ill. as dom. media	Country	Percent illustration as dom. media	Country	Percent infographic as dom. media
Sweden	72.22	Brazil	42.86	Portugal	100	El Salvador	100
Argentina	60	United Kingdom	30	Peru	100	Ecuador	90.91
United Kingdom	60	Germany	29.17	United Arab Emirates	66.67	China	43.75
Belgium	57.14	Oman	27.27	Denmark	55.56	Oman	27.27
United States	56.77	China	18.75	Canada	44.44	Colombia	25
Colombia	50	United Arab Emirates	16.67	Belgium	42.86	Mexico	25
Canada	42.22	Canada	13.33	Mexico	37.5	Argentina	20
Germany	41.67	Mexico	12.5	Oman	36.36	United Arab Emirates	16.67
Denmark	33.33	Sweden	11.11	Germany	29.17	Brazil	14.29
China	31.25	Denmark	11.11	United States	29.03	United States	6.45
Mexico	25	Ecuador	9.09	Brazil	28.57	Canada	0
Brazil	14.29	United States	7.74	Colombia	25	Germany	0
Oman	9.09	Argentina	0	Argentina	20	Sweden	0
Ecuador	0	Colombia	0	Sweden	16.67	Denmark	0
United Arab Emirates	0	Belgium	0	United Kingdom	10	United Kingdom	0
Portugal	0	Portugal	0	China	6.25	Belgium	0
El Salvador	0	El Salvador	0	Ecuador	0	Portugal	0
Peru	0	Peru	0	El Salvador	0	Peru	0

V. Discussion

Overall results

The findings of this research reveal qualities that make up award-winning news design. Overall, it is clear that large main images are quite common, with the average dominant image taking up nearly 50 percent of a page. Headlines are generally small, around 4 percent of a page. There also is a substantial amount of white space, with around 60 percent of each page being counted as white space. Despite the size of the dominant image, there is often more than one image, with an average of 6.72 images on each page.

The average page dominated by a large image is to be expected, as larger images catch the readers' eye first and draw them into a story (Homqvist, 2005). The standard deviation of the dominant image size is 27.09, meaning that 68 percent of the pages have a dominant image that falls between 21.93 percent and 76.11 percent of the page. This is a fairly large standard deviation considering that of the 495 pages that were coded; 158 (32 percent) had dominant images that fell outside of that range. And of those 158 pages, 46 had dominant images that were less than 10 percent of the page, while there were just 13 that had dominant images that were more than 90 percent of the page. Therefore, it is clear that the size of dominant images varies widely throughout different pages and there isn't necessarily a hard and fast rule.

Part of what could explain the large differences in image size could be the relationship between the number of images on the page and the size of the largest image. If there are many smaller illustrations combined to form one idea or concept, the main illustration would be fairly small, despite having an important impact on the page. Infographics too, generally were very small, but there were a lot of different ones. But on sports pages or feature pages, they were often dominated by a very large image and thus did not have much room for a bunch of smaller pictures.

Headlines were often fairly small at around 4 percent of a page, but as mentioned in the literature review, the size of a headline doesn't also need to be excessively large if it is surrounded by white space because the additional space gives it greater impact (Bergstrom, 2008). This tends to be common on a lot of pages, especially ones that have a greater amount of white space, because the text doesn't have to compete with many other components for readers' attention. The main outliers are the sports pages of the *Cleveland Plain Dealer*, which have very small headlines on a small black background, often splashed across very busy photos. These pages are meant to focus much more on the action in a photo, and words are simply a small supplement.

The standard deviation for headlines is 6.05, so 68 percent of headlines fall between being 0 percent of a page and 10.01 percent of a page. Since headlines are generally much smaller than other images on a page, this smaller range in size represents a significant array of headline sizes. An interesting thing to note is that there were 11 pages that didn't have a headline at all and there were 42 pages that had headlines that were greater than 10.01 percent of the page, with the largest headline being 57.33 percent of the page. These outliers show that variation in headline size is still apparent, but not as common as variation in dominant image size.

White space on pages is trickier. A term that is more accurate than white space may be "empty space," since many pages have lightly colored photos or illustrations that let the text and headline breathe and give a sense of emptiness on the page. This is why the percentages of the white space, headlines and images add up to more than 100. It is common to have a lightly colored sky background in images with use of empty space to place the headline or the start of the article. As explained earlier, while not explicitly white, it still adds an airy feel to the page.

The standard deviation for white space on a page is not as large as the one for dominant imagery, but is still substantial at 20.66. So, 68 percent of all pages have between 39.71 and 81.03 percent white space. There were 31 pages that had white space that took up more than 90 percent of the page, but just three pages that were less than 10 percent white space. It seems clear then, that while pages varied amounts of white space, having next to no white space is generally avoided, potentially due to readability concerns of dark pages and a lack of images that are almost entirely dark.

Regarding the number of images on a page, while it may seem as though it would be difficult to fit 6.72 images on a page when the largest one is nearly half the size of the page, it is typical for pages to have multiple very small images as little graphics, or to accompany teasers. Headshots are also common on news

pages, and photos of book covers or sports logos are often seen on features or sports pages. All these count as separate images, making it possible to tally up a large amount of very small images on a page.

Results by section

It is clear that pages of all sections are often dominated by large images that take up close to half of a page or more. There is not great variance by section, but news sections tended to have smallest images, because those pages tend to focus more on having multiple stories and plenty of text, with not as much focus on the images that accompany them. Sports has the largest dominant image at about 54 percent of the page. This is most likely explained by blowing up large reaction shots from exciting moments in sporting events. Because people often express a great deal of emotion, newspapers typically enlarge a photo so that people immediately see and connect with it.

Headlines though, are generally fairly small, taking up less than 5 percent of the page. It seems to be common (especially on sports pages) to let the dominant image do most of the talking and keep the headline smaller and more subtle to not distract. Headlines are generally largest in the opinions section, which could be the result of longer headlines needed to explain an opinion column. But it is also important to note that the opinions section also had the smallest sample size, with just 31 data points.

White space is also prominent in all sections, and only sports has white space below the average amount of 60.37 percent at just 57.94 percent. This is likely explained because sports pages tend to be dominated by large, busy photos with less empty space. This is partially because of the papers that most often won in sports design – the *Los Angeles Times* and the *Cleveland Plain Dealer* – often used black backgrounds, particularly for Rio Olympics coverage, which decreased the amount of white space.

The average number of photos (6.72) overall is a result of the combination of pages that often only had 2 or 3 images in features and opinions, with a very high number of images on sports pages (9.68). Sports may have a higher number of images because the pages often trying to captures multiple key moments in a game or event, instead of an overall feeling. Features and opinions usually had fewer images because they were dominated by one large photo with smaller images often reserved for tiny headshots or teasers. News was in the middle ground because there were both more stories on news pages that needed images and because news articles would often use more than one photo per article.

News and sports are the two sections that tend to lean heavily on photography for visuals. Both use photography significantly more than any other kind of image, because both sections focused on capturing specific moments, such as breaking news topics like car crashes, fires, attacks, or sporting events like a particular pitch or game-winning point. Features and opinions, which tended to use illustrations more often, generally try to convey emotions, feelings or in the case of opinions, complex topics that aren't necessarily conveyed by one photo.

Results by country

Geographically, it's difficult to make assumptions about any of the results because of the low sample size of so many of the countries. So it is important to understand that despite some papers that only use illustrations (such as Peru), that doesn't necessarily represent other newspapers from the same country.

What is interesting is that there were a fair number of countries that didn't win any awards for infographics, and some that predominantly won awards for infographics. For example, China won 16 awards and 43.75 percent of them were for infographics. Ecuador won 11 awards, and 90.91 percent of them were for infographics. Canada though, while winning the second-most awards with 45, didn't win any awards for infographics at all. It seems as though some newspapers have very skilled infographics staff who are able to compile well-designed pages and graphics, but may not necessarily for traditional news pages.

Regarding percent image, Peru had the largest image size, at 79.26 percent. Peru though, only had one award-winning page. Oman had the next largest, at 72.15 percent, and it had 11 award-winning pages. The awards that Oman tended to win for were feature pages, which generally have larger dominant images than news or opinions and larger imagery in general.

Peru also had the largest headline size (12.38%) and Germany had the second largest (8.72%) and they won 24 different awards, so it seems German papers tend to lean toward having larger headlines.

Ecuador had the most white space on pages, with 87.87 percent of pages consisting of white space. The country won 11 awards, and 10 of those awards were for infographics. Their infographics were often

illustrated, but because of the way images are spaced out in graphics, it makes sense that there was a large amount of white space on these pages.

And El Salvador had the most images per page with 25, but that was because it was the only winning page for El Salvador, and it was an infographic that contained a vast amount of small images. Mexico had the second most images per page with 17, which is interesting because the most common dominant imagery was illustration, which didn't generally lend itself to a large number of images.

Regarding the kind of dominant media used, Sweden used photos the most often, using them 77.22 percent of the time and never used infographics. Brazil used photo illustrations the most often, 42.86 percent of the time, Portugal and Peru both used illustrations 100 percent of the time, and El Salvador used infographics 100 percent of the time.

It is nearly impossible to make broader generalizations about the news designs of these countries newspapers because of the small sample size of all countries except the United States. The U.S. though, leans toward using photos most often (56.77 percent of the time) and then uses illustrations second most often (29.03 percent of the time). This could be explained because America's larger sample size includes a wider range of pages, especially news and sports, which are more photo heavy than features or opinions. Some countries tended to win for pages for specific sections, such as Oman, which predominantly won for features pages, and thus tended to skew results toward the typical design for that section of the paper.

VII. Conclusion

The findings from this study highlight what the main components of award-winning news design are and how they vary across section and country. Overall, dominant images on pages tend to take up around half of the page, while headlines are very small and only around 4 percent of each page. White space is approximately 60 percent of each page, and there's an average of 6.72 images per page.

The limitations of this study are that when charting the results geographically, it is almost impossible to make generalizations about results simply because there were not many data points for the majority of the countries. Another limitation is that white space was calculated by determining which pixels were below 50 percent black when converted to grayscale, which isn't necessarily the most effective way to measure purposeful white space on a page.

Additional studies could focus solely on white space with a more intricate methodology focused on breaking down purposefully added white space that ignores the typical leading and margins of a newspaper. This would give a more detailed look at how papers employ white space to make particular items jump out to the reader, whether that be around photos, headlines or body copy.

Another study could look at additional award-winning designs over the course of multiple years to chart the changes in design components and see how design has changed over time. This could be done in either consecutive years, or every five or ten years depending on what time frame is analyzed. Because there is so little research done regarding award-winning news design, there is plenty of additional research that can be done to further investigate what makes pages particularly compelling, unique and interesting.

Acknowledgments

The author would like to thank Kelly Furnas, lecturer at Elon University, for his revisions, support, and advice throughout the project and writing of the article. He was instrumental in narrowing the scope of the project and providing insight and overall. His encouragement and frankness were also much appreciated. The author would also like to thank the numerous reviewers who helped edit the article.

References

- Bergström, B. (2008). *Essentials of visual communication*. London: Laurence King Publishing.
- Beyers, H. (2006). What constitutes a good online news site? A comparative analysis of American and European awards. *Communications*, 31(2), 215–240.
- de Vries, J. (2008). Newspaper design as cultural change. *Visual Communication*, 7(1), 5–25.
- Harrower, T. (2002). *The newspaper designer's handbook* (5th ed. ed.). Boston: McGraw-Hill.
- Holmberg, N. (2004). *Eye movement patterns and newspaper design factors: An experimental approach* (unpublished Master's thesis). Lund University, Lund, Sweden.
- Holmqvist, K., & Wartenberg, C. (2005). The role of local design factors for newspaper reading behaviour: An eye tracking perspective. *Lund University Cognitive Studies*, 127.
- Leckner, S. (2012). Presentation factors affecting reading behaviour in readers of newspaper media: an eye-tracking perspective. *Visual Communication*, 11(2), 163–184.
- Morris, D. L., & Haight, M. J. (2018). America's front pages A 30-year update. *Newspaper Research Journal*, 39(1), 105–120.
- Tsai, M.-T., Wang, K.-A., Liu, Y., & Hong, J.-S. (2014). Perceived visual aesthetics of text-overlaid images: Computational models and experimental research for white-space fraction. *International Journal of Human–Computer Interaction*, 30(1), 1–23.
-