Fred Ritchin

Image/Text/ Hypertext

What now is a photograph? Is it the same, or even similar, to a 20th-century photograph, one created with camera, film and paper? Or has the paradigm shifted?

Has the easy malleability of the digital photograph, a mosaic formed of discrete pixels, helped to resituate the photograph as more of an elastic form of branding than a visual record of our surroundings, especially in this age of consumer entitlement? Is it now more of a node on a network, a shorthand linking other discrete bits of data, rather than an individuated image meant to be focused upon and read on its own?

Or, more pointedly, of what use is the photograph as a societal referent once it has been divorced from its stenographic function as a witness, a record of the visible, or, as Charles Baudelaire described it in the 19th century, "the secretary and clerk of whoever needs an absolute factual exactitude in his profession"[1]? Has it become overtly subjective, a depiction easily modifiable by photographer and subject alike – a selfie rather than a self-portrait, a photo opportunity rather than a reportage, etc.?

Has the photograph become so estranged from its previous origins in mechanical reproduction that its aura is now constituted by the number of 'likes' the image receives, rather than the originality and authenticity of what it conveys? Or, going back to Borges[2] and Baudrillard[3], is the photograph no longer a map of the visible, but rather a map without a territory, or perhaps even a map that has no use for a territory, divorced from its own indexicality?

Might we then begin to define this 'post-photograph' as a counterfeit disguised as its former self primarily to borrow from its own previous credibility? Or, more broadly, in this Age of Image

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1 From Charles Baudelaire, "The Salon of 1859", in: *Charles Baudelaire, The Mirror of Art*, edited and translated by Jonathan Mayne, London 1955, reproduced in Vicki Goldberg, *Photography in Print. Writings from 1816 to the Present*, Albuquerque, New Mexico, 1988, p. 125.

2 Jorge Luis Borges, *A Universal History of Infamy*, translated by Norman Thomas de Giovanni, London 1975.

3 Jean Baudrillard, "Simulacra and Simulations", in: *Jean Baudrillard, Selected Writings*, edited by Mark Poster, Stanford 1988, pp. 166–184.

has the (post-)photograph *become* the reality, displacing the circumstances of the everyday? And, if so, what does this mean for the requirements of citizenship when, for example, reality TV is allowed to take over?

Should we, for the sake of media literacy, be delineating a boundary between the photograph and these *imagegraphs* similarly to what John Szarkowski, then director of photography at the Museum of Modern Art, did in his 1978 photographic exhibition titled *Mirrors and Windows*? Trying to make sense of U.S. photography since 1960, the exhibition's premise was that most photographs fall into one of two categories: the 'mirror' photograph tells us more about the photographer, the 'window' photograph more about the world. As Szarkowski wrote:

> "This thesis suggests that there is a fundamental dichotomy in contemporary photography between those who think of photography as a means of self-expression and those who think of it as a means of exploration."[4]

In the exhibition some of the most interesting images overlapped, categorized as both mirror and window, and were shown in a separate room. The exhibition argued that the camera's mechanical recording of the external world did not guarantee that the photograph's subject was not, in fact, the photographer.

It could be a productive if fraught exercise to similarly try and separate the photograph and *imagegraph*, aware of the many overlaps here as well. Probably much of editorial photography assigned by corporate sponsors might find itself labeled *imagegraphs*, for example, and more than a few selfies would be characterized as photographs. In the process one would also have to consider the elusive boundaries between fiction and nonfiction, categories that have been widely applied to words but not to photographs due in large part to the lumping together of photographs of all kinds as some sort of a visual record. In a world suddenly preoccupied by the liminal universe of 'alternative facts,' such an effort would be timely. According to the current president of the United States, for example, journalism is "nothing more than an evil propaganda machine for the Democrat [sic] Party."

Appearances are fragile and transient, a major reason for the initial lure of photography and its ability to depict the momentary. But rather than being contemplated, now the world and all it

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4 From John Szarkowski, *Mirrors and Windows: American Photography since 1960*, The Museum of Modern Art, New York 1978, p. 11.

contains have increasingly become thought of as objects to be transformed into whatever we want them to be. Isn't that a major purpose of code – digital code, DNA – both of them editable, whether by Photoshop or CRISPR? Isn't it now largely the surveillance machines, and the police, that are intensely focused on recording what things actually look like – facial identification systems, mug shots, license-plate readers, etc.?

If "the medium is the message," to recall Marshall McLuhan from 1964[5], then the message of the digital is more quantum than Newtonian, more about what might be, or have been, than what is. Multiple identities thrive in the digital environment, as do alternative truths and parallel universes, as do viral images, a sharing of biological genes and cultural memes. The commanding iconic photographs of the last century that depended upon hierarchies required shared belief systems that have been substantially eroded as we shun elites for our information, from editors to doctors to a whole host of specialists, including scientists. Not surprisingly, the entwined, overlapping network of digital signifiers, powered by algorithms that are displacing the grandeur of the physical, have made the ephemeral the currency in which we trade. Bad things can be made to seem as if they are happening to somebody else, or don't exist at all.

In this media universe of the nonlinear, of accidents and discoveries, of overlapping microworlds and open borders, the new frontier is not in comparatively closed systems like books, cinema and print newspapers. These seem antiquated in contrast to a constant deluge of free media where everyone can be a prosumer – a producer, a publisher, a critic, and a potential troll. The screen-based universe simultaneously becomes both ludic and addictive, as we become 'users' clicking on links that so often lead nowhere of importance. Often it is the circular pathways that are the most comforting, the solipsistic sum of all clicks bringing us back to the tribal hearth. Is this what succeeded the promise of the vaunted information superhighway?

Meanwhile the legions of photographers still search for the iconic image, the one with the power to provoke change in the world. Otherwise their work becomes a kind of voyeurism, an untenable position when one is faced with so much suffering. But there may have been only one iconic photograph in the last 15 years that had a substantial impact internationally – the drowned body of three-year-old Syrian refugee Alan Kurdi lying face down on the sand. It is the viral memes on social media that, linked and

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5 Marshall McLuhan, *Understanding Media: The Extensions of Man*, New York 1964.

6 One definition of a meme: "[…] a unit of cultural information, as a concept, belief, or practice, that spreads from person to person in a way analogous to the transmission of genes." Webster's New World College Dictionary, 4th edition, Boston 2010, https://www.collinsdictionary.com/us/dictionary/english/meme (last accessed 19 February 2020).

retweeted, have the most effect, albeit often simply as entertainment.[6]

In a culture where the image is now used as a shortcut to elide the verbal (show it, don't tell it), with vocabularies thinned by the constraints of texting and tweets, it is the metonymy, not the metaphor, that triumphs – the image as keyword, as meme (albeit as one that may be read differently by insiders belonging to a particular group). So it is a manipulated image of a golden, shining Trump Tower placed onto a rural landscape in Greenland that the President of the United States chooses to circulate, writing "I promise not to do this," or the close-up of the kiss between Melania Trump and Justin Trudeau at the G7 meeting in Biarritz that goes viral, not any imagery of the enormous challenges facing the world's most powerful nations. Or, Marianne Williamson, a Democratic candidate for U.S. president, who was asked during the 2019 campaign how well she thought that the night had gone after a nationally televised debate in which she participated responded: "I don't know yet. I mean, I'll tell you when, you know, later when I see the memes."[7]

The transition away from the iconic recalls for me a 2011 exhibition on the Libyan revolution that I curated by the photographer Bryan Denton, a former student of mine.[8] He had been working in Libya as a freelancer for the *New York Times* over a six-month period. Denton is nearly fluent in Arabic, had lived in Beirut for several years, and devoted himself to making imagery that explored, as best he could, the complexities of the uprising. (He also pointed out that the combatants he was photographing would frequently see his photos as they were published by the *Times* online.) After a projection of his recent work that he presented in a public forum that I moderated at New York University where the exhibition was held, I turned to a young Libyan woman on the panel – a student pursuing a career in health sciences – and asked her to comment.

She thanked all who had made photographs of her country's revolution, and then spoke of a specific photograph of her grandfather in Libya that she had received only the day before as the one that was most important to her. She described it as a cellphone image of her grandfather, posing with the corpse of former dictator Muammar el-Qaddafi in a meat locker. In the photograph, she said, her grandfather was smiling for the first time in 40 years. There were no other photographs that she specifically referenced. The young professional seated next to her, who had

7 Matt Stevens, "Marianne Williamson Wants to 'See the Meme.' Here They Are", in: The New York Times, 1 August 2019.

8 I have written previously on this episode in Fred Ritchin, *Bending the Frame. Photojournalism, Documentary, and the Citizen*, New York 2013.

survived wartime violence to serve as a witness and was having his first exhibition, was made to realize that, for a young Libyan woman living in New York, a cellphone image of her grandfather was the most consequential. Like so much else in an increasingly digital world, it was the personal that had the most impact.

This leads then to a subsequent question: Are the great majority of 'photographs' published on social media an articulation of a photographer's vision of the world, an attempt to formally explore people and events, to occasionally focus on what might be symbolic of an issue or event, or are they primarily meant as an immediate sharing of experiences for a like-minded community? Are they echoing and amplifying ideas greater than what is depicted in the rectangle, or are they largely reductive, a visual slang for an in-group – a picture of a ring on a finger meaning 'I'm getting married,' or of a glass of champagne meaning 'I'm having a good time'?

This simplification creates a relatively easy mimetic opportunity for photographic-like images made by artificial intelligence, with one computer network making the image and another critiquing it until it is considered fit for human consumption (which in itself, given the low level of media literacy, may be yet another simplification). Are these then still to be thought of as photographs, or is the better term 'synthetic images'? And then what of the millions or billions that have been extensively retouched or composited – shouldn't they be called 'fabricated'? Do we, in this post-truth era, have any interest in restoring the term 'photograph' only to those images that are a quotation from appearances (which does not make them 'true' or 'objective'), and finding different terminology for the others?

There is also a growing question of authorship, or more specifically the need for a human author. Last year an algorithmically-generated painting that is part of a larger series, *Portrait of Edmond de Belamy,* sold for 432,000 dollars at a Christie's auction in New York, nearly 45 times its high estimate. The painting, printed on canvas, was signed by an algorithm, and credited to the Paris-based arts collective Obvious.[9]

What then happens as algorithms generate not only paintings, but music, television scripts, and news articles? They can be programmed to work in certain styles, leading to further issues concerning authorship. As the influential musician Brian Eno asserted nearly a quarter of a century ago,

9 "Is artificial intelligence set to become art's next medium?", christies.com, 12 December 2018, https://www.christies.com/features/A-collaboration-between-two-artists-one-human-one-a-machine-9332-1.aspx (last accessed 27 December 2019).

> "I want to be able to sell systems for making my music as well as selling pieces of music. In the future, you won't buy artists' works; you'll buy software that makes original pieces of 'their' works, or that recreates their way of looking at things. You could buy a Shostakovich box, or you could buy a Brahms box. You might want some Shostakovich slow-movement-like music to be generated. So then you use that box. Or you could buy a Brian Eno box. So then I would need to put in this box a device that represents my taste for choosing pieces."[10]

What happens then when you can obtain software that replicates the style of Henri Cartier-Bresson, or Diane Arbus, or Malick Sidibé? It might allow one to make new synthetic imagery without even employing a camera, or to put it into a camera that then makes images whenever the software decides that a situation resembles one of these people's photographs, choosing the appropriate framing, focus and shutter speed (perhaps even telling the person wielding the camera to move closer or further away). It would be like having one of the nostalgia filters now available on apps, but of a different magnitude. And given the work being done on computer-generated captions, the human has little more to do than select from among the possibilities that the machine creates: "The Work of Art in the Age of Synthetic Reproduction." One wonders if and when these *fauxtos* will supersede the originals both in popularity and price.
Meanwhile, the less mimetic conceptual openings that the digital represents are mostly ignored as sources of new thinking and experimentation. The digital, nonlinear and open-ended, paves the way for parallel universes, links among far-flung entities, a sense of potentials vaster than previously imagined. In a hypertext (nonlinear) novel, for example, one reading might have the main character fall in love and have children, while in another reading she dies in an auto accident – so that the reader becomes, in choosing the narrative, a co-author of sorts, a partial concretization of the premise of literary deconstructionism that author and reader are collaborators in determining meaning. Words have multiple meanings, depending upon where they are sequentially placed, as are images. A photograph of a woman staring into space may be followed of one of her with her family, or prone on the street after being hit by a car – each modifying the meaning of the image that precedes it as well as the ones that follow.

10 From Brian Eno and Kevin Kelly, "Gossip is Philosophy", in: Wired, May 1995, https://www.wired.com/1995/05/eno-2/ (last accessed 27 December 2019).

This is a similar plotline to certain readings of the pioneering electronic fiction, *afternoon, a story*, by Michael Joyce (1987–1990)[11]:

> "[T]his is the story of Peter, a technical writer who (in one reading) begins his afternoon with a terrible suspicion that the wrecked car he saw hours earlier might have belonged to his former wife: *'I want to say I may have seen my son die this morning.'*"

Then again, he might not have. Readers do not read the same narrative; after experiencing the story, there may be little overlap of plot or even similarity of characters to discuss with others. Enormous tragedy may have befallen a character, or none at all. In hypertext fiction the reader may simply be urged to continue until he or she is exhausted since there is no conventional ending (perhaps a metaphor for life). As Joyce explains it:

> "Closure is, as in any fiction, a suspect quality, although here it is made manifest. When the story no longer progresses, or when it cycles, or when you tire of the paths, the experience of reading it ends."[12]

Hypertext is an explicit collaboration with the reader whose choice of pathways elicits differing narratives, an incarnation of Roland Barthes's "active reader."[13] For example, in 1961 French writer Raymond Queneau published what might be called a metapoem, *Cent mille milliards de poèmes (100,000 Billion Poems)*[14] that was impossible for him, as its author, or for anyone else to read in their lifetime. Starting with ten sonnets of 14 lines each on ten pages, each line of a poem situated on a strip separated from the one above or below it by a cut in the paper, the reader was encouraged to reassemble the lines in any sequence desired, a folded piece of heavier paper provided to hold the strips in place. There were so many possible permutations that, in the introduction to his book, Queneau calculated "counting forty-five seconds to read a sonnet and fifteen seconds to change the strips, for eight hours daily, two hundred days a year, there is enough for more than a million centuries of reading …"[15] He then cites the poet Lautréamont's argument that "poetry must be done by all, not by one"[16] – a more humanistic rallying cry for the collaborative content-generating sites of Web 2.0.

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11 Michael Joyce, *afternoon, a story*, Watertown, Massachusetts, 1990.
12 Ibid.
13 Roland Barthes, *The Pleasure of the Text* (French Original: *Le plaisir du texte*), New York 1998 [1978].
14 Raymond Queneau, *Cent mille milliards de poèmes*, Paris 1961.
15 Ibid.
16 Ibid.

Unlike reading the same codex book, or watching the same movie, the fictional hypertext both liberates and isolates the reader in their own particular reading. It is as if the oral tradition of overlapping, complementary, and divergent tellings of the same story were transferred to print, but asynchronously, without the live, physical presence of the other speakers. Gutenberg's mechanical type is credited with advancing the formation of the nation-state as people were newly able to read and discuss the same documents. Hypertext supports a more idiosyncratic individuality.
As Joel Achenbach perceptively wrote in the *Washington Post* in 2006,

> "The ultimate destination of this phenomenon is the complete transformation of any text into discrete 'bytes' of information, divorced from their original source, to be used democratically in whatever fashion the downstream manipulator wishes. The concept of 'copyright' will become extinct. So will 'the meaning' of a piece of writing. If you wish, you can reconfigure Moby Dick to become the story of an aging sea captain who is obsessed with a great white hamster."[17]

How then can photographs work with text and other media in nonlinear narratives, becoming more of what we might want to call 'quantum images'? One of my formative experiences in the nonlinear, published for three months in the summer of 1996, which I thought would serve as a reference for thousands more projects that would transcend what we were able to accomplish in the early days of the Web, was a website that I conceived for the *New York Times – Bosnia: Uncertain Paths to Peace*. It was a collaboration between the photographer Gilles Peress, myself, and *Times* staff. In an attempt to move the paradigm forward, at the end of the previous year I had proposed to an editor of the newly born *New York Times on the Web*, Kevin McKenna, a project to create a photo essay that would engage with the photography of peace rather than the much more typical depictions of war, and engage the new medium of the Web for more complex and pertinent communication.[18]
After four years of armed conflict among Serbs, Croats, and Muslims, and the signing of the Dayton Peace Accords, the idea was to create a photo essay that departed from the usual shockingly graphic violence of war to one that used imagery to describe the tentative making of peace. The intent was also to take advantage of the new strategies made possible by the Web – nonlinear

17 Joel Achenbach, "The Blah, Blah, Blahgosphere", in: The Washington Post, 2 July 2006.

18 I previously wrote about this at length in Fred Ritchin, *After Photography*, New York 2008.

narratives, discussion groups, contextualizing information, panoramic imaging, the photographer's reflective voice – rather than imitating a print-based essay.

From the very beginning it was evident that the photographer Gilles Peress needed to be centrally involved in the creation of such a project rather than simply hand over his imagery for others to select, as is often the case in print media. My many years of working as a picture editor were insufficient for the multilinear, multimedia editing required. I could not simply select the 'best' images and string them together, bemoaning the imagery that had to be left out due to lack of space. In this case the photographer had to articulate the multiple meanings of each image as a way of deciding upon accompanying texts and images, and to strategize possible linkages to photographs and media on the other screens that would make up the site.

As the eyewitness who was aware not only of what was within each frame but of that which remained outside it, both spatially and temporally, the photographer had an ongoing and pivotal role even after the actual photography was accomplished. It would take two months to edit and build the site – longer than to photograph the essay; several hours for a viewer to go through it; and the photographer remarked afterward that the process was equivalent to making three books or one feature film. By comparison, he edited and sequenced an eight-page essay of these same photographs for the *New York Times Magazine* in about two and a half days.

In this need to interrogate every image for possible meanings there was a sharper sense of my own distance, as editor, from the events and people being depicted and, concurrently, a heightened desire to understand them. I wanted to know the people that were photographed as individuals rather than as symbols; furthermore, with all the nonlinear, multimedia possibilities of the Web, generic imagery of a suffering mother or wounded combatant would not propel the narrative. In fact, such simplistic imagery would become a dead end, suffocating the narrative.

The multiple meanings of the photographs were often not at all apparent. A photograph of a dead man on the ground that I had selected from uncaptioned contact sheets while the photographer was still in Sarajevo turned out to be, to my surprise, an actor playing dead: the shooting of a feature film on the siege of Sarajevo had commenced only four days after the shelling had stopped. Ultimately it was possible either to collapse each photograph's potential meanings into one that could be called a defining caption, or to sustain the ambiguities in the presenta-

tion so as to provoke new thinking, not only about each image but also about the larger conflict in Bosnia.

Peress and I worked with some 400 small photos on the walls of his loft, with differently colored lines connecting the various images, playing a kind of four-dimensional chess as we pondered how to structure the photo essay. If the reader clicks on this image near the window, where would it take him or her? To the image on the other side of the room? What if a reader clicked on the image but only on the person shown on the left; where would it lead? Why would a reader want to become involved in such a new form of reading? How interactive could (and should) the experience be? When would we lose a reader's interest? When would it become gimmicky, a kind of a game that would demean the experience of those in the pictures?

We decided that the metaphor of the journalist should be the operative strategy for navigating the essay. Just like the journalist who arrives at the Sarajevo airport not knowing where to go, what specific story to explore, the reader would be required to click on images without knowing where they lead. Unlike a book or magazine, there was no way of quickly flipping forward to assess and select a path. Each click of the cursor would put a reader on another screen with new perspectives and unknown possibilities.

In our construction, readers would be required to evaluate the information presented, then take trips and side trips through photographs, text, sound, and video, with the option of extricating themselves at any time from Peress's essay to go to one of 14 forums and participate in various discussions, as well as to consult maps, a bibliography, or a glossary. There would be a copy of the Dayton Peace Accords and links to large numbers of other sites and other archival material provided by the *Times* and National Public Radio.

The navigational devices for each screen, in these early days of the Web, were exhaustively discussed as we aimed for simplicity, short download times (most people then had telephone modems), and the capability to explore aspects of the narrative with greater complexity. It took three weeks for a group of us to agree on the rather simple trio of buttons PREVIOUS/MORE/NEXT, allowing the interested reader to pursue more depth at specific places in the narrative. We also decided, but did not alert the reader, that clicking on a photo would link to the same screen as if MORE had been selected; the thought was that choosing a photo indicated sufficient interest so that the reader should be shown more than the linear narrative would provide. Most importantly, two screens of a couple of dozen small photographs

each were provided as grids – one compiled from the screens concerning Sarajevo and the other from screens dealing with the surrounding suburbs – that would allow the reader to decisively reject any linearity by clicking on an image to leap to any other part of the reportage. The uncaptioned photographs that made up the grid were meant to encourage a more intuitive reading. Any confusion that resulted for the reader seemed minimal compared to the actual chaos in Bosnia.

The photography was discussed and reevaluated in Web terms – we could present a 360-degree navigable panorama; we could use complex images which link to different destinations; we could scroll up and down or sideways (hiding pictures beyond the border of the screen); we could create collages, and so on. (Later, when I again worked for the *Times Online* on two much smaller projects, I was told that I could not use horizontal scrolls, only vertical ones, because they had done a reader's survey and the horizontal scroll was not favored. I responded that it was like asking a painter not to use the color red.)

We decided to pair Peress's photographs with his own written text and recorded voice to add other points of view. His emotional reactions and philosophical questions would help to contextualize and extend the imagery beyond what the typical identifying captions could accomplish. Much of his text was dictated to me as he sat on a windowsill in his studio, smoking a cigarette. For example, on arriving in Sarajevo, along with aerial photographs:

> "Flying above the land frozen and virgined by the snows, I start to see the scars, the trenches, rows of homes, suburbs of a better life, wrecked by house-to-house combat, by front lines through living rooms, gardens turned into mine fields. From this vantage point, embracing the totality of destruction, silenced by the winter air, we drift upon the city: Sarajevo."

Or, on snipers, accompanying pictures of their lairs:

> "The sniper's world is a cubist virtual reality where both killer and victim have mapped out space in a game of life and death, and where 10 centimeters of unthought potential are met by the crack of the gun. When the sniper is 'on,' the air vibrates, the sound of a shot can come at any time, and the street changes its form from a positive space to a negative one, more defined by its outlines than by its center. And now that war is gone, you can visit the other side of the mirror from which he was looking at you …"

The newness of the medium required that Peress and I discuss

nearly every decision at length, lost in a new and emerging language that we were trying to comprehend. And we tried to be ambitious. Rather than publish the conventional photographs of war, sensationalizing victimization and emphasizing the grotesquerie of violence, we preferred photographs that would strive to understand the problematics and possibilities of reconciliation. We were attempting to ask how people who viciously killed one another for years might live together, and we provided forums for readers to discuss strategies for resolution.

The idea was to challenge some previous limitations of storytelling without alienating the reader. The essay opened, for example, with an uncaptioned photograph that was, in fact, a rephotographed snapshot of a Muslim family in which the face of each family member had been erased by a drill bit; the disfigured snapshot was all that was left when this family returned home after four years of conflict. Then readers had to choose, intuitively clicking on one of two photographs that would take them either to Sarajevo or to its suburbs, unsure of what each choice entailed.

Rather than circumvent a photographer freshly back from extraordinarily intense experiences, Peress was given center stage. And rather than produce the site primarily relying on the authority of the *New York Times*, by acknowledging and encouraging a conversation among photographer, subject, and reader we could be seen as undermining it. By the newspaper's willingness to engage its readers in such a relatively open and unresolved fashion, the online project demonstrated the *Times*'s self-confidence. 200,000 e-mail messages were sent out announcing the site, and although readers outside the United States at that time had to pay a subscription fee to access the online newspaper, the *Times* made this particular project free to anyone with Internet access.

Some hopes for the project were not realized. The complexity of experiences available to the reader were not nearly as great as we had initially wanted (we were prepared to use hundreds more photographs), but we had to weigh that against the fact that this site was already much more complex than possibly any photojournalistic foray that had been attempted in any medium. We had wanted to automatically keep track of a reader's movements so that some mixing of pathways through the essay could take place based upon previous choices, opening up new issues and ideas. We also wanted each reader to be able to pause and then to reenter the site at another time depending upon what had already been seen. (One reader told me that it had taken her four hours to go through the site.) But these options would have involved too many demands upon the *Times*'s servers in 1996.

I also had wanted to engage the viewer's history of choices as a

primary navigational determinant, so that if a reader clicked on a picture showing someone from the Muslim community, then later he or she might be surprised to be prohibited from selecting pictures of Serbs (the computer might temporarily freeze, for example). In a much milder way this could have reminded the viewer of what had happened to the inhabitants of Sarajevo who were continually being hemmed in and at times assaulted or murdered not only over their own ethnicity but also according to their previous choices of friends and neighbors.
We might also have proceeded to image-map the photographs, so that clicking on various segments of a photograph would lead to different pathways – clicking on a child's toy, for example, might lead to a different set of images than clicking on a bedroom window. This explicit sectioning of the photograph into a kind of mosaic, should it have become widely adopted, would have explicitly released the photograph from comparisons to paintings, making them serve as menus leading to unknown narratives, amplifying both a sense of adventure and potentially one of confusion.
In the end it was the discussion groups that proved the most incendiary and revelatory. Four computer terminals were set up at the United Nations in New York and two at The Hague to expand the discussion with those who normally might not have had Internet access then (another center planned for Sarajevo University encountered problems and was slow to go online). Yet the discussion groups were quickly dominated by some of the most racist and vitriolic comments ever to appear in the *New York Times*. There were 14 forums with differing subjects (introduced by UN Ambassador Madeleine Albright, CNN's Christiane Amanpour, human rights leader Aryeh Neier, among others), many of which were dominated largely by pro-Serbian commentators abroad who felt their cause was being vilified by the conventional media; someone suggested, accusing the *Times* of a pro-Muslim slant, that the newspaper must be owned by Saudi Arabia. The discussion groups, despite entreaties for civility by former *Times* foreign editor Bernard Gwertzman, were so rampantly hostile that a reader might learn more from them than from any news report as to how extensive, irrational, and personal the contested claims could be. In the early days of the Web, this was deeply revealing.
A few commentators felt that the project succeeded in important ways. In *Print* magazine, Darcy DiNucci wrote:

> "Clumsy as today's low-bandwidth presentations must be in some particulars, the site indeed pioneers a new form of journalism. Visitors cannot simply sit and let the news wash over them; instead, they are challenged to find the path that

engages them, look deeper into its context, and formulate and articulate a response. The real story becomes a conversation, in which the author/photographer is simply the most prominent participant."[19]

Joe Goia, writing in the online journal *Salon*, cited "the McLuhanesque consequences of photography freed from the confines of material reproduction." He also responded to the relative insubstantiality of the screen-based photographs: "They seem barely more permanent than the moments they presume to record. Quick to load, the photos present themselves with the ease and weight of dreams."[20]

The Web had shown itself capable of a conversation among a variety of authorities; for this project a discussion was provoked by the singular voice of a photographer within the boundaries of a news organization. The interpretation of the news was made considerably more explicit, and the requirement on the part of the reader to digest and reinterpret these interpretations was reinforced. No longer was the continuum from subject to reporter to editor to reader conceived as if in a straight line; the Web allowed, and promoted, a more zigzag approach, and a sense of uncertainty when journalism has tried so hard to be authoritative: "All the news that's fit to print," as the *Times* advertised itself back then.

In 1997 the *New York Times* nominated *Bosnia*: *Uncertain Paths to Peace* for a Pulitzer Prize in public service, but the Pulitzer committee immediately rejected this project. Why? It had not been produced on paper. The following year, inspired in part by this project, the Pulitzer committee decided to consider Web sites for the prize in public service if they were associated with print projects from traditional media outlets. Stand-alone sites, however, were not admissible. It would take nearly another decade for a variety of online media such as databases, interactive graphics and streaming video, published online but still with a print component, to be ruled eligible for a Pulitzer. The connection to the tangible, analog medium was difficult to relinquish. The rear-view mirror had triumphed yet again.

The relationships among author, subject, and reader will evolve, as others pursue their own trajectories in storytelling. Although the apparent reluctance to do so – the Bosnia project was made nearly a quarter of a century ago – speaks to the difficulty of giving up previous paradigms both by institutions and individuals. How many media departments in universities, or photo schools,

19 Darcy DiNucci, "Uncertain Paths to Understanding", in: Print, November/December 1996, pp. 72–79.

20 Cited in Ritchin, *After Photography*, 2008, p. 108.

teach hypertext? How many individuals are comfortable in giving up the lingering certitude of the 20th-century photograph for the ambiguities and subjectivities of more open-ended narratives? As might be expected, it is often not the institutions with the greater resources but individuals of an idiosyncratic, innovative bent who have made the most essential advances in nonlinear storytelling online. Jonathan Harris, whose work can be found at number27.com, is one of the most accomplished. His 2007 *Whale Hunt*[21] was documented in a remote region of northern-most Alaska

> "with a plodding sequence of 3,214 photographs, beginning with the taxi ride to Newark airport, and ending with the butchering of the second whale, seven days later. The photographs were taken at five-minute intervals, even while sleeping (using a chronometer), establishing a constant 'photographic heartbeat.' In moments of high adrenaline, this photographic heartbeat would quicken (to a maximum rate of 37 pictures in five minutes while the first whale was being cut up), mimicking the changing pace of my own heartbeat."[22]

One of the purposes of this project, in Harris's words, was "to experiment with a new interface for human storytelling" so that the

> "full sequence of images is represented as a medical heartbeat graph along the bottom edge of the screen, its magnitude at each point indicating the photographic frequency (and thus the level of excitement) at that moment in time. A series of filters can be used to restrict this heartbeat timeline, isolating the many sub stories occurring within the larger narrative (the story of blood, the story of the captain, the story of the arctic ocean, etc.). Each viewer will experience the whale hunt narrative differently, and not necessarily in a linear fashion, constructing his or her own understanding of the experience."

Harris, both programmer and artist, states that he was also trying to establish empathy with the computer in subjecting himself "to the same sort of incessant automated data collection process that I usually write computer programs to conduct."
(The potentials for linking photography to biological functions such as heart rate, blood pressure, and brain waves is both exciting as a way of connecting with the photographer's thoughts and

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21 http://thewhalehunt.org/ (last accessed 27 December 2019).

22 http://thewhalehunt.org/statement.html (last accessed 27 December 2019).

emotions, as well as potentially punitive. Imagine, for example, attaching a camera capable of identifying its subjects to a convicted pedophile and then texting or even shocking the person if caught looking for a length of time at a child, particularly with a speeded-up pulse rate. Or, similarly, surveying a lustful adolescent out on a date?)

What kinds of image/text combinations are best for the multiple and parallel readings of a nonlinear narrative? If the nonlinear is judged to have quantum characteristics – leaps of logic, myriad partial resolutions, long-distance links, exotic probabilities – then the conventional caption appended to the photograph that attempts to resolve its ambiguities, to concretize it, would cause a sort of 'quantum collapse' (Schrödinger's cat is no longer both simultaneously alive and dead), diminishing the richness of the narrative, its potential outcomes. It is this very ambiguity, purposefully constrained by many so resistant to the photographs' multiple meanings that they stamp literal, inflexible captions on them, that should be defended with texts that amplify rather than subtract. And as photographers will attest, it is often others, including the subjects of the images and their neighbors, who can elicit meanings that might otherwise be missed.

The reader then becomes a meta-reader, expected to explore new pathways, new links, new ideas and revelations, while the photographer becomes a meta-photographer, responsible for much more than producing an image. In these circumstances the photograph is valued for its complexity, not reduced to a pointed meme or specific signifier. This emphasis on the image and on its many readings then refutes nearly the entire history of photography with its insistence on 'explaining' what the image is about in a caption, an attempt to impose an external authority over the volatility of the image. Simply put, if the photograph was once thought to be worth 'a thousand words,' how could a short caption ever do it justice?

Other strategies are also possible. One can, for example, use digital layering to initially present an individual photograph with no words at all, leaving it up to the reader to place the cursor on the photograph to reveal the contextualizing texts concealed behind it. This then allows the photograph to be first viewed on its own, open to various interpretations, before the reader actively inserts him- or herself into the process to find the text, which may be at odds with the viewer's initial reading, thereby opening a new dialectic. The texts revealed behind the photograph can, if one wants, also vary upon each viewing, and other media can be concealed as well.

But if the photographer wants to partially collapse some of the image's ambiguity, perhaps aware of the power imbalance between photographer and subject, then it is possible, for example,

to use another strategy and make an 'interactive portrait.' After making a portrait the photographer turns the camera around to show the subject the image on the camera's screen, and records the person's voice responding as to what extent, in their opinion, the portrayal is accurate as a representation; one can also show the subject the portrait at a later date. I have been teaching this for a number of years, and I am often surprised at how differently the person portrayed responds to the image than I do, seeing themselves as calm when I see the person as menacing, or as unattractive when I see the person as dignified. And given that employing this strategy causes no added financial burden, it becomes a way for the photographer to move from the more aggressive 'taking' of photographs to the more collaborative 'making' of the image by more explicitly involving one's subject. And, given a hardening skepticism about empathy – why accept the reality of the existence of others unlike ourselves in a photograph – the interactive portrait allows that 'other' a greater voice. A more extensive contextualizing of the photograph, one encouraging the photographer to become more of an author of his or her image, is facilitated by the *Four Corners* project, an approach that I first raised publicly in 2004 at the World Press Photo annual awards ceremony in Amsterdam and is now available as an open-source software at fourcornersproject.org. Here each of the four corners of the online photograph is templated to contain different kinds of information that is concealed until the reader, if so inclined, clicks on it. The bottom left corner contains the Backstory, written or spoken words detailing what was going on when the image was made. The upper left corner contains Related Imagery, referring to photographs, video, or drawings that might show what happened before and after, or during the moment when a photograph was made, or show other imagery that would help to better contextualize the photograph that was made in only a fractional second. The upper right corner provides Links to other websites with more information related to the image. And the bottom right corner is where the photographer puts his or her name, declares ownership via copyright or Creative Commons, inserts a short, declarative caption, and importantly writes or copies a personal code of ethics ("As a photojournalist I do not manipulate the image in post-production," "As a fashion photographer I do not work with unhealthily underweight models," etc.). The photographer can also insert a short bio, link to their own website and, eventually, there should be a way to provide an online contract so that others can more easily buy reproduction rights or a print.

This newer photography, or meta-photography, allows the medium much more nuance, allowing ourselves to see our universe differently. It may illuminate new ways of understanding and help to resolve issues that were previously occluded by distortions and short-circuited approaches. All of this requires that we take the digital seriously as a fertile environment for experimentation, utilizing image, text, and a variety of other media in intelligent ways. The camera always lied, but it spoke certain truths as well. What are they? What might they be? How do we articulate them? Photography can then expand and transform, becoming a richer visual literature. Much work is required.

Segments of this essay appeared in somewhat different form in my books *After Photography* (WW Norton, 2008) and *Bending the Frame. Photojournalism, Documentary, and the Citizen* (Aperture, 2013).