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Wire Photography and Transatlantic Visual Culture

Jonathan Dentler

Beginning in the 1920s, wire photography services used a technology similar to a fax machine to send news pictures across the Atlantic much faster than ever before. News-reading publics used such telecommunicated images to picture how infrastructure had reshaped the spatial relations of modern life.

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Wire service photography significantly altered transatlantic visual culture by using a photo-electric scanning technology similar to a fax machine to separate visual information from its material support, allowing it to travel across the Atlantic Ocean much faster than ever before. Up until the explosion of fax in the 1980s, this technology's most significant users were wire photography services such as the Associated Press (AP), which used it to transmit news pictures. Wire photography demonstrates that, from the early twentieth century onward, telegraphy, telephony, and radio were also visual media, and that the pre-digital history of the image as telecommunications information is much longer than commonly admitted. The technology's development and use in the press was at first centered in the North Atlantic, before it became more global around the mid-twentieth century (although major Japanese newspapers began using it in the late 1920s). This technical shift was of decisive importance in a broad transformation not only of the visual culture of the news, but of the everyday experience of time and space for millions of people.

Though many different techniques coexisted, they can be summed up by the following explanation. On one end of the connection, a photo or drawing would be attached to a rotating drum. A pinpoint of light would scan this rotating picture drum, reflecting variable levels of light back onto a photovoltaic cell. This cell would translate the light into an electric current that encoded its visual information and transmitted it into a wire or a radio signal. On the connection's other end, the current would be reconverted into light, and used to expose a photosensitive surface attached to a synchronized rotating drum, resulting in a copy of the original image. This technique allowed visual information to travel as fast as text had since the advent of telegraphy.

VIDEO

View online: https://www.youtube.com/embed/cLUD_NGE370

> Jam Handy. Spot News (Chevrolet Motor Company, 1937)
>
> **Source:** YouTube

In recent years, scholars have expanded our understanding of the ways in which photography has been historically linked to circulation, communication, and infrastructural systems. Attention to infrastructure can help move us beyond discussions about photography's ontology as a medium and toward a notion of photography as an "apparatus" that extends beyond the camera, film, print, or photographer, to the larger social, spatial, and temporal contexts and structures in which these exist and are received. Yet if photography was always bound up with circulation and communication, wire photography's widespread adoption by the press in the early twentieth century marked the first time that large publics had the everyday experience of looking at images that had been transmitted as electrical information rather than transported as material objects. Art historian Jennifer Roberts has argued that the advent of telegraphy in the nineteenth century made the visual arts conspicuously weighty and slow in comparison to words. Their materiality meant that pictures were resistant to code and transmission. In the twentieth century, the wired image bridged the gap that telegraphy had opened up between the textual and the visual, creating new spatial relationships around the Atlantic basin.

During the second half of the nineteenth century, companies and states built a system of undersea telegraph cables, which first stretched across the North Atlantic Ocean before eventually encompassing the globe by around 1900. For the first time, the duration involved in communication ceased to be primarily a function of physical geographic distance. As the pioneering communications scholar James Carey argued, the most important impact of telegraphy was that for the first time it separated communication from

transportation, and messages from the physical movement of objects. During this period, the great wire services such as Reuters, Agence Havas, Wolffs Telegraphisches Bureau, and the Associated Press, divvied the world up into exclusive zones and used telegraphy to trade and transmit news. While these cables carried numerical and textual messages, images remained stubbornly tied to their material supports.



New York Tribune cover, June 30, 1875

Source: Chronicling America: Historic American Newspapers. Lib. of Congress

However, this did not prevent early attempts at bridging the gap between text and image in telegraphy. Research into picture telecommunications began in the mid-nineteenth century, even as telegraphy itself was just coming into practical use. Inventers such as Alexander Bain, Frederick Bakewell, and Giovanni Casseli patented devices that were capable of transmitting graphic information over a telegraph line, but did not make the transition to a commercial application or transatlantic service. Nevertheless, the press made efforts at transatlantic picture transmission almost as soon as transatlantic telegraphy went into operation in the 1860s. In 1875, for example, the *New York Tribune* thrilled the public by printing pictures reconstructed by telegraphy of the targets in an American-Irish shooting match in Dublin. Commercially-viable transatlantic picture telecommunications, however, only developed after World War One. Even then, for a number of years the technology remained prohibitively expensive and lacked sufficiently sensitive instrumentation, resulting in pictures that were generally too distorted for halftone reproduction in the press. A cultural "lag" elapsed before newspapers were willing to print and spectators were willing to look at visually poor wired images. Such pictures also required a better-developed market of geographically extensive picture agencies and photo-illustrated daily newspapers. Yet, by the mid-1930s, a robust transatlantic trade in telecommunicated images had developed, mostly carried out by wire services that transmitted news pictures for halftone reproduction in the daily press.

Although it was a "new media" in the 1920s, wire photography had by that time been imagined, predicted, and experimentally refined for nearly one hundred years. Still image transmission included a large number of techniques referred to with a somewhat unstable array of terms including among others "wire photography," "phototelegraphy," "picture telegraphy," and "facsimile," which were sometimes used interchangeably by contemporary actors. As media historian Anne-Katrin Weber has demonstrated, picture telegraphy, photography, and television, "belonged to related fields of scientific and experimental investigations," and "shared their broader epistemic conditions." [1] The fact that wire photography developed within a field of image transmission technologies that included television and facsimile may be one reason it has received less attention from media scholars than these two more "successful" media. Yet although television and facsimile might seem more relevant technologies from the standpoint of the twenty-first century, this was not self-evident a century ago. Additionally, while these technologies had their heyday in the later twentieth century, the fact that they are now giving way to digital image storage and transmission reopens the earlier scientific and cultural field out of which they developed, making wire photography newly relevant.

Wire Photography, Infrastructure, and Transatlantic Cultural Geography

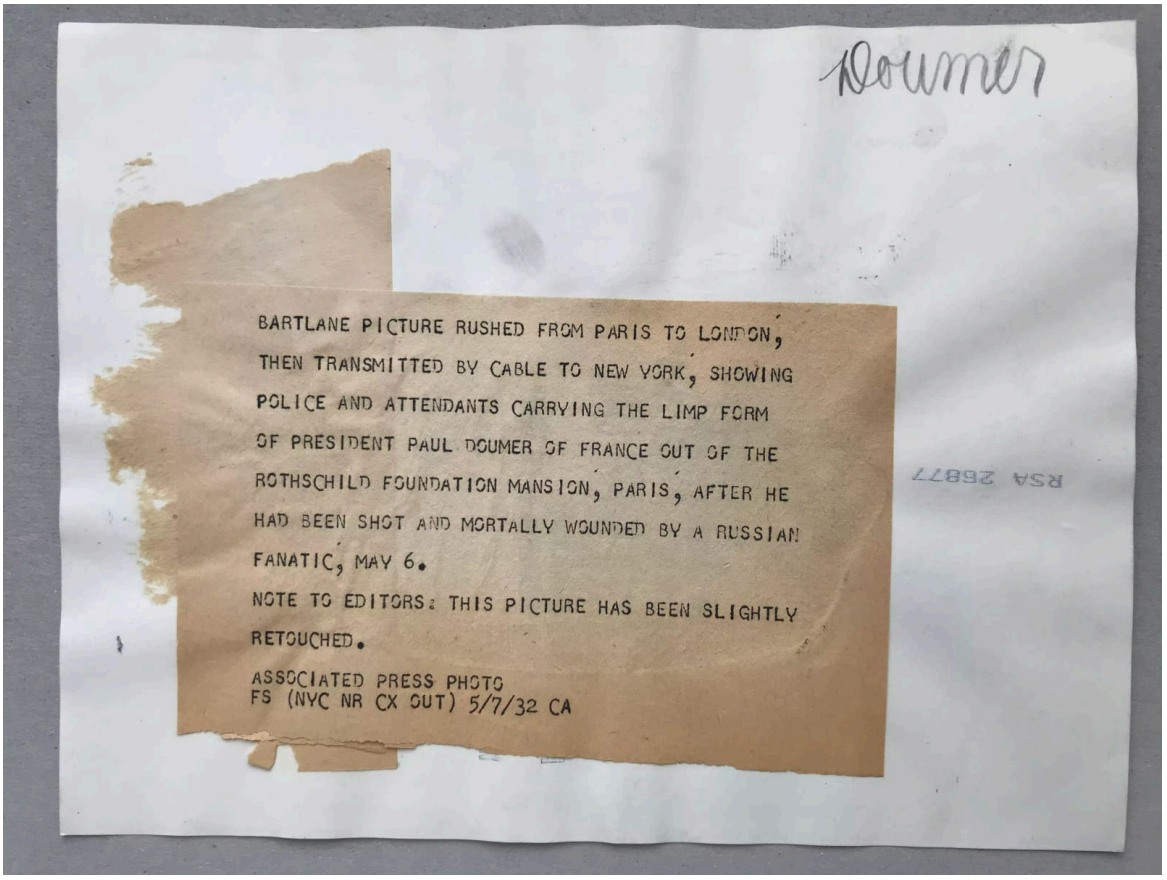
Wire photography began to enter everyday use in the 1920s, just as journalistic practices were shifting under the rubric of "objectivity" as a professional value, and not long after publications began to widely adopt halftone photomechanical reproduction of photographs in place of engravings. One the one hand then, wire photography was deeply tied to the association between photography and journalistic objectivity, and seemed to offer a way to transmit visual "facts" across distances quickly, bolstering the news' "eye-witnessing" capability to very distant events. Through the 1930s, what communications scholar Barbie Zelizer has called a "discourse of resistance" to visual journalism by text-focused newspaper editors bolstered the association between photography and the purely evidentiary. Journalists adopted a strategy of "disembodying" news photography, shoring up their own professional status by casting wire photography as merely an automatic, technology-driven, and artless supplement to real text-based news work. [2] As anthropologist Zeynep Gürsel has shown, wire services conceived of these images as "fast" pictures rather than "good" pictures. [3]

However, efforts to associate wire photography with mechanical or indexical visual documentation were troubled by the fact that, until certain technical challenges were overcome, the transmission process degraded the edges and tones of the photographic image. Newsroom artists often had to step in to retouch the image with pen, ink and brush in order to salvage visual information distorted in transmission, often to the extent that their autographic reworking was clearly visible in the halftone reproduced in the newspaper. The wired image therefore extends much further into the twentieth century the long process of adjustment and hybridization in which the press deployed techniques from drawing and engraving as well as photomechanical processes to illustrate the news. Wire photography was not merely a way to create a transparent window onto distant events. Instead, it made visible in various ways the infrastructural, technological, and organizational effort to picture world events in a new temporal horizon.



Associated Press photo depicting the immediate aftermath of President Paul Doumer's assassination in 1932. The picture was likely flown by plane from Paris to London, and then transmitted by cable to New York, using the Bartlane method. The verso (below) informs picture editors, perhaps unnecessarily, that, "this picture has been slightly retouched."

Source: Author's private collection



Associated Press photo depicting the immediate aftermath of President Paul Doumer's assassination in 1932. The picture was likely flown by plane from Paris to London, and then transmitted by cable to New York, using the Bartlane method. The verso (here) informs picture editors, perhaps unnecessarily, that, "this picture has been slightly retouched."

Source: Author's private collection

Wire photography operated on the tantalizing edge of what was seeable, as a degraded copy that traded quality for speed. Yet rather than a bug, the wire photo's visual impoverishment could be a feature. Precisely because this "first impression" was hazy and indistinct, it simultaneously made something else visible: the infrastructural effort that undergirded photojournalism and was reshaping spatial relations around the Atlantic basin. When Charles Lindbergh made his transatlantic flight in 1927, the news photo agency "Pacific and Atlantic Photos" transmitted this picture of his arrival in Paris back to New York by cable. The picture is visually "poor," with most of the finer gray tones having fallen out due to the transmission process. Its lack of visual detail was evidence of its infrastructural path beneath the waves. This formal quality set up a productive interplay between the picture's denotative content—the pilot who has bridged space—and connotations of transatlantic connectivity. As metaphor, the pilot visualized how wire photography used telecommunications infrastructure to stitch, bind, and link distant places into a simultaneously unfolding visible present. Infrastructure's typical mode is to withdraw from view, and it is frequently concealed by design. However, in middle decades of the twentieth century wire photos tended to visually register traces of their bumpy transatlantic paths through electrical circuits and adverse weather patterns.



Lindbergh meeting French aviator, inventor, and engineer Louis Blériot, who had made the first flight across the English Channel in 1909. Photo transmitted via the Bartlane method by Pacific and Atlantic Photos.

Source: McFarlane Papers, Volkerding Center for Creative Photography (AG 23 1.2, series 1-42)

Wire photography did not merely reflect a preexisting physical or political geography. Nor was it simply a window through which audiences expected to see seemingly unmediated evidence of hitherto distant places and events in a new temporal horizon, though that was one of its important tasks. As the interface at which people perceived and contemplated distant events by way of telecommunications infrastructure, wire photography provoked meditation on the condition of connectedness itself and produced a new cultural space and pace. In this sense, wire photography responded to and reflected upon the experience of modernity, particularly the condition of being connected by vast and invisible planetary infrastructures. It also reflected a contradiction between objectivity as a set of cultural techniques and institutional ideals on the one hand, and the subjective selecting functions exercised by the whole organizational apparatus of modern journalism on the other. Modern life depended fundamentally on an extensive infrastructure that remained below the threshold of visibility, and it was to the problem of this threshold that wire photography was often addressed.

As artifacts, wire photographs concretized and formalized the rapid shrinking of distances. Pictures, which had taken weeks to travel across oceans by steamer, could now be transmitted and printed in daily newspapers, which often ran various editions throughout the day. The collapse of distance was therefore connotatively at play in the experience of seeing and interpreting wire photos. In this respect, wire photography reached far beyond the indexical and evidentiary function often credited to press photography during this period, when, it has been suggested, photographs entered newspapers in order to shore up declining faith in textual reporting's objectivity. Wired images were often marshaled as timely evidence, but were always also open to question as to their meaning and intentionality. Moreover, whatever visual "fact" the wired image purported to show, the fact of the telecommunicated visual

statement itself was often more important than the picture's content, and always placed such content within the interpretative context of the medium. While these images often depicted international events such as the Olympic Games or intercontinental transportation technologies such as airplanes or airships, this iconography supplemented their other main function: linking different regions by visual telecommunications. In this sense, what these pictures "meant" was less important than what they did, or the conditions they set for apprehending the world.

If we conceive of culture as a system of shared objects, signs, and ways of making meaning within a circumscribed space, it can be difficult to pin down exactly what one might mean by a transatlantic culture. Where ought one locate its frontiers and borders? By bringing timely visual representations across the ocean, wire photos created transatlantic news events out of sports competitions, disasters, or political summits. Such images provided audiences connected by transatlantic communications infrastructure with collective experiences of visual news. Communications hubs such as New York, London, and Buenos Aires formed the "core" of an interwar Atlantic network in which news pictures circulated by wire, radio, and airplane. While contemporary observers often remarked that wire photography "annihilated" space and time, it would be more accurate to say that it produced a new kind of space and pace for those it connected. When commentators in Europe and America invoked notions such as "simultaneity," "synchronization," or "instantaneity," to refer to wire photography, they were alerting their audiences to the fact that technology and infrastructure had produced a new kind of space, and teaching them how to read wire photos as visible proof of this process. As it circulated and found a temporary home in various media, from silver-gelatin prints to offset posters to newsprint, the wired image sutured time to space in a new way, bringing the very far away closer in a condensed period of time. Such pictures gave audiences a measurement of time and space, and a sense of how the two were in flux at that historical juncture.

However, only with great difficulty could this network reach beyond the places where visual telecommunications infrastructure and its attendant media, such as halftone photoengraving and mass daily newspapers, existed. Wire photography therefore reflected an Atlantic geography centered on a network of industrially developed areas with mass circulation press and high rates of literacy, connected by telecommunications. This network excluded other places around the Atlantic basin that were not economically and socially developed in this way. In this sense, while wire photography seemed to shrink the space between regions separated by large stretches of ocean, for areas outside the geography traced by this organizational and infrastructural network, distance widened relative to that system's interior. As global historian Roland Wenzlhuemer has argued, space is essentially relative and always produced by relations between objects in a given system. Communications infrastructure creates new spatial relations by arranging and connecting places, people, and things into new constellations. It would thus be more accurate to say that wire photography rearranged space, bringing media hubs such as New York, London, and Berlin closer together, while pushing areas outside the geography traced by its network relatively further away. Far from creating a "global village," telecommunications media can exacerbate existing physical, societal, and political divides by making the places it does not connect relatively more distant in infrastructural and cultural terms.

From the Interwar Period to Digitalization

During these years, transatlantic wire photography developed along two tracks: undersea cable and radio. As had always been the case with photography as a whole, these technologies developed out of transatlantic "zigzags" in research and development as inventors, engineers, and practitioners shared

knowledge by publishing technical papers and exchanging intellectual property. [4] The Lindbergh and Doumer pictures already shown were transmitted using the "Bartlane" process, a form of image transmission that scanned a picture and converted its tones into a punched strip of telegraph paper. This punched strip was transmitted by undersea cable and reconverted into an image on the receiving end. Beginning in 1918, H.G. Bartholomew, one of the editors of the London *Daily Mail* and M.D. McFarlane, who had served in the British air force during World War One, began to develop the technology together. They made transatlantic tests in 1920 during the International Yacht Race and in 1921 for the Dempsey-Carpentier boxing match in New Jersey. In 1924, the Patterson-McKormick syndicate's *Daily News* and *Chicago Tribune* became interested, and supported further tests, including one by radio from the *SS Olympic* in the middle of the Atlantic Ocean. A regular service was then built between London, New York, and Chicago. In London, Bartholomew was in charge of European operations, while in New York McFarlane ran operations for Pacific and Atlantic Photos, the photo service of the McKormick-Patterson newspaper syndicate, which controlled the American rights to the process. At first the transmission took hours and the picture quality was extremely blurry, but the technology gradually improved and by 1926 the system was in regular use.

Transatlantic radio photography developed roughly parallel with the Bartlane cable method, but traveled through the so-called "ether" rather than under the sea. The Radio Corporation of America began developing transatlantic radiophotography in 1923 and in 1925 it opened a commercial connection with London via Imperial Cable & Wireless. On March 5th of that year, RCA transmitted the first commercial spot news picture to cross the Atlantic by radio. The image, which depicted German president Friedrich Ebert lying in state, made a splash in the mass press while the exposed photographic plates lagged into New York harbor five days later by steamer. By the mid-1930s, RCA had opened connections with Buenos Aires, Berlin, and Tokyo as well. In Germany, telecommunications companies such as Siemens and the Allgemeine Elektrizitätsgesellschaft (AEG) quickly began developing their own systems. As historian Heidi Tworek has argued, many in interwar Germany saw radio as a "path to freedom" that would provide a way around British control over the telegraph cables reaching out into the Atlantic. [5] In 1925, the German Post Office and Siemens-Telefunken began planning a radiophoto system, and by 1931 opened links between Berlin, Buenos Aires, and New York.

At the same time, a new kind of news photo service was emerging in order to supply the postwar illustrated daily newspapers with spot photography from distant events. Unlike earlier services, which would construct picture archives in order to have images on hand whenever a given topic became newsworthy, the new services focused on supplying dramatic pictures of events as they were happening, producing topical news photos. The topical photo services used the organization of speed to produce and disseminate photos and outcompete other agencies. Competition triggered a sort of arms race within which wire and radio photography came to seem like obvious solutions. New American photo agencies set up offices in Europe, helping push wire photography development on both sides of the Atlantic forward since corporate and governmental investment could be confident of finding a market. Keystone expanded to London in 1919, Berlin in 1923, and Paris in 1927, while Pacific and Atlantic set up a European headquarters on Fleet Street and then expanded to Paris, Berlin and Rome in 1922. Wide World also expanded to these cities in the same period. As Myriam Chermette has shown in the case of the French press, early resistance to wire photography gradually broke down, and by the 1930s the large circulation French dailies were well supplied with wire photos by the Paris branches of the American photo agencies.



Stettiner General-Anzeiger

Die große Heimatzeitung Pommerns und der Nachbargebiete

Ostsee Zeitung

Gegründet 1885

Wirtschafts- und Schiffahrtsblatt

Nr. 127 — Sonnabend, 8. Mai 1937 — 89. Jahrgang

Zeppelin-Reederei meldet: 65 Gerettete in Lakehurst

LZ „Hindenburg" völlig zerstört — Unter den Geretteten befindet sich auch Kapitän Pruß

Berlin, 7. Mai.

Das tragische Unglück, dem das Luftschiff „Hindenburg" in der Nacht zum Freitag in Lakehurst zum Opfer fiel, und über das wir bereits am frühen Morgen des Freitag durch Extrablätter und Aushänge in unseren Geschäftsstellen den größten Teil unserer Leser in Stettin und in der Provinz unterrichten konnten, hat glücklicherweise nicht die große Zahl von Opfern an Menschenleben gefordert, wie man nach den ersten Schreckensmeldungen annehmen mußte. Nach den bis zum Freitag abend vorliegenden Nachrichten konnten von den an Bord befindlichen 36 Passagieren und 61 Besatzungsmitgliedern 65 gerettet werden.

Die Geretteten

Nach den bei der Deutschen Zeppelin-Reederei vorliegenden Meldungen wurden folgende Passagiere unverletzt gerettet: Dimler, Schreitmüller, Viallas, Alfred Stöckle, Scherf, Mooser, Reischacher, Helgenring, Schlapp.

Es besteht die Hoffnung, daß einige der als vermißt gemeldeten Passagiere und Besatzungsmitglieder noch als in Krankenhäusern befindlich festgestellt werden können.

Wie das Unglück geschah

Augenzeugen berichten

Lakehurst, 7. Mai.

Der am Schauplatz der Unglücksstätte weilende Berichterstatter des Deutschen Nachrichtenbüros übermittelt folgenden Drahtbericht: Ich war selbst Augenzeuge der unfaßbaren Katastrophe des LZ „Hindenburg". Ich war mit einigen deutschen und amerikanischen Freunden im Kraftwagen nach Lakehurst unterwegs, als wir gegen 18 Uhr Newyorker Zeit bei unfreundlichem und von wiederholtem Platzregen begleitetem Wetter den deutschen Luftriesen in gleicher Fahrtrichtung, wie wir sie einhielten, etwa in Höhe der Atlantischen Küste sprang noch im letzten Augenblick aus dem Fenster und kam so mit dem Leben davon. Ebenso haben sich zwei Stewards und ein Kabinenjunge durch Sprung aus dem Gondelfenster retten können.

Die Landmannschaft, die jeden Augenblick das Auswerfen der Seile erwartete, stob, als die Stichflamme aus dem Schiffskörper herausschlug und der Mannschaftsführer „Rettet euch!" schrie, entsetzt nach allen Richtungen auseinander. Eine Abteilung Soldaten aus Philadelphia, die als Reservemannschaft für die Landung bereit stand, machte sich in fieberhafter Eile an die Rettungsarbeiten. Mit bewundernswürdigem Mut stürzten sich die Soldaten, ehe noch die Flammen gelöscht waren, in den brennenden und rauchenden Trümmerhaufen, um zu retten, was noch zu retten war.

Die Explosion des LZ „Hindenburg"

Aufnahme: Weltbild.

Unser aus Amerika gesandtes Bild zeigt den Augenblick der Explosion des Luftschiffes „Hindenburg" in Lakehurst: Das brennende Luftschiff sinkt neben dem Ankermast zu Boden.

(Weitere Bilder auf Seite 10.)

Front page Hindenburg photo in the *Stettiner General-Anzeiger*, May 8, 1937

Source: online resource

A decade after Lindbergh's flight, when the *Hindenburg* exploded above New Jersey, transatlantic radiophotography was the primary means for transporting spot pictures of the event to Buenos Aires, Berlin, and London. The picture in the *Stettiner General-Anzeiger* shows little in the way of evident retouching, although it does register the lines and dots from the radiophoto rasterization (i.e., the conversion of shapes into dots or lines) in the halftone reproduction. Once again, wirephoto's connotative meaning was strongly associated with the apparent collapse of geographic distance, emphasized by the interplay between the visible traces of the transmission process and an iconographic content of space-bridging transportation technology. This photo is credited to *Weltbild*, a news photography service created by the Nazi state using property forcibly purchased from Keystone in 1935, and which used wire photography extensively.

During the Second World War, the major powers on both sides used radiophotography heavily as a press and propaganda tool, taking advantage of its unique ability to visually bridge great distances in order to bring the battlefront to the front page as quickly as possible. Wired images both fabricated visual facts of distant events and placed those facts into a dramatic narrative about the conflict, charging them with excitement and promising that sharper pictures and other media formats would follow. These images were the first to arrive, and set photographic realism to a pace enabled by telecommunications, making a thrilling mode for narrativizing the news. States, propaganda ministries, and news agencies did not just use photographs to establish the facts of a given narrative by acting as insurance against all too manipulable words. They also used such pictures to establish those photographic facts first, shaping the narrative as it unfolded. Wire and radiophotos often served as evidence to underscore the truth of a certain propaganda line, following on the heels of text and words, which were typically distributed more quickly by radio. Radiophotography created both facticity and drama by breaking the news in pictures. In the early period of the war, Germany was more successful than Britain and France in using radiophotography to

distribute photographs of the conflict to the U.S. press. After the U.S. entry into the war, RCA, Cable and Wireless, the American Office of War Information (OWI), the British Ministry of Information, the Armed Forces, and the Still Picture Pool cooperated to create a much more robust transatlantic radiophoto network. In the days following the Normandy invasion in 1944, for example, this system radioed more than four hundred news photographs from London to Washington DC.



Washington AP staff looks at first 158 Wirephotos transmitted after invasion.

A.J. Ezickson, a photo editor and columnist for *Popular Photography,* reported that in the first ten days following the invasion, "more than 400 news photographs radioed from London to Washington by U.S. Army Signal Corps radiophoto circuits." Ezickson included an "unusual shot" by AP staff photographer Gene Abbott depicting the Washington DC bureau staff examining the incoming invasion photos.

Source: in A.J. Ezickson, "Press Flashes," Popular Photography, August, 1944, 62

During the war, the OWI used radiophotography to spread news and propaganda pictures to the press around the world, including many areas outside the pre-war network. This program's failures as well as its limited successes illuminate how relative connectivity to telecommunications infrastructure produced cultural distance between various parts of the Atlantic basin. Established in late 1941, the OWI Radiophoto Section effectively became a wire photography service on an unprecedented, global scale. It established operations in places where private photo agencies had never distributed pictures, since there was no chance of recovering profits. Brazzaville and Leopoldville, located in the Congo basin and at that time the

capitals of the *Afrique-Équatoriale Française* (AEF) and the *Congo Belge* respectively, were among the first OWI overseas radiophoto installations. By installing radiophoto infrastructure, the OWI attempted to connect colonized populations to wire photography's visual public sphere, reshaping spatial relations between the colonies and Europe that had already been disrupted by German occupation of the metropole in 1940.



From OWI Radiophoto Unit File-Brazzaville. The Label on the top of the photo display board reads "The New Ju-Ju-Power + Cooperation = Victory." The OWI's caption pasted to the verso reads, "Somewhere in Central Africa, June 14, 1943: Clustered about OWI picture exhibit showing the new Juju, or "witch doctor magic" of the Allies, African natives look at photographs of United Nations' activity in the war for freedom.

Source: Records of the Office of War Information, Record Group 208; National Archives at College Park, College Park, MD

This OWI photograph from 1943 shows a group of African youths, probably in either Brazzaville or Leopoldville, looking at an OWI photo display board in the window of a large building. The OWI used such display boards to bring war news to societies in which literacy and newspaper reading were not widespread. The board shows scenes from various theaters of the war from around the world, equipment such as bombers and aircraft carriers, and portraits of leaders such as Roosevelt. Its title reads "The New Ju-Ju-Power + Cooperation = Victory." "Juju" is a catchall term derived from the French *joujou*—a toy or plaything—to denote a spiritual belief system associated with African animist religions, which involves the use of spells and objects deployed for their magical efficacy. The caption on the photo's verso reads, "Somewhere in Central Africa, June 14, 1943: Clustered about OWI picture exhibit showing the new Juju,

or 'witch doctor magic' of the Allies, African natives look at photographs of United Nations' activity in the war for freedom." It is difficult to determine to what degree this photograph was staged, but it is revealing regardless. It might be said to represent an example of what anthropologist Brian Larkin has referred to as "the colonial sublime," or the way that colonial powers introduced infrastructure and media technologies in order to overwhelm colonized peoples' senses with the spectacular achievements of modern science and engineering. [6] However, whether staged or not, these young Africans knew that they were an intended audience for these pictures because they actively posed or were encouraged to pose as such an audience. The OWI Radiophoto program sought to suture Africans to a potential transnational public.

This public always remained more potential than real, however. The Radiophoto Section's efforts to propagandize Africans in the Belgian Congo and the *AEF* ultimately met with little success, demonstrating the limits of the transatlantic culture described above, as well as the politics inherent in any infrastructurally produced cultural space. At that time, there were only two daily newspapers in the Congo Basin, both published in Leopoldville, and no photoengraving facilities. Responding to the lack of engraving facilities for printing radiophotos in daily newspapers, the OWI capitalized on photo display boards in public spaces to transmit visual news. The outpost staff used a Davidson offset reproduction machine to cheaply print radiophotos on pamphlets and posters. The staff regularly rotated and supplemented display boards with newer photos, and posted radiophoto posters at cafés, restaurants, and public places. In Central Africa, constructing radiophoto infrastructure was not an insurmountable problem. The more tenacious problems were the lack of photoengraving facilities and a mass newspaper audience, the difficulty of maintaining technology designed for the temperate North Atlantic in the humid tropics, and, most decisively, colonial racism and racial hierarchies that militated against including Africans in a broad visual public sphere.

In attempting to produce an expanded visual public sphere, the OWI had to overcome difficulties that were not just political, social, and cultural, but also atmospheric. Tropical heat and humidity ruined photographic chemicals, negatives, and prints, and destroyed the finely tuned machinery in radiophotography receivers and transmitters as well. High humidity made it impossible for cement to harden properly, producing vibrations from the transformer that rotated the sensitive light bulb inside the radiophoto receiver device, and causing an intermittent short circuit. For the outpost personnel, the climate's enervating effects may have served as a kind of cipher for the ways in which this area was infrastructurally and politically outside wire photography's proper space and pace. Ultimately, the OWI was never able to reconcile outreach to Africans with its cooperation with colonial administrations, and this contributed to the eventual scaling back of its Congo operation near the end of the war.

After the war, wire photography continued to expand around the world from its previous center in the North Atlantic. By this time, radio had definitively replaced undersea cable transmission. Radio transmission was less firmly tied to geographic space than cable transmission had been, having to grapple instead with the space of the earth's atmosphere. As radiophotography expanded, it supplanted what had been largely a transatlantic geography of telecommunicated images with a global one. It was managed principally by the "big five" global wire services, the American Associated Press (AP) and United Press International (UPI), the Soviet Sovfoto, and later *Agence France-Presse* (AFP) and Reuters. In the immediate postwar years, the notion of a universal "Freedom of Information" across borders gathered steam, and eventually the "free flow of ideas by word and image" was enshrined in the 1945 constitution of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and the 1948 Universal Declaration of Human Rights. Wire photography services thus came under pressure from many quarters to fulfill the lofty goals for peace and international understanding enshrined in these documents. However,

for the more laissez-fair American news agencies, "freedom of information" meant primarily that news at its source would be freely available to all journalists whatever their country of origin, and that no country would give preferential transmission facilities to its own press as against the press of any other country. Disagreements about the meaning of this "freedom" soon caused private news agencies such as the AP to come into conflict with institutions such as the US State Department and UNESCO. While it gave images the ability to circulate nearly instantaneously across intercontinental distances and produce excited engagement with the news, wire photography also entailed massively expensive and complex systems that required international cooperation to maintain and standardize. Many intellectuals and government officials criticized fast images for sensationalism, and as a symbol of how large news agencies such as the AP used their market position to crowd out other more in-depth kinds of world news.

This system for global wire service photography remained more or less stable until digitalization started to take hold near the turn of the century, creating significant changes in the industry. In a number of ways, wire photography clarifies the emergence of a visual regime that we now associate with digital images. Zeynep Gürsel has shown that digitalization changed the way that images circulated, opening the news picture industry to amateur images and also leading to the rise of large corporate "visual content" providers such as Corbis and Getty Images. Still, wire photography services such as the AP and AFP have so far survived the digitalization of the industry and transmit most spot visual journalism today. Wire photography allowed images to be separated from their material support as information for the first time. Today, a seemingly endless stream of what artist and theorist Hito Steyerl has referred to as the "poor image" accompanies us wherever we go. [7] Yet while Steyerl focuses on how digital images degrade as a result of recirculation and compression, wire photography hurtled "poor images" around the world at high velocity during press photography's analogue age. This infrastructure both emerged from and shaped a transatlantic visual culture, which then went global in part thanks to radiophoto technology. Yet wire photography did not simply "annihilate" space and create an undifferentiated connectivity around the geographic Atlantic basin. The OWI's unsuccessful attempt to reach connect Central Africa with radiophotography demonstrates the difficulty of overcoming deeply entrenched spatial and political relations, and is worth bearing in mind with regard to today's so-called "digital divide." Instead wire photography connected certain urban nodes and populations reached by mass-circulation newspapers into a transatlantic visual culture.

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NOTES

1 Anne-Katrin Weber, "Recording on Film, Transmitting by Signals: The Intermediate Film System and Television's Hybridity in the Interwar Period," *Grey Room* 56 (Summer 2014): 16.

2 Barbie Zelizer, "Journalism's 'Last' Stand: Wirephoto and the Discourse of Resistance," *Journal of Communication* 45, no. 2 (Spring 1995): 78-92.

3 Zeynep Gürsel, "A Short History of Wire Service Photography," in *Getting the Picture: The Visual Culture of the News*, ed. Jason Hill and Vanessa R. Schwartz (New York: Bloomsbury, 2015), 207-208.

4 François Brunet, Gaëlle Morel and Nathalie Boulouch, "Zigzags," *Études photographiques* 21 (2007): 2-5.

5 Heidi J.S. Tworek, "'The Path to Freedom'? Transocean and German Wireless Telegraphy, 1914-1922," *Historical Social Research* 35, no. 1 (2010): 209-233.

6 Brian Larkin, *Signal and Noise: Media, Infrastructure, and Urban Culture in Nigeria* (Durham: Duke University Press, 2008), chap. 1.

7 Hito Steyerl, "In Defense of the Poor Image," *E-flux* #10, 2009.