Visual messaging of the coronavirus news story

Alison J. Head, Steven Braun, Margy MacMillan, Jessica Yurkofsky, and Alaina C. Bull

KEY FINDINGS

1. Five dominant visual themes – fear, hope, loneliness, determination, and grief – emerged from the sample of news photos analyzed from the first 100 days of U.S. news coverage in 2020.

2. The theme of fear appeared in all three waves of news coverage, while photos with the themes of hope and grief became more prevalent in late February once the pathogen had reached American soil, the number of confirmed cases started mounting, and businesses, schools, and sporting arenas began to shut down.

3. Visual techniques of composition, lighting, and angle were used to tell a story in ways that words alone could not. Single subjects were often foregrounded against a looming backdrop or caught at an uncomfortable angle as news photos captured a world that had suddenly become profoundly unfamiliar.

Introduction

Certain images from the first 100 days of the U.S. Covid-19 news coverage will be seared into our minds for the rest of our lives. Grocery store workers in face masks, medical staff in hazmat suits, deserted city streets, and nursing home residents waving to their families through window glass are just a few. These photos bear witness to the human condition as a deadly virus infected almost every corner of the planet.

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While more than three-quarters of a million people around the globe have died from Covid-19, many more have tested positive as the world has been shuttered and unemployment rates have skyrocketed. The coronavirus news photos, and articles published with them, have shaped a common understanding about once unimaginable events. These images have created a historical record of the toll the deadly pathogen has taken on individuals and virtually every facet of society.

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In this two-part series from Project Information Literacy (PIL), we explore U.S. media coverage of Covid-19 during the first 100 days of 2020. In the first report, we examine the shape and flow of the coronavirus story across time and digital space using a large sample of stories from a range of news outlets. In this second report, we analyze the visual representation of the coronavirus story by using a sample of news photos as a barometer of the emotions that American society was feeling at the outset of the Covid-19 outbreak.

The purpose of this special series is to examine how mainstream news outlets responded to the largest global health crisis in a century. As the news industry is hemorrhaging jobs and advertising revenue, the coronavirus outbreak has created formidable challenges for journalists and photojournalists covering the story. Public demand for reliable news and compelling visuals is stronger than ever, as readership of online news sites has surged and many outlets have lowered paywalls and made their coronavirus coverage free for all readers to access.

Ultimately, our series is about reclaiming information agency: The ability to exert some control over the torrent of news about Covid-19 in order to remain critically informed at a time when one’s life may depend on it. We present empirical findings that illustrate how news stories and visuals shape our understanding of the world, and how media messages – the written word and visual storytelling – influence what we see and learn, what we think, and who we are. Learning resources accompany these reports as ways to build news and visual literacy competencies.

Visual framing of the pandemic

As Covid-19 spread, and our lives were restricted to our homes and immediate neighborhoods, news photos opened a window onto a world we could no longer enter. Images captured eerily vacant airports, store shelves stripped bare, exhausted doctors and nurses, and temporary morgues outside hospitals in New York City. These haunting visuals came to represent a new normal as the coronavirus took its grim toll.

In this second report in our series, we focus on the visual messaging of the coronavirus story in the early months of 2020. Just as journalists have chosen their words to convey meaning about an emerging global crisis, photojournalists have crafted similar messages using visual techniques. The Covid-19 photos used lighting, angle, composition, and color as rhetorical strategies for telling a story in ways that words alone could not.

The process of producing news photos may be less familiar than writing news articles. News photographers, trained to be objective eyewitnesses, must visit a scene and try to capture a defining moment with deep meaning to make their visuals memorable.

Editors, often under deadline pressure, sort through many available photos, choose which to run, crop and size the images, and position them on a news site’s home page. In newsrooms around the world, photo editors often find it difficult to explain their intuitive selection criteria, other than to say, “When I look at photos, at least one thing has to happen: either in my head, in my heart, or in my belly.”

Beyond these daily procedures, Covid-19 created a host of extra challenges for photojournalists covering the story. Photographers, who generally go to the visual center of every story, had to distance themselves to protect their safety and that of their subjects by relying on telephoto lenses and masks and shooting through doorways and windows.
Given these factors, how did news outlets frame their visual coverage during the first months of the coronavirus pandemic? What visual techniques were observable in photos that may have evoked particular emotional reactions? To answer these questions, we used a two-step research process to analyze visual messaging in a sample of Covid-19 news photos from the first 100 days of 2020.9

We analyzed 532 randomly selected news images from a sample of news articles (N = 74,737) published by the top 12 U.S. news outlets identified in Report 1. These data were drawn from Media Cloud, an open-source platform for large-scale media analyses at the MIT Center for Civic Media.10 Almost all of the images (95%) were photographs,11 and the majority (53%) were taken in U.S. locations.

Drawing on the analytical framework developed for Report 1, we used the metaphor of waves to describe ebbs and flows of media coverage in order to further analyze at what points in time news photos with certain themes appeared.

Photos from all three waves were systematically analyzed by two trained researchers on our team, who went through two test rounds before actually coding photos (Figure 1). They coded emotions each photo evoked as a whole and, separately, the emotions discernible in people in the images.12 In addition to coding emotional themes, researchers coded the setting of the photos in our sample.
As Figure 1 indicates fear, hope, loneliness, determination, and grief were recurring themes striking an emotional chord in photos published during the first 100 days of Covid-19 coverage. Notably, images evoking hope and grief did not start to appear with any regularity until early March, once the pathogen hit the U.S., confirmed cases started mounting, and businesses, schools, and sporting arenas began to shut down.

The most common setting was the workplace, although as businesses closed, the number of workplace images declined. Photos of government, medical, and business leaders speaking at podiums accounted for over 10% of our sample, reflecting both the public’s need to see leadership in action, and the reduction in more candid photo ops of a world in flux. Depictions of medical work, often outdoor testing facilities or the exteriors of hospitals, became more frequent toward the end of the study period as the number of cases climbed. In early 2020, images of occupied spaces decreased as those of near-empty streets, stores, arenas and other public spaces increased.

By coding a sample of images from major news outlets, it is possible to identify visual storytelling themes during three waves of Covid-19 news coverage as the mystery illness grew from an outbreak in China to a global pandemic. This practice provides a useful vantage point from which to critically evaluate the symbolic vocabulary of these timely news images. It allows for a deeper understanding of how certain visual messages are circulated under the press’s authority, and in turn, elicit certain responses from readers.
Five themes of emotion

As a second step in our analysis, we selected 15 representative images from this larger sample of 532 news photos. We used a qualitative analysis of these photos as a basis for developing a narrative about the meaning these images conveyed and the emotional responses they tended to evoke (Figure 2 through Figure 6).

(1) **Fear (33%)** was the most frequent and consistent theme in our sample of U.S. news photos across all three waves of coverage (Figure 2). Some of these images used tightly framed compositions of confined spaces to convey the physical restrictions associated with the pandemic. Many photos portrayed distress about the spreading contagion as shelter-in-place orders became the norm and medical personnel fought an invisible enemy. Masks were a constant in these images, hiding the subjects’ individuality while emphasizing their alienation. Hazmat suits and hospital gurneys were other visual metaphors that stirred feelings of suffering, mortality, and fear of the unknown. Taken together, these visual storytelling techniques relied on and reinforced a symbolic vocabulary for sending visual messages of anxiety and fear. These candid images had an intended effect of throwing viewers’ deepest fears into high relief: darkness, death, disruption of everyday routines, and the loss of human contact. They sent a clear message about a global society under a single and imminent threat.

(2) **Hope (18%)** was a surprising theme, one that was interwoven with darker ones of fear, loneliness, and grief (Figure 3). Once Covid-19 reached the U.S. and began its rapid spread, images with the theme of hope appeared more frequently on news sites. To depict hope, photographers often used close-ups taken with long focal lengths to pull subjects away from colorful backgrounds. These images were usually taken in full sunlight. Smiling faces were a central element of these photos. Most of these images evoked feelings of optimism by depicting themes of kindness and perseverance. Some photos captured teachers virtually connecting with students or a Covid-19 survivor out with their family. Other photos focused on competent first responders and conveyed visual messages of security and safety. Together, these photos were tropes for surviving in the face of adversity and the interruptions of daily life.

(3) **Loneliness (15%)** was an intermittent theme that became more pronounced as city streets and public spaces in the U.S. began to empty, the economy came to a halt, and people found themselves feeling disconnected and isolated (Figure 4). A typical photo might be of a solitary person in a distant and deserted cityscape. Other images leveraged techniques from *street photography,* relying on a shot taken from a high angle of an isolated person looking away from the camera and caught in the long shadows and slowness of time. Aerial shots of desolate freeways struck an apocalyptic tone. Together, these images gave us a portrait of a civilization forced to slow down. But these photos often hid more than they disclosed, and what was missing from these photos was as important as what was in the frame. In a world where cell phones are appendages, technology was strangely absent. This subtle messaging communicates feelings of loneliness that goes beyond physical isolation and suggests that when there is no one to meet and nowhere to go, there are no social connections to be made.

(4) **Determination (9%)** was a theme that built slowly over the 100 days (Figure 5). Political portraits and photographs of people going about their day under unimaginable circumstances illustrated resilience in different ways. Photos consistently showed government leaders, health officials, and CEOs speaking from podiums, trying to appear in control in the midst of global chaos. Some were visual shorthand for steadfast resolution rather than fear, hope, frustration or anger, with the subject looking past the camera, not into it. Many of these images were
Image gallery: Five themes of emotion

**STORY TITLE**
China Confirms New Coronavirus Spreads From Humans to Humans – The New York Times

**PHOTO CREDIT**
© STR/AFP via Getty Images. Used with permission.

**SOURCE**
The New York Times

**PUBLISH DATE**
Jan 20, 2020

**VISUAL TECHNIQUES**
Unposed, candid shot of subject
Looking up at subject
Subject looking outside the frame
Subject looking downward
Subject photographed from the back or side
No eye contact
Two or more people in the photo
Subject foregrounded against backdrop
Symmetrical background, shapes, and patterns
Shades of gray, low light

**STORY TITLE**
Thermometer guns used to screen for coronavirus are 'notoriously' unreliable experts say, warning against improper use and false temperatures

**PHOTO CREDIT**
© Thomas Peter, Reuters. Used with permission.

**SOURCE**
Business Insider

**PUBLISH DATE**
Feb 15, 2020

**VISUAL TECHNIQUES**
Subject up close, not smiling
Unposed, candid shot of subject
Looking up at subject
Subject looking downward
One person in the photo
Subject fills the frame
Subject juxtaposed with other key elements
Symmetrical background, shapes, and patterns
Shades of gray, low light

**STORY TITLE**
30 people in Suffolk County monitored for possible coronavirus exposure

**PHOTO CREDIT**
© Photograph: Orestis Panagiotou / EPA-EFE/Shutterstock. Used with permission.

**SOURCE**
New York Post

**PUBLISH DATE**
Feb 27, 2020

**VISUAL TECHNIQUES**
Subject up close, not smiling
Unposed, candid shot of subject
Looking up at subject
Subject looking outside the frame
Subject looking downward
Subject photographed from the back or side
No eye contact
One person in the photo
Subject juxtaposed with other key elements
Symmetrical background, shapes, and patterns
Shades of gray, low light

Figure 2: Theme of fear
Figure 3: Theme of hope
STORY TITLE
Coronavirus patients with heart disease have a 10% chance of dying. Here’s the mortality rate for patients with various underlying health problems.

PHOTO CREDIT
© Kevin Frayer, Getty Images. Used with permission.

SOURCE
Business Insider

PUBLISH DATE
Feb 29, 2020

VISUAL TECHNIQUES
Unposed, candid shot of subject
Looking directly at subject
Subject looking outside the frame
No eye contact
One person in the photo
Empty space around subject
Subject foregrounded against backdrop
Symmetrical background, shapes, and patterns
Shades of gray, low light

Figure 4: Theme of loneliness
Figure 5: Theme of determination
Figure 6: Theme of grief
existing photos, taken well before the pandemic. Others were taken at press conferences, featuring public officials aware that both their images and their words were on the record. Most of the leaders photographed this way were white males, mirroring the current demographics in U.S. national politics. In contrast to the formal portraits of leadership were the candid shots of ordinary people. Some of these photos featured an intimate look at sheltering in place, using posed families gazing directly at the camera in solidarity and resolve. Other photos were of people shopping, exercising, traveling, and working under decidedly strange conditions. Often, there was little or no interaction between subjects and the photographer, who caught them in an off-camera gaze, producing an image that evoked a sense of toughing it out and going it alone. These images were reminiscent of Dorothea Lange’s iconic photos of the Dust Bowl in the 1930s, and archival photos of the 1918 influenza epidemic. All of these photos echoed the same ideal of American stoicism in the face of crisis.

(5) Grief (7%) was a theme that emerged in the third wave of news coverage (Figure 6). These photos depicted and reinforced the collective sadness many Americans were feeling about the loss of loved ones, connections, and normalcy. A typical shot might be of a solitary essential worker headed home to face an uncertain future. Photos like these captured subjects unposed and in a private moment, presumably without their knowledge that they were being photographed. Unlike images with a loneliness theme, these photos evoking grief often featured close-ups. Other images in this category alluded to the deaths from Covid-19. As cultural customs around grief and dying like final goodbyes, last rites, funerals and wakes all but disappeared due to restrictions, news photographers were left without the conventional images of mourning. One of the most striking images in the sample was a wide angle shot of coffins in Italy. Another photo, taken with a telephoto lens, gave a spectral quality to morgue workers in New York City. Very few photos were taken from inside hospitals or nursing homes. In our sample, there were no photographs of medical professionals racing to treat the ill, or patients in emergency rooms or on ventilators. Stories of coronavirus in the U.S. were frequently accompanied by photos from hospitals in Europe and Asia. This was due to U.S. laws protecting patients’ right to privacy, bans on visitors to hospitals and nursing homes after the lockdown, and the media’s double standard for capturing foreign tragedies, but not U.S. ones for fear of news consumers seeing “disturbing” human casualties on American soil.

An iconic illustration

It was not always easy for news outlets to find a photo for every coronavirus story. Medical research stories, for example, often did not have an appropriate photo for scientific analysis about how the deadly pathogen spread and was infecting whole areas of the country. News outlets came to frequently rely on graphic artists for producing drawings, maps, infographics, and other visualizations.

One of the most iconic images of the first 100 days was an artistic rendering of the Covid–19 virus, a grey sphere with fuzzy red spikes (Figure 7). In late January 2020, the U.S. Centers for Disease Control and Prevention (CDC) gave us this first impression of the pathogen with its spongy texture.
When two veteran CDC artists were instructed to “create something to grab the public’s attention,” they used color and composition to create a memorable image. Aspects of the image are intended to evoke emotions – red spikes and angular shadows underscore the gravity of the threat.

Figure 8 shows an actual photo of coronavirus taken through an electron microscope. The gray blobs with black dots at the top of the slide are what this coronavirus actually looks like. The three-dimensional, colorful depiction of the virus replaced the flat lab photo and quickly became ubiquitous across the media ecosystem. Its constant use gave the public an unforgettable illustration of the virus.
Conclusion

The visual storytelling of the Covid-19 outbreak has been an indispensable element of U.S. news coverage. This story continues to unfold as news staffs shrink, and news organizations across the country announce even more pay cuts, furloughs and layoffs.

Economic conditions of a struggling news industry, and accompanying misinformation and disinformation about the novel coronavirus’ origins, treatments, and solutions, have made it more difficult for journalists to cover the story, and for the public to find reliable information. Moreover, quarantines, travel restrictions, lack of access to personal safety equipment, and fears of infection complicated photojournalists’ attempts to document the effects of the disease in nursing homes, hospitals, homes, and morgues.

Despite these hurdles, news outlets found ways to illustrate the coronavirus story. They had no choice. Public expectations of the news ecosystem, and its use of visuals, have been redefined in the past two decades. High-resolution digital cameras, smartphones equipped with cameras capable of both still and video photography, and image-based social media platforms like Instagram and YouTube contribute to a world that insists on “pics or it didn’t happen.”

Ongoing research on newspaper design from The Poynter Institute confirms a shift to image-centric journalism, finding that large photos get noticed, drive page views, and triple the readership of text. At national and local papers, it is unsurprising that editors dispatched their own journalists and photojournalists, scoured stock photography databases, relied on photos taken before the pandemic, and even reprinted candid photos snapped by readers to satisfy the demand for Covid-19 images.

Ultimately, the Covid-19 photos we ended up seeing on news sites were a singular representation of an accumulation of many decisions made by photographers, journalists, and editors. In this way, these news photos were artifacts, flattened representations of things or events, not necessarily a high-fidelity expression of how something might exist and appear in reality.

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Many of the more memorable photos published on news sites from the early days of the pandemic conveyed deeper layers of meaning and served as powerful and lasting points of reference. To be memorable, these images needed to capture a world that had suddenly become unrecognizable. At the same time, the visuals had to crystallize a united response to the pandemic that most readers were feeling but could not always express.

When we coded 532 news photos from mainstream news outlets, our team of coders found fear was the most commonly evoked emotion in the first 100 days of the coronavirus photos. Visual techniques, such as low light and dark colors, off-camera gaze, and candid shots, were used to acknowledge and reflect the deep-seated anxiety most felt about the uncontrolled spread of the disease and the economy coming to a near standstill.

A surprising counterpoint to these results were photos conveying hope and determination. These photos, often taken with long focal lengths to pull subjects away from bright backgrounds, started to appear in the U.S. news
coverage when resilience and fortitude may have been needed most. By early March, the full effects of Covid-19 were being felt as sporting events were canceled, schools and workplaces closed, and the economy crashed. In contrast to the images of hopeful people, news photos captured deserted streets and empty gathering places.

Drawing on our analysis, we found the photos making the strongest impression on viewers used a visual shorthand to document life in the first few months of the pandemic. The images resonated with what many people were experiencing, and encapsulated their emotional responses to a changed world. While our sample of photos was not meant to be representative of all photos about the Covid-19 outbreak, it allowed for exploring the normative role journalism had in shaping responses to a global crisis that has permeated all aspects of life and disrupted daily routines.

At a time when many Americans have lost trust in the news media, applying a critical lens for understanding how the visual messaging of news photos works can develop our agency and discernment as consumers of news. This approach to evaluating the meaning of visual and textual news is essential for staying informed while navigating a news ecosystem that is becoming more crowded than ever.

The first report in this two-part series on the First 100 Days of Covid-19 news coverage explores the shape of news by looking at the peaks and valleys of mainstream coverage over time, and includes a narrative timeline of how the story developed in the top U.S. 12 news outlets in our sample. Read Report 1: The shape of the coronavirus news story >>

Opportunities for further learning

In addition to this report, we have prepared a Project Information Literacy (PIL) project landing page with these related resources:

Report 1 of this two-part series on the First 100 Days of Covid-19 explores how the coronavirus news coverage developed and gained momentum in the U.S. This report includes an analysis of the top 12 mainstream news outlets publishing the most news, and a narrative timeline examining the news spikes and the stories behind them.

Learning resources for this report include discussion prompts and activity-based exercises suitable for virtual or in-person learning. The exercises are a way to reclaim information agency by stepping back from the endless stream of Covid-19 news and information to evaluate how news photos send visual messages to elicit and reinforce certain reactions.

PIL’s Covid-19 misinformation resource list offers classroom-ready materials from researchers and journalists about the spread of false claims and “fake news” of the coronavirus pandemic particularly on social media. This is a topic that raises compelling questions beyond the scope of our series on the development and representation of the story from mainstream news outlets.
**Endnotes**


10. See Report 1, “The shape of the coronavirus news story,” for a list of the 12 U.S. news outlets during the first 100 days of 2020, and our analysis.

11. We defined images as news photos, illustrations, maps, data visualizations, and infographics, and coded the first image in an article that met these criteria. Videos were excluded from our analysis, since unlike images they
incorporated sound and motion.

12. This coding required researchers to interpret the underlying meanings of a photo so some bias may have affected their coding selections. See Methods for a discussion about our coding procedures.


28. “Pics or it didn’t happen” is a popular phrase used on Instagram and other image-based social media platforms to counter the vast range of unverifiable claims made by users. See Jacob Silverman (February 26, 2015), “‘Pics or it didn’t happen’ – the mantra of the Instagram era,” *The Guardian*, https://www.theguardian.com/news/2015/feb/26/pics-or-it-didnt-happen-mantra-instagram-era-facebook-twitter
