2.13
Rotogravure and the Modern Aesthetic of News Reporting

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Two months after the Wall Street Crash that ushered in America's Great Depression, a politically radical German magazine summarized the events with a remarkable amalgam of news photographs, drawing, and text (Fig. 2.13a). Atop galloping towers rendered by hand, cartoon-like moneybags bear the photographed heads of J. P. Morgan and John Rockefeller. Their stubby arms extending from the overstuffed sacks that are their bodies pull the reins of finance, keeping European stock exchanges under tight control. Behind these plutocrats, the photographed façade of New York's stock exchange towers upward toward a view that opens onto its hectic trading floor. At the other end of the taut reins lie similar circular views of other exchanges, each bearing the same top hat sported by the stern-looking oil magnate "on" his skyscraper perch. Faintly undergirding this scene, a curving globe situates Europe's financial capitals geographically, and signals the world domination of American plutocracy in this moment of crisis.

What this double-spread in the communist-affiliated *Arbeiter-Illustrierte Zeitung (AIZ* hereafter) demonstrates is that the news photograph and the rotogravure printed page, on which the former increasingly met its audience, often worked in dynamic tandem, nourished by notions of instantaneity, mobility, and wonder. It was through this conjunction that the full potential of photojournalism as a multi-layered and specifically aesthetic practice was best realized, particularly between the two world wars. This had been a prospect pushed along by advances in halftone printing around the turn of the last century and the release of handheld cameras in the mid-1920s. Rotogravure conclusively capped this progression by improving the pictorial quality of photography in mass print and significantly reducing the price of this sort of mass publication. But it did something else as well. The new technology made the most inventive designs of halftone printing a commonplace. Beautifully reproduced photographs now regularly flew, crashed, and overlapped in a kaleidoscopic sequencing that mirrored the hectic and politically-charged instants caught by the camera. Operating in close tandem, the rotogravure's affordability, visual fidelity, and its openness to free-form design fostered a cutting-edge visual culture for mass audiences, an aesthetic development that rivaled the achievements of avant-garde artists.

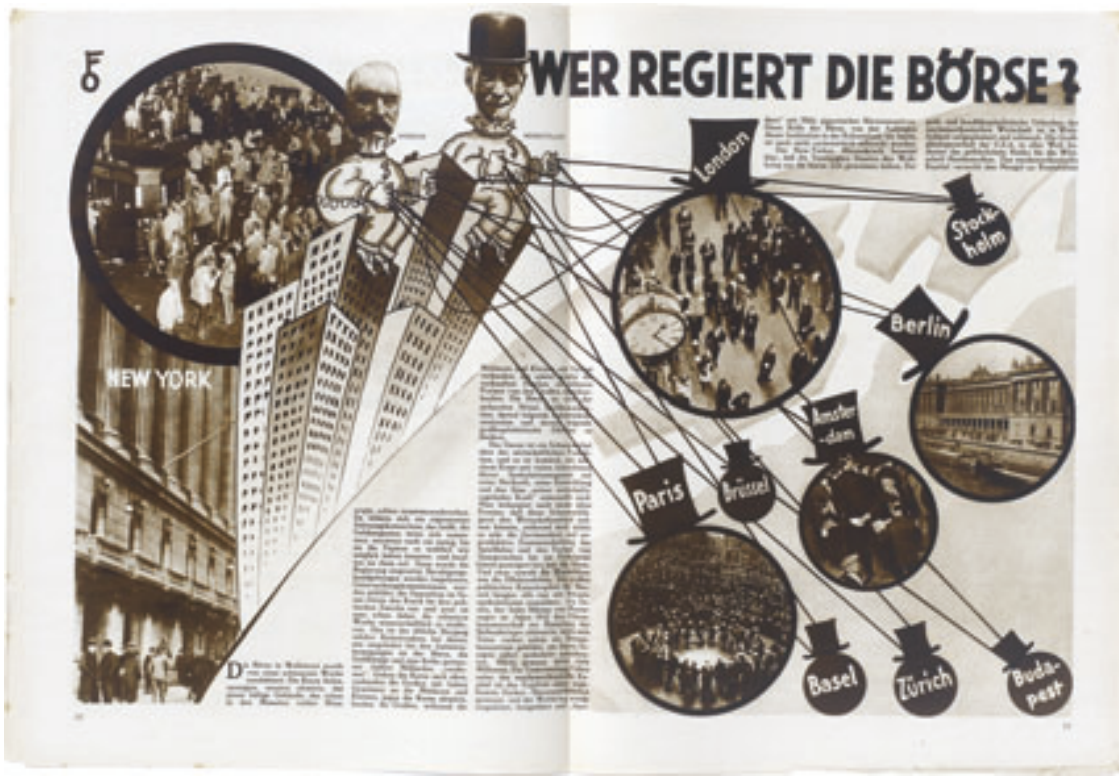

Figure 2.13a Designer signing as "FO," "Wer regiert die Börse?" ["Who Controls the Exchanges?"], *Die Arbeiter-Illustrierte Zeitung [AIZ],* Vol. 8, No. 49 (1929) pp. 10–11. The Museum of Fine Arts, Houston, Museum purchase funded by Max and Isabell Herzstein.

Photography and photogravure

Ever since the first triumphs in fixing the camera obscura's projected image, photography's home has been as much on the printed page as on light-sensitized copper or photographic paper. Inventor Joseph Nicéphore Niépce achieved his earliest success on the road to the medium's discovery when he incised a sensitized plate of bitumen by exposing it to the sun under a translucent image.[1] The prints he drew from this plate and others like it from 1822 and 1825 were at once among the first photomechanical images and the first photogravures. What qualified them specifically as gravure was that the image plate used to print them was etched rather than rendered in relief. His printer's ink filled recessions incised on a flat surface rather than coating forms protruding from that plane. Rotogravure would be a similar sort of etching but made on a copper drum fitted to a rotary press. Although gravure accompanied photography's discovery, it would take nearly a century of further refinements before it could affordably work on these room-size machines that printed in mass volumes.

Chief among the hazards facing those who sought to expand on Niépce's early precedent was the difficulty in obtaining the same pictorial quality from a printing plate as from a negative. Most press technologies worked in simple black and white, impressing their text and pictures with solid pigment stamped onto a uniform ground. Text appeared in solid blocks and pictures arose through a network of solid—often minuscule—lines varying in width. The printer's limitation to undifferentiated pigment and ground made it exceedingly difficult to duplicate the photograph's subtle gray tones. As a consequence, there long remained a boundary separating mechanical and photographic printing.

An important casualty of this prolonged separation was the full integration of word and photograph on one plate and, thus, on the same printed page. One of photography's inventors, William Henry Fox Talbot, patented an early photogravure process he called photoglyphic engraving in 1858, and this held the potential of combining the mechanically impressed photograph and type in the same periodical issue or book, if not on the same page. But its quality was low. In the case of his own book, which he published as the multi-volume *Pencil of Nature* a decade earlier (1844–6), Talbot produced his photographs separately as negative–positive contact prints and tipped them in by hand at substantial cost. The great breakthrough came in the early 1880s with the invention of halftone printing. Finally photographs and text could be set into the same plate and, a few decades later, spun from rotating presses at great speed. But this relief process only mimicked the gray tones of photography by reducing an image to a small network of dots of varying size. Its quality of reproduction was correspondingly often quite low. More advanced forms of halftone printing developed in the 1890s offered far more detail and even a surprising degree of design liberty, effectively softening this division and inaugurating exciting image-text spreads by inventive editors. But the cost of composing these plates and the limited number of prints they could spin before wearing down meant that design experimentation was generally the exception rather than the rule.[2]

Modern photogravure made complicated text-image-graphic compositions of the sort printed by the *AIZ* easily available. Thus was born the age of the "typophoto," as German typographer Jan Tschichold termed this amalgam in 1928.[3] Like Niépce's early intaglio (or engraving) process, this newer technology is a photoengraving process that uses the action of light to etch an image on a flat tablet. Unlike other photomechanical print techniques, such as halftone relief, it is not limited to the printing of solid pigment on undifferentiated ground. Instead, it can stamp a great variation of tones and fine details that approximate the quality of the traditional photograph produced from a negative. It works by engraving innumerable intaglio cells on a copper plate. These vary in depth depending on the tones of the original photographic negative to which the plate is exposed. The darker the tone, the less light hits the sensitized copper plate, and the shallower the cell. The infinite variation of this depth duplicates the photograph's detail and subtle tonal gradations for mechanical printing. It also allows for the appearance of layered images, text, and graphics, as in the *AIZ* composition where round photo fragments bordered by black appear over the faint design of a globe.

Another key improvement in photogravure, and its partner technology rotogravure, is that the same plate is engraved with text, graphics, and photographs, all at once. No longer was it necessary to prepare halftone or woodblock reliefs in advance, and then slot these into matrices of set type. This development meant that all the typographic and design work took place on the same surface before the printing plate was even prepared. Photograph and text therefore met much earlier on the apparatus that spelled one of the photogravure's greatest technical differences over its predecessors: the light table.

Designing for the rotating copper cylinder

Between the mid-1920s and the advent of computer-assisted publishing around 1967, the mounting of an illustrated magazine page took place not on the plate itself, as with earlier technologies, but on page-sized sheets of glass illuminated from below by a light table. First, a layout grid was devised that roughly determined the placement and dimensions of the images, texts, and graphic elements. The original photographs were then duplicated at the appropriate size and printed directly on positive film.

Figure 2.13b From "*Wie eine Zeitung entsteht*" ("How a Magazine Arises"), double-spread centerfold composition with the embedded feature "*Kupfertiefdruck. Herstellung der A.I.Z.*" ("Rotogravure: Production of the AIZ"), in *AIZ* 6, no. 31, 1927, p. 8. Staatsbibliothek zu Berlin – PK/Abteilung Historische Drucke/Signatur: 2″ Ue 526/12: R.

The text was typeset and then similarly rendered on transparent cellophane. The two were then cut and pasted onto the backlit glass sheet roughly following the original layout grid. One can see the layout staff of Berlin's *Arbeiter-Illustrierte Zeitung* leaning over their light tables to arrange these celluloid and cellophane pieces into a unified amalgam (Fig. 2.13b). The result would be a maquette on glass.

Through a series of photomechanical processes, these plates would be printed onto a copper drum leaving the signature intaglio cells of infinitely varied depth. Because the rotogravure's glass plate was literally a blank sheet, the process naturally allowed for a great deal of creativity in how photographs, text, captions, and headlines could be positioned. Captions or headlines, for example, could be hand-drawn on film rather than typeset, and then pasted under, above, or even over the other translucent components. Moreover, because the film and cellophane were so easy to cut, rows and columns of text could be shaped like putty as they filled gaps between pictures and captions, or the photos could be fragmented, made to overlap one other, or otherwise set at unusual angles.

The extraordinary possibilities of this photo-typo-graphic alchemy can be seen on the pages of *Mahnruf* (1923–33), the monthly magazine of the radical-left *Internationale Arbeiterhilfe* (*IAH*, or Workers International Relief), an organization based in Berlin and generously (but secretly) funded by Moscow. In a 1931 double-spread titled "No Work—No Bread" (Fig. 2.13c), circular photo fragments cluster and overlap toward the middle of the composition while another fragment above-right shows a hand outstretched toward a woman tipped toward the left, her face aghast at the meager sum of coins carried by the hand's palm. Most of the article's text flows around the circles, like water filling empty volume, while other texts and the title itself run over these photos.

In a particular flourish, the magazine read by a woman at the bottom-left features slogans that spring from her periodical's pages and declare "WOMEN MUST READ . . . AND LEARN!" Although not always realized to this extreme, the rotogravure's process encouraged the creation of eye-catching photomontages. This could make every page or double-spread a complete design unit, blurring the distinction between picture, word, and graphic when best realized.

Once transferred to copper cylinders and fitted on a rotary press, these amalgams could print high volumes on cheaper, lighter paper than was otherwise possible with the halftone. Unique to the rotogravure process as well was its use of thinner inks of various colors. These liquids had to flow rapidly in order to fill the gravure cells, a technical specificity demanding nearly the opposite consistency of halftone printing, which was made in relief. In the older technology, denser gooey inks had to stick tightly to protruding forms, which were usually small dots, rather than rush to fill recessed spaces. These thinner inks could be far less opaque and were available in many colors. Some magazines chose a sepia-toned dye that better favored the subtle tonal gradations of photography. Periodicals could also opt for red, blue, or any other color depending on the desired effect. Generally, an entire issue would be printed in one color, although the occasional translucence of these inks could create the illusion of multiple colors. If desired, a publisher could send pages through two or more printing cycles, thereby producing multi-chromatic arrays that caught the eye with even greater allure.

The news photograph and rotogravure

The affordability at high runs, visual fidelity, and design liberty of this process made the most exciting design work of halftone printing a regular eye-catching affair. Leafing through the more creative of these

Figure 2.13c Grete Hahne, "*Keine Arbeit—Kein Brot. Beitrag zum Internat. Frauentag*" ("No Work–No Bread: An Article on the Occasion of International Women's Day"), in *Mahnruf*, no. 3, 1932, pp. 6–7. Stiftung Archiv der Parteien und Massenorganisationen der DDR im Bundesarchiv (SAPMO), Berlin.

rotogravure periodicals, such as the Berlin-based *Arbeiter-Illustrierte Zeitung (Worker's Illustrated Magazine*, 1921–38), the French *VU* (1928–40) and the Soviet *USSR in Construction* (1930–41), was like peering into a pictorial whirlwind. As a reader turned an issue's pages, multiple pictorial shards slid against each other, arrows pointed, graphs indicated, and free-flowing text divulged the week's news. But even though each page or double-spread could function as a deeply integrated graphic unit, the photograph nevertheless provided the greatest allure and frisson in an increasingly common frenetic assembly. Essentially, the picture, or a number of them stacked in interesting ways, almost always provided the pole around which the larger assembly spun.

Under these typo-pictorial conditions, the news photograph thrived. It reached larger audiences than ever before and struck with a clarity that often stunned or—alternately—repulsed its audiences, depending on the beauty or ghoulishness of its highly legible content. But its flash isolation of an important moment and place, a characteristic that increasingly defined its pictorial style, also helped determine the often frenetic-looking layout of the pages on which it appeared. Duration had retracted into tighter units, as the cameras snapping before cataclysmic events now made manifest. Simultaneously, time began moving so quickly that its frames seemed to overlap, as illustrated periodicals had increasingly revealed

across their flipping pages. This perfect fit of the news picture with the printed page had already begun to unfold to great effect in the 1890s with halftone printing. But rotogravure's openness to design liberty encouraged editors and print technicians to devise these sorts of complex graphic systems on a far more regular basis, generating compositions that signaled the ever more hectic pace of modern life. The experience of consuming an illustrated weekly by the late 1920s became as vertiginous as the rapidly unfolding events reported by the photographs within their typographic units, a perceptual encounter that approximated the newest fashions in modern cinema.

VU emphasized this development in its 1928 inaugural issue. "Produced through the latest technology and based on an entirely new concept," it proclaimed, *VU* was to be an "ILLUSTRATED MAGAZINE that reflects the brisk rhythm of modern life, a magazine that reports and documents every aspect of contemporary life," including political events, disasters, and sporting achievements. On its pages, the newest photo, print, and transport technologies would cohere in a blend that, through its content and look, reflected the harried pace of interwar modernity. As the magazine's statement further emphasized:

> From every place on the globe where an event of any significance occurs, photographs, dispatches and articles will find their way into the pages of *VU*, with columns and special reports and illustrations serving as links that connect its readers with the rest of the world, giving them a bird's-eye view of life as it is lived in far-flung parts.[4]

Enhanced by the affordability and design liberty of rotogravure, the illustrated periodical could now regularly offer a cutting-edge look, if the editorial and design team possessed the initiative. Availing themselves of this potential, they could define page after page by the fast-paced reporting of the news photograph, which was increasingly taken in the thick of key events. Typographic elements could easily be made to swirl from and around the mass-reproduced image. Signals of action flashed by the modern news photograph, such as vertiginous vantage points, close proximity, and the blur of half-stopped action, could easily be coordinated with the similarly vertiginous designs of accompanying graphic and textual work, to conjure a complete unit based on spontaneity and mobility. What once lay at the extreme of halftone design possibilities now became an everyday performance in print.

The astringently political staff of *Mahnruf* was particularly well-disposed to realize the design possibilities of rotogravure on a regular basis (Fig. 2.13d). Its later issues were printed in rotogravure and took great advantage of the process' design liberty. Another double-page spread from February 1933 shows a proudly-standing worker from a dramatic worm's-eye view at its center. As he rises to near page height, photos of worker misery cluster to the left, and shots of radical "solidarity"—realized in strikes and protest—overlap each other to the right. This second array floats on a field of red that matches the thick line on which the Paul Bunyan-like worker stands. In this bar that runs the double-spread's length, a quote by Marx famously intones that philosophers have only interpreted the world, whereas the necessity is to change it. The arrangement of word and image suggest that the agent of this transformation is the hammer-bearing worker who pounds misery into solidarity with spectacular and dynamic success. Here was the perfect pictorial realization of the agitational charge of the Workers International Relief, realized on a monthly basis through rotogravure's ready openness to extreme design.

This new technology helped realize German artist Johannes Molzahn's 1928 prophesy that the photograph in mass print would become "the pacesetter for the tempo of time and development." As he

Figure 2.13d Designer signing as "gü," "*Die proletarische Solidarität muss zu einer Flamme werden, in der diese morsche Welt verbrennt*" ("Proletarian Solidarity Must Become a Flame That Burns This Rotten World") in *Mahnruf*, no. 2, 1933, pp. 8–9. Stiftung Archiv der Parteien und Massenorganisationen der DDR im Bundesarchiv (SAPMO), Berlin.

explained, "the multitude and arrangement of visual sensations forces the uninterrupted work of assimilation on the eye and the psyche." With photo, type, and graphic regularly and fully integrated on the rotogravure page, this visual sensation was indeed accelerated and the modern urban citizen now had to follow Molzahn's imperative: "Stop Reading! Look!"[5]

Notes

1 More specifically, he prepared the plate for etching; the bitumen hardened in relationship to the light striking its surface. He then washed the plate with lavender oil, which diluted and washed away the unexposed portions much as acid would in a traditional copper engraving. For a classic review of this process, see Beaumont Newhall, *The History of Photography* (New York: Modern Museum of Art, 1988): 13–16.

2 For more on this lack of picture-text correspondence in halftone printing, see "Before *VU*," in Michel Frizot and Cédric de Veigy, eds, VU: *The Story of a Magazine* (London: Thames and Hudson, 2009): 288–95. My account of the rotogravure process is heavily indebted to this book and Frizot's essay "Photo/graphismes de magazines:

Les possibles de la rotogravure, 1926–35," in *Photo/Graphisme* (Paris: Jeu de Paume, 2008): 5–12. For the spectacular possibilities of halftone printing that defined the exception rather than rule, see Thierry Gervais, "L'invetion du magazine. La photographie mise en page dans 'La Vie au grand air' (1898–1914)," in *Etudes Photographiques* No. 20 (2007): 50–67.

3 Jan Tschihold, *Die neue Typographie. Ein Handbuch für zeitgemäss Schaffende* (Berlin: Bildungsverband der deutschen Buckdrucker, 1928).

4 "Reflections on a New Magazine," in Frizot and de Veigy, *VU*: 300–1.

5 Johannes Molzahn, "Stop Reading! Look!" in *Das Kunstblatt* Vol. 12.3 (March 1928): 78–82. Translated and reprinted in Anton Kaes, Martin Jay, and Edward Dimendberg, eds, *The Weimar Republic Sourcebook* (Berkeley: University of California Press, 1994): 648–9.