POPULAR MATERIALS: LATE-VICTORIAN ILLUSTRATED MAGAZINES
AND THE TECHNOLOGICAL IMAGINATION

by

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Abstract

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How did the multimodal aesthetics of popular illustrated periodicals shape late-Victorian reader
engagement? How did these terms of engagement relate to the role magazines played in
emerging mass culture? My dissertation investigates these questions using evidence from four
popular periodicals between 1885 and 1918: the *Graphic*, the *Illustrated London News*,
Pearson's Magazine, and the *Strand*. Readers possessed a print media literacy through which
they could interpret the material traces of production that were part of a periodical's aesthetics
and situate a print object in its real and imagined socio-technological contexts, a capacity I
describe as the technological imagination. Print media literacy also enabled readers to attend to
how a physical print object mediated culture, which I describe as medial awareness.

Combining close reading with historical contextualization and a media archaeological emphasis
on materiality, I analyze aesthetic characteristics of these four illustrated magazines that
influenced reader engagement by invoking readers' technological imagination. At the turn of the
century, the *Illustrated London News* and other popular illustrated magazines underwent what
Gaudreault and Marion would call a "second birth," repositioning themselves within the era's
new media milieu. The increasingly visual and multimodal aesthetics of these periodicals
engaged readers' technological imagination and drew their attention to mediation itself. Using de
Certeau's theory of strategy and tactic, I argue that periodical producers strategically invoked the
technological imagination to acquire cultural authority, but readers could use their medial
awareness to poach producer techniques, becoming critical and productive agents of mass
culture. In news weeklies such as the *Illustrated London News* and the *Graphic*, advertisers
encouraged readers to conflate reading and consumption, but readers could appropriate
advertising strategies using curatorial and hyper-reading tactics. In monthlies such as *Pearson's*,
population journalism prompted readers to conceptualize themselves using a "biopolitical" rubric
of normalization, in Foucault's sense, but this genre's spectacular strategies created space for
readers to exert tactical agency. In "Curiosities," a participatory feature in the *Strand*, readers
used the technological imagination to appropriate multimodal magazine production and
contribute to what Flichy terms the "socio-technical frame of reference" for the hand camera. As
"Curiosities" demonstrates, late-Victorian illustrated periodicals influenced the terms of user
engagement for twentieth- and twenty-first-century mass media.

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Introduction: Imagining Popular Illustrated Journalism in the Nineteenth Century

The general tendency of modern development has been to bring many more levels of culture within the general context of literacy than was ever previously the case.

Raymond Williams, *Culture and Society* (1963)

By the end of the nineteenth century, reading had become "a popular addiction," as

Richard Altick puts it (364), and periodicals and newspapers had become Britain's first mass

media (Scholes and Wulfman 27). Top weeklies such as the *Illustrated London News* (*ILN*)

circulated up to half a million copies per issue in the 1880s (Law vi); popular monthlies such as

Pearson's Magazine circulated one million copies per issue in the 1890s (O'Connor "*Pearson's*

Magazine"). Technological innovations galvanized developments in production and distribution

that gave print media unprecedented reach across society, including the working classes, among

whom literacy had just become all but universal (Altick 171). The transition to an economic

model in which periodicals profited from advertisements, as well as selling price, contributed to

the increasing diversity and consolidation of titles by early media barons such as George Newnes

(K. Jackson, *George Newnes* 266). A growing number of general-interest pictorial weeklies and

monthlies incorporated New Journalism-style features and state-of-the-art illustration in order to

combine the growth of mass print with consumerism. Non-print media technologies such as film,

the phonograph, and radio had not yet begun to displace print's domination of cultural

expressions. Print media constituted the lifeblood of late-Victorian mass culture—the widely

practiced, non-specialized, cross-class cultural activities of the British reading public from the 1880s to World War I.[1]

The popular illustrated periodical was a major visual medium in an era of proliferating spectacle (Brake and Demoor 12). As Jerome McGann observes, in the nineteenth century, "image and word began to discover new and significant bibliographical relations"; technological innovations in image reproduction signaled "a culture-wide effort for the technical means to raise the expressive power of the book through visual design" (62). Such efforts were not limited to books. The illustrated periodical, as print's most widely distributed form, occupied a uniquely powerful position in image-conscious British society. In an article written for the *Illustrated London News* Jubilee Number in 1892, illustrator Joseph Pennell declared that the artist had achieved the same importance as the author for daily and weekly journalism (584). A decade later, E.H. Lacon Watson further privileged journalism's pictorial aspect, declaring that "the journalistic eye is now of far greater importance than the journalistic pen" (84). In 1899, Clement Shorter boasted that illustrated journalism could "no more be crushed out now than . . . Sir Henry Irving's picturesque stage or 'the three R's'" (494). Such comments regularly appeared in the late-Victorian pictorial press.

Shorter championed the hand-drawn illustration over the photographic image, little foreseeing that the latter would supersede the former's visual authority in the twentieth century. However, his opinion is indicative of the rapid changes experienced by the illustrated press in the nineteenth century. Innovations in periodical production technology, as well as the British government's repeal of taxes on stamps, advertising, and paper between 1830 and 1861,

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[1] Used in this sense, mass culture denotes popular culture on a larger scale, broadly describing the tastes and values of the majority rather than denigrating a faceless mob (R. Williams 289).

underwrote the significant expansion of newspaper and magazine titles, circulation, and pictorial content (Nevett 223). Between the 1840s and 1880s, wood-engravers adopted an industrial-style division of labour that enabled rapid, large-scale image reproduction (Beegan, *Mass Image* 27, 48). In the 1870s, the rotary press increased the pace of printing (Scholes and Wulfman 28). By the early 1880s, paper makers had perfected a process for using wood pulp to make bleached newspaper, thereby increasing the quantity and affordability of paper for periodical print (Huculak 162). Linotype, patented in 1886, sped up the typesetting process (Scholes and Wulfman 28). However, the technological innovation that proved most significant to the illustrated press was the rise of photomechanical image reproduction in the 1880s and 1890s.

Photomechanical line-block and halftone processes allowed for the rapid reproduction of detailed images on an unprecedented scale (Thorpe 10). In the line-block process, an artist's drawing was photographed and the resulting negative exposed on a plate; through a series of chemical interactions, the plate was etched to reveal the line drawing in relief (St. John and Zimmerman, "Print Processes"). Eliminating the necessity for the engravers who served as essential intermediaries in wood-block reproduction, the line-block process translated an original image to the relief block used for printing (Gascoigne 33.g). As the first mass-produced photomechanical images, line-block technology remediated artists' drawings through industrial mechanization without compromising their hand-sketched appearance (Gascoigne 33.f-33.g). While the line-block process reproduced linear, pen-and-ink images, the halftone process reproduced the "continuous tones of paintings and photographs" (Beegan, *Mass Image* 8). In the halftone process, the negative from a photograph or artwork would be developed on an image block, covered by a screen that filtered its shades, which were developed as dots on the image. Dark regions of the original tonal work became larger and denser dots in the image, conveying a

granulated facsimile in grayscale (St. John and Zimmerman, "Print Processes"). The halftone

process enabled producers to reproduce photographic images directly onto the periodical page

(Beegan, *Mass Image* 15).

Both line-block and halftone processes were adopted by popular pictorial magazines at

the turn of the twentieth century. In the late 1880s, periodicals such as the *ILN* and the *Graphic*

began including line-block images alongside wood engravings (Beegan, *Mass Image* 43).

Halftone process superseded wood-engraving in the 1890s after the increased availability of

halftone screens—an essential component of the halftone process—made this type of

photomechanical reproduction more readily available to publishers (Beegan, *Mass Image* 77).

The new photomechanical processes resulted in a greater number and variety of images

in popular illustrated magazines. If British print media became more pictorial in the nineteenth

century, they also became more self-conscious of their multimodal aesthetics. Periodical

producers—including authors, artists, engravers, editors, advertisers, and printers—used

increasingly varied design techniques, compelling readers' attention to how the images,

letterpress, page layout, organization, and material characteristics contributed to meaning.

Through their diverse, innovative aesthetics, popular print media manifested the technological

developments that propelled industrial modernity and shaped emerging mass culture.

Given illustrated journalism's central place in late-Victorian culture and its deliberate

aesthetic techniques, this study begins by asking: How did the multimodal aesthetics of popular

illustrated periodicals shape reader engagement? How did these terms of engagement relate to

the role of magazines in emerging mass culture? My dissertation investigates these questions

using evidence from four popular periodicals between 1885 and 1918: the *Illustrated London

News* (*ILN*), the *Graphic*, *Pearson's Magazine*, and the *Strand*. The *ILN*, founded in 1842, and

the *Graphic*, founded in 1869, enjoyed the widest circulation of Britain's pictorial news weeklies in the latter half of the Victorian era. Both magazines were quick to incorporate print innovations and thus managed to dominate the market for illustrated weeklies well into the twentieth century, despite the growing number of competitors. *Pearson's Illustrated Monthly Magazine* and the *Strand* emerged in the 1890s. Effectively utilizing New Journalism's formal variety and new image technology's spectacular affordances, *Pearson's* and the *Strand* became two of the most widely circulated turn-of-the-century illustrated monthlies. Grounded in case studies from these four magazines, I theorize how the aesthetic characteristics of an illustrated periodical influenced reader engagement. Production processes inscribed print media with distinctive aesthetic features that became part of a reader's experience of a given print object. A periodical's production history therefore influenced a reader's interpretation of the cultural values that a periodical mobilized.

A foundational tenet of this study is that readers possessed a print media literacy through which they could recognize and interpret the material traces of production that were part of a periodical's aesthetics. Through this literacy, readers could situate a periodical in its real and imagined socio-technological contexts, a capacity I describe as the technological imagination. The technological imagination functioned both collectively and individually: periodical producers used aesthetic strategies that fostered and engaged the technological imagination of whole readerships, but individual readers could exercise it subjectively. Print media literacy also enabled readers to attend to how a physical print object mediated culture; I describe this aspect of the technological imagination as medial awareness. I argue that the technological imagination, and particularly medial awareness, significantly contributed to how readers interpreted periodical depictions of mass culture and their roles in it.

Primary Texts and Scope

Taken together, the *Illustrated London News*, the *Graphic*, *Pearson's Magazine*, and the *Strand Magazine* represent the general character and features of popular illustrated periodicals at the turn of the twentieth century. Both weeklies and monthlies had pictorial formats, but weekly content was shaped by a journalistic focus on current events, whereas monthly content engaged current events less directly, focusing on more temporally durable entertainment genres that readers might return to in bi-annual, bound volumes. The longer publication cycles of monthlies allowed these papers to use more sophisticated aesthetics, but pictorial news weeklies also used images in innovative ways to depict each news cycle's most action-packed moments. Advertisements were more visually pervasive in weeklies, largely because they moved out of paratextual locations to infiltrate the editorial content pages. Advertising expanded in monthlies, too, but remained mostly cordoned off in each issue's front and back sections. Monthly advertisements are more difficult to examine because twentieth-century archival practices favoured preserving the bound volumes of monthlies, which included fewer advertisements than the first issues; often, commercial paratexts were simply discarded.

My dissertation's focus on popular materials determined my selection of some of the most widely circulated periodicals of the era. Periodical scholars regard the *ILN*, the *Graphic*, the *Strand* and, to a lesser extent, *Pearson's*, as major contributors to and records of late-Victorian popular culture. These magazines all boasted general audiences across gender and class, with the broad middle classes comprising their largest subsets of readers. Observations and analyses conducted in these titles, then, have broad relevance for understanding how Victorian illustrated periodicals influenced modern mass culture through the development of readers' technological imagination and medial awareness.

The Late-Victorian Technological Imagination and Medial Awareness

My concept of the technological imagination builds on the thought of several scholars, particularly Matthew Kirschenbaum's conceptions of forensic materiality and the forensic imagination. Kirschenbaum describes forensic materiality as the physical characteristics of a media object associated with information inscription and storage—the ways that data are encoded and stored (15). To attend to forensic materiality when analyzing media, thereby inciting the forensic imagination, is to refute the misguided but prevalent tendency to treat media objects as simply interfaces (253). Through forensic imagining, a user critically engages with the unique physical traces that evince these essential aspects of a media object's operations (250).

Kirschenbaum traces the forensic imagination's origins to the late-nineteenth century because this era produced "the great inscribing engines of modernity": the gramophone, film, and typewriter (250). As Friedrich Kittler has argued, the emergence of these "technological" media facilitated new conceptualizations of communication in which meaning is not inherent to a written or spoken word (*Gramophone* 83). Rather, data are inscribed, physically stored, and interpreted through a user or reader's sensory relation to a media object's materials (*Discourse Networks* 225). New media such as the gramophone and film parsed this process, making mediation visible and inviting a reconceptualization of communication practices (Guillory 347).

Although Kirschenbaum focuses on digital media, his theory applies to any communication modes that use an interface to mobilize inscribed and stored information. His conceptions of formal and forensic materiality have been taken up by scholars in many fields, including periodical studies. For example, James Mussell uses these concepts to analyze the "relations between the displayed phenomena" of a periodical interface and the "architecture that

sustains them" (*Nineteenth-Century Press* 8). Building on Mussell's approach, I introduce

Kirschenbaum's notions of forensic media literacy and the forensic imagination into periodical

analysis. Although, as Kirschenbaum and Kittler observe, new communication technologies

drew increasing attention to materiality and mediality at the fin de siècle, I argue that nineteenth-

century print media had already begun calling reader attention to forensic materiality, albeit with

a less nuanced view of information as physically stored data. I describe this attention as readers'

medial awareness: their capacity to recognize that a periodical's material production mediated its

aesthetic affordances and, therefore, its representations of culture.

Nineteenth-century illustrated journalism regaled readers with accounts of its own

material history and technological processes, fostering print media literacy across a wide reading

public and nurturing the collective technological imaginary. Much periodical content engaged

the technological imagination by encouraging readers to interpret its aesthetic elements as

technological signifiers as well as discursive components—as expressions of techne as well as

culture. Reader engagement became more complex as developments in mass image reproduction

transformed illustrated journalism's aesthetics. Halftone images in the magazines were

characterized by their tonal shadings and distinctive granular pattern, and line-block images by

their clean pen-and-ink appearance. The tonal granularity of halftone pictures and the stark,

black-and-white look of line-block pictures attested to their status as mechanical reproductions.

Aesthetic evidence of the production history of these images contributed to readers'

interpretation of their meaning. Illustrated periodicals thus cultivated the technological

imagination and an awareness of mediality in ordinary citizens long before new, non-print media

such as the gramophone, film became popular. In this respect, I disagree with Walter Benjamin's

argument that mechanized cultural expressions seem, to their audiences, to have no material

history ("Work of Art" 20). Periodicals exhibited evidence of their production processes, and readers possessed the literacy to include this evidence in their interpretation of magazine contents. Certainly, as Benjamin argues, mechanically reproduced images lacked an original artwork's aura of authenticity; indeed, Peter Sinnema notes that the mass character of such images defied "the notion of artistic uniqueness" (Benjamin, "Work of Art" 21; Sinnema 4). However, mass illustrated print derived cultural value from its industrial status and its socio-technical connotations. The technological imagination is therefore crucial to how late Victorians engaged with periodicals, and with mass culture *in toto*.

Theory and History of the Technological Imagination

The technological imagination's theoretical genealogy[2] begins with Benedict Anderson's theory of the social imaginary as he first articulated it in *Imagined Communities* (1983). Scholars of media and cultural history have made wide and varied use of Anderson's theory. Its recent appearances in Victorian periodical studies include *Images at War* (2006), in which Michèle Martin notes that nineteenth-century pictorial journalism developed a body of "symbols, myths, and cultural icons that formed the collective imaginary of a large anonymous public" (63). Thomas Smits refers to the *ILN*'s Australian circulation history to argue that this weekly contributed to the formation of local and imperial identities in the imagined communities of British colonies (80-83). As Kirschenbaum's concept of the forensic imagination demonstrates, Anderson's theory of imagined communities informs an array of scholarship rooted in the principle of a technological imaginary. For example, Patrice Flichy investigates the technological

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[2] I use the term genealogy to describe a concept or technology's developmental history, but not in the sense of a linear progression. A genealogy involves plural formations, dead ends, and convergences.

imagination's role in how a society integrates new technologies. Scholars of nineteenth-century media and culture variously take up the concept of the technological imagination to discuss the Victorians' relationship with industrial technology. Notably, Tamara Ketabgian studies the contemporary notions of humanness that emerged from the "close mingling and identification" of people and machines in the nineteenth-century "industrial imaginary" and its literatures (1-2). In periodical studies, Michèle Martin and Christopher Bodnar use the technological imagination concept to analyze innovative techniques that the press developed to circulate illustrated news during the 1870-1871 siege of Paris (73). Gerry Beegan studies the relationship between the late-Victorian socio-technological milieu and a social imaginary fostered by print images (*Mass Image* 1). Beegan's analysis is particularly important to this project, as he demonstrates that print readers interpreted print production's aesthetic traces at least as readily as they interpreted words on the page, and that these signs contributed to social imaginings of modernity.

The Victorian technological imagination was fostered by efforts of the illustrated press to educate readers about its material production. Popular journalism was Victorian society's primary means for announcing technological developments to a broad audience and discursively framing readers' understanding of these technologies. As Brian Maidment remarks, "[t]he visual explanation of technical process became a staple of illustrated journalism" (*Reading Popular Prints* 145). Features on production processes and technological innovations appeared in various newspapers, magazines, and books. As Andrew King and John Plunkett point out, nineteenth-century print often showcased its own practices to influence readers' attitudes toward the print industry (4). Works in this vein targeted audiences ranging from specialists to amateurs. For example, books such as P. G. Hamerton's *The Graphic Arts* (1882) and journal articles such as Carl Hentschel's "Process Engraving" in the *Journal of the Society of the Arts* (1900) were

written for print professionals, while Mason Jackson's *The Pictorial Press* (1885) and Gleeson White's *English Illustration: The Sixties* (1897) were written for a more general, if somewhat elite (upper-middle class) audience.

The popular illustrated press's accounts of print technology had a particularly wide audience, including middle-class and, to a lesser extent, working- and upper-class readers. These accounts imbricated industrial modernity and emerging mass culture to impart information about print processes. As a means of disseminating information about the latest technological advances, print embodied its industry's latest techniques. Paul Fyfe examines this process of signification using the *ILN*'s Great Exhibition supplement of 1851. The "penultimate" page of the supplement, which describes the "*Illustrated London News* Printing Machine" on display at the Exhibition, is labelled as the product of that machine. A large, detailed illustration of this press, a customized Applegath vertical press, appears on the verso of the page. Fyfe argues that the supplement "became a material souvenir of the mechanical processes on display" ("Great Exhibition" para. 1). The exhibited Applegath press "focused people's attention on printing as an industrial process," stoking their technological imagination. Through its materiality, temporality, and visual veracity, the supplemental souvenir advanced the exhibit's cultural work, relating a more complex story about the production history and the representational functions of illustrated journalism (Fyfe, "Great Exhibition" para. 2-3).

The *ILN*'s Great Exhibition supplement was one of many educational and entertaining pieces about print's material production that encouraged Victorian readers to appreciate the periodical in his or her hands as an artifact of progress. "The Commercial History of a *Penny Magazine*," published from August to December 1833, offers an early example of illustrated journalism depicting its own production. "The Commercial History" was a series of monthly

supplements to the *Penny Magazine*, a weekly periodical published by the Society for the

Diffusion of Useful Knowledge from 1832 to 1845. Consistent with the *Penny Magazine*'s

mandate of edifying self-instruction, the supplement educated readers in print production,

emphasizing the link between industrialization and the increasing ubiquity of popular magazines

(Altick 242). Each month's supplement described the facets of journal production, from paper

making to printing. Intricate descriptions and occasional illustrations invited readers to mentally

recreate the process of printing the *Penny Magazine* at every step. The author (or authors; no

name is given and the narrative uses the editorial We) takes an enthusiastic amateur's point of

view, describing machinery, labourers, and processes in admiring tones. For example, paper

making is "as rapid as it is beautiful" (Sept. 1833, 383) and the compositor's re-distribution of

used type is "a remarkable example of the dexterity to be acquired by long practice" (Nov. 1833,

469). The narrator affects a lack of expertise and a personal tone; for example, in the supplement

on paper making, the author comments, "We were compelled patiently to watch the process for a

long time to convey our first impressions to the reader" (Sept. 1833, 382). Such statements

encouraged the reader to identify with the observer. Recounting visits to each of the mills and

offices where facets of the *Penny Magazine*'s production took place, the narrative enabled

readers to imagine themselves along for the tour. It was through the magazine, an artifact of

production, that readers could link imagined industrial settings with their own experiential

reality. The supplements prompted readers to engage with a periodical's material signs of

production as well as its words and images, instructing them in print journalism's mediality.

Over the course of the nineteenth century, illustrated journalism continued to educate

readers about its processes of production while commenting on changes in print culture and

technology. In its inaugural 1842 issue, the *ILN*'s editorial address to its readers indicated the

degree to which illustrated print had advanced since the *Penny Magazine*'s supplements on its production. The *ILN* was the world's first pictorial weekly newspaper, and "Our Address" proudly presents illustrated journalism as equal to and integrated with other technological advances such as steam power and the telegraph. Illustrated journalism, claims the *ILN*, is the material and aesthetic manifestation of the news, presenting "the very form and presence of events as they transpire, in all their substantial reality, and with evidence visible as well as circumstantial." Tellingly, at the end of the address, the *ILN* invites readers to "imagine for us a great deal more than we have been able to crowd into the compass of an introductory leader." The *ILN* thus incited readers' imagination and invited them to participate actively in a new era of journalism.

Two years after "Our Address," the *ILN* produced a supplement series that familiarized readers with pictorial journalism's material history in more detail. "Wood-Engraving: Its History and Practice" appeared in several instalments between April 20 and July 6, 1844. Unlike many periodical supplements, this series was included in the magazine's paginated numbers, meaning that it was available to all readers. William A. Chatto, author of *A Treatise on Wood Engraving, Historical and Practical*, provided the supplements' letterpress (Henderson). In its structure and tone, the "Wood-Engraving" series resembled the *Penny Magazine* supplements, but Chatto's articles focus exclusively on image production. The series frequently included state-of-the-art illustrations, as was fitting for the its subject matter and for the *ILN*'s reputation as an eminent pictorial weekly. Indeed, in many of the supplements, a large, detailed engraving dominated the article, accompanied only by one or two columns of letterpress.

The "Wood-Engraving" articles presented this subject's history from ancient Egypt to modern Europe, particularly focusing on eighteenth- and nineteenth-century England. As the

series transitioned to nineteenth-century wood-engraving, Chatto interspersed more aesthetic and technical criticism, effectively grooming his readers as amateur historians of the art and craft of engraving. He also included considerable technical detail about modern practices. The last instalment of the series, titled "The Practice of Wood-Engraving," includes information about the engraving process, materials used, the roles of designers and engravers, and even diagrams of minor tools such as the leather sand-bag on which the wood-block sat and the lamp that concentrated light on the block.

Throughout the series, Chatto depicted wood engraving as possessing unique capabilities of expression that artists were obliged to exploit to their fullest potential. For example, Chatto says of William Harvey's "Death of Dentatus" (1821) that although the cut displays "the greatest skill in the mechanism of the art," it is not an "effective employment of the means of wood-engraving." The piece has "too much the appearance of being an elaborate effort to emulate a copper-plate." Consequently, Harvey has wasted much labour and, worse, "has sacrificed some of the peculiar advantages which wood-engraving possesses over engraving on copper" ("Wood-Engraving" June 1, 357). At the end of the "Wood-Engraving" series, Chatto reflects that unlike the "servile copies of copper-plate engravings," wood engraving has "peculiar powers" to translate "subjects into its own graphic language, with a view to their being multiplied by means of the steam press." Chatto's comment suggests that wood-engraved images have distinctive connotations because of their connection to the steam press—industrialization's foundational technology—and because of their large-scale multiplication by that technology. Wood engravings, as a form of relief printing, could be printed on the same steam-powered press as type. As Sinnema observes, Chatto's series "sanctifies" the *ILN* as both the "culmination of an

ancient, increasingly refined art" and an emblem of modernity (22), instructing readers to imagine wood-block images as the graphic language of modern industrial culture.

In 1879, the *Illustrated London News* published another series that educated readers in illustrated print production. Between January and August, Mason Jackson contributed a series of articles entitled "Illustrated News: A Sketch of the Rise and Progress of Pictorial Journalism."[3] Jackson's series, like Chatto's, posits the *ILN* as the culmination of advances in journalism and print technology and includes a detailed account of contemporary engraving practices in the last instalment of the series. By the late 1870s, decades of pictorial journalism made the *ILN*'s field illustrators, termed "special artists," central to the *ILN*'s brand. Jackson drew on his experience as an *ILN* engraver and art editor to regale readers with exciting tales from the field. His account emphasizes the *ILN*'s unequaled commitment to pictorial journalism, but he mentions other illustrated British journals, such as the *Penny Magazine*, *Punch*, and the *Graphic*, reminding readers that the *ILN* participated in a network of print media that influenced one another. Jackson calls this network an "English institution" and boasts that its yields are "the perfection of 'multiplying art' and a marvel of patient and persevering ingenuity" (Aug. 16, 158). Like the author of "The Commercial History of a *Penny Magazine*" and Chatto, Jackson invites the reader to share in this awe of modern print processes and culture, observing, "While the printing-machine has become the potent agent of human power and wisdom, it also fulfils the remarkable function of sending forth to the world a constant supply of 'illustrated news'" (Aug. 30, 206).

Throughout the remaining decades of the Victorian era, the *ILN* continued interweaving a rhetoric of aesthetic sophistication and state-of-the-art technical accuracy to characterize the

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[3] Mason Jackson went on to publish a revised version of this series, titled *The Pictorial Press: Its Origins and Progress*, in 1885. The book, like the series, privileges the *ILN* as the top pictorial news journal.

power of illustration. The news weekly also continued to highlight the technological innovations essential to illustrated print's representational power. In 1892, the *Strand Magazine* educated readers in its production with a thirteen-page article called "A Description of the Offices of the *Strand Magazine*." The *Penny Magazine* and *ILN* articles on print production included multiple illustrations, but the *Strand* article offered its audience particularly rich visual documentation of periodical production. It allocated over half of the available page space to engraved images taken from photographs. "A Description" also adopted a different narrative strategy than earlier articles on illustrated journalism's production processes by taking an ethnographic approach. The article takes the reader through a series of scenes comprising a day in the life of the journal's offices, noting characteristics ranging from the furnishings and interior decoration (editor George Newnes' "sanctum sanctorum" is "decorated in pale tints of salmon, green, and cream," 595) to the roles and behaviours of the people in each scene.

As the virtual tour heads from editorial offices to production rooms, the pages give more space to letterpress to accommodate detailed verbal descriptions of various production processes, such as stereotyping and electrotyping. The *Strand*'s unnamed author appears more expert and less awed than the *Penny Magazine*'s author, but the article similarly presents the printing process in a celebratory tone, describing the perfecting web press in the *Strand*'s offices as "a wonderful construction" and its rotary art press as "a mass of ingenuities" (605). The narrative concludes with the publishing room, where each number is viewed and copies distributed. "A Description of the Offices of the *Strand*" thus interweaves visual and verbal details into a textured representation of the magazine's socio-technological production. The article also mentions another opportunity for readers to advance their education in periodical production: the offices include an art gallery displaying original drawings and image reproduction blocks for

both the *Strand* and the *Million*, another of Newnes' illustrated magazines. This gallery is open "every day, and all day, to the inspection of whomsoever may like to inspect" (596-7). The *Strand* thus invites readers to stimulate their technological imagination by viewing material artifacts of the print production process.

The above examples from the *Penny Magazine*, the *ILN*, and the *Strand* served to edify readers and satisfy their curiosity about the making of the magazines they held in their hands. Appearing over decades of print production from the 1830s to the end of the century, these articles also instructed readers to attend to how illustrated periodicals' aesthetics were shaped by their production. Further, pictorial journalism's accounts of its own history strengthened readers' perception of illustrated periodicals as embodiments of modernity (Beegan, *Mass Image* 2). These narratives offered readers socio-technological contexts in which to situate print media by linking industrial modernity to the increasing ubiquity and aesthetic sophistication of illustrated magazines. Articles on the production of the pictorial press therefore encouraged readers to engage, critically and imaginatively, with periodicals as media—that is, as socially realized structures of communication that materially mediated popular culture (Gitelman 7).

Theory and History of Illustrated Periodicals as Aesthetic Media

Several media theorists, in addition to Kirschenbaum, inform my analysis of periodical reader engagement. This research takes as a precept that texts function as interpretive environments, affording a dynamic set of aesthetic and procedural conditions that delineate the possibilities for making meaning. As McGann argues in *Radiant Textuality*, texts "are not containers of meaning or data but sets of rules (algorithms) for generating themselves: for discovering, organizing, and utilizing meanings and data" (138-9). If a print media object is an

environment that conditions meaning making, then a reader's interpretation is necessarily experiential. Periodicals rely largely on visual communication, but they also incorporate verbal, spatial, and material modes—techniques of expression that are experiential, and therefore aesthetic, as Johanna Drucker has argued (*Graphesis* 51). My research begins from the premise that periodicals are aesthetic environments. A magazine conditions a reader's encounter through aesthetic characteristics ranging from the visual display of letterpress and image content, to the materiality of illustration and type, page layout, and other extra-textual factors. The magazine environment makes these aesthetic characteristics available as affordances, in James J. Gibson's sense: they are perceived characteristics that indicate ways in which a reader can interpret the magazine (127). Interpretation depends not only on a periodical's aesthetic affordances, but also on how readers select which affordances to pay attention to, as N. Katherine Hayles observes (11). My analyses of the *ILN*, the *Graphic*, *Pearson's*, and the *Strand* focus on the aesthetic affordances that readers could attend to in specific periodical environments. For most of these case studies, limited evidence of historical reader engagement impedes the reconstruction of how specific readers experienced periodicals. Instead, my analyses delineate the interpretive horizons made possible by a magazine, given its contexts and rules of engagement (McGann 152). I address each periodical's contexts and form-specific organization in tandem with its aesthetics, first to explicate the techniques that periodicals used to invoke the technological imagination and condition reader interpretation, and then to theorize the ways that readers responded to those techniques.

In using media theory to investigate periodicals, I participate in an established paradigm for periodical scholarship. Periodical studies have long attended to the relationship between socio-cultural contexts, editorial content, and material form. Introducing a recent issue of *English*

Studies in Canada (*ESC*) that focuses on magazines as media, Faye Hammill, Paul Hjartarson, and Hannah McGregor observe: "the history of periodical studies has been a history of studying mediations and their remediations" (4). Following David Jay Bolter and Richard Grusin, the *ESC* authors define remediation as the representation of one medium in another (Bolter and Grusin 45). In the digital age, the processes of remediating archives and engaging with periodicals in online environments has challenged prior notions of literacy and textual engagement. Like many other humanities fields, periodical studies responded to this challenge by increasingly approaching texts as multimodal cultural objects and malleable interpretive environments. Investigations of periodical aesthetics, production history, and material organization combine print history with cultural criticism and media theory. For example, Elizabeth Carolyn Miller analyzes magazines of the late-Victorian radical press as material arguments for alternatives to industrial production (6). Mussell foregrounds miscellaneity and seriality as formal features of newspapers and periodicals that set them apart from other print media and shaped their contributions to the developing information economy ("Elemental Forms" 5). Laurel Brake champions studying the "textual heteroglossia" that offer evidence of periodical circulation and engagement, such as wrappers, advertisements, supplements, illustrations, indexes, mastheads, and editorial matter (*Print in Transition* 27; also see "Longevity" and "London Letter"). Brake also highlights frequency, price, and geography as infrastructural factors that shaped the material organization of the press, and particularly of specialist periodicals ("Markets" 237). Although he misses the late-Victorian precursors that this dissertation examines, Sean Latham recognizes that modernist magazines yielded spontaneous behaviours and properties through reader-periodical interaction ("Affordance and Emergence" n.p.).

Medium-specific considerations increasingly factor into analyses of periodical images and visuality, a topic which, Maidment argues, has itself become indispensable to studying the Victorian press ("Illustration" 102). He analyzes periodical images that functioned "as physical expressions of a text," rather than letterpress "accompaniments" (102), as well as "visually interesting paratextual elements" that contributed to magazine aesthetics, such as mastheads (104). Lorraine Janzen Kooistra investigates the contributions that textual ornaments make to periodicals' structures of design, labour, and use ("Charting Rocks" 376). Beegan chronicles how British fin-de-siècle readers identified with the materially hybrid character of photomechanical line-block and halftone images (*Mass Image* 9).

Within the paradigm that approaches periodicals as media, my project aligns with recent work in periodical media archaeology that excavates a print technology's material conditions of knowledge production to gain insight into the relationship between past and present "media cultures" (Parikka 2). Such scholarship posits periodicals as media artifacts shaped by production in a network of agents and technological processes. Fyfe exemplifies this approach in relating the architecture of the *ILN*'s Great Exhibition supplement to the Applegath press it champions. Fyfe contends that the supplement's construction embodies the *ILN*'s "competing impulses" to offer images of "unmatched reprographic fidelity" on a timely schedule and unprecedented scale ("Great Exhibition" para. 11). Andrea Korda also draws on media archaeology in her study of the production histories and material characteristics of social realism in paintings and news images (22). Studying the *Strand*'s corporate records, Shannon Smith and Ann Hale recover "the hidden human and technological infrastructures" that underpinned the magazine's production and circulation (682). Smith also studies the "shifting socio-cultural narrative terrain" around two new print technologies of the nineteenth century, Applegath's vertical rotary press and

linotype, to delineate how these machines influenced print culture ("Technologies" 32). Adopting media archaeology's anti-progressivism, Fyfe traces the twentieth-century history of Victorian periodical remediation, first in microfilm, and then in digital files ("Archaeology" 551-52). Melissa Score similarly recuperates the history of the pianotype composing machine, a short-lived print technology of the 1840s (578).

My dissertation contributes to this burgeoning subfield of periodical studies in two ways. First, my research focuses on titles, genres, and techniques that have disappeared from view but that exemplify innovative and influential uses of the illustrated periodical. Second, my analyses emphasize the role of periodicals' material aesthetics and production history, particularly their image reproduction processes, in reader engagement. To analyze how readers' engagement with periodicals shaped their understanding of and participation in popular culture, I draw on Michel de Certeau's theory of strategy, tactic, and poaching. De Certeau characterizes the dynamic between a modern society's dominant cultural representations and its individual citizens as the dialogical interaction of strategies and tactics. Dominant representations of society, such as those expressed in popular illustrated periodicals, are strategies produced to shape citizens' interpretive agency, and, in turn, their behaviour as participants in mass culture. Individuals can respond to those strategies with tactics that insinuate temporary, heterogeneous interpretations. In each of my case studies, I locate the aesthetic strategies that illustrated periodical producers used to engage readers' technological imagination and condition how they interpreted the periodical's representations of mass culture. I also identify tactics through which readers could exercise their imaginations to formulate alternative interpretations of popular culture and assert agency as both consumers and producers of periodical content. My dissertation thus excavates significant contributions to Victorian popular culture and subsequent mass culture. As I will show, the

dynamic between periodical producer strategies and reader tactics influenced the terms of engagement for emerging mass culture and non-print media.

Dissertation Overview

Chapter One investigates the role of the technological imagination in the rise of self-consciously multimodal representation in the *ILN* as it transitioned from wood-engraved reproduction of images to photomechanical processes. These technologies had a profound impact on the visuality of this magazine and, consequently, on reader engagement. Between 1880 and 1907, this news weekly increasingly relied on images, interacting with letterpress, spatial layout, and materiality, to convey information. Drawing on the work of André Gaudreault and Phillippe Marion, who argue that "A Medium is Always Born Twice," I demonstrate that this transition from verbal to visual storytelling galvanized the *ILN*'s birth as a new medium (3). Though the illustrated weekly's initial, integrating birth occurred in the 1840s, its second, constitutional birth at the turn of the twentieth century, propelled by changes in the technologies of image reproduction, endowed it with unique representational capacities. Through its second birth, the *ILN* transitioned to a more deliberately multimodal aesthetic to participate in the late-Victorian new media milieu. I profile the *ILN*'s second birth through its changing text-to-image ratio, decreasing reliance on verbal apparatuses to aid pictorial interpretation, disappearance of illustrated fiction, and increase in image number and variety. As I show in my analysis of three case studies—the *Coronation Procession Number* (1902), "Stories Without Words" (1906), and "Fairy Stories by Photography" (1907)—the *ILN*'s second birth as a visually oriented medium affected how readers engaged with the pictorial weekly. The magazine's increasingly multimodal aesthetics engaged readers' technological imagination to draw their attention to mediation itself.

By 1907, the pages of the *ILN* presented popular culture as mediated and its participants as media users.

Chapter One establishes that as a new medium, the late-Victorian illustrated periodical stimulated readers' awareness of magazines as mediating popular culture. Chapter Two explicates how mediality and the technological imagination figured in the dynamic between periodical producers and readers. Analyzing aesthetic developments in the advertising pages of the *ILN* and the *Graphic* between 1885 and 1906, I argue that readers' critical awareness of mediation influenced their perception of consumer culture. In the last years of the nineteenth century, advertising space infiltrated magazine contents and advertisements became more sophisticated. I show how advertisers deployed aesthetic strategies, including hybridity and kitsch, to engage readers' technological imagination and encourage them to conflate reading and consumption. As I demonstrate, readers could also use their print media literacy and technological imagination to develop counter-interpretations. Using N. Katherine Hayles' theory of hyper-reading, I identify reading tactics made possible by the periodical environment, such as scanning, skimming, and juxtaposing (12). Engaging the technological imagination within the context of print magazines, advertisements not only encouraged readers to conceive of themselves as consumers of mass culture, but also presented means for readers to exert agency as curatorial and appropriative producers of that culture.

Chapter Three examines how the technological imagination conditioned readers' engagement with the population journalism published in *Pearson's Magazine* between 1896 and 1902. As I demonstrate, this previously unrecognized periodical genre combined statistical narrative with lively data visualizations. Drawing on Michel Foucault's theory of biopolitics, I analyze the aesthetic strategies through which *Pearson's* population journalism prompted readers

to conceptualize themselves and other popular culture participants using a rubric of normalization (*Security* 477). Where periodical advertisements strategically conflated reading and consumption, population journalism strategically conflated popular culture and population politics. In the abstract data visualizations that *Pearson's* population journalism used between 1896 and 1898, the minimalist aesthetic encouraged individual readers to conceive of themselves as statistical units within a demarcated socio-biological population: the British nation. The photorealistic data visualizations used between 1898 and 1902 remediated the individual body as a component of multimodal, mass print spectacle. However, I argue that the spectacular aesthetic strategies through which population journalism engaged the technological imagination also created space for readers' medial awareness, and therefore their tactical agency.

Chapter Four examines how readers used their technological imagination and medial awareness tactically to produce their own content in the non-fiction periodical genre of novelty journalism. As I show, this genre showcased unusual events, feats, and items made all the more entertaining by their basis in reality. In "Curiosities," a novelty journalism feature appearing in the *Strand Magazine* from 1896 to 1918, readers appropriated the production of magazine material by assuming control of a new technology, snapshot photography. "Curiosities" became a participatory forum for the *Strand* community to share curated snapshots and commentary on the photographic process. I use Flichy's theory of technological integration to demonstrate that the dynamic interaction of periodical producers and readers helped shape snapshot photography's place in twentieth-century mass culture (81). During its most innovative years, "Curiosities" marked a high point in participatory journalism and the illustrated magazine's interaction with the new media milieu.

Chapters One to Four delineate the influential position that late-Victorian popular illustrated periodicals occupied at the moment when mass, non-print media began transforming the cultural landscape. They map how the illustrated press responded to Britain's increasingly visual and mass-mechanized popular culture with aesthetic strategies that engaged readers' technological imagination to invoke socio-technological authority and draw attention to the spectacle of cultural mediation. Through these strategies, illustrated journalism repositioned itself within the new media milieu. Indeed, the terms of engagement that popular magazines made possible through their aesthetic affordances influenced the terms of engagement for other mass media in the early twentieth century. In the dissertation's Conclusion, I consider the implications of my argument by briefly elaborating on how this study contributes to our understanding of participation in twentieth- and twenty-first-century mass media and culture. As late-Victorian popular culture developed into twentieth-century mass culture, tactical practices of periodical consumption and production contributed to the active, heterogeneous terms of user engagement with new media. Recognizing the Victorian print genealogy of digital media is essential to understanding how users interact with mass media today. Digital media that adapt the aesthetic strategies of turn-of-the-century periodicals similarly condition user agency and reiterate Victorian cultural values. Comparing particularities of past and present media is important to understanding how they engage the technological imagination and facilitate both producer strategies and user tactics.

Chapter One

Imagining Mediation: Visual Storytelling and New Media in the *Illustrated London News*, 1885-1907

The illustration of books, and even more of magazines, may be said to have been born in our time, so far as variety and abundance are the signs of it; or born, at any rate, the comprehensive, ingenious, sympathetic spirit in which we conceive and practice it.

Henry James, *Picture and Text* (1893)

On January 5, 1907, readers opening the latest issue of the *Illustrated London News*

would have been struck by its pictorial transformation. Ornate headers now embellished the

ILN's most prominent regular features, including those that did not previously include many

pictures, such as local event briefs, book reviews, and science news. The *ILN* aestheticized such

unillustrated items by placing them within frames of thematic graphical discourse. Perhaps the

most striking aesthetic enhancements were those adorning the *ILN*'s editorial essay, "Our Note

Book," which previously held no pictorial appeal (figure 1). The header for this feature, drawn

by Amédée Forestier, depicts an early modern scene in which a lively crowd interacts in the

background, while in the foreground, a central figure sits upon a monumental bench carved in a

vaguely classical style (figure 2). The quill and sheets of paper in this young man's hands

indicate that he is a writer; his body language, as he leans back to observe the crowd over his

shoulder, implies that he writes from life. His amused facial expression suggests that the tone of

his creative output is playful or sardonic. The header's depiction of the act of composing mirthful

observations from social life resonates with the subject matter of "Our Note Book," which was written, at this time, by the witty author and critic G. K. Chesterton.[4]

In the editorial essay that appears below the pictorial header, Chesterton remarks on the feature's new look with mock awe: "I perceive with astonishment, mingled with gratitude (and terror, which is the very soul of gratitude) a beautiful picture erected upon the top of this article. Such decoration is all to the good." He then proceeds to interpret figures in the headpiece as representations of editorial staff. Chesterton identifies the writer sitting on the bench, "clad in that close and clinging fifteenth-century costume" and "ostentatiously" dipping quill into ink, as his avatar—a claim carrying a hint of irony, given the physical discrepancy between this lithe scribe and the famously large, stout Chesterton (Bergonzi). The two classical busts appearing atop plinths on either side of the carved bench "are portraits of the Editor and his trusty lieutenant" (4). Chesterton's allegorical interpretation of this image is not readily verifiable. Whether or not the header's figures corresponded with the physical bodies of the *ILN* staff, however, Chesterton's nod to the new visuality of "Our Note Book" enhanced readers' engagement with the feature by referentially entwining text and image.

The dialogue Chesterton creates between pictures and letterpress in "Our Note Book" suggests that the *ILN*'s aesthetic transformation in 1907 extended its longstanding efforts to cover "every subject which attracts the attention of mankind, with a spirit in unison with the character of each subject, whether it be serious or satirical, trivial or of purpose grave" ("Our Address" 1). However, while the *ILN*'s new graphic features brought the spirit of a subject in harmony with its mode of representation, it also announced the *ILN*'s embrace of modern visual

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[4] Chesterton wrote "Our Note Book" each week from September 1905, when he took it over from journalist and playwright Louis Frederic Austin, until his death in June 1936 (Stapleton 1-2).

culture, which was strongly influenced by new, non-print media. As established in my introduction, late-Victorian illustrated periodicals sought, in their form and content, to position themselves at the forefront of modern print technology and culture. Deploying a variety of communication modes—including letterpress, material characteristics such as magazine organization and page layout, and, above all, images—popular illustrated magazines exploited visually oriented, multimodal expression to engage their readers.

Focusing on the period between 1885 and 1907, this chapter traces the development of the visually oriented, multimodal format that gradually replaced written narrative as the main expressive mode in the *ILN*. Running from 1842 to 1989, this staunchly middle-class magazine was one of the earliest and widest-circulating illustrated news magazines, and the first serious pictorial news weekly. The *ILN* was a prominent innovator in pictorial journalism, employing pictorial correspondents, termed "special artists," to document news of the world, and circulating reproductions of their images on a mass scale on a weekly schedule. As Brian Maidment points out, the *ILN* "occupies a uniquely important role" in the history of print image reproduction because it insisted on the importance of pictorial representation as a way of documenting the world, first using wood-engraved images, and then using the photomechanical line-block and halftone images that I will discuss in depth ("Illustrated London News").

As suggested by this chapter's epigraph, taken from Henry James' introductory remarks for an essay collection on periodical illustrators, the pictorial press underwent unprecedented expansion in the nineteenth century. Much of this expansion was driven by technological innovation. At the fin de siècle, the replacement of wood engraving with photomechanical reproduction processes catalyzed a phase of intensified aesthetic transformation that is evident in the pages of the *ILN*. The magazine shifted from a relatively simple, modular layout, in which

modest pictorial blocks appear alongside the columns of letterpress that dominated the page, to a more complex, imbricated layout, in which images of diverse types, styles, and sizes interrupted the columnar letterpress and dominated the page. What did this aesthetic transition indicate about illustrated print journalism's role in turn-of-the-century mass culture? How did the transition impact reader perception of and engagement with illustrated magazines?

To respond to these questions, this chapter situates the *ILN* within the context of the new media milieu. Using the theory of André Gaudreault and Phillipe Marion that a medium is always "born twice," I demonstrate that the *ILN*'s change from a letterpress orientation to a pictorial orientation—the result of new print technologies—exemplifies the popular illustrated periodical's metamorphosis into a new medium at the turn of the twentieth century (3). The illustrated magazine's initial, "integrating" birth occurred in the 1840s when it became one of the first weeklies to be densely populated with wood engravings (Gaudreault and Marion 12). Its second, "constitutional" birth took place between 1885 and 1907, when its replacement of wood-engravings with new photomechanically reproduced images distinguished it as a new medium (Gaudreault and Marion 12).

The *ILN*'s development into a new medium involved a shift from verbally oriented to visually oriented, multimodal storytelling. The use of pictorial storytelling has a long history in print journalism—in the eighteenth century, for example, illiterate members of the working classes could rely on images in the *Newgate Calendar* to learn the sordid details of recent crimes and executions. However, it was not until the late nineteenth century that such a visual orientation was taken up by the *ILN* and other news magazines with a wide, cross-class readership. Combining statistical, distant reading with a close reading of *ILN* characteristics, I analyze evidence of this shift in the magazine's changing text-to-image ratio; decreasing reliance

on textual apparatuses to interpret images; comparative use of words and pictures in fictional storytelling; and image frequency and variety. The implications of this shift are evident in three special *ILN* items: the *Coronation Procession Number* (1902), "Stories Without Words" (1906), and "Fairy Stories by Photography" (1907). Relying on images and other non-verbal modes of expression to convey meaning, these three special features simultaneously showcased and propelled the illustrated magazine's development as a distinctive medium. Through visual innovation, highlighted by supplemental verbal commentary, the early-twentieth-century *ILN* invoked readers' technological imagination to consider how illustrated journalism uniquely mediated the modern world. The last of my case studies, "Fairy Stories by Photography," shows how this cultural work was augmented by aesthetic intermediality. This feature foregrounds the interconnectivity between illustrated news weeklies and other forms of expression, ranging from scrapbooks to film. My analyses of the *Coronation Procession Number*, "Stories Without Words," and "Fairy Stories" demonstrate that the popular illustrated periodical's second birth underwrote readers' increasing capacity to recognize that a periodical's material production mediated its aesthetic affordances and, in turn, its representations of culture. At the turn of the twentieth century, then, medial awareness became part of readers' technological imaginary, equipping them to scrutinize how the physical characteristics of periodicals and other media conditioned popular culture representations.

Late-Victorian New Media and the Illustrated Magazine

A defining feature of the turn-of-the-century media milieu was an influx of multimodal, mechanical media, including the hand camera, gramophone, film, and radio. Unlike print, these media did not inscribe, store, and disseminate written text language. They therefore did not

conform to existing means of expression, as Friedrich Kittler observes (*Gramophone* 143). Until the nineteenth century, Kittler contends, people viewed the discursive field as "the spiritualized oralization of language": language was synonymous with a transcendent orality. Writing, though subservient to this orality, was the only channel for processing and storing linguistic information (Winthrop-Young and Wutz xxiv). Kittler does not address the position of the pictorial in relation to this model of expression but, as John Guillory notes, the idea of meaning as transcendent and spiritualized informed the rubric of mimesis that informed all the arts (321). Late-Victorian new media did not fit within this rubric. The words of a printed text gestured toward symbolic meanings, whereas new media such as the gramophone and film functioned by recording and expressing physical phenomena as sensory data (Kittler, *Gramophone* 3). The new media effectively denaturalized the writing process, reducing it to one of many forms of data recording and storage, and challenged the rubric of mimesis with an alternative rubric of communication (Guillory 347). How a cultural expression imitates life (or other expressions, such as literature and art) therefore becomes less important than how it circulates information.

This challenge to pre-existing views about communication galvanized another defining feature of the turn-of-the-century media milieu: a turn to the conceptual awareness of mediality. As new media remediated cultural expressions that previously existed in print and oral forms, they raised collective awareness of communication's materiality. This change of perception engendered the conception of communication media that became prevalent in the twentieth and twenty-first centuries (Guillory 347). Indeed, the *Oxford English Dictionary* documents various late-nineteenth-century uses of the term "medium" to describe the materials of a creative or communicative technique and signify a channel of communication ("medium, *n.* and *adj.*"). In the twentieth century, the *OED* added the two definitions of medium that have become the most

widely used in popular Western discourse: "Any of the varieties of painting or drawing as determined by the material or technique used"; and a "channel of mass communication, as newspapers, radio, television, etc." (Bradley; "medium, *n.* and *adj.*"). Taken together, says Guillory, these definitions of media describe "a domain of cultural production that assimilates the traditional fine arts to the larger category of what later comes to be known as mass communication" (348).[5]

The increasing medial awareness of readers and audiences was due not only to new, non-print media, but also to cultural attitudes. Nineteenth-century popular culture involved the proliferation of constructed images. As Kate Flint points out, it also reflected an imperialist impulse to classify bodies and behaviours, making all phenomena visible. Both facets of society underwrote increasing attention to mediality at the turn of the century. New media extended Victorian efforts to make all things legible and knowable by articulating the mediating stages of data inscription, storage, and circulation (Flint 14).

Late-Victorian illustrated periodical practices also contributed to readers' increasing medial awareness. Cultural attitudes toward pictorial communication became more complex as the variety, methods, and subject matter of mass image reproduction expanded. As I discuss in my Introduction, pictorial journalism initiated readers' media literacy by showcasing periodicals as manufactured objects that exhibited traces of their production. Articles on periodical production encouraged readers to view these traces as part of a periodical's meaning, implying that the technologies of production conditioned that meaning. Kittler does not recognize

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[5] Guillory points out that the *OED* offered a third use of "medium" at the turn of the century: to describe a communicant with the dead. This use of the term is peripheral to this study, although media scholars such as John Durham Peters have addressed the relationship between nineteenth-century communication technology and spiritualism. See "medium, *n.* and *adj.*," *Oxford English Dictionary*.

illustrated journalism's role in the new media milieu, positing a technological and ideological rift

that divides "new" mechanical media from "old" print media—including periodicals—perhaps

because, as Sean Latham contends, periodicals so successfully "masquerade as books"

("Affordance and Emergence"). However, Kittler's theory has applications in periodical studies;

for example, Laurel Brake has used it to analyze journalism networks that were constituted by

"hard-wired discourses" embedded in the material characteristics of media ("London Letter"

124). Moreover, Latham, Brake, and others have established that a dialogic relationship existed

between periodicals and turn-of-the-century new media. As Anne Ardis argues, understanding

this relationship depends "on scrupulous attention to both the materiality of print and its

intermedial relationships with other communication technologies" ("Toward a Theory").

Gaudreault and Marion's theory of medium development offers a guide for examining the

materiality of the illustrated periodical and its relationship to other media as these evolve over

the nineteenth and early-twentieth centuries. As Gaudreault and Marion show, a medium's initial

birth is only one of several phases of its development. Once it functions within a culture on its

own terms, rather than terms derived from other, pre-existing media, it has achieved its second,

constitutional birth (Gaudreault and Marion 12). Such a process of development is apparent in

the visual transformation of the *ILN* and other popular illustrated periodicals at the turn of the

twentieth century.

The *ILN* and the Text-Oriented Pictorial Weekly, 1842-1885

Gaudreault and Marion propose a three-phase process of medium development that

explains how and why media are gradually constituted, rather than discretely born. Each of the

three phases—appearance, emergence, and constitution—involves different "social agents" (5).

In the appearance phase, a technology integrates with "legitimate types of existing media, practices and genres" for socio-cultural use (12). In the case of illustrated news weeklies, a cluster of processes for illustrated weekly newspaper production constituted this new technology. As a means for large-scale image reproduction, wood engraving was foremost among these processes. In its inaugural address to readers, the *ILN* declared its intention to use wood engraving to intervene in British journalism. Having watched the "progress of illustrative art" for "the past ten years," the *ILN*'s editors deemed this the right moment for "launching the giant vessel of illustration" into the "broadest" and "widest" channel "that it has ever dared to stem." The *ILN* suggests the very words "illustrated news" are tokens of "a fresher purpose" and an "enlarged design" for "the world of newspapers" (1). These turns of phrase suggest a new take on established practices. Indeed, Mason Jackson, an *ILN* engraver and editor, later contended that although the idea of illustrated journalism was "as old as the newspaper itself," it was most fully realized through the *ILN* (*Pictorial Press* 4).

As Gaudreault and Marion point out, a new medium enters an existing media culture; its emergence involves "com[ing] to grips" with the "codes" of established genres, conventions, institutions, and other media (3). During a medium's emergence phase, use procedures derived from pre-established cultural codes shape an apparatus that surrounds the technology, giving rise to a "proto-medium" (Gaudreault and Marion 12). The use procedures that shaped the emergence of illustrated news journalism were, as Peter Sinnema describes them, "a conjoining of forces" that originated in the marketplace, reading culture, print culture, and technological innovation (19). Herbert Ingram and Henry Vizetelly, the *ILN*'s first proprietors, innovatively synthesized existing print codes and conventions. The result was a middle-class weekly that combined text and illustration to report serious news items, supplemented by entertaining diversions

("Illustrated London News," *Waterloo*). The *ILN* promoted circulation, reading, and appropriation practices that adhered to existing codes of periodical culture. Like other weeklies, the *ILN*'s publication schedule, format, and content reflected its status between the dailies and the monthlies (Law, "Weeklies"). It offered more sophisticated visuals than a daily news format could offer,[6] and more up-to-date information about current events than a monthly format could provide. Like other periodicals issued on the weekend, the *ILN*'s Saturday release date made the magazine eligible reading material for Sunday's leisure hours.

In keeping with the conventions of periodical culture, the *ILN*'s weekly seriality shaped its depiction of annual and ongoing current events. For example, the magazine imbued its coverage of the two Boer Wars with continuity in several conventional ways. The world news summaries and illustration commentaries could situate an issue's war updates within the context of previous and forthcoming numbers. The magazine repeated the same title for ongoing or recurring events; the headers "The Transvaal War" and "The Transvaal Crisis" regularly introduced reports on the Second Boer War (1899–1902). The *ILN*'s visual style also gave the paper's representations continuity; often, the same special artist(s) would send multiple field sketches to *ILN* engravers over long stretches on a battlefront (M. Jackson, *Pictorial Press* 328).

The *ILN* also incorporated promotional schemes developed by other magazines. For example, in the 1870s, the *ILN* began to publish special Christmas and Summer numbers, following the examples of other popular periodicals targeting middle-class readers, such as the monthly *All the Year Round* and the weekly *Graphic*. The *ILN* similarly followed the widespread practice of including supplemental, full-page or double-page images designed to be pulled out

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[6] Print technology did not make a daily illustrated paper possible until 1890, when the *Daily Graphic* launched (King, "Daily Graphic").

and appropriated by readers. Unlike the separate Christmas and Summer numbers, which both subscribers and non-subscribers could obtain, the supplements were only available to readers who subscribed to regular issues, and they thus added incentive for subscription.

Although the *ILN* inherited many conventions of Victorian journalism, its editors considered its pictorial approach ground-breaking because the magazine championed the representational fidelity of visual storytelling. As Andrea Korda notes, the *ILN* presented its illustrations of contemporary events as "objective transcription[s] of reality" (22). Periodical scholars such as Richard Altick, Patrick Collier, and Sinnema hold that it was the first weekly to subordinate text to image (Altick 344, Collier 488, Sinnema 15). Certainly, the Victorian *ILN* made much more frequent and innovative use of images than previous papers (except for the satirical *Punch*, established one year before the *ILN*). The magazine's careful attention to visual details, image reproduction, and verbal accompaniments for illustrations indicate that pictures carried epistemological weight. The *ILN* also participated in broader visual culture, cross-pollinating with other pictorial media such as paintings, public spectacles, and photography (Korda 21, Thomas 3-4, Richards 24). Indeed, the *ILN*'s role in visual culture was significant enough to prompt rebuke from William Wordsworth in a sonnet, entitled "Illustrated Books and Newspapers," which he wrote in 1846, four years after the *ILN* began, and published in 1850. In the poem, Wordsworth criticizes illustrated journalism as "a backward movement" in which poor "prose and verse" enlist "dumb Art" to pander to the tastes of "this once-intellectual Land"—in other words, to appeal to the sensibilities of readers who lacked advanced education (Wordsworth 40).

Despite championing pictorial communication, the *ILN*'s text-to-image ratio and its reliance on verbal apparatuses to contextualize its pictures demonstrate that the magazine

privileged the written word as the primary mode for communicating information about topical

events and culture. Until the end of the century, the *ILN*—and other illustrated news weeklies

that followed its lead—remained within an intermedial field determined by journalistic

conventions privileging the written word. This verbal orientation derived partly from limitations

of printing technology, and partly from socio-cultural conventions. In general, educated readers

considered words superior to images. Victorian culture was highly visual, but class-based

educational bias supported the written word's status as a primary means of communication.

Indeed, in "Our Address," the *ILN*'s own descriptions of the relationship between words and

pictures capitulates to this bias. The article frames the confluence of image and text as a wedding

in which "Art" becomes "the bride of literature" (1). This figure bestows supreme

communicative status on the written word, enforcing a textual patriarchy.[7] From this perspective,

images re-presented or accompanied information that was pre-formulated in verbal form. As

long as images served merely to supplement text, illustrated journalism remained a derivative

medium—what Gaudreault and Marion describe as "a simple auxiliary to existing genres" (12).

Viewed through the lens of Gaudreault and Marion's theory, the relationship between

images and texts is key to the illustrated periodical's development from derivative proto-medium

to non-derivative medium in the late-Victorian period. Investigating aspects of the *ILN*'s change

from a verbal to pictorial orientation as evidence of this process, I reveal insights about reader

engagement and the illustrated periodical's status in turn-of-the-century mass culture.

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[7] The *ILN*'s marital metaphor participates in British print culture's longstanding practice of
gendering image and text, as Lorraine Janzen Kooistra and others have documented (see *The
Artist as Critic*).

As a method for comparing the magazine's reliance on verbal and pictorial modes of expression, I have quantified the amount of physical page space that pictures and letterpress respectively occupied in a series of samplings over the crucial decades of transition, 1880 to 1907. The results indicate that this ratio markedly changed during the period of the *ILN*'s second birth. The spatial ratio of letterpress and images can be roughly tracked by documenting the percentage of pages in which images occupy at least half of the space (figure 3).[8] In the *ILN*'s inaugural number of May 14, 1842, images occupy at least 50% of page space in only 19% of the number's 16 pages. Most of the *ILN*'s pages are therefore spatially dominated by text. My random sampling of the editorial content of regular *ILN* numbers from every decade (i.e. non-supplementary, non-special weekly issues) demonstrates that the spatial presence of pictures in the *ILN* increased significantly over the course of the century. Four decades after the ILN appeared, it was beginning to undergo a second birth. By the 1880s, the proportion of image-to-text had almost equalized. In a sample number from January 10, 1880, images occupy at least 50% of page space on 42% of the number's 24 pages. All 42% of these image-heavy pages are exclusively pictorial: at this stage of its development, the *ILN*'s printing technology allowed for large pictures, but these were often segregated from text for printing ease.

Ten years later, images predominated in the pages of the *ILN*. In my sample number from January 11, 1890, pictures occupied at least half of the page in 63% of the number's pages. By this time, the *ILN* frequently integrated photomechanically reproduced and wood-engraved pictures inset in various ways in columns of type. Even the text-heavy pages often included one

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[8] Where possible, these percentages include advertisement pages (some of which are chiefly textual and some of which are chiefly visual), because the advertisements, like other magazine contents, conveyed cultural information. Unfortunately, advertisement pages are not consistently included across all available bound volumes of the *ILN*. However, this inconsistency does not detract from the general pattern evident in the statistics.

or more illustrations. The greater frequency and page occupancy of images attest to the *ILN*'s

increasing reliance on the visual representation of news topics, as well as its increasing use of

pictorial advertisements (which I discuss in more depth in Chapter Two). By the turn of the

century, pictorial matter eclipsed text on the printed pages of a weekly issue. In my sample

number, January 13, 1900, images occupy at least half the space in 76% of 38 pages. The

presence of visuals increased throughout the early years of the twentieth century: in the number

for January 12, 1907, for example, images occupy at least half the space in 85% of 40 pages. We

can interpret the marked increase in the *ILN*'s visuality between 1842, when only 19% of pages

were substantially pictorial, and 1907, when 85% of pages were substantially pictorial, as

evidence of the news weekly's transition from emergence to constitutional second birth.

Tracking the *ILN*'s use of verbal apparatuses to support reader interpretation of images

offers another way to trace the magazine's development toward a second birth. Throughout the

nineteenth century, *ILN* images appeared within a contextual verbal framework that typically

included a headline and a caption. An issue's top editorial, news, and supplemental images, often

showcased as full-page pictures, required an even more substantial textual apparatus in the form

of an explanatory article. These appeared as early as the *ILN*'s first year (for example, "Our

Illustrations of the Afghan War," 11 June 1842). Even after the magazine's second birth was

underway in the 1880s, and pictures began occupying more space than letterpress, the *ILN*

continued to rely on such explanatory summaries to supplement its visual information.

In the 1890s, these were formalized into a regular feature, "Our Illustrations"—an

elaborate editorial apparatus to help readers interpret pictorial news and situate it within broader

biographical, geographical, technological, and political contexts. This feature addressed the

events depicted in a number's most prominent pictures, which might be full-page images and/or

a multi-page series of smaller images depicting aspects of the same news item. "Our Illustrations" might include information about the circumstances in which the *ILN*'s special artists produced their sketches; the historical or political significance of the events depicted; and/or more immediate context to help readers understand what was happening in the pictures. For example, during the Second Boer War (1899-1902), "Our Illustrations" often included commentary on the war's developments, as well as narratives of the circumstances resulting in the scenes depicted in the *ILN*'s pages. The September 9, 1899 iteration of "Our Illustrations" explains the South African Republic's ongoing preparations for battle. The article outlines the typical conscription and training process, mentioning details that appear in a double-page illustration of conscripted soldiers meeting on horseback in a marketplace ("The Crisis in the Transvaal" 358-59). The article mentions that this illustration exemplifies the government's efforts to "muster" troops ("Our Illustrations: Crisis" 346). It oscillates between general observations about the war and particulars of the illustrated scene, encouraging readers to interpret illustrations as faithful depictions of specific events and symbolic representations of larger patterns beyond the documentary scope of a pictorial weekly. The article also provides more detailed information about the illustration's temporal, geographic, and political contexts than the double-page image's caption can provide. "Our Illustrations" reveals an underlying logic at work in the *ILN* for most of the nineteenth century: the larger the visual range and detail of an illustration, the greater the verbal apparatus required for its interpretation. However, this logic was already waning by the time "Our Illustrations" was formalized in the early 1890s: the increasing predominance of images was not accompanied by a corresponding increase in verbal apparatuses per number. Notably, "Our Illustrations" soon died out, disappearing from the *ILN* in 1903.

The *Coronation Procession Number*: Showcasing the Spectacular

This material evidence shows that the *ILN*'s reliance on letterpress to aid pictorial interpretation gradually diminished at the turn of the twentieth century. The magazine increasingly used images to convey most of the information, with text playing a comparatively minor role. The *ILN*'s *Coronation and Procession Number*, published August 14, 1902, exemplifies this shift. This issue undermines established journalistic practices by not using extensive verbal apparatuses to aid interpretation of complex images. The *Procession Number* documents the coronation of King Edward VII on August 9, 1902, serving as a counterpart to the *ILN*'s *Coronation Record Number*, published June 9, 1902. Both special coronation numbers followed precedents established in the *ILN*'s lavish Royal Jubilee numbers of 1887 and 1897; however, the Edwardian coronation numbers relied more on non-verbal modes of expression than their predecessors. The 34-page Jubilee number of 1887 was similar in format to Summer and Christmas special numbers, interweaving long columns of text with images ranging from small initial letters to full-page portraits and advertisements. The 58-page Jubilee number of 1897 was a more elaborate publication, combining colour decorations and illustrations with full pages of text. Both Jubilee special numbers were retrospective in nature, recounting Queen Victoria's life and reign. The 1902 *Coronation Record Number* for King Edward similarly celebrates a major royal event with a history of British coronation and overview of its ceremonies.[9] Of the four commemorative publications, the *Coronation Procession Number* offers the most extensive on-site reporting. The *ILN* documented the events of the 1887 and 1897

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[9] The *Coronation Record Number* was released to coincide with the original coronation date, June 9, 1902; illness delayed the King's actual coronation by two months.

Royal Jubilees in regular numbers published separately from the commemorative special numbers. In contrast, the 1902 *Procession Number* combined the *ILN*'s visual news reportage techniques with pictorial commemoration using an artistic illustration style which, by the early 1900s, was usually reserved for non-news features such as fiction and supplements. This special publication further departed from *ILN* conventions by using minimal letterpress: only titles and captions added verbal context to the chiefly pictorial representations. The *Procession Number* thus showcased not only King Edward's coronation, but also the *ILN*'s transition away from the letterpress orientation of Victorian print journalism.

Under a blue and red cover, the *Procession Number* is made up of 24 full-page illustrations, bookended by advertisements and concluding with a double-page, pull-out image. Image titles and captions of a few explanatory lines constitute the only text in the otherwise wholly pictorial contents. Every halftone reproduces tonal artwork. The first page of contents boasts that these images are the work of the *ILN*'s top special artists: "NOTE.—The Illustrations for this Number have been specially drawn by R. Caton Woodville, A. Forestier, Ralph Cleaver, T. Walter Wilson, R.I., S. Begg, A.M. Faulkner, Allan, Stewart, and others, our Special Artists in the Abbey and on the line of route" (1). The artists also signed each image, sometimes prominently. By 1902, photographs reproduced by the halftone process had become the magazine's primary image type; the *ILN*'s choice to report on a news story exclusively through artist-rendered images at this time aesthetically conveyed the historic event's import and linked the traditions of Britain's monarchy to those of its popular print culture.

Each page of the *Procession Number* depicts a stage of the Edward VII's procession from Buckingham Palace to Westminster Cathedral, his coronation at Westminster Abbey, and his triumphant return to the Palace as Britain's formally inaugurated Sovereign. Titles and captions

supplement the pictorial information with additional temporal and geospatial context. The illustrations draw attention to the most important figures and activities of each scene through detailed documentation, particularly of faces, clothing, setting architecture, and ritual accoutrement such as the royal orb, staff, and crown. Coronation ceremony images display the faces of the King and the Queen Consort in careful detail. A title and a few sentences below each illustration explicate features of the image that may otherwise not be obvious to readers. For example, the image on the third page, by Richard Caton Woodville, depicts a royal coach surrounded by guards on horseback; against a backdrop of trees, foot soldiers stand at attention nearby (figure 4). The image title offers context for this scene and names the carriage's invisible occupants: "The Start of the Coronation Procession: Their Majesties in Their State Coach Leaving Buckingham Palace." The subsequent caption identifies the groups surrounding the coach as a "bodyguard of Colonial and Indian cavalry and the first division of the Sovereign's escort of Royal Horse Guards" (3). Such supplementary information guided readers' focus as they explored the pictures. The captions consistently emphasize social status, signaling the importance of individuals and groups by listing their complete titles. The images reinforce the *Procession Number*'s focus on the nation's aristocracy and its religious and political leadership, depicting these people in detail but rendering anonymous guards and crowds as vaguely homogenous. Through such visual rhetoric, the *ILN* underscores one of the coronation's major cultural functions, as an exhibition of the power of the monarchy and a celebration of the British empire.

Although pictorial expression dominated this number's format, the verbal supplementation of the captions indicates that some information, such as context and non-visual sensory details, was best articulated in words. Underneath an image by Allen Stewart depicting

Lord Kitchener taking part in the post-coronation parade, the caption mentions that Kitchener received a "magnificent ovation" from the crowd. The *ILN* reinforces the special number's imperialist subtext, interpreting this ovation as evidence of popular "approval and gratitude" for the commander's "long and arduous labours in South Africa" (i.e. his role in the Boer Wars) (20). The text underneath the image of the departure from Buckingham Palace reports that the stage coach was "drawn by the King's famous eight cream-coloured horses in their gorgeous trappings of scarlet and gold" and that, as the procession began, a twenty-one-gun salute "thundered from the battery stationed in the Park" (3). Other captions describe the "boom of salute from the Tower," cheering multitudes, and trumpeting fanfare (4, 9). Buttressed by these captions, the images present an impressive spectacle of imperial power in which crowds rally around prominent agents of the British empire.

The *ILN* also used letterpress to make the *Procession Number*'s visual stories tangible approximations of firsthand experience. The captions situated the images in relation to urban streets and landmarks that were familiar to many *ILN* readers. For example, the caption for an image by Woodville of the coronation procession's aides-de-camp reads, "The Nobility of India in the Empire's Coronation Procession: The Indian Honorary Aides-De-Camp to the King Passing Up St. James' Street… This drawing was made from the stand in front of the Royal Societies Club" (21) (figure 5). The picture depicts six men on horseback, looking soberly at the crowd beyond the frame as their horses move slowly in the procession. Londoners could draw on their own visual knowledge of St. James' Street to reconstruct this stage of the procession, albeit through the gaze of the *ILN*'s special artist looking out from the Royal Societies Club. The caption for this image informs readers' interpretive point of view in other ways as well: it indicates that the pictured aides-de-camp are notable for their "political significance" as well as

their "outward splendour" (23). Although the caption does not spell out this significance, the interacting text and image imply that the presence of Indian nobility testifies to Britain's imperial prestige. The three central figures have visibly darker complexions and wear different regalia than the other men on horseback who participate in the procession; their appearance indicates that these are the "nobility of India" mentioned in the image's caption. Clothes and skin tone distinguish the three figures from the men surrounding them, but their formal appearance, alert posture, and facial expressions align them with these other members of the procession. All of the image's figures adhere to a formal, disciplined uniformity of order that undergirds the coronation procession—and, in many ways, the British imperial project.

A promotional page at the end of the *Procession Number* stimulated readers' medial awareness by drawing attention to the number's storytelling techniques. The page functions as both supplement and advertisement, offering a final overview of the *Procession Number* while encouraging readers to purchase the complementary *Coronation Record Number*. The supplement describes the *Record Number*'s mode of expression as "a popular and interesting pictorial method." This designation also applies to the *Procession Number*, as the *Record Number* is much like the *Procession Number* in format but is longer, at 81 pages, and incorporates more letterpress, including several pages narrating coronation history.

The "popular and interesting pictorial method" used by the *Procession Number* epitomizes some of illustrated journalism's longstanding techniques. It assembles detailed news images developed by special artists with additional context documented in titles and captions. The sequence of well-crafted images records the sequence of the coronation procession. Concise captions evoke multiple senses (particularly aural) and place readers within a familiar urban landscape. At the same time that it establishes a high watermark of Victorian illustrated

journalism, however, the *Procession Number* also evinces the visually oriented, multimodal

storytelling that was gaining prominence in regular numbers and transforming weekly illustrated

news practices. Notably, the number did not require a text-heavy editorial apparatus akin to the

"Our Illustrations" feature of the 1890s. Although the captions provide some contextual

information, they also encouraged readers to attend to pictorial details and relate the illustrations

to their own embodied visual experience. The number's opening and closing pronouncements

drew readers' attention to the confluence of reproduction methods and journalistic practices that

produced it. The *Procession Number* both responded to and stoked a popular enthusiasm for

visual culture, showcasing a public spectacle in a format that was itself spectacular to advance

illustrated journalism's visual mandate. Like many spectacles, this number self-referentially

signposts its sophisticated use of images, increasing the visibility not only of the *ILN*'s pictorial

news, but also of visual storytelling itself.

"Stories Without Words" and the Disappearance of Illustrated Fiction

The dominance of visual storytelling in the *Coronation Procession Number* in 1902 and

the demise of "Our Illustrations" in 1903 suggest that, by the turn of the century, illustrated

journalism's readers no longer required advanced verbal apparatuses to interpret images. For a

time, "Our Note Book" absorbed the other contextual functions of "Our Illustrations" by

including condensed overviews of the historical, political, or cultural context of a number's most

prominent image series. However, by 1907, "Our Note Book" had largely ceased to offer

commentary on the *ILN* pictures. For most news images from 1903 onward, titles and short

captions offered adequate verbal supplements to aid a reader's visual interpretation. The pictures

themselves conveyed much information through visual detail and their proximity to related

contents. Where an image may have lacked meaningful context on its own, the *ILN* used layout strategies such as placing the picture close to another pertinent news item. For example, a page of the April 13, 1907 *ILN* presents a wash-drawing portrait by Samuel Begg depicting a cabinet minister, Lewis Harcourt, addressing the House of Commons, surrounded by a border containing pen-and-ink sketches cataloguing his various physical poses at the scene of his legislative duties (figure 6) (549). A brief caption describes Harcourt's position within the cabinet. Across from this page, a snippet of "The World's News in Brief" verbally introduces the new cabinet minister by declaring, "Mr. Lewis Harcourt has disproved the popular belief that a humorous speaker can never get on in the House of Commons." The remainder of the snippet does not unpack this declaration, instead praising Harcourt's leadership abilities and noting that he has "followed the prevailing fashion of marrying a beautiful American" (550). The lack of additional verbal information about Harcourt's "humorous" speaking meant that readers had to depend on the image on the facing page to interpret the first sentence of the news item. Without explicit pointing, then, the snippet and the illustration evidently inform one another: the tidbit from "The World's News in Brief" offers context about the picture of the new cabinet minister, while the picture conveys how Harcourt's body language is amusing—something that cannot be captured in a few lines of copy.

Tracing the comparative roles of images and text in the *ILN*'s fiction offers another way of profiling the magazine's transition to a constitutive medium. The *ILN* was "among the most prestigious metropolitan outlets" for illustrated serial and short fiction between the early 1880s and the turn of the century (Law 5). Fiction typically occupied two full pages or six columns of letterpress, interspersed with up to three illustrations that took up 10-40% of the page space allotted to this feature. Some illustrations doubled as title headers that incorporated the title's text

in a relevant landscape or background that might be populated by the story's characters. Other illustrations depicted key moments in the story, such as a first encounter, a conversation, or a confrontation. A caption from the story's text appeared below each picture to signal its context; on their own, these images are semantically cryptic, yielding little information about the story's plot unless read in tandem with verbal narrative. For example, F. H. Townsend's illustrations for "The Planters," by Shan Bullock (1897), depicts an expressive trio of characters without suggesting the nature of their fraught interactions with one another (figure 7). Townsend's illustration encapsulates the social dynamics between its three main characters and visually reinforces the emotional distress of Lizzie, the female figure in the foreground. Lizzie invites sympathy as she stands apart from her male acquaintances and yearningly looks off into the horizon, past the reader's gaze (Townsend 415). However, readers will not discover enough information in this illustration to decipher the expression on Lizzie's face. Without a caption linking each image to a specific moment in the story, the significance of the illustrations remained opaque. Only by reading the letterpress can Lizzie's expression be recognized as evidence of her longing for Hughy, another of the main characters, to propose marriage (Ballock 416).

As Townsend's illustration for "The Planters" suggests, that *ILN*'s illustrated fiction consistently privileged letterpress over images. This dynamic may have led to the demise of illustrated fiction as the magazine completed its second birth. In the 1880s and 1890s, the *ILN* published serial and short fiction in almost every regular number, as well as all Summer and Christmas numbers. The magazine's inclusion of illustrated stories became more erratic in the early 1900s. By 1906, fiction required more sustained attention to letterpress from the reader than any other *ILN* feature. The verbal orientation of fictional narrative made the genre

inconsistent with the *ILN*'s changing conventions for expression. Tellingly, the *ILN* last published fiction in a regular number at the end of December 1906, right before the aesthetic transformation unveiled in the January 5, 1907 number. We can read the disappearance of illustrated fiction from the *ILN* in January 1907 as a sign of the magazine's shift away from a verbal orientation. Visual storytelling now dominated over verbal narrative in the magazine.

While text-heavy short fiction was on the wane in the *ILN*'s regular numbers, "Stories Without Words," an item in the 1906 Christmas number, modeled an alternative approach to fiction that aligned with the magazine's increasing use of visual, multimodal storytelling. Although its approach to fiction was not adopted in regular numbers of the *ILN*, "Stories Without Words" presents instructive evidence of how a visual orientation prompted the *ILN*'s staff to push the boundaries of convention—in this case, subverting established rules for constructing illustrated fiction. Like the *Coronation Procession Number*, "Stories Without Words" used interpretive pictorial storytelling techniques that significantly departed from previous periodical conventions, fostering readers' medial awareness in the process. While the *Procession Number* used pictorial storytelling to cover a major news story, King Edward's coronation, "Stories Without Words" used it to reconfigure illustrated magazine fiction. "Stories Without Words" deployed the recognizable talents of the *ILN*'s short fiction authors and artists to showcase a series of scenes depicting adventure, mystery, and love plots. Ten full-page images are followed by two pages of notes that correspond to the stories. The titles and captions that appear below the images and the corresponding notes that follow the pictures are written by "famous novelists." These happened to be the era's most recognizable *ILN* fiction authors, including Mayne Lindsay, Flora Annie Steel, Max Pemberton, and Seumas MacManus. Many of the artists who created this special feature's images were also recognizable to *ILN* readers as regular illustrators of its

fiction. These artists include W. Russell Flint and Gunning King, as well as Caton Woodville and Forestier, who also illustrated the *Coronation Procession Number*.

Like the short story illustrations in the *ILN*, the images of "Stories Without Words" are tonal artworks reproduced by the halftone process. Each one depicts a salient moment of action or discovery. For example, the first page of the series displays Woodville's dramatic picture of sailors trying to free their boat from the clutches of a frozen sea. The page's header, "Walter Wood's Suggestion for a Story Without Words," appears in bold above; the image title, "Foiled by King Frost," and a caption appear below (20) (figure 8). A chaotic jumble of bodies in action is the focus of Woodville's picture; the sides of the boat appear near the image's periphery, and another vessel is visible in the top right corner. Little image space is devoted to the sea itself, although the strange tilt of the boat, relative to the other ship and the frame of the image, suggests a violent storm. More prominent than the sea is a thick layer of ice that has covered the boat's entire surface in treacherous-looking shards. This ice appears to be the immediate impetus for the chaotic action of the six figures in the image's foreground. Their focused, slightly fearful facial expressions are only partly visible, drawing the focus of readers toward their body language. The men struggle with the boat's frozen wheel and tackle, pushing, pulling, and wielding axes to free their vessel from the ice. This ice is particularly prominent in the bottom portion of the image, where it appears to subsume not only the boat's exterior, but also the legs of a crewman who, as the largest figure in the image, offers a compositional focal point. Another sailor holds a steaming bucket, poised to counteract as the ice threatens to envelop this figure. The interaction of the two men encapsulates the dangerous conflict between humanity and natural phenomenon—personified, in the picture's title, as King Frost—that is thematically central to this image.

The notes appearing after the images in "Stories Without Words," which take the same title as their corresponding images, supplement the pictures' visual narratives with fragmentary verbal narratives. Some notes summarize the stories in brief. Others develop a narrative for a paragraph, only to leave it dangling. A few simply describe the pictured scene or narrate the events leading up to it. The note for "Foiled by King Frost," written, as the header for this image suggests, by the author and journalist Walter Wood, offers a narrative fragment that begins at the moment depicted in the image and reveals the conclusion to its central conflict (29). The note takes the point of view of a crewman on the steamboat depicted in the upper right corner of the picture, and it relates the struggle of the smaller ship's crew to wrest it free of ice and reach the safety of the narrator's vessel. The small ship has almost reached the steamboat when the "towering, broken sea advances" to overcome the vessel, and the narrator dramatically concludes that "Death, whose pace is swift… has run the faster race" (Wood 29). While Wood presents readers with the story's conclusion, his note leaves much of its exposition and rising action to the reader, including only a few details that suggest context for the circumstances—for example, the sea is described as the "Dogger," which may be shorthand for the Dogger Bank of the North Sea. The note takes a different point of view than the picture. While Wood focalizes the story from the perspective of a rescuing crewman on the steamboat, Woodville centres the action on those in the frost-gripped ship. Readers had ample visual information with which to imagine their own narrative counterpart to Wood's note, taking the perspective of one of the ill-fated individuals on the icy ship. Wood's note thus supplements Woodville's image without over-determining how readers could interpret it.

Like the *ILN*'s illustrated fiction, "Stories Without Words" presents images of pivotal narrative moments, reproduced from tonal artwork by the halftone process. Additionally, many

of the same *ILN* contributors were responsible for content in illustrated fiction and "Stories Without Words." However, although image type, style, authorship, and function made for continuities between the *ILN*'s short fiction and "Stories Without Words," the latter flips the dynamic between words and pictures. In "Stories Without Words," the text illustrates the image, rather than the other way around. Its full-page pictures precede the "Notes" and take up more page space by a ratio of five to one. Even the pages of notes have significant visual elements in the form of ornamental headers and decorative borders. The presentation sequence and the relative page space of letterpress and image reinforce that, as the feature's title suggests, pictures are the main means of expression for the stories. The ten-page image series requires no textual introduction aside from a simple heading: the first image constitutes the first page, introduced by "Walter Wood's Suggestion for a Story Without Words" (20) (figure 8). Readers had to infer the feature's logic by perusing the image series and by heeding an instruction at the end of each image caption to see a corresponding note on a subsequent page.

In this way, "Stories Without Words" significantly differed from the *ILN*'s fiction. In fiction, the illustrations piqued a reader's interest, suggesting excitement and drama without giving the story away. Using the caption of each image as a guide for locating the pertinent moment in the story, a reader had to engage with the text to interpret the illustrations' significance. In contrast to the illustrations for *ILN* fiction, the pictures of "Stories Without Words" are imbued with more narrative significance: pictorial storytelling is now the dominant mode of expression. These images are interpretively rich, enticing readers with many narratively suggestive details. Letterpress is demoted to a supplementary mode of expression: each image's meaning has only slight dependence on the verbal support offered by the title captions and following notes. Indeed, the relationship between the feature's two parts—the images and the

notes—echoes the relationship between "Our Illustrations" and news images in a regular *ILN* number. "Our Illustrations" added context to news images and offered an interpretive key. The notes for "Stories Without Words" similarly inform the visual storytelling. However, because the images appear before the notes, readers (at least, those who read the pages in a conventional sequence) had an opportunity to rely chiefly on visual representation to inform their interpretation.

"Stories Without Words" facilitated readers' medial awareness in two ways. First, by flipping the conventional dynamic between text and image, the feature defamiliarized illustrated fiction, prompting readers to reassess the relationship between words and images in this periodical genre. Second, the separation of pictures and textual apparatus also contributed to readers' medial awareness. Parsing the verbal and pictorial constituents of storytelling effectively made each mode's affordances more visible to readers. While the notes provided background context that the images could not easily include, such as information about earlier or later events, the pictures provided most of the expressive details, such as tone and characterization, that shaped the stories.

"Fairy Stories by Photography," Intermedial Hybridity, and the *ILN*'s Second Birth

The change in number and type of images used by the *ILN* offers additional indication of the magazine's constitutive rebirth as a visual medium. Between 1880 and 1907, the number of pictures dramatically increased. My statistics on image types, taken through random sampling of issues during this period, indicate that their increase was due to the *ILN*'s gradual adoption of photomechanical image reproduction processes (figure 9). Line block and halftone images almost entirely displaced wood engraving in the *ILN* and other popular illustrated magazines by

1900. This technological change enabled the magazine to cultivate medium-specific aesthetics, an essential factor in a medium's second birth (Gaudreault and Marion 13). Gaudreault and Marion note that a proto-medium undergoes its second, "distinguishing" birth once it has developed a unique way "of re-presenting, expressing and communicating the world" (3-5). For the illustrated weekly, this process involved not only subverting print culture's hierarchy of text and image, as I have demonstrated, but also developing pictorial practices that took advantage of photomechanical image reproduction's affordances for depicting news and entertainment. Halftone images from photographs became the ILN's preferred form for visual news reporting, although line-block images continued to relay important news about spontaneous events. The *ILN* also used halftone images that reproduced artwork for certain kinds of content, particularly non-news entertainment features. Whether for news events or entertainment, the *ILN* used photomechanically reproduced images to convey both immediacy and mediality. These capacities sometimes contradicted and sometimes complemented one another; both were major facets of the aesthetic specificity that the *ILN* developed during its second birth, and both engaged readers' technological imagination.

While all types of halftone prints appealed to *ILN* producers and readers, halftones from photographs emerged as the preferred image form in the early twentieth century. Tom Gretton estimates that by 1900, halftone images made up 93% of all the *ILN*'s pictures; in 1910, this number rose to 98% (89). My random sampling of *ILN* image numbers and types from 1897 to 1907, depicted in graph form (figure 9), suggests that the majority of halftone images were reproduced from photographs, although halftone images from artwork maintained a modest presence. Figure 9 indicates that the *ILN* made little use of line-block images by the late 1890s, although they appeared more frequently to reproduce news correspondent sketches during

wartime. For example, in 1898, during the Second Boer War, the graph shows a slightly higher ratio of line-block images from special artists' drawings, and a lower ratio of halftone images from photographs. During this period, as Gretton notes, full- and double-page images reproducing work by *ILN* artists were still valued as editorial enhancements and supplements (90). However, photograph-based news images far outnumbered images reproduced from artwork in a typical *ILN* number. By 1906, many *ILN* covers included halftone images reproduced from photographs (Gretton 89). This public-facing display signaled photographic halftones' centrality to the practice of illustrated journalism and to the *ILN* brand.

Halftone images reproduced from photographs did not necessarily undermine the long-championed representational capacities of an *ILN* special artist's drawings, but they offered different advantages and affordances. Because of technological and logistical limitations, news weeklies rarely used photography-based images as a source of visual information about spontaneous or chaotic events, such as battles (Beegan, *Mass Image* 162). Indeed, reproductions of actual battles continued to be line-block and halftone reproductions of artwork, rather than reproductions of photographs, well into the twentieth century (Martin 78). However, the weeklies used images from photographs to document more predictable facets of the news, such as pictures of military encampments, cultural events, and celebrity portraits. Readers perceived both line-block and halftone images as having unique representational authority because photomechanical processes reproduced images of news events rapidly, with limited human intervention. As Lorraine Janzen Kooistra has noted, before the pictorial press adopted photomechanical reproduction on a large scale, those images of current events at which a special artist was not present were often "remediated verbal descriptions, rather than eye-witness reportage" ("Illustration" 118). Once illustrated journals could print photographically reproduced

images, stored visual news data could quickly be reproduced without an intermediate verbal report. Halftone reproduction of photographic images utilized a method of data inscription and storage that readers perceived as complementary to the line-block reproductions of a special artist's rapid, on-site visual reportage. Photomechanical line-block engraving, according to Gerry Beegan, appeared to offer a "direct conduit" for "an artist's individual vision"—including the vision of a special artist on site—by "removing the interpretive hand of the engraver" ("Carl Hentschel"). Used in combination, photomechanical line block and halftone processes closed what Kooistra describes as a "temporal disjunction" between the images and texts of pictorial news during the era of wood-engraved reproduction ("Illustration" 119). The *ILN*'s use of images reproduced by these rapid and direct processes therefore boosted its journalistic authority in the eyes of readers.

While the *ILN* deployed halftone and line-block images to reinforce the sense of proximity to world events conveyed in its news reports, it also, as Beegan observes, used them to invoke the hybridity of modern society. The use of multiple image and reproduction types resulted in aesthetic assemblages that reflected the diverse socio-technological "amalgamations" of modern life (Beegan 9). In this way, the *ILN*'s cultivation of unique codes of expression imbued its content with a contradictory but ever-present subtext of immediacy—direct or near-direct contact between reader and subject matter—and mediality—the aesthetic conditioning of this contact by industrial practices. Both aspects of the *ILN*'s visually oriented, multimodal storytelling implicate modernity. The former aspect evokes the simultaneity made possible, in the nineteenth century, by rapid transit and communication technology such as the railroad and telegraph. The latter aspect evokes the hybridity of late-Victorian culture wrought by industrialization.

In the *ILN*, hybridity manifested in diverse ornamentation styles and images. Reader interpretation of *ILN* contents involved registering the array of image types, whether consciously or unconsciously. These images resonated with other facets of late-Victorian visual culture. For example, in the *ILN* number for January 5, 1907, the ornate header for the "Art, Music, and Drama" page interweaves halftones from photographs and wash drawings to invoke aesthetic authority (figure 10). The header includes the feature title, photographic portraits of some of the week's performing actors and artists, and small, artist-drawn fragments of society scenes set within a decorative frame. The halftone photographic portraits, evocative of cartes de visite, remediate the physical data photographically gathered from actual performances and sittings, evoking a trace of each celebrity's presence. The wash drawings of historical art appreciation relate modern London's arts scene to upper-class traditions, suggesting continuity between *ILN* readers and historical aristocratic audiences. An art nouveau border frames traditional arts appreciation and current arts reviews within modern print aesthetics, emphasizing the *ILN*'s authority on cultural taste. Through such deliberate assemblages of varied images, the *ILN* asserted the illustrated weekly's hybrid "personality" (Gaudreault and Marion 3).

As it conveyed both immediacy and mediality, incorporating a growing number and variety of images in diverse layouts, the *ILN* reconstituted itself as a new medium outside the framework of non-pictorial journalism. As we have seen, the first number of 1907 embodies a significant moment in the *ILN*'s development of unique, hybrid codes of expression. Another telling example appears at the end of 1907, in an item from the year's Christmas number entitled "Fairy Stories by Photography: Grimm Illustrated." This item demonstrates that the *ILN* adopted a hybrid aesthetic in its entertainment contents as well as its news contents. The *Coronation Procession Number* and "Stories Without Words" stimulated readers' consciousness of the

distinct aesthetic affordances the *ILN* engendered as an illustrated periodical. By recognizing the techniques that illustrated magazine producers developed to exploit this pictorial medium, readers participated in the weekly's constitutive development as a new medium. "Fairy Stories by Photography" further advanced this development with hybrid aesthetic techniques that made a spectacle of exploring the magazine's intermediality. Through its use of and relation to other media, "Fairy Stories" encouraged readers to imagine the illustrated periodical as part of the new media milieu.

"Fairy Stories" is constituted by six full-page images that combine halftone images from photographs and artists' drawings to depict scenes from Grimm fairy tales (figure 11). Folk and fairy tales, and the Grimm stories in particular, influenced many nineteenth-century texts and images (Zipes, "Introduction" xviii). In the *ILN*'s "Fairy Stories," each tale's major character is reproduced in halftone from a photograph and appears at the centre of the scene, carefully posed as the focal point of a fantastic tableau. The scene's peripheral characters and background are wrought in a combination of sketched lines and wash tones.

Like the *Coronation Procession Number* and "Stories Without Words," "Fairy Stories" guided readers to regard images as the primary vectors of meaning. Each picture's tableau encapsulates the story at the heart of a fairy tale, and the accompanying letterpress sketches the tale's plot points. The images are not given the titles of their respective fairy tales—for example, "Rapunzel"—but, rather, descriptions of the moments they depict—for example, "The Prince Climbing the Golden Ladder of Rapunzel's Hair" (24). These titles reference recognizable fairy tales while framing the pictures as visually salient moments, rather than condensed depictions of whole tales. The caption under each title summarizes the plot of the depicted fairy tale, but offers

little narrative. Most readers were familiar with these stories. Spared the challenge of piecing together a new narrative, they could attend instead to the fairy tale remediation itself.

The images add emotional depth and semantic texture to the familiar tales. Each scene expresses an aesthetically rich moment that foregrounds important aspects of the tale's story—a prince's desire for beautiful Rapunzel; a sweet protagonist's care for her brother; the weird calm of Sleeping Beauty's enchanted castle; the disparity between a princess's rightful position and her temporary status as a goose girl. Presented with a spare plot outline, a detailed snapshot of a fairy tale, and prior knowledge of the Grimm Brothers' fairy tales, readers had abundant interpretive material.

"Fairy Stories" advanced the illustrated weekly's second birth with a hybrid aesthetic that used halftone images to explore a new kind of intermediality. As Faye Hammill, Paul Hjartarson, and Hannah McGregor note, intermediality, or the "interaction and interconnectedness of multiple contemporary media," is "a central feature" of periodicals (10). Victorian periodicals drew on the practices and remediated the contents of many old and new means of expression, from manuscript illumination to history painting and even other periodicals (Kooistra, "Politics of Ornament" 108; Korda 22). However, photomechanical image reproduction enabled turn-of-the-century illustrated magazines to develop new techniques for adapting practices of and remediating content from other media. According to Gaudreault and Marion, after a medium's second birth, it loses its former, derivative intermediality and acquires one that reflects its new character. The medium "negotiates" this intermediality in "interaction with its own potential" (Gaudreault and Marion 13). "Fairy Stories" assembles images produced from various materials using techniques that evoke both print and new non-print media, and foregrounding these juxtapositions as conditions of interpretation. Through this intermediality, "Fairy Stories" reveals

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that the reborn illustrated magazine occupied a unique place in the new media milieu.

The intermedial character of "Fairy Stories" has its basis in an aesthetic created through the combination of photographs and hand-drawn or painted images, both reproduced by the halftone process. The contrast between the photographed foreground figures and the hand-drawn backgrounds is visually striking (figure 12). The artist, "A.C.T.," touched up some details of each photographed figure's clothing and added shading to integrate these figures in the drawn scenes. However, the dark, heavily graded tones of the figures' faces, skin, and hair are virtually free from such line work, rendering them distinct from the backdrops on which A.C.T.'s pencil has sketched fine outlines and shadows over light gray tones. The materiality of these figures attests to their reproduction from photographs of real individuals. Through their knowledge of illustrated print technology, gained from the periodicals themselves (as documented in my Introduction), readers could recognize this production process.

Other pictorial and verbal characteristics emphasize the hybridity of these fairy story illustrations and boost the visibility of their production history. Under each caption is a brief statement giving information about the staging, model(s), and photographer of the original photograph used for the picture—for example, "Setting by 'The Illustrated London News'; Photograph of Miss Gladys Archbutt by Bassano" (20).[10] The art nouveau borders around the pictures are printed in clean lines of green or red that attest to a different original image type (pen-and-ink) and reproduction method (line block). Perhaps to set off the visual and material differences between the pictures and borders, the decorative figures that populate the line-engraved borders also thematically differ from those of the fairy stories. In these borders,

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[10] The photographer credited for every image, Bassano, also advertised in regular numbers of the *ILN* in 1907, although not in the Christmas number that "Fairy Stories" appears in (see "Bassano Limited" in *Illustrated London News*, 5 Jan. 1907, p. 2).

holiday-themed, classical female figures with oddly wide eyes wind their bodies about the frame; mischievous cherubs dangle mistletoe, empty wine goblets, and wrap their teeth around holiday repast (see figure 11).

As these characteristics suggest, "Fairy Stories" employed hybridity to juxtapose different modes of expression that originated in multiple old and new media, including illustrated fiction, scrapbooks, photography, and cinema. Like the illustrations for Victorian fiction, most of the pictures of "Fairy Stories" focus on moments of interaction between two characters, emphasizing the protagonists' facial expressions and gestures. The "Fairy Stories" pictures also follow a widespread practice in fairy tale illustration by visually constructing alternate worlds, depicting elaborate details that remove the narrative from a contemporary British context (Voysey). The aesthetics of "Fairy Stories" also evoke the medium of the Victorian scrapbook; the pictures of this special article can be classified as photocollage, or the practice of combining photographs with typography and non-photographic imagery (Evans). As Elizabeth Siegel has discussed, photocollage was widespread in Victorian scrapbooking practices. Photocollage creators combined the domestic arts of painting and album-making with the new medium of photography. Indeed, "Fairy Stories" may have invited such individual appropriation; the running title and page layout of the feature's pictures gave readers the option of removing single scenes, perhaps to paste on a wall or reuse in a scrapbook collage, without sacrificing the continuity of the series left behind. When it was first practiced in the mid-nineteenth century, photocollage album-making was chiefly the purview of upper-class women, but by the end of the century it was part of mass culture, appearing "on everything from postcards to advertisements and newspapers" (Siegel 13). Through halftone image reproduction, popular culture proliferated in the composite aesthetic of photocollage and its sibling, photomontage (the practice of

combining photographic figures into one image) (Evans). Turn-of-the-century news weeklies exhibit little use of the photocollage aesthetic, so the 1907 *ILN* Christmas Number's participation in this cultural trend was relatively novel and added to the appeal "Fairy Stories" held for readers.

In addition to illustration and scrapbooks, "Fairy Stories" invoked more technologically sophisticated forms of photographic manipulation practiced by professionals and elite amateurs. Notably, the special feature's pictures have some aesthetic similarity to spirit photography, a late-Victorian practice that simulated the presence of dead people and other supernatural elements that supposedly hovered about a photograph's live subject(s), unperceived by the naked eye (Wojcik 111). The fantastical figures of spirit photographs were often created through double exposure, so that, like the artist-drawn settings and background figures in "Fairy Stories," they appeared lighter and more ethereal than the photograph's sitter. However, while many viewers believed that spirit photography documented real phenomena, the "Fairy Stories" pictures are framed as fictitious (Wojcik 114). In this regard, the special feature resembles the mid-century composite photography of Oscar Gustav Rejlander and Henry Peach Robinson. Rejlander and Robinson assembled figures and sections of multiple photographs to create artistic pictures. Perhaps the most well-known example is Rejlander's "Two Ways of Life" (1858). This allegorical image, inspired by Renaissance paintings of classical scenes, represents two groups of people absorbed in various activities that exemplify vice and virtue. The composite photograph comprises approximately thirty negatives (Rejlander). According to Jordan Bear, both Rejlander and Robinson "wagered their commercial success on the proposition that viewers would be able, and indeed interested, to engage with photography in a way that was predicated from the start upon a recognition of its fundamentally mediated status" (32). They apparently won this wager;

photographers and non-photographers alike viewed their works with great interest in travelling exhibitions (Bear 43). Bear notes that the composite nature of Rejlander's work was a main point of attraction for viewers (43), and that Robinson was successful in part because he gave viewers the opportunity to identify how his images were fabricated (6). The appeal of "Fairy Stories" is similarly due to its visible fabrication. Like the composite photographs of Rejlander and Robinson, "Fairy Stories" engaged viewer interest by reimagining real phenomena in augmented scenarios. Rejlander and Robinson achieved this effect by editing negatives into improbable constructions; the creators of "Fairy Stories" achieved it by incorporating photographic figures into artist-drawn images of fantasy.

"Fairy Stories" offered a site for *ILN* readers to speculate about the illustrated weekly's intermedial potential to merge data photographically inscribed from physical phenomena with fantastic artistry and fairy tales. The hybrid aesthetic of "Fairy Stories" drew readers' attention to its process of adapting familiar fairy tales into photocollage assemblages that combined "the apparently factual medium of photography" with "fictional subject matter" (Siegel 37). Like scrapbook photocollage, "Fairy Stories" used theatrical staging techniques for its scenes (Siegel 37). In mid-century photocollage, such staging evoked tableaux vivants; in "Fairy Stories" it also evoked film. By 1907, when the *ILN* published "Fairy Stories," Britons (and particularly Londoners) of all classes could regularly attend film showings at local shops converted into penny cinemas (Burrows 63, 72). Indeed, a number of turn-of-the-century films were actually based on fairy tales (Zipes, *Happily Ever After* 2-3)—for example, George Méliès' *Cendrillon* (1899) and *Barbe-bleu* (1901). Fairy tales were ideal subjects for new media adaptation because they historically existed through oral retelling and had no single origin or author (Zipes, *Happily Ever After* 3): to remediate a fairy tale was to participate in a longstanding tradition of retelling.

The incentives for a filmmaker to adapt a fairy tale were similar to those for an illustrated weekly. An audience would recognize visual tokens of an already familiar, popular story and thus did not have to struggle to interpret the narrative despite its use of unfamiliar format that used minimal text.

For turn-of-the-century readers, "Fairy Stories" presented a unique platform for reconfiguring established techniques of expression in combination with innovative techniques influenced by visually oriented new media. Producers of new media expressions were drawn to fairy tales because of the opportunity they provided for a medium to draw on its unique capabilities to depict the fantastical and magical. In illustrated fiction, a writer's text and an artist's images wove a world aesthetically distinct from reality. In photocollage, photorealistic elements interacted with figures and settings drawn or painted from imagination. Trick photography and film manipulated records of physical reality to create fantastical scenarios with aesthetically realistic figures and settings. "Fairy Stories" drew on all these aesthetic techniques. At the same time, this special feature positioned the illustrated weekly within the modern media milieu. Aesthetic allusions to illustrated fiction, scrapbook photocollage, photography, and film signalled the *ILN*'s intermediality—its dialogical interaction with other media. However, the *ILN* and other popular illustrated magazines were nonetheless unique in the new media milieu because of their expressive specificity. In their subversion of the text and image hierarchy, they differed from non-pictorial journalism. Unlike smaller, more avant-garde visual periodicals, they exhibited a mass-culture orientation and mass-produced, hybrid aesthetics; and they circulated more widely and dependably than photographs or films.

The *Coronation Procession Number*, "Stories Without Words," and "Fairy Stories" demonstrate that at the turn of the century, illustrated print journalism's mediality was essential

to how it engaged readers and positioned itself within mass culture. The *ILN* engaged readers'

technological imagination to increase their understanding of the illustrated magazine's unique

techniques of representing popular culture. During its second birth, the *ILN* repositioned itself

within the new media milieu, encouraging readers' consciousness of how different material

characteristics and storytelling techniques shaped their interpretation. Consequently, awareness

of mediation became a significant aspect of readers' technological imagination. The visibility of

mediation in turn-of-the-century numbers of the *ILN*—and others like it—created new

possibilities for readers to exert agency. As I will show in the next three chapters, readers'

medial awareness enabled them to scrutinize and respond to an illustrated periodical's aesthetic

strategies with an array of meaning-making tactics.

Chapter Two

Imagining Consumer Culture: Reading Advertisements in the *Illustrated London News* and the *Graphic*, 1885-1906

[A]dvertising has become recognized as a means of communication not only for the conveniences of trade, but for political, lovemaking, fortune-hunting, swindling, and the thousand and one other purposes which are always ready to assert themselves in a large community.

Henry Sampson, *A History of Advertising from the Earliest Times* (1874)

Henry Sampson's comment about advertising's "thousand and one" social functions

reflects the Victorian fascination with its increasingly visible role in popular culture. Ubiquitous

in the public landscapes of late-Victorian Britain, advertisements took many forms, including

sandwich boards, signs, bills, posters, chalked and painted murals, trading cards, leaflets, tram

tickets, and even theatre safety curtains (Hindley and Hindley 10-14). However, few media

brought advertisements into the private sphere. Because periodicals had this privileged access,

they were particularly important for emerging consumer culture's promotion of goods and

services. As I recounted in Chapter One, the images in the editorial contents of late-Victorian

illustrated periodicals grew in scale, diversity, and aesthetic sophistication after 1885. The

commercial contents of these magazines similarly underwent an aesthetic transformation. Within

a few decades, the typical advertising page in an illustrated weekly evolved from a block of

dense, minimally illustrated letterpress to an aesthetically diverse bazaar of images and slogans.

Given the increasingly visible cultural importance that Sampson ascribes to advertisements, how

did their metamorphosis impact periodical readers? How did advertising's extravagant aesthetics

enable readers to construct new interpretations of the relationship between print and consumer

culture and exert agency at this intersection?

Taking two illustrated news weeklies, the *Illustrated London News* and the *Graphic*, for my case study, I argue that periodical advertisements played a crucial role in fostering readers' active participation in mass culture between 1885 and 1906. During this period, British popular culture was not only significantly expanding in scale, but also becoming more consumerist. As dynamic interpretive environments, periodicals facilitated advertisers' strategic representations of mass culture, but they also presented opportunities for readers to respond to such strategies with subversive tactics. Through their visual, textual, material, and spatial characteristics, periodicals engaged readers' technological imagination to encourage them to conceive of themselves as consumers of mass culture. At the same time, however, this engagement of the technological imagination created opportunities for readers to exert agency as curatorial and appropriative producers of that culture.

Following Margaret Beetham's ground-breaking analysis of the relationship between context, text, and aesthetics of periodical advertisements in *A Magazine of Her Own?* (1996), periodical scholarship has uncovered many ways in which advertisements' medial particularities were important to their cultural functions and their interaction with editorial contents. Laurel Brake points out that advertisements and other so-called ephemera shaped the unique characters of different literary media (*Print in Transition* 27). The aesthetic affordances of advertisements contributed to multiple ideologies at work on the periodical page. Scholars have mapped how the rhetorics of multimodal advertising in late-Victorian periodicals express issues such as capitalist consumerism, imperialism, and nationalism (Beegan, *Mass Image* 17; Collier 487; Scholes and Wulfman 142). As Robert Scholes and Clifford Wulfman demonstrate, magazine advertisements show "how the rhetoric of commerce is mixed with that of politics and art" (142).

This chapter examines the multimodal qualities that conditioned a reader's encounter with advertisements and the illustrated news weeklies in which they appeared. Readers possessed a print media literacy by which they could interpret the material traces of a print object's production and situate it in its real and imagined socio-technological contexts. Chapter One's case studies showed that illustrated journalism encouraged readers to interpret its aesthetic elements as technological signifiers, as well as visual and textual expressions of cultural discourse. I now wish to trace the evolving aesthetics of advertisements in the *Illustrated London News* and the *Graphic* to uncover the strategies through which editors and advertisers sought to influence readers' views of consumer culture in illustrated print, as well as the tactical ways that readers could respond to those strategies. Given the prominent place of illustrated news weeklies in late-Victorian popular culture, readers' changing engagement with periodicals had implications for their participation in broader mass culture.

In the previous chapter, I showed how the *ILN* transitioned from a verbal to a pictorial orientation at the turn of the twentieth century. This chapter shows how advertisements played a key role in the magazine's second birth as a medium and its participation in the new media milieu of commodity culture. As Thomas Richards observes, the *ILN* is "the closest thing we have to a concordance of Victorian advertising" (10). As the *ILN*'s closest rival, the *Graphic* (1869-1932) serves as a complementary second source on the aesthetic strategies of advertising in this period. The *ILN* and the *Graphic* enjoyed the widest circulation of late-Victorian pictorial news weeklies. Both magazines were early adaptors of mass print innovations, thus dominating the market for illustrated weeklies well into the twentieth century, despite the growing number of competitors.

Analyzing the *ILN* and the *Graphic* using Michel de Certeau's concepts of strategy and tactic reveals a power dynamic at work in these illustrated news weeklies (xix). The multimodal strategies of advertisements encouraged readers to engage with periodicals as commodities to be momentarily consumed. However, the same aesthetic conditions enabled reader tactics for producing, as well as consuming, periodical meaning. As I demonstrate below, illustrated magazines in the new media milieu enabled what N. K. Hayles calls "hyper-reading": interpretive practices such as scanning, skimming, fragmenting, and juxtaposing (12). According to Hayles, the superabundance of information mobilized in the digital age necessitates hyper-reading (62). However, I consider the turn of the previous century as hyper-reading's moment of emergence; the age of superabundant information began in the late-Victorian period, when the press first proliferated information on a mass scale and print media reached peak cultural saturation (Mussell, *Nineteenth-Century Press* 2; Drucker and McVarish 141). Periodical hyper-reading encompassed a notable set of tactics through which readers could simultaneously consume and produce representations of mass print culture. Ultimately, the dynamic between print advertising strategies and reader-consumer tactics influenced how readers engaged with broader mass culture. Illustrated magazine advertisements facilitated dynamic engagement through which readers became both consumers and producers of mass culture.

Advertising and Late-Victorian Print Culture

British periodical advertising dates back to journalism's early modern origins (Sampson 65-9). Governmental taxes curtailed periodical advertisements from 1712 until the early nineteenth century, but after the British government repealed so-called "knowledge taxes" on stamps, advertising, and paper between 1830 and 1861, increasing periodical size and decreasing

advertisement constraints enabled periodicals and advertisers to established a mutually beneficial

dynamic (King, "Advertisements"; Nevett 223). Advertising profits freed periodicals from

dependence on individual and institutional patrons, and the press became the most important

medium for promoting consumer products. Large advertising profits underwrote press expansion

and innovation.

The quantity and character of periodical advertisements gradually changed as advertising

became more profitable and innovations in print production increased advertisements' visual

diversity. By the fin de siècle, periodical advertising was an industry in its own right; full-service

advertising agencies mediated between periodicals and goods manufacturers (Beegan, *Mass*

Image 17). Major publishers such as George Newnes (the *Strand*) and Arthur Pearson

(*Pearson's*) added advertising managers to their staff to liaise with these agencies, although the

relationship between advertisers and periodicals was not always harmonious (Beetham, *A*

Magazine 119).[11] Advertisers developed marketing strategies that emphasized consumption,

rather than production, and prized innovative promotional techniques over tried-and-true

methods such as repetition (143).

Advertising profitability prompted magazine publishers to conceptualize their

publications as commodities and develop strategies to maximize magazine consumption,

prioritizing what the reading public wanted to know over what it ought to know (Martin 19). To

this end, many magazines adopted techniques from New Journalism, which took reader desire as

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[11] Periodical producers resented the efforts advertisers made to increase their visibility and
advertisers resented the efforts periodical producers made to segregate and tone down advertising
content (Hindley and Hindley 57-8). Dependence on advertising could constrain periodical
content at times, and the dubious, bombastic claims made by some advertisers undermined
periodical authority. However, publishers did their best to maintain advertising standards
consistent with periodical branding, and readers were well aware that advertisements took
liberties with the truth (see Sampson, ch. 7 and 9).

its raison d'être. New Journalism used short, light news pieces, a personal tone, and entertaining images to encourage quick and frequent print consumption. It conveyed aesthetic liveliness through diversely attractive, forceful text and image styles. New Journalism's pioneers began by catering to the working classes—for example, George Newnes's *Tit-Bits*—but print entrepreneurs quickly saw that aspects of it could be implemented to appeal to cross-class demographics (Easley). New Journalism's emphases on personal interest, readability, and aesthetic liveliness thus became defining conditions of the popular magazine as commodity.

In the late-nineteenth century, cultural attitudes toward consumption also changed, particularly among the middle classes targeted by the *ILN* and the *Graphic*. Industrialization transformed the conditions of goods production and distribution: manufacturing growth translated to increased competition that producers addressed through attention to branding. By the end of the century, the dominant retail model had shifted from the small shop, which carried few product brands, to the large department store, which could offer many brands of many goods (Leiss et al 44). Buying goods became a pleasurable performance of social status. In 1899, the economist Thorstein Veblen described this phenomenon as "conspicuous consumption" in his treatise, *The Theory of the Leisure Class* (68).

Through most of the Victorian era, advertisements' invocation of economic exchange associated them with domestic chores and the concerns of the working classes (King, "Advertisements"). As consumer culture transformed shopping into a pleasurable, status-building activity, advertising took on a different set of class connotations. Magazine advertisements celebrated this new culture of conspicuous consumption. Advertisements in the *ILN*, the *Graphic*, and other middle-class weeklies typically promoted "luxury" household goods (King, "Advertising in the *ILN*"). They used various techniques to boost their cultural authority,

boasting of industrial and scientific advances in manufacturing, venerating the relationship between brand name and authentic quality, and hosting visual parades of domestic products. As Richards has demonstrated, consumer culture took its aesthetic cues from performative Victorian spectacles such as the Great Exhibition and the Queen's Golden and Diamond Jubilees, which associated prestige with the display of material abundance (14). Thanks to this emphasis on spectacle, magazine advertisements gradually moved away from heavy copy and sparse stock images in favour of concise slogans, visually distinctive branding, and imaginative promotional displays. The technological developments that my Introduction documents, particularly photomechanical image reproduction, enabled advertisers to take their representations of conspicuous consumption to new heights at the turn of the twentieth century.

Periodical Advertising Strategies

In the first decades of periodical advertising's expansion, regular weekly numbers of the *ILN* and the *Graphic* typically presented all advertisements in the typographically oriented, column-organized formats. As an advertising page from the *ILN* in October 1882 shows, this layout is similar to what we now associate exclusively with classified advertising (figure 13). Such segmented organization restricted advertisement conventions. The relatively few, small graphics used by advertisements on this page are chiefly stock images, rather than unique commodity depictions (Nevett 223). Four separate advertisements for Louis Velveteen appear in the bottom half of the page, illustrating that, due to print production constraints, periodical advertisers had to rely on repetition, rather than variety, for visual efficacy. An aggressive advertiser such as Louis Velveteen could buy multiple spaces in the same column, or even across columns, so that a reader might encounter several advertisements for the same product on a

single page. Other common strategies included repetition of the same advertising copy, or simply repetition of the company name down the page. Relatively few single advertisements occupied more than one column of a page, although the advertisement for Eno's Fruit Salt offers such a case (figure 13). This advertisement repeats the name of its product several times in its text; indeed, although it differs in size from other advertisements on the page, it uses the same promotional techniques, assembling small blocks of promotional copy around a central image of a lighthouse. The image relies on words for its promotional impact; text superimposed on waves breaking on the lighthouse declares that "140,000 persons ever year die unnatural deaths." Above, text inscribed upon the lighthouse indicates that Eno's Fruit Salt is the solution to this "waste of life" (411).

Beginning in the mid-1880s, advertisements began to increase their spatial and visual participation in the *ILN* and the *Graphic*. The number of pages devoted to advertisements increased and single full-page advertisements became more common. Advertising sections also migrated from the front and back of each issue to integrate with editorial contents. At first this occurred through the additional pages of advertisements that followed the main news and event listings of the week. In the mid-1880s, half- and quarter-page advertisements began to share editorial pages with letterpress and pictures in weekly magazines. Thanks to the tandem development of visually oriented consumer culture and mass image reproduction technology, the advertisements that appeared in the *ILN* and the *Graphic* between 1885 and the early 1900s exhibited increasing sophistication. Conventional advertising practices such as the use of stock images and verbal repetition continued into the early twentieth century, but new techniques extended the aesthetic spectrum. Periodical advertisements developed a variety of eye-catching strategies, including headlines set in display type, copy set across column rules, large picture

blocks, and full page displays.[12] By the early 1900s, much advertising used a streamlined, highly

pictorial style that prevailed well into the twentieth century. Advertisements integrated varied

images, catchy verbal slogans and manifestos, striking spatial composition, and otherwise

provocative aesthetic strategies to lobby readers.

These developments in advertisement aesthetics functioned as strategies in Michel de

Certeau's sense of the term. A strategy, according to de Certeau, is a mode of "force-

relationship" that a dominant social power exerts on a weaker "other" based on presupposed

distinctions between proper and improper behaviour (xix). Strategies can be expressed as

representations of the dominant social model. For modern consumer culture, advertisements

strategically reinforced the dominant social model of mass consumerism through their

representations of culture. Kitsch and mélange were two multimodal aesthetic strategies through

which late-Victorian periodical advertisers sought to shape readers' understanding of consumer-

oriented mass culture. Kitsch describes items that imitate the sensibilities of avant-garde art

through gaudy amplification in order to appeal to mass consumers (Glaves-Smith and Chilvers).

Kitsch is a product of the bourgeois consumerism that emerged in the late-nineteenth century.

Richards notes that the hyper-aestheticization involved in kitsch de-emphasizes a commodity's

unremarkable production history and renders it an emblem of spectacular or sentimental

experience (88). Late-Victorian advertisements for Pears' Soap particularly relied on such kitsch

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[12] T.R. Nevett traces these innovations to the 1880s and 90s (223), but they are evident in
working-class magazines from the 1870s onward (Loeb 5). As Andrew King points out,
downmarket periodicals were the first to publish illustrated advertisements because mid-
Victorian advertisers held that visual messaging would be most appealing to working-class
audiences ("Advertising in the *ILN*" 1). Indeed, single full-page advertisements appeared in
working-class periodicals from the mid-nineteenth-century onward. In contrast, full-page
advertisements did not appear in middle-class periodicals until 1875, when the *ILN* permitted
Pulvermacher's Galvanic Chain Bands and Belts to place the first full-page advertisement
(Hindley and Hindley 66).

strategies, hyper-aestheticizing sentimental moments picturing children at play.[13] In an 1891 *Graphic* advertisement entitled "Our Baby," the promotional space is halved, with a halftone print on the left, and typographic copy on the right (figure 14). The picture block uses little text. "Pears' Soap," in rough handwriting, is visible over a pale, angelic child's shoulder, apparently scrawled on one of the dark boulders behind a brook over which the naked child perches. A caption below the image underscores the print's culturally distinctive status: "OUR BABY. From the original picture by the Honorable John COLLIER. The property of the Proprietors of PEARS' Soap" (Pears 120). Beside the image, a flurry of text promotes Pears' Soap in a more conventional, typographical style. Manicules and underscoring compel the reader to heed the text's rhetorical highlights ("HIGHEST AWARDS EVERYWHERE!"). In multiple fonts, the letterpress proclaims Pears' long history and award-winning reputation. While the picture block innovates by aesthetically aligning itself with editorial content and fine art, the typographic section falls back on familiar methods for engaging readers.

The Pears advertisement not only reimagines the product as the catalyst for a sentimental moment—an innocent child bathing in a pastoral setting—but foregrounds its aestheticization of this moment. The advertisement capitalizes on Collier's reputation as a popular Pre-Raphaelite artist, appealing to consumers by declaring the advertisement's culturally authoritative origins— a strategy that Pears first used with "Bubbles," its adaptation of *A Child's World* (1886), a painting by John Everett Millais. For art-based kitsch advertisements such as "Bubbles" and "Our Baby," this strategy meant discarding the enduring importance of the original artworks.

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[13] Advertisers' purchase of fine art copyright and use of adapted images in advertisements had another set of sociopolitical implications. Julie Codell has discussed controversies surrounding fine art's use for advertising and debates about the extent to which artists ought to market their work for mass tastes ("Promoting and Condemning").

Richards holds that kitsch is necessarily of the moment, "figuring all time as potential nostalgia" (90). Where advertisers employed consumer kitsch as a strategy, they capitalized on a momentary value that quickly faded from perception. If the perceived aesthetic value of the sentimental moment depicted in "Our Baby" was enduring, it would conflict with consumerism's continual turnover. The momentary value of this advertisement sat at the intersection of several cultural elements: the Victorian idealization of the "Child of Nature," associated with what critics have termed the cult of the child; Collier's popular appeal as a sentimental genre painter; and the recent trend of adapting artworks into advertisements (Gubar 4). The popularly perceived value of these individual elements was not necessarily momentary, but the appeal of their combination in a soap advertisement was specific to the cultural moment. Indeed, at the turn of the twentieth century, other purveyors of household and cosmetic soaps, such as Swan and Sunlight, similarly relied on kitsch in their advertisements. Their products were closely associated with personal, domestic activities that, when hyper-aestheticized in print images, could conjure sentimental feelings, leveraging the readers' emotional memories to increase product appeal.

The kitsch of "Our Baby" also involves the image's production history as an advertisement in a magazine, invoking readers' technological imagination. The caption associates the print with a unique original (Collier's painting), but the materiality of this halftone image attests to its mass multiplication. This use of modern reproduction technology serves dual purposes. First, the halftone image's subtle visual texture and graduated shadings invoke the rich detail of the original painting, thereby aestheticizing the consumption of Pears' Soap. Second, as many magazine readers would know from their periodical education in print production, the advertising image's representation of tonality was made possible through photomechanical

reproduction. Using cutting-edge technology to reproduce its promotional materials, Pears encouraged readers to associate their product with modernity and to view Pears as a cultural authority.

As the dual significance of the advertising image's halftones suggests, hyper-aesthetic kitsch was complemented by the modern visual hybridity of mélange. Kitsch strategically evokes nostalgia, but mélange strategically evokes the spectacular technological future. In late-Victorian advertisements, mélange involved images reproduced from various original types and drawing on multiple aesthetics, including photorealism, art nouveau, and even the pen-and-ink style of special artists. Mélange became pronounced in periodical advertisements of the 1890s and early 1900s as advertisers found new ways to incorporate photomechanical image reproduction techniques. This aesthetic strategy aligned consumerism with the cultural hybridity that Beegan has identified as a trait of late-Victorian modernity, recognized by British citizens as such (*Mass Image* 9).

Mélange sometimes manifests in contrasting discourses, images, and uses of space within a single advertisement. A 1906 advertisement for Savory and Moore's Peptonized Cocoa and Milk in the *Graphic* demonstrates how mélange created a sense of modern hybridity that, like kitsch, could boost an advertisers' cultural authority (figure 15). The advertisement uses photomontage (multiple photographs to create one composite image) to convey an amusing and thoroughly modern spectacle. A halftone from a photograph of an open product tin sits under the brand's banner and above a block of text. The text attempts to incite readers' desire for this brand of cocoa and milk with the declaration: "The high nutritive value of Cocoa is unquestionable but its value depends on its digestibility." The text goes on to extol the product's virtues: "Peptonized Cocoa and Milk can be readily taken by all, even by those who cannot take any

other form of Cocoa" (Savory and Moore 120). At the edge of the advertisement's border, two pairs of hands, reproduced in halftone from an artist's rendering, reach out to the tin in a supplicating gesture. Their respective sizes and sleeves suggest a heteronormative couple, emphasizing the scene's domesticity. A tiny woman, represented in halftone from a photograph, perches over the rim of the cocoa tin. This figure leans on her elbows over the lip of the tin and her dress's fairy-like sleeves drape over part of its label. She directs a blank but receptive gaze in the direction of the large, disembodied hands as she holds out a tiny cup of cocoa. The overall effect is humorous, if vaguely ominous.

The cocoa server's incongruous size and situation may amuse readers, but they also strategically reinforce Savory and Moore's association with modern technological convenience. The woman performs the product's ready availability to all, even those who cannot take any other form of cocoa. The visual play underscores the advertisement's unusual use of photomechanical halftone to reproduce a photocollage combining photographs and drawn figures. The Savory and Moore's image is the only halftone photocollage on a page full of advertisements; indeed, few other illustrated advertisements in the *ILN* and the *Graphic* use photocollage in the very early 1900s (although photocollage was a popular aesthetic at this time). Association with the latest in print image innovation particularly benefits Savory and Moore, who have marketed their product as a staple that the company has modernized, and therefore improved, through the unexplained chemical process of peptonization. The hands emerging from beyond the margins make it easy for readers to put themselves in place of the disembodied consumers reaching for cocoa. In effect, the advertisement aims to be as easily digestible as the company claims their cocoa to be. Through the mélange of photocollage, Savory and Moore

invoke the authority that late-Victorian society bestowed on modern technologies and signal the company's participation in modern cultural sensibilities.

Mélange could also manifest within a cluster of advertisements sharing page space. Though this latter strategy was indirect, it could still be intentional, as advertisers used all aesthetic methods at their disposal to distinguish their advertisements from others. Intertextual hybridity resulted from the diverse visuals assembled in a magazine's advertisements. An advertising page taken from in the *Graphic* in 1900 exemplifies this type of mélange (figure 16). Four advertisements divide the page into equal quadrants. An advertisement for Hennessy's Brandy in the upper left is striking for its use of negative space: a decorative art nouveau border frames the white of the un-inked paper with a black floral pattern. In contrast to the border's flourishes, the advertisement's main text, "Hennessy's Brandy," is printed in modern sans serif, in large, bold lettering. Eight lines of copy underneath, in a smaller font, constitutes the rest of the advertisement's contents (James Hennessy and Company 61). The image's use of white space, coupled with the border's flat black decoration, evokes the modern aesthetic of line-block engraving that Aubrey Beardsley famously advanced in his work for periodicals such as the *Yellow Book* and the *Savoy* in the 1890s.

In the page's diagonally opposite quadrant in the lower right, a promotion for Keystone Burgundy complements the Hennessy advertisement's aesthetics, evoking art nouveau sensibilities but using a layout that imitates the conventions of editorial magazine content. A tall, narrow image depicts three fashionably dressed women at dinner. A wine bottle sits at the centre of the table; a male servant, standing behind the seated women, waits to present another bottle on his tray. The line illustration relies chiefly on black and white for contrast but makes use of detailed patterns in the women's clothing and in background interior décor. The combination of

stark black and white with minute, repetitive detail associates the advertisement with modern

print aesthetics. A headline in bold—the product's name—and a column of advertising copy

provide textual counterpoints to the image. The layout replicates a formula used in the *Graphic*'s

content pages—a pithy headline and column of information paired with illustrating image—

thereby subtly implicating editorial importance (Stephen Smith 61).

Above the Keystone advertisement in the upper right quadrant, a halftone image of a

handsome, mustached man looks at a shaving and hairdressing establishment's door on which a

sign, "Williams' Shaving Soap Used Here," proudly hangs. The advertisement relies on

longstanding tropes such as a variety of text forms and fonts, an emphasis on brand quality, the

familiar symbol of a barber's pole, and an attractive but conventional everyman figure (only

partly visible, perhaps to encourage a female reader to imagine her own husband in his place) (J.

B. Williams 61). In the diagonally opposite quadrant of the page in the bottom left, an

advertisement for the Gophir Diamond Company similarly pairs longstanding promotional

techniques with modern visual sensibilities. The company name tops the advertisement in a

typical, square display font, accompanied by a brief boast of product quality. A photographic

halftone of Gophir Diamond's imitation jewelry occupies approximately nine-tenths of the

advertisement, with detailed descriptions of the pictured imitation pearls below. In its concept

and layout, this advertisement differs little from those of previous decades; it offers a tidily

organized exhibition of products against the blank backdrop of the page. However, its use of a

halftone image from a photograph is distinctive. Advertisements in this style from the 1870s and

1880s used wood-engraved illustrations of their wares. By invoking the fidelity of the

photographic camera, the Gophir Diamond advertisement offers its reader an approximation of

its real products, as if presenting an accurate representation of the jewelry will imbue the

company's pearls and diamonds with authenticity even though they are, as the advertisement indicates, imitations. The halftone image adds credence to the advertisement's claims about the "absolutely perfect" colour, shape, and weight of the pearls (Gophir Diamond 61).

Taken together, these advertisements destabilize image categories and display the hybridity of modern culture. The advertisements use old and new aesthetic strategies, presenting multiple, sometimes contradictory cultural narratives, styles, and image reproduction methods. The Gophir and Hennessy advertisements showcase items on their own, letting consumers imagine their own contexts of use. The Keystone advertisement places its product at the centre of a modern lifestyle of privileged leisure to which savvy consumers—particularly women—may aspire. Gophir attempts to bestow authenticity and credibility on an imitation product by combining an old-fashioned concept and layout with the modern look of photography. Just as the product's imitative construction made it affordable to the middle class, the halftone's rendition of a photograph makes the product available for viewing. Shaving soap was a more quotidian commodity for middle-class readers; Williams spins this product's everyday status into themes of stability and tradition through its use of the enduring symbol of a barber's pole. The Hennessy advertisement similarly relies on an aged name and product ("genuine old Cognac brandy") to appeal to readers who are initially attracted by its novel use of white space. This advertisement's compositional emphasis on text, adorned with a black ornamental border, stylistically evokes an era before large, detailed images became ubiquitous in advertising. Yet its use of an art nouveau border reflects modern sensibilities. The Keystone advertisement also uses a black and white aesthetic, but its image has been reproduced by line-block from a pen-and-ink drawing—a technique that popular periodicals had only recently adopted in reproducing their illustrative contents. This material characteristic reinforces the advertisement's unequivocal embrace of

another aspect of fin-de-siècle culture, the New Woman. The Keystone image suggests this cultural figure through its depiction of fashionable women keeping their own company over wine, and holding a position of power over a male waiter.

As advertisements became more aesthetically hybrid, so too did the contents of the *ILN* and the *Graphic*, due to many of the same social and technological factors, and to the cross-pollination of periodical ads and contents themselves. Mussell has identified miscellaneity and seriality as defining characteristics of nineteenth-century periodicals: seriality gave periodicals continuity, and miscellaneity fostered novelty and diversity within each issue (*Nineteenth-Century Press* 24). At the turn of the century, the miscellaneity and seriality of illustrated news weeklies transformed, respectively, into aesthetic hybridity and continuous ephemerality. Aesthetic hybridity was fostered by the blend of consumerism and cultural narrative deployed by the magazines. Continuous ephemerality reflected a culture of newness in which mass print production and circulation continually relegated existing periodicals to old news, imbuing each number's content with a sense of impermanence.

Through hybridity and continuous ephemerality, the *ILN* and the *Graphic* encouraged readers to imagine mass print culture as an infinite proliferation of diverse goods to be purchased and momentarily consumed. The interacting aesthetic characteristics that developed in the advertisements and periodical contents formed a strategic matrix that served commercial periodical interests. Within this matrix, the distinction between advertisements and other magazine contents blurred, effectively conflating reading and consumption. The aesthetics of periodical contents, as well as advertisements, therefore served as strategies for grooming readers to participate in popular culture as statistical consumers (a ramification of periodical strategies that Chapter Three will address in depth).

Periodical Reader Tactics

Although advertiser and editor strategies conditioned how readers encountered periodicals, they could only influence the interpretive process so far. Advertisers necessarily lacked the agency to determine how readers related advertisements to the rest of a periodical's textual environment and to broader social and technological contexts. In de Certeau's terms, the multimodal aesthetics through which advertisers engaged readers' technological imagination also enabled their tactical resistance. De Certeau posits the tactic as strategy's complementary social mode. A tactic "insinuates itself" into social force-relations to create fragmentary, transitory, and heterogeneous elements. Tactical responses to social force-relations leave little evidence behind because they are transitory (xix). Accordingly, what follows is a sketch of potential ways in which readers could tactically interpret a magazine's aesthetic strategies.

Periodical readers resisted advertisements' dominant social representations through tactics of curation and appropriation. Curatorial tactics involved reusing select periodical advertisements and contents in collections, wall decorations, and albums. Readers cut out aesthetically or topically striking elements from advertisements, articles, and supplements to paste into new print environments, such as scrapbooks, creating visual narratives organized by their own aesthetic purposes or thematic categories (Good 559). Through practices such as photocollage, readers could also incorporate a figure from a magazine into their own original drawing or, alternatively, insert a hand-drawn figure into scenery taken from a re-purposed advertisement or news illustration. As Maria Damkjaer argues, Victorian scrapbooking practices were both creative and critical (148). Readers also pasted select magazine cuttings and pull-outs to the walls of their homes, adjoining personal space to the magazine environment on their own

terms. This practice was sufficiently widespread to receive mention in works of fiction. In Olive Schreiner's *The Story of An African Farm*, for instance, the walls of Gregory Rose's one-room house are "profusely" covered with *ILN* prints (174). All these curatorial tactics enabled readers to recontextualize and remediate the depictions of consumer culture posited by advertisements and other magazine contents. A reader's acts of selection, order, and re-presentation mobilized a personal value hierarchy.

Appropriative tactics involved what de Certeau calls "poaching" (165). He argues that in everyday activities, individuals make "innumerable and infinitesimal transformations of and within the dominant cultural economy" to adapt this economy "to their own interests and their own rules" (xiv). For de Certeau, reading is a key tactic of transformation, and therefore of cultural resistance. To read is to wander unpredictably through an imposed system and select where to place attention and bestow value—in other words, to poach meaning. Through poaching, readers insinuate differences into the dominant text. Given that turn-of-the-century illustrated weeklies encouraged readers to conflate reading and consumption, readers could transform the act of reading-as-consumption into reading-as-poaching.

Hyper-reading practices exemplify the array of appropriative tactics that illustrated magazine advertisements made possible. Late-Victorian readers developed these processing methods in response to information superabundance. By the late-nineteenth century, literate British citizens of all classes had daily access to more print matter than they could possibly read; with the expansion of the periodical press, the body of knowledge proliferated at an unprecedented rate. The sheer volume of print matter—and particularly of periodicals, one of the highest circulating print media—necessitated hyper and heterogeneous engagement in order to keep up with the "news." To help readers parse the weekly barrage of information, the

heterogeneous format of an illustrated paper invited hyper-reading. As Faye Hammill, Paul

Hjartarson, and Hannah McGregor observe, reading a magazine "involves actively assembling

different components—articles, advertisements, illustrations, letters to the editor—into an

unpredictable, idiosyncratic, and ultimately unstable whole" (3). Non-linear and otherwise hyper

practices of newspaper and periodical engagement were already well underway in late-Victorian

Britain, as Beegan, Damkjaer, Priti Joshi, and Matthew Rubery, among others, have

documented.[14] Hyper-reading practices allowed readers to identify quickly which textual and

pictorial features deserved the sustained attention of close reading (N. K. Hayles 91).

The abundance of aesthetic information in a turn-of-the-century *ILN* or *Graphic* number

encouraged techniques of skimming and scanning. Few articles, and fewer advertisements,

required a reader's sustained, linear engagement to glean a basic understanding of form and

content. Readers could gather much general information about a number's editorial and

commercial contents by scanning headlines, icons, banners, and photographic spreads. Because

they covered a large number and variety of news items each week, the *ILN* and the *Graphic*

relied on an editorial brevity that further enabled skimming. An image-oriented news item's

caption rarely exceeded three lines. The weeklies often presented verbally oriented news items as

a series of short summaries organized by a geographic or topical logic indicated by a headline in

different type—for example, "Home and Foreign News" (39). This practice of presenting a little

information about a lot of things also attests to New Journalism's influence on the *ILN* and the

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[14] Damkjaer discusses a-linear writing and reading in *Mrs. Beeton's* household guides (117).
Matthew Rubery argues that late-nineteenth-century newspaper formats encouraged skimming
(10-11). Beegan claims that fin-de-siècle readers assembled "fragmentary" magazine data as a
means of negotiating their modern milieu (*Mass Image* 22). According to Priti Joshi, Victorian
periodicals uniquely facilitated "discontinuous" reading practices through their diversity,
seriality, and a "polyvocality" that unpredictably amplified in the advertising pages (251).

Graphic. Scanning was further facilitated by the visually oriented, multimodal storytelling techniques that advertisements and editorial content utilized. Readers could glance at several news images and advertisements before deciding which deserved closer attention based on topic, tone, complexity, aesthetic appeal, and even, for images, the evident means of production.

Activities of selection and isolation also fall within the rubric of fragmentation and juxtaposition, another pair of hyper-reading practices. As readers idiosyncratically wandered through a magazine's pages of editorial and commercial contents, they could select multiple editorial and commercial expressions to juxtapose and compare. As Beegan notes, late-Victorian magazine readers took pleasure in "assembling and using fragmentary information in order to feel that they knew what was happening at that moment" (*Mass Image* 22). Readers could cultivate this knowledge across periodical numbers or titles or even across multiple print media.

A visually oriented *ILN* item about current events in August 1903 offers a good example of aesthetic strategies and reader tactics. "The Close of the Campaign in Northern Nigeria" (1903) exemplifies a typical visual layout that encouraged hyper-reading on a single magazine page (figure 17). In its layout and use of borders, this news item evokes a photograph album. The composition might invite a reader's eye to focus on some images over others, but this set of information offers no conventional linear sequence through which to proceed: a reader need not interpret the images in sequence from left to right, or top to bottom. Readers could select, isolate, and juxtapose the information based what they thought most interesting or useful. The *ILN* regularly used this album technique for displaying multiple images, particularly photographic images from halftone process. The *ILN* and other weeklies also frequently deployed a similarly nonlinear compositional style in conjunction with other aesthetic techniques, such as positioning sketched figures reproduced from line blocks among halftone figures or scenes from photographs

or wash drawings. In such cases, readers might prioritize their interpretive attention based on type of image.

The layout of the advertising pages, which presented multiple promotions side by side, also readily encouraged hyper-reading. In the *Graphic*'s page of advertisements for Hennessy, Williams, Gophir, and Keystone, for example, readers could appropriate the exhibited aesthetic strategies in myriad ways (see figure 16). A reader might choose to isolate and focus on only the images, meaning that the Hennessy's promotion would recede into the background, the Keystone advertisement's attempt to imbue its content with journalistic credibility would be moot, and the highly pictorial Gophir and Williams advertisements would garner the most attention. A reader could use juxtaposition to construct a hierarchy among the advertisements, interpreting the Gophir advertisement's display of abundant jewels as ostentatiously hollow in comparison to the confidently minimalist strategy used by Hennessy's Brandy. A reader might use selective medial awareness to navigate the page based on techniques of visual display or image type that piqued personal interest—perhaps focusing on the Keystone and Williams pictures, which most evidently reproduced original artwork. Indeed, responding to the advertisements' efforts to invoke the technological imagination, a reader might attend exclusively to how the hybrid aesthetic techniques represent popular culture, and, rather than interpreting these techniques as evidence of brand credibility, ignore the commercial messaging altogether.

The subject matter of advertisements in the *ILN* and the *Graphic* also encouraged juxtapositional hyper-reading across editorial and commercial contents. Topical references signaled visual and verbal intertextuality. For example, multiple advertisements for Ogden's Guinea Gold cigarettes in the two news weeklies referenced the second Boer War between 1899 and 1900, the period of its most extensive coverage in the *ILN* and the *Graphic*. One *ILN*

advertisement features a box of Ogden's cigarettes skewered on a bayonet, with the slogan, "Carried at the Point of the Bayonet into Great Popularity" (figure 18) (Ogden's, Sept. 9 367). Another Ogden's advertisement in the *ILN* depicts a solider lighting a cigarette in nighttime darkness, with the declaration: "It's risky! But Ogden's 'Guinea Gold' are worth it" (figure 19) (Ogden's, Oct. 21 591). Both advertisements use Boer War references to entwine the Ogden's brand with British courage and imperialist power. The first advertisement displays a gesture without context; the image does not include a battlefield, or even the individual presumably holding the bayonet, implying the depersonalized, collective character of citizens upholding imperialist values. Yet the advertisement's use of hand-drawn letters, rather than standardized typography, imbues it with a sense of the individual. Depicted in clean lines on an un-inked background, the image's lack of visual ambiguity underscores the direct boldness of the act depicted. But the spatial prominence of the textual pun foregrounds that even stout British imperialism can be witty, as well as serious. The advertisement suggests that both cigarettes and humour can boost the morale of the troops and their loved ones at home—and Ogden's provides both.

The second advertisement calls attention to itself by depicting a human figure and a familiar gesture within an unusual, implied context. Like the bayonet image, this Ogden's advertisement avoids depicting the mess of an actual battlefield. Instead, reader recognition of the Second Boer War is evoked through the lone figure's military uniform and the text's reference to the risk a soldier takes by making himself a visible target for the enemy at night. The advertisement personalizes imperialism through a hand-drawn image of an everyman who risks death to practice the familiar ritual of smoking a cigarette. The soldier's brashness is displaced on the page by his loyalty to a specific British cigarette brand, Ogden's Guinea Gold, displayed

in large, hand-drawn letters just above the figure. The advertisement's heavy inking underscores the symbolic power of lighting a match in the darkness: the soldier's branded ritual of home brings light to the dark circumstances of war.

Intertextuality and topicality were essential to what each Ogden's advertisement conveyed. The advertisements reference events reported in the *ILN*'s editorial content to frame their promotions in terms that resonated with the magazine's readers in September and October 1899. Linking their brand to ongoing news reports that spoke urgently to British nationalist sensibilities, the advertisements signaled their product's cultural currency. They also left the intertext sufficiently ambiguous to require readers to connect the advertisement themes and *ILN* news contents themselves. For example, the name Guinea Gold evoked the Witwatersrand gold mines that regular *ILN* readers associated with Britain's colonial and military presence in South Africa (see, for example, "Trouble in the Transvaal").[15] Refraining from making this link explicit, the Ogden's advertisements encouraged readers' awareness of their own processes of juxtaposition, and a sense of accomplishment in becoming "in the know" through this process.

Hyper-reading the illustrated news weeklies yielded knowledge production in forms such as summary and synthesis. Navigating back and forth through a periodical, readers could assemble meaningful narratives based on select images, articles, advertisements, and other heteroglossia. For example, readers of the *ILN*'s March 29, 1902 number might assess the diamond-studded jewelry illustrated in a Mappin and Webb advertisement in relation to the sartorial values that Florence Fenwick Miller advocated in the "Ladies' Pages" directly above the advertisement (Filomena 468). Readers might even extend this interpretive work across the

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[15] Historians have often identified these mines as the chief incentive for Britain's role in the Second Boer War, but Andrew Porter argues that gold was but one of several complex factors (47-48).

number, drawing on a photographic spread depicting diamond magnate Cecil Rhodes' residence at Cape Town to consider how fashion is implicated in the British imperialist project (Shelly 458). Readers could also synthesize information across magazine elements to extrapolate a counter-meaning. For example, a reader might sympathize with the desperate Boer War soldier who risks his life to smoke Ogden's Cigarettes and consequently revile the military leaders whose portraits are published as part of the *ILN*'s war coverage, such as General Sir George White and the late Admiral Colomb ("General Sir George White," "The Late Admiral Colomb" 568). Many Britons did not support the war, and might view the suggested correlation between Guinea Gold cigarettes and gold mines in the Ogden's advertisements as crass (Morgan 3-5). Even here, the technological imagination could play a role in interpretation. The hand-drawn aesthetics of the Ogden's advertisement of October 1899 make its lone figure, with his wary expression, more idiosyncratically individual, and therefore, perhaps, more familiar and "poachable" than the regularized, photographic indifference of the military portraits.

This chapter has demonstrated that while periodical producers used aesthetic strategies to condition reader engagement, readers could respond with interpretive tactics, poaching a periodical's meaning. While my focus has been on advertisements in the *ILN* and the *Graphic*, I have shown the ways in which the format of illustrated weeklies in the modern media milieu evoked specific hermeneutic behaviours, including curatorial poaching and appropriative hyper-reading. The technological imagination contributed to both the aesthetic strategies of producers and the responding tactics of readers. While periodical producers invoked the technological imagination to garner authority and position readers as consumers, readers could deploy it to become both producers and consumers of cultural meaning. As I show in the following chapter, this dynamic between periodical strategies and reader tactics was present wherever producers

sought to influence readers' interpretation of other dominant cultural narratives and values. In

Chapter Three, I move from the commercial rhetoric of advertising to consider the statistical

rhetoric of population journalism, a new genre of late-Victorian popular magazines.

Chapter Three

Imagining Population Politics in *Pearson's Magazine*, 1896-1902

Of late years our magazines have been overrun by the statistical fiend.

> J. G. Grant, "Statistics Gone Mad: With Apologies to the Statistical Society
> and Mr. Holt Schooling" (1899)

In "The Mathematics of Marriage," an 1898 article in *Pearson's Magazine*, T.D. Denham observes: "There is much of interest in . . . figure-facts . . . if they can but be set forth in picturesque form." (396). The "figure-facts" Denham refers to are statistics; shown in "picturesque form," they become data visualizations—that is, graphical displays of abstracted, quantitative information.[16] Data visualizations regularly appeared in general-interest periodicals during the Victorian period—for example, as thematic cartography maps and weather charts. By relying on the power of "picturesque form" to make figure-facts interesting to readers, Denham's article participated in the genre of population journalism that developed in fin-de-siècle monthlies. This short-lived genre combined entertaining data visualizations with narrative analyses of vital statistics about human populations. Population journalism covered a wide array of topics ranging from annual food consumption per capita to changes in average life span over time and military power compared across European nations (Waldron 666; Schooling, "Length of Life" 30; McGovern 383). A broad array of data visualization types in innovative configurations represented the people to themselves. For example, in "The Modern Mercury"

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[16] My definition of data visualization draws on Johanna Drucker's *Graphesis* (8). Quantitative data visualizations are related to but distinct from qualitative information graphics, as Edward Tufte has noted (9). They also differ from diagrams, which offer visual and spatial analogues for physical objects, and from the non-graphic information displays that Ryan Cordell has dubbed "information journalism," such as number tables ("'Many Facts in Small Compass'").

(*Strand Magazine* 1896), J. Holt Schooling reports on the volume of mail circulated by the Post Office as "a vital factor of our social life and of our national activity and development" (334). The article is supported by several data visualizations; a bar graph displays the British Post Office's nineteenth-century growth: a proportional area chart compares Britain's volume of circulated mail to that of other nations, and a set of circle clusters visualizes the quantity of British mail sent to each corner of its empire. George B. Waldron's "The World's Bill of Fare" (*Pearson's* 1898) compares food and beverage consumption of different nations (figure 20). In this article, visualizations of consumption per capita use data measures that graphically represent the food and drink they signify. The sizes of the data measures reflect their relative quantities: for example, the ascending sizes in a row of eggs, steers, or bags of rice represent the ascending average number of eggs, pounds of beef, or pounds of rice consumed per capita in each European nation. As a type of popular science, population journalism claimed the objective authority that Victorians attributed to empirical, quantitative evidence, even though its visualization methods sometimes lacked rigour.

Building on Chapter Two, this chapter investigates the aesthetic strategies through which a specific periodical genre invoked the technological imagination, conditioning how readers engaged with the genre's cultural representations. Population journalism appeared in several popular monthlies in the 1890s, including the *Pall Mall Magazine*, *Strand*, and *Harmsworth Magazine* (later called the *London Magazine*). However, it appeared with particular frequency in *Pearson's Magazine*, which was known for its exceptionally miscellaneous and visual character, as well as its wide distribution across British classes and the empire (O'Connor). Launched in 1896 by Cyril Arthur Pearson, *Pearson's* typified late-Victorian popular magazines in its use of the New Journalism's entertaining brevity, levity, and emphasis on human interest—strategies

that Pearson had perfected while working for George Newnes and W.T. Stead, two of New

Journalism's most renowned pioneers (Easley). *Pearson's Magazine*, the "crown jewel" of

Pearson's publishing empire, achieved wide circulation thanks to its relatively low cost (at six

pennies) and its generous use of images. Intended for "popular rather than high-brow reading,"

Pearson's attracted a broad-based readership, including working, middle, and upper-class

consumers (O'Connor). *Pearson's* cross-class circulation range was unusual among illustrated

monthlies, which typically targeted middle-class audiences (Beegan, *Mass Image* 14). Despite

Pearson's high profile at the turn of the twentieth century, scholars have largely neglected the

magazine as a whole, and its population journalism in particular.[17] However, *Pearson's*

population journalism warrants investigation because it presents a substantial case study in a

genre that served as an important signifying system at the turn of the twentieth century. Through

the visualization of population data, population journalism combined Victorian popular culture

and population politics, or what Michel Foucault terms "biopolitics" (*Security* 477). Data

visualizations quantified and rationalized population traits and activities through their visual,

spatial, and material aesthetics. Just as media-specific characteristics conditioned readers'

interpretations of consumerism in magazine advertisements, they shaped how readers interpreted

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[17] Within the field of nineteenth-century periodical studies, *Pearson's* receives mention in survey works, such as James Thorpe's seminal *English Illustrations: The Nineties* (178), and in reference sources, such as the *Dictionary of Nineteenth Century Journalism* and the *Waterloo Dictionary of English Newspapers and Periodicals, 1800-1900*. Aside from these brief studies, Victorian scholars tend to regard *Pearson's* only as a publication vehicle for work by major fin-de-siècle authors such as Arthur Conan Doyle, Rudyard Kipling, E. Nesbit, and H. G. Wells. Two exceptions are Judith R. Walkowitz's account of Olive Christian Malvery's photojournalism in *Pearson's* and Andrew Shail's study of interacting text and images in H.G. Wells" *War of The Worlds* and M. Griffith's "An electric eye," both published in *Pearson's* in 1896.

biopolitical meaning in magazine data visualizations.[18] Population journalism combined the verbal rhetoric of statistical narrative with the aesthetics of data visualization to represent the British nation as a managed population body and its citizen readers as population units. Given its prominence in popular, middle-class illustrated miscellanies, population journalism made a significant, though under-recognized, contribution to late-Victorian discourses of population health, encouraging people to conceive their identities in biopolitical terms.

Pearson's population journalism employed two distinctive aesthetic strategies, each made possible by late-nineteenth-century developments in image reproduction technology. In the early years of the genre's publication in this magazine, between 1896 and 1898, it used data visualizations that were abstract, not only in that the data were removed from their original contexts, but also in that they were graphically remediated in geometric forms such as pie charts and bar graphs. These graphics were chiefly reproduced by line-block from linear, black-and-white originals. Analyzing J. Brand's "Is Suicide a Sign of Civilisation?" (1896), I demonstrate that the minimalist aesthetic of abstract visualization encouraged individual readers to conceive of themselves as statistical units within a delineated socio-biological population: the British nation. I contrast this abstract visualization strategy with the new photorealistic visualization strategy that *Pearson's* population journalism used between 1898 and 1902, taking T. D. Denham's "The Mathematics of Marriage" as my example. Photorealistic data visualizations incorporated detailed human figures and quotidian objects, reproduced from photographs or drawings, as data measures. Photorealistic visualizations were reproduced by halftone process, which could convey the "continuous tones" of paintings and photographs in grayscale (Beegan,

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[18] By taking into consideration the ways in which the medium of a data visualization conditions how it can be interpreted, I depart from Drucker, who contends that visualizations exist "independently of particular media" (*Graphesis* 67).

Mass Image 8). Photorealistic visualizations incorporated detailed human figures and quotidian objects as data measures. Photorealistic visualizations were less strictly quantitative than abstract visualizations, but, as my analysis of "The Mathematics of Marriage" reveals, these graphics enacted a more complex biopolitics through their spectacular, multimodal aesthetics.

Through their respective aesthetic strategies, the abstract and photorealistic population visualizations imbricated modern image reproduction technology and modern statistical methods. While the abstract visualizations rationalized the individual body as a population unit, the photorealistic visualizations remediated the individual body as a component of multimodal, mass print spectacle. Population journalism transformed biopolitics into a spectacle in Guy Debord's sense—an aesthetic phenomenon that mediates social relations (27). This spectacularity signalled population journalism's authority in the arena of fin-de-siècle popular culture, which was highly visual on many fronts, including exhibition culture and print media, as discussed in Chapter One, and consumerism, as discussed in Chapter Two. Evoking modern aesthetic sensibilities through its use of image reproduction technology, population journalism encouraged readers to conflate population politics with popular culture. However, in population journalism, as in periodical advertisements, these aesthetic strategies presented indeterminate interpretive possibilities, effectively creating opportunities for readers to exert agency through a variety of tactics. Drawing attention to its own spectacular remediation of bodies, photorealistic data visualization opened its graphical methods and biopolitical values to reader scrutiny. Using the case study of population journalism in *Pearson's Magazine*, I argue that changes in reproduction technologies and graphical methods of data visualization engendered new possibilities for reader engagement in fin-de-siècle periodicals, and with visual popular culture more broadly.

Victorian Biopolitics and Data Visualization

Foucault identifies population politics as a feature of the modern state and traces its genealogy through eighteenth- and nineteenth-century social institutions and cultural discourses in Europe. At this time, scientists and social thinkers began conceptualizing humanity as a species, and its "basic biological features" became "the object of . . . a general strategy of power" which Foucault describes as "biopower" (*Security* 16). Biopolitical discourse pervaded popular journalism throughout the nineteenth century. At the fin de siècle, biopolitical rhetoric intensified in print, attesting to late-Victorian anxiety about social and physical degeneration. Population journalism presented statistics that measured human bodies and behaviours in relation to a quantified average, thereby encouraging readers to view themselves and other British citizens as units of a normalized population body.

Foucault limited his biopolitical analysis to verbal discourses, and much scholarship on the Victorian period that is influenced by his work follows suit.[19] However, as I demonstrate in this chapter, the graphic rhetoric of Victorian data visualizations also mobilized biopolitics. Indeed, as Johanna Drucker points out, modern data visualization emerged in tandem with modern bureaucracy—the infrastructure that Foucault identifies as a precondition of biopolitical life management (*Graphesis* 91). Evidence of human efforts to abstractly map information about space, time, and our own activities shows that we have been graphically displaying data for thousands of years (65-88). In the seventeenth century, scientists and mathematicians introduced

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[19] See particularly Sally Ledger's *The New Woman* (1997), Ann McClintock's *Imperial Leather* (1995), Iveta Jusova's *The New Woman and The Empire* (2005), and *Sexuality at the Fin de Siècle*, ed. Peter Cryle and Christopher E. Forth, 2008). These works examine how fin-de-siecle discourses of race, gender and sexuality, and class medicalized and biologized subaltern subjects. Elizabeth Carolyn Miller's *Slow Print: Literary Radicalism and Late Victorian Print Culture* (2013) uses a more holistic approach, combining biopolitical discourse analysis with material analysis of textual artifacts to examine sex censorship in radical Victorian print.

what Michael Friendly calls "the beginnings of visual thinking" (21). The rise of engraved

illustration contributed to an "explosion of visual imagery integral to knowledge production"

during this period (Drucker, *Graphesis* 68). As the scientific community became more interested

in measuring physical qualities of time, space, and distance, the emerging power economy

applied developments in demographic statistics to the "political arithmetic" of population, land,

taxes, and goods (Friendly 22-3). In the eighteenth century, as print production continued to

facilitate visual knowledge production, the consequent surge in "visual reasoning" underwrote "a

rationalizing sensibility committed to the bureaucratic management of the emerging modern

state" (Drucker, *Graphesis* 69).

Many of the most familiar data visualization formats originated in the late-eighteenth

century work of the Scottish political economist William Playfair and Swiss-German

mathematician Johann Heinrich Lambert. According to Edward Tufte, Playfair and Lambert

combined mathematics, visual art, and empirical statistics to establish modern data visualization

practices (9). Playfair and Lambert pioneered the development of relational graphics that were

not direct analogues for features of the physical world (Tufte 47). The nineteenth century saw

"explosive growth" in statistical graphics and thematic mapping, although British statisticians

tended to favour the use of tables over graphics until late in the century (Friendly 23). During

this period, many European nations established statistics offices, supporting further advancement

in statistical theory and visualization techniques (28). As late-Victorian print culture became

more visually oriented, diagrams and data visualizations gained prominence in popular science

journalism (Lightman 296-97). They became a familiar mode of expression to many readerships,

ranging from the elite professionals who read specialty statistical publications to the working-

class citizens who read popularized science articles in miscellanies. Prevalent data visualization

types included weather forecasting charts, which the weekly *Graphic* printed from 1876 onward, and cartographic maps, which might display information about, for example, contested geopolitical territories or major infrastructural developments (Hutchinson 239; Ward 295).

Although data visualizations appeared regularly in late-Victorian periodicals, the publication history of population journalism suggests that the popularity of this genre rose and fell in a relatively small arc at the turn of the twentieth century. Between approximately 1895 and 1902, several of the most popular illustrated monthly miscellanies, including *Harmsworth Magazine*, the *Pall Mall Magazine*, the *Strand*, and the *Windsor Magazine*, published articles that visualized statistical data about human populations and activities. Early in the twentieth century these articles disappeared from the monthlies. Despite population journalism's brief heyday, its distinctive form and subject matter render it a unique genre of Victorian data visualization.

Of the popular illustrated monthlies, *Pearson's* and *Harmsworth* published the most population journalism articles. *Pearson's* had wider cross-class appeal, as readers considered the three-penny *Harmsworth* slightly "down-market" of the six-penny *Pearson's Magazine* (Birns). Given *Pearson's* cross-class reach and high circulation (it sold 200,000 to 400,000 per number in 1898), the magazine's population journalism wielded considerable influence over readers' conception of society ("*Pearson's Magazine*"). Like most popular, family-oriented periodicals, *Pearson's* reflected "patriotic, royalist and imperialistic" values; its contents "trumpeted the bravery of British soldiers, the might of the military and the wonders of the ever-expanding Empire" (O'Connor). *Pearson's* population journalism reinforced this populist nationalism by framing biopolitical tenets, such as population health, normalization, and expansion, in terms of British citizenship.

Abstract Data Visualization in *Pearson's Magazine*, 1896-1898

J. Brand's "Is Suicide a Sign of Civilisation?," from *Pearson's* first year in print, was the magazine's initial piece of population journalism. The illustrated article ostensibly educates its readers with an overview of scientific measurements of human life while showcasing a specific version of the British nation for readers to take pride in. However, it also encouraged readers to conceptualize individuals as quantitative units of a bureaucratically defined statistical mass. As was typical of the genre of population journalism, "Is Suicide a Sign of Civilisation?" combines statistics, data visualization, and social commentary. Brand compares statistics on suicide from countries deemed civilized and uncivilized, reporting that "[a]mongst savages suicide, as an individual act apart from the customs of the country, is almost unknown." In contrast, "[e]very civilized country pays its yearly tribute to this terrible plague with a regularity that is appalling, and the tribute is steadily increasing" (666). Brand includes statistics on the number of suicides among men, women, and children, citing a few harrowing anecdotes before addressing the causes. He identifies heredity as the chief cause, but a pie graph offers more specificity: "insanity" causes thirty-four percent of cases, followed by "various" at twenty-eight percent and "grief" at twenty-three percent. Brand ranks the European nations in order of suicide numbers, observing that Germans, the "profoundest thinkers in Europe," are also "the most suicidal race." He concludes that "since all the phenomena of social life . . . originate in the constant struggle of man with nature, with other men, and with himself, suicide is not an explicable social phenomenon, but inevitable in the process of civilization" (666).

Like much popular journalism of the period, Brand's rhetoric invokes social Darwinism, positing hereditary factors and social progress as influences on the population body's health. His

statistical accounting of deaths and causal explanations invoke a sense of scientific order and certainty. Brand places this seemingly irrational behaviour within a science-based narrative that identifies direct and indirect causes. Brand's account manages to reassure the reader not only of a rational framework within which to make sense of suicide, but also of the British nation's privileged status relative to this framework. Britain's suicide rates place third among civilized European nations, positioning them above the less civilized nations but below the more introspectively suicidal ones. Britain thus sits on a trajectory that supports the existence of suicide as a regrettable but inevitable side effect of social progress.

Abstract data visualizations aid Brand's efforts to reassures readers about his narrative's scientific basis. These visualizations connect the article with the magazine's visual landscape while distinguishing its science-based analysis. In contrast, other image types in this *Pearson's* number include short story illustrations, photographs of ethnographic groups in travel narratives, and detailed technical diagrams of industrial technologies. Brand's data visualizations—three pie charts and a bar graph—stand out as simplified, minimalist representations of society. One of the pie charts divides a year's suicides by method—hanging, drowning, poison, and "various"—and displays them as percentages of the whole (figure 21). This abstract data visualization reinforces the article's rationalization of seemingly irrational behaviour, containing self-violence in impersonal categories that form a tidy circle. Use of a large miscellaneous category, "various," limits the pie chart to four sections, presenting readers with a reassuringly (if misleadingly) small array of suicide techniques. Any unusually bizarre or horrific methods are absorbed by this dark gray, vaguely labelled slice of the pie, buffering readers from the distress of studying real, individual suicides. The pie chart's circular form is also reassuring: it enables readers to understand individual suicides, aggregated and reshaped into a circular whole, as proof of the

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advancement of the so-called British race. A horizontal bar graph similarly reduces real instances of suicide to a simple rectangle that categorizes them into a gender binary (figure 22). Male suicides dominate the visualization, making up 73% of the chart. Given that the two categories derive meaning from their relation to one another, female suicides are visually marginalized. The graphical abstraction reiterates that women are not only socially marginal, but also, following Brand's supposition, less civilized than men. This outlook resonates with population journalism's orientation to an average subject defined as such by middle-class, patriarchal, populist values.

Following Brand's "Is Suicide a Sign of Civilisation?," seven more articles of population journalism using the same abstract data visualization strategy appeared in *Pearson's*: "Which is the Maddest Part of the Kingdom?" (1896), "The Lion's Share" (1896), "Is the Length of Life Increasing?" (1897), "To All Named Smith—Greetings!" (1897), "Land Versus Sea" (1897), "Black Diamonds" (1897), and "Ourselves Versus the World" (1898). These seven articles shared the same author: John Holt Schooling (1859-1927), an actuary, statistician, and author. Schooling popularized data visualization and statistical analysis in a number of periodicals. A member of the Royal Statistical Society, Schooling published on economic and statistical matters for both elite and popular audiences. His output included the *British Trade Book*, an overview of British commerce which he updated and published every three years from 1902 until at least 1911; economic journalism for newspapers and magazines, including the *Morning Post*, the *Nineteenth Century*, the *Monthly Review*, and the *National Review*; and fiction in the *English Illustrated Magazine*, *Sketch*, and others ("Schooling, John Holt").

Schooling was a prominent agent in population journalism's surging popularity between 1895 and 1902; he wrote and illustrated work in this genre for several periodicals, including the

Pall Mall Magazine, the *Strand*, the *Windsor Magazine*, and *Pearson's*. No other journalist

contributed so substantially to popularizing statistics in late-Victorian magazines.[20] Indeed,

Schooling's prominence in population journalism was recognized by other participants in late-

Victorian print culture. An 1898 article in *Harmsworth Magazine* titled "Statistics Gone Mad,"

in which J. G. Grant mocks the population data visualizations that have "overrun" magazines in

recent years, bears the subtitle: "With Apologies to the Statistical Society and Mr. Holt

Schooling" (609).[21]

　　Schooling's population journalism for *Pearson's* aligns with Brand's "Is Suicide a Sign

of Civilisation?" in form and content. In each article, Schooling gives a narrative overview of a

collection of statistics concerning patterns of human characteristics and activities, and relates

them to the everyday life of the magazine's readers. The visualizations underscore Schooling's

narrative assessment of British social and political life. In keeping with the nationalist,

imperialist tone of *Pearson's Magazine*, Schooling frequently celebrates British

accomplishments. In "The Lion's Share," Schooling boasts that "one person in every four who

crawl, walk, or ride on the surface of this planet is under the rule of Victoria, the greatest

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[20] Few population journalists had Schooling's credentials; indeed, many of them were generalist writers, publishing miscellaneous curiosity pieces. Based on available evidence, few journalists published more than one or two pieces in this genre, whereas Schooling wrote at least a dozen such articles—and drew at least some of his own data visualizations (as credited in four *Pearson's* articles between 1897 and 1898 and two *Windsor Magazine* articles in 1897). Available evidence does not indicate that other article authors drew the images accompanying their statistical analyses.

[21] In this article, Grant parodies the population journalism genre by presenting a series of obvious and otherwise ridiculous data visualizations while wryly insisting on their importance. His data visualizations include a circle diagram quantifying the percentage of men with green whiskers (0%), a row of data measures depicting the number of beans that make five (5), and three multiples depicting the number of keyholes his neighbour Smythe sees on his front door at a given time of night (one at five p.m., two at eleven thirty p.m., and none thereafter, a trend implying that alcohol is a factor).

monarch in ancient or modern history" (Schooling, "Lion's Share" 612). The British empire also looms large in many of Schooling's visualizations. A piece titled "Land versus Sea" ostensibly focuses on statistics comparing the planet's land mass to its bodies of water, but even here, Schooling contrives a strategy for privileging Britannia. A visualization consolidates the United Kingdom as a hollow jelly mould that, if it reached down to the earth's core, could hold half of the ocean's total volume (Schooling, "Land Versus Sea" 525-6). The image suggests that although the United Kingdom seems superficially small on the ocean's surface, it carries unseen weight. Schooling doses his narrative statistical reports with patriotic observations about England's superiority within the United Kingdom and the British Empire's importance to the world.

Through interacting text and images, population journalism by Brand and Schooling epitomized the combination of empirical knowledge production and the social management through which data visualizations upheld Victorian ideological assumptions. The data visualizations quantified and re-presented the British populace in clean geometric shapes and stark, neat lines, visually and spatially colonizing human bodies and behaviours. For example, through their quantitatively specific width, height, and proportions on the page, the pie charts and bar graph in "Is Suicide a Sign of Civilisation?" abstract their data from individual circumstances so that, as Drucker puts it, "the human condition may be administered without troubling detail" (*Graphesis* 92). These visualizations aggregate individual suicides into contained fractions of geometrically rationalizing shapes (see figures 22, 23, and 24).

Population data visualizations contributed to this work of quantitative social management through material features as well as visual and spatial ones. For example, *Pearson's* graphic for the "Six Great Powers of Europe" in "The Lion's Share" demonstrates the strategy of abstract

data visualization through the linear technology of line-block process reproduction (figure 23). The visualization uses only black (i.e. fully inked) and white (i.e. not inked) tones; fine, black lines on un-inked space produce a semblance of grey. This proportional area chart depicts the imperial powers as cross-hatched, uniformly sized cubes. Fully inked cubes representing imperial colonies and dependencies appear below, each joined to its respective nation by a line like a weight on a tether. The disparity between the size of the United Kingdom and the colonies and dependencies it carries—the largest such disparity in the visualization—suggests Britain's biopolitical prowess: among the six "Great Powers," its capacity for support a vast empire is exceptional.

Idiosyncrasies of shape and label reveal that the visualization reproduces Schooling's hand-drawn original (Schooling, "Lion's Share" 92). The visualization's idiosyncrasies and its use of linear, black-and-white forms evince line-block image reproduction. Victorian readers, informed by articles on illustrated print production, could account for such material factors as part of their interpretive processes. Readers who knew the reproduction history of line-block images recognized them as the outcomes of the mass industrialization of print. Engaging the technological imagination, then, abstract data visualizations aesthetically rationalized the periodical page in two senses: they exhibited its quantitative mapping by an artist's or statistician's hand, and its systematic mediation by machine. The individual subjects represented by abstract visualization became units of mechanized mass print, as well as quantified imperial and colonial populations.

Photorealistic Data Visualization in *Pearson's Magazine*, 1898-1902

In 1898, *Pearson's* population journalism relinquished the abstract visualization style, with its suggestion of quantitative rigour, in favour of more idiosyncratic, photorealistic visualizations. These used halftone process to reproduce a composite of photographs and drawings as visually detailed, grayscale figures. The resulting aesthetic strategy aligns less with political economics and more with scrapbook photocollage, the Victorian practice of creating composite images from photographs and other materials. As I explained in my discussion of reader tactics in Chapter Two, Victorians created composite images from photographs, hand drawings, and other materials. Thus, Pearson's adaptation of photocollage to invoke the technological imagination strategically deployed a practice from everyday life. Notably, at the same time that it dispensed with abstract data visualizations for its population journalism, *Pearson's* ceased to rely primarily on Schooling to write and illustrate these articles, further diminishing the genre's association with statistical integrity and science. All nine population articles appearing between 1898 and 1902 incorporated photorealistic, rather than abstract, data visualizations; of these, only one article was written by Schooling.[22]

The texts of *Pearson's* post-1898 population journalism upheld established biopolitical rhetoric, but the photorealistic graphics flouted conventional data visualization values—presentational transparency, simplicity, and quantitative accuracy—in favour of New Journalism's visual novelty. Photorealistic data visualizations did not uphold the methodological values of statistical science, thereby undermining their own quantitative authority. Through their spectacular, multimodal aesthetic strategies, however, the photorealistic data visualizations

[22] Given that most of Schooling's population journalism uses abstract visualizations, *Pearson's* simultaneous departure from this type of visualization and its decreased reliance on Schooling is probably not coincidental, but confirming this link would require evidence about the circumstances of these editorial decisions that I have not been able to locate.

enacted a more complex biopolitics than the abstract graphical method. While the latter reduced the individual subject's body to a quantified population unit, the former remediated the individual subject's body as an aesthetic component of mass print.

T. D. Denham's "The Mathematics of Marriage" exemplifies *Pearson's* photorealistic population journalism, advancing the aesthetic strategies previously established by Brand and Schooling by deploying a more complex biopolitics in its visuals (figure 24). Denham's data selections and diction enforce the late-Victorian cultural precept deeming marriage statistically normative and socially desirable. The article's "figure-facts" chiefly pertain to how many people marry (and re-marry), at what ages they wed, and how many people remain single. Visualizations for "The Mathematics of Marriage" complement the text by aesthetically associating marriage, birth, and life with light shades, and singleness and death with dark shades. A visualization of infants, appearing at the top of the article's second page, exemplifies how these two sets of associations are mapped onto distinctive population groups (figure 25). In a line-up of twenty babies, the eleven wearing black gowns suggestive of funereal wear represent the statistical likelihood of remaining single. The nine wearing white gowns, suggestive of baptismal and wedding dresses, represent the likelihood of getting married (Denham 396-97). For every twenty births in England, Denham says, ten people marry; one of these ten "will already have been married," and "we are, therefore, left with nine spinsters or bachelors who marry": the eleven spinsters and bachelors who remain unmarried become the population's numeric and social remainder (396-97).

Throughout the article, Denham expresses the marriage rate in terms of the "chances at birth that an infant will actually marry" in adulthood. Drawing a direct link from infancy to marriage—rather than, for example, citing the married percentage of the adult population—may

strike the reader as an unusual marriage statistic formulation. However, this article's framework posits birth and marriage as the quintessential characteristics of the biological trajectory, and, correspondingly, of population life. Curiously, Denham gives little attention to the statistical relationship between marriage and procreation; instead, the text and visualizations of "The Mathematics of Marriage" emphasize the statistical relationship between being born and getting married. The population's marriage behaviours are only associated with the national body's reproduction indirectly. For example, the title header faces the row of babies heaped in visual abundance, a kind of fecundity itself (396-97) (figure 24). The article limits its scope to one's own biological and cultural behaviour—one's own birth, one's own marriage—though neither birth nor marriage can be managed on one's own. The narrative thus places responsibility for population behaviours with individuals. A pair of visualizations on the article's third and fourth pages reinforces this biopolitical individualization (figure 26). Two sets of images place four identical figures in sequence of size; these data visualizations use scale to express the comparative occurrence of marriage among different age groups (Denham 398-99). None of the images depicts a heteronormative couple: the pages spatially segregate married women, on the verso, from married men, on the recto. The data visualization encourages readers to imagine marriage as the behaviour of an individual, and to group married individuals by age and gender. Readers might therefore categorize human bodies and behaviours within statistically determined demographics instead of the self-selected category of the married couple.

While "The Mathematics of Marriage" prompts readers to identify themselves as individual biopolitical units, it also encourages them to aggregate other citizens in demographic categories. Denham comments that "on average, one person in every twenty you meet in the streets, in the train, or wherever it may be, will be a widow or a widower, and three out of five

unmarried" (397). He thus recasts the values by which the reader can assess not only his or her behavioural normalcy or deviancy but also that of fellow citizens. The article's implied association between reproduction and the marriage of women and men leaves no room for these two activities to occur and relate to one another in other forms. Reproduction outside marriage, the birth of an individual who is not defined by marriage status, and same-sex marriage are not depicted within Denham's rubric. According to the logic of Denham's article, citizens who practice any of these behaviours deviate from the norm.

Although "The Mathematics of Marriage" maintains the biopolitical outlook of *Pearson's* first population articles, its photorealistic aesthetic renders its visualizations less quantitatively accurate and more interpretively opaque than Schooling's abstract pie charts and bar graphs. Like much of *Pearson's* photorealistic population journalism, "The Mathematics of Marriage" makes frequent but haphazard use of small multiples—the technique of repeating the same graphical design structure, in which a small number of variables can be compared across instances. The small multiples in "The Mathematics of Marriage" perpetuate graphical distortion because their spatial proportions do not correspond to the quantities they represent. For example, the two visualizations that depict the comparative occurrence of marriage among different age groups of men and women uses disproportionate small multiples (figure 26). Each visualization depicts the same figure four times (one male and one female), but the figures vary in size to express population quantities for the different age ranges of marrying citizens. Although size constitutes the main variable through which the visualizations convey data, the figures are disproportionately sized in relation to one another. In the series depicting "The Marrying Female," figure No. 2 supposedly represents slightly more than 50% of figure No. 1's proportions, but actually occupies closer to 75% of her size on the page. Figure No. 3 represents

25% of the total marrying female population in a year and figure No. 4 represents less than this amount. However, the two figures occupy identical quantitative areas.

This data visualization perpetuates what Tufte considers a serious error: distorting data measures to "make an editorial comment or fit a decorative scheme" (59). Tufte contends that "graphical distortions" yield quantitatively dishonest data that "corrupt the display" (55, 61). Distorted data visualizations mislead and confuse readers, "cloud[ing] the flow of information" (108). Tufte's tenets of data visualization are informed by a rubric that Playfair, a political economist and pioneer of statistical visualization, first established in the late-eighteenth century. Offering the rationale for his influential 1786 work, *The Commercial and Political Atlas*, Playfair argued that data visualization should present information so that a reader could comprehend it as perfectly as possible. Visualizations that "are as near perfect accuracy as is [in] any way useful" enable a viewer to retain a 'sufficiently distinct impression" of the "complete" data that will "remain unimpaired for a considerable time" (Playfair 3-4). Extending this view of data visualization's purpose, Tufte defines "graphical excellence" as visually offering a reader the greatest number of ideas in the shortest time with the least ink and in the least space (51).

According to the conventions championed by Playfair and Tufte, data visualizations should not draw attention to themselves, but should "mask the very fact of their visuality" (Drucker, *Graphesis* 9). *Pearson's* photorealistic population visualizations flout this tenet, too: their aesthetic detail not only distorts their data, but renders it opaque. For example, the form and layout of the small multiples in "The Marrying Female" and "The Marrying Male" are determined at least as much by editorial sensibilities as by the data this visualization conveys (see figure 26). The figures of "The Marrying Female" form a slope descending toward the right margin of the verso, mirroring the upward slope of the figures of the complementary

visualization, "The Marrying Male," on the facing recto. The figures of "The Marrying Male"

appear in reverse order (i.e. No. 4, representing the whole population of marrying males in a

year, stands on the far right, and the figures representing portions within this population form a

line of succession from right to left). This reversal yields aesthetic symmetry across the two

pages, but confuses readers who assume that the two displays are visually and structurally

similar because they share a sequential logic. In this way, the visualizations privilege design over

interpretive simplicity (Tufte 117). Other characteristics of the two data visualizations transform

graphical display into ornamentation: the figures in each visualization also exhibit rich tonal

detail that conveys quantitatively superfluous aesthetic data, such as facial features. Aesthetic

details such as the inky shadows under each figure's feet, and curlicues above their heads, add

unrelated visual interest. Tufte dismissees this type of "interior decoration" as "chartjunk" that

obstructs data visualization's true purpose: to "*reveal* data" and "induce the viewer to think about

the substance rather than about methodology, graphic design, the technology of graphic

production, or something else" (107, 113).[23]

Within the rubric first articulated by Playfair in the eighteenth century and theorized in

the twentieth and twenty-first centuries by Tufte, *Pearson's* photorealistic visualizations look

aesthetically noisy and deceptive compared to their abstract predecessors. Photorealistic data

visualization's graphical distortion resulted from its adaptation of photocollage, using images of

human figures and quotidian objects (ranging from food and drink to clothing) as data measures.

This contrasts with the abstract, linear character of the data visualizations that *Pearson's*

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[23] Tufte's principles for data visualization simultaneously uphold that there is an objective truth that data visualization should transparently reveal and, contrarily, that visualization necessarily involves choice and mobilizes argumentation. I disagree with Tufte's position, taking for granted here that an interpretive method of collection is a precondition of all information; an interpretive method of presentation is a precondition of all data visualization.

population journalism included between 1896 and 1898, which relied on simple but varied graphical techniques for accuracy and efficacy. For example, Schooling's population journalism frequently included pie charts to represent data about the relative proportions of subgroups within a whole population. Use of a sectioned pie chart, rather than small multiples, would avert graphical distortions such as those displayed in "The Marrying Female."

Although the noise and distortions of photorealistic data visualizations detracted from their statistical authority, they boosted population journalism's visual interest and advanced its biopolitics. As my analyses of "Is Suicide a Sign of Civilisation?" and "The Mathematics of Marriage" demonstrate, quantitative information was only one facet of the cultural data that visualizations mediated for readers. Within the multimodal environment of an illustrated periodical, even the most ornamental visualization conveyed meaning through its aesthetic characteristics. When *Pearson's* phased out Schooling's illustrated articles and transitioned to photorealistic data visualization in 1898, it turned to non-specialists who relied little on statistical conventions to write the text of its population journalism. Some of the journalists who wrote *Pearson's* population data articles between 1898 and 1902 had backgrounds in math, economics, and social science (including Simon Newcomb and George B. Waldron, who published on mathematics and geometry). However, most authors wrote more widely on miscellaneous popular topics, ranging from acrobatics to the future of telegraphy (Carnac; McGovern). We can therefore surmise that population journalism's statistical accuracy was not as important to its biopolitics as its interacting visual, textual, spatial, and material aesthetics.

Spectacular Normalization in "The Mathematics of Marriage"

"The Mathematics of Marriage" assembles words, images, and numbers in unusual relationships and layouts that foreground their own visuality and materiality, enacting an aesthetic spectacle of biopolitics. Such deliberately opaque data visualizations worked by encouraging readers to attend to the process of knowledge production itself (Klein). The noisy aesthetics of "The Mathematics of Marriage" drew reader attention to the feature's use of halftone reproduction technology. Halftone images were characterized by their tonal detail and distinctive granular pattern. As I discussed in the Introduction and developed in Chapter One, readers would recognize a halftone image as such and could situate it as the product of recent innovations in photomechanical mass image reproduction.

The halftone images in *Pearson's* population journalism and other content distinguished the magazine as aesthetically modern—as a new media artifact in an era that made much of "new" cultural phenomena (for example, New Journalism, the New Woman, and New Realism). The aura of modernity in halftones imbued formulations of reader identity with cultural authority; interpretation was also conditioned by the technology-based material specificity of these graphics. Halftone images reproduced from photographs, including most of the images in "The Mathematics of Marriage," implicated the unique subjects of their originals: the real people, places, and events from which a magazine photographer captured physical data. Depending on the quality of paper and ink, the halftone could exhibit tonal details almost as minute as those of a photograph. Indeed, photography influenced the technological imagination and cultural sensibilities of periodical readers. Readers perceived the halftone's capacity to reproduce a photograph's spatial composition and tonal gradation as indications of its fidelity to the physical data that photography inscribed. However, all halftone images also implied their own mass multiplicity. A photograph, as a three-dimensional object, had unique materiality, but

halftone images did not: the verso of a magazine page attested to the two-dimensionality of images materialized *en masse* in print culture. A photograph-derived halftone on a magazine page, regularized and flattened, was but "one ephemeral image among many contiguous texts" (Beegan, *Mass Image* 13). The tonal granularity of halftones also attested to their status as mechanical reproductions. A halftone image's miniscule dots recursively signified a production process that required remediating complex subjects as uniform bits of data and reproducing that data through a segmented, multi-stage photomechanical process evocative of the assembly line (Beegan, *Mass Image* 72). The halftone aesthetic suggested the increasing role of industrial, capitalistic automation in popular culture.

Through the photorealism made possible by halftone reproduction, population visualizations remediated the individual subject's body as an aesthetic component of mass print. Population journalism's textual, visual, and material elements constructed the reader as a unique individual but also, paradoxically, as a quantified, mechanized component of the population mass. For example, in the visualization of infants in "The Mathematics of Marriage," the infants' unique facial features and posture suggest that *Pearson's* sourced the image from a photograph of real babies (figure 25). The halftone visualization thus invokes the putatively objective, documentary powers of the camera and the photograph. At the same time, the granular dots made by the halftone screen regularize the figures as products of mass mechanization. In keeping with *Pearson's* cultural imperialism, these mechanical replicas exhibit racial as well as material homogeneity. All the babies are white and fair, conveying a racialized view of the British nation and its future.

Similarly, at the bottom of the article's first page, two sets of visualizations depict three figures that respectively represent single, married, and widowed adults (female in the first

visualization and male in the second) (figure 27). The three figures in each visualization bear the features of a perfectly average type: the figures are appropriately pleasing to the eye, but not exceptionally beautiful, with dress and posture that reflect conventional notions about how an individual should look and act at each stage of adult life. In the visualization that represents twenty "of the female sex," twelve single maidens face the reader, clasping their hands and leaning inward with a smiling, dreamy expression that suggests playful but yearning hopefulness (Denham 667). Seven married women turn away from the reader but look toward the right so their faces appear in profile. Their posture suggests the reserve that accords with social expectations for a matron in public. These figures also wear more elaborate dress than the maidens, suggesting the economic security that a Victorian woman ideally achieved with marriage. One widowed woman faces toward the reader, but her serious expression and crossed arms keep her aloof. The dowager's unornamented, black mourning clothes further distinguish her from the other figures. Her posture and dress adhere to conventions for widowhood, rendering her stately, grave, and socially removed.

The detailed features of the visualization's figures suggest that *Pearson's* reproduced images of three real individuals in multiple (see figure 27). A line of units represents each demographic's proportion in the population body. The queue progresses from left to right, evoking the progression of both a sentence and an assembly line. Maidens on the line-up's far left lean in toward the right, superseded by matrons who turn their faces in the same direction; the single dowager on the far right, with her face turned left toward the other figures, serves as a stalwart punctuation mark while illustrating the final stage of married life. This arrangement yields a simultaneously comical and dehumanizing effect, as each figure (the single maiden, the

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matron, and the dowager) becomes synecdochic for a mass in which a shared population trait makes units self-identical.

Through spectacularity, photorealistic visualizations foregrounded their own aesthetic mediation, encouraging readers to conceptualize themselves as units of mass, mechanized print and a normalized population body. But in making their mediation visible, these visualizations also opened themselves to critical scrutiny. Readers who attended to the processes that shaped population journalism's aesthetics could consider not only factors of production, but also factors of interpretation—visualization method and execution, textual themes, and emphases. In effect, photorealistic population journalism drew attention to how it argued, inviting readers to question the biopolitical suppositions that underwrote that argument and even to reject dominant biopolitical discourse. Moreover, the opaquely spectacular halftone visualizations confronted the conventional values that shaped data visualization as a practice of statistical knowledge production. Photorealistic population journalism thus stimulated critical data visualization literacy among periodical readers.

The biopolitical aesthetics of "The Mathematics of Marriage" illustrate that at the turn of the twentieth century, the reader-citizen had conflicting cultural roles as an individual and as a unit of the modern mass. By visualizing this duality as a spectacle, "The Mathematics of Marriage" and other population journalism articles that used halftone images encouraged readers to conflate population politics with popular culture. The changes to the aesthetic character of population journalism's biopolitics reflected the changing character of popular mass culture at this cultural moment. By reducing the individual to a unit of mass print, population journalism's visualizations mirrored emerging mass culture's reduction of the individual to a unit of a

consumer population that ultimately existed to circulate and proliferate capital (Foucault, *History of Sexuality* 141).

Like the advertisements in the *Illustrated London News* and the *Graphic*, *Pearson's* data visualizations exemplify the aesthetic evolution through which late-nineteenth and early-twentieth century illustrated periodicals responded to innovations in mass image reproduction and to an increasingly spectacular popular culture. Population journalism encouraged readers to conflate its population politics with popular culture. By making its mediation of bodies and behaviours visible to readers, however, photorealistic population journalism created space for readers to exert agency by critiquing biopolitical discourse and data visualization itself. Population journalism's aesthetic transformation generated new possibilities for reader engagement with data visualization in periodicals. What is more, it fostered opportunities for readers to recognize and respond to the biopolitics of visual popular culture. As the next chapter demonstrates, readers could also tactically draw on their technological imagination and medial awareness to produce cultural expressions of their own in illustrated magazines.

Chapter Four

Imagining Snapshot Photography: Participatory New Journalism and the Making of Popular Culture in the *Strand*, 1896-1918

The real amateur knight of the camera scorns the taking of mere prosaic portraits of his friends and relations, and pines for higher things. Having served an apprenticeship at landscape photography, he enters with zest into the creation of bizarre and comic photos.

"Curiosities," *Strand Magazine* (1898)

In Chapters Two and Three, my use of Michel de Certeau's theory of strategies and tactics to analyze reader activities has a necessarily speculative element. Evidence of historical readers' interpretation and appropriation of illustrated periodicals exists, as Margaret Beetham has shown, but it is far from comprehensive ("In Search" 92). To illustrate her point, Beetham lists numerous sources, such as reviews, letters, and public lectures, that document historical reader engagement with a particular text, Charles Darwin's *The Origin of Species*. However, beyond Victorian texts that still occupy a prominent place in Western culture, such evidentiary abundance does not surround many print titles. Such is the case for most popular illustrated newspapers and magazines. For example, the satire on population journalism that J.G. Grant wrote and illustrated for *Harmsworth Magazine*, "Statistics Gone Mad," may offer our only evidence of historical practices for reading the population journalism that was briefly ubiquitous in illustrated monthlies of the 1890s.

To theorize reader engagement with multimodal advertisements and population journalism, then, my approach to the case studies of Chapters Two and Three involved identifying strategies and tactics through which readers could engage with specific periodical titles, genres, and numbers. The resulting analyses indicate that producers used aesthetic

strategies to condition readers' engagement with periodicals and influence their understanding of mass culture. Such strategies functioned by appealing to the technological imagination, drawing readers' attention to how periodicals mediated mass culture. By making periodical mediation visible, though, these strategies created opportunities for readers to respond with tactics, producing heterogeneous counter-interpretations.

This chapter analyzes "Curiosities," a feature in the *Strand Magazine*, for evidence of the tactics of historical readers. In this long-running feature of participatory journalism, readers used their technological imagination and medial awareness to produce cultural expressions that integrated written narratives with amateur photographs. Over its 22-year run, "Curiosities" became a platform for readers to explore hand-camera technology, which became widely available to middle-class consumers in the mid-1890s. Every month between August 1896 and August 1918, "Curiosities" published captioned images sent in by readers; most often, these were amateur snapshots: informal, rapidly captured images, typically taken with a hand camera. Contributors sent in images of exotic foreign and historical artifacts, exceptional feats and unusual events, natural anomalies, and bizarre results of the photographic process itself. "Curiosities" published its most reader-driven, innovative items between 1897 and 1903. This period marks a high point in New Journalism's participatory strategies, which expanded, at the turn of the century, with an array of highly interactive opportunities for readers in popular newspapers and magazines. It also marks a pivotal moment for the interaction of the illustrated magazine with the new media milieu, specifically through the medium of snapshot photography.

"Curiosities" contributed to amateur photography's developing "socio-technical frame of reference," which Patrice Flichy defines as a field shared by various actors collaborating in a technological activity (81). Flichy's theorization of the process through which a new technology

integrates with a culture illuminates how "Curiosities" operated as an interface at the border between the hand camera's intended functions and its heterogeneous use by individuals and groups. According to Flichy, the actions of various agents, particularly technology designers and users, shape the place a new technology comes to occupy in a culture. In this dynamic process, agents interact as strategists and tacticians within two subframes that constitute the larger socio-technical frame of reference: the frame of functioning, which encompasses technological activities and knowledge; and the frame of use, which encompasses a technology's social significance (Flichy 83).

The Eastman Kodak company dominated the interactions of the frames of functioning and use through which hand cameras acquired a socio-technical frame of reference. It was largely thanks to Kodak that hand cameras expanded amateur photography's role in popular culture. "Curiosities" presents an opportunity to examine how hand camera users—particularly middle-tier, folding camera amateurs—responded to Kodak's strategies. The *Strand*'s use of participatory journalism to engage readers' technological imagination made "Curiosities" an interface through which the hand camera's frame of functioning and frame of use interacted. According to Flichy, agents draw on the technological imagination to develop strategies and tactics for a technology's functioning and use (119). The contributors to "Curiosities" reimagined snapshots as components of multimodal print expression when the *Strand* offered a medium for these imaginative innovations. This chapter maps how the multimodal print items that readers contributed to "Curiosities" subverted Kodak's strategies. Readers became tactical producers, not only of a feature of the *Strand*, but also of the hand camera's socio-technical frame of reference. In "Curiosities," the *Strand*'s engagement of readers' technological imagination became part of a large-scale formation of popular snapshot culture.

The *Strand Magazine*

      Like *Pearson's Magazine*, the *Strand* printed varied, visually oriented subject matter that appealed to a diverse but primarily middle-class audience.[24] The *Strand*'s successful format was inspired by popular American illustrated monthlies such as *Scribner's* and *Harper's* Magazine (Sutherland 495). The second of many journals through which George Newnes established a diverse publishing empire, the *Strand* significantly influenced the modern press (K. Jackson, *George Newnes* 1; Tilley). Published from 1891 to 1950, the *Strand* became Newnes's most successful magazine. Selling for 6d per monthly issue, it "represented excellent value" to readers (Tilley). The magazine engaged established authors and artists, such as Gordon Browne and Sidney Paget, and relative newcomers such as Arthur Conan Doyle ("*Strand Magazine*, The"). Many scholars credit its success and longevity to its staunchly middlebrow and uncontroversial character and its "commercial imperative" (K. Jackson, *George Newnes* 88-90). Advertising that bookended the editorial contents constituted nearly half of each monthly issue.[25] Like *Pearson's*, the *Strand* appealed to readers through New Journalism techniques such as a personable tone, an orientation to entertainment, and readability.

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[24] Unlike George Newnes' first publication, *Tit-Bits*, which catered to the lower-middle classes, the *Strand* chiefly targeted a higher middle-class demographic that included intellectuals and professionals ("*Strand Magazine*, The"; K. Jackson, *George Newnes* 88). While most of its audience was middle-class, however, the *Strand* boasted a relatively diverse readership that included royalty. Queen Victoria was known to read the *Strand*, even contributing to articles about aspects of her life (K. Jackson, *George Newnes* 98).

[25] The distribution of advertisements before and after editorial contents varied, perhaps because advertising practices changed over time or convention differed among the magazine's international printers. K. Jackson states that the *Strand* had over 250 advertisers per month (*George Newnes* 94).

Scholars of Victorian periodicals and literature have often noted that fiction was prominent among the *Strand*'s contents. Winnie Chan argues that throughout the 1890s, the *Strand* was promoted "primarily as a short story magazine" (13). Its images have received less critical attention than its fiction even though visuality was essential to the magazine's brand. The *Strand* strove, according to its last editor, Reginald Pound, to print "a picture on every page" (30). The presence of an art editor on the magazine's staff testified to its emphasis on images; prior to the *Strand*'s 1891 emergence, artwork was typically the responsibility of a magazine's general editor (Beare 8). The magazine exhibited pictures reproduced from wood engravings, line drawings, paintings, and photographs which, according to James Mussell, showcased the "commercial potential" for photomechanical processes, which were still new when the magazine first appeared (*Nineteenth-Century Press* 81).

The *Strand*'s editors were highly conscious of how its "rich variety" of image reproduction methods and styles affected visual meaning (Mussell, *Nineteenth-Century Press* 82). Artist-drawn images consistently accompanied the *Strand*'s fiction, but a wider range of image types accompanied the magazine's equally diverse non-fiction. For example, in the feature "From Behind the Speaker's Chair," which ran from 1893 to 1902, pen-and-ink caricatures of British politicians adorn Henry W. Lucy's satirical commentary on domestic politics. An 1898 article by Grant Allen, titled "Glimpses of Nature," includes scientific drawings of male, queen, and worker wasps (57). Halftones from photographs also frequently illustrated non-fiction. An 1894 instalment of the *Strand's* "Illustrated Interviews" feature, on the actor Charles Wyndham, includes five exterior and interior photographs of Wyndham's manor house, and nearly a dozen photographs depicting Wyndham in various roles (513-25). An 1898 article by Henry Hale on submarines includes photographs of an American submarine's launch and descent (705-8). As

these examples suggest, the *Strand*'s array of illustrated non-fiction included social commentary, celebrity interviews, and popularized science, among other topics. The magazine's non-fiction was generally consistent with the *Strand*'s middle-class interests and values; its letterpress and images contained enough specialized detail to hold interest, but not enough to be challenging or controversial for an educated general audience.

Participatory Journalism and the Technological Imagination in the *Strand*

One of New Journalism's defining characteristics was its use of participatory strategies for reader engagement. These ranged from correspondence columns and literary competitions to unusual schemes such as a treasure hunt that required readers to assemble clues across multiple issues (K. Jackson, "*Tit-Bits* Phenomenon" 211-14). Periodical scholars describe such interactive reader engagement as participatory journalism, which emerged with the modern magazine in the late-eighteenth century (Klancher 21-23). Participatory journalism fostered a sense of community among periodical readers and contributors, even providing opportunities for readers to exert agency as contributors. As Beetham points out, readers were "constantly being invited to become writers" ("In Search" 96). At the fin de siècle, New Journalism deployed participatory techniques to strengthen readers' loyalty to specific titles and keep them invested as regular consumers of those periodicals. At the same time, advancements in mass print technology and portable photography also began expanding opportunities for participatory journalism. For example, during the Second Boer War, the *Illustrated London News* and other journals engraved and printed snapshots submitted by soldier-readers at the front (Beegan, *Mass Image* 171).

George Newnes invented schemes to foster reader interaction in his magazines. His first periodical, *Tit-Bits*, was rich in examples of participatory journalism, including advertising

stunts, competitions, and correspondence features (K. Jackson, "*Tit-Bits* Phenomenon" 211).

Kate Jackson characterizes the *Strand* as less participatory and dynamic than *Tit-Bits*, viewing it

as a stable reflection of the middle-class values and interests of its readers (*George Newnes* 89).

However, the *Strand* sustained its share of interactive features, including puzzles, symposia, and

articles that printed reader contributions. In an 1892 instalment of "The Queer Side of Things," a

sporadic feature published in the magazine's first few years, the editors invited readers to send

"vegetable oddities" to the *Strand* offices, promising to publish those that were "sufficiently

curious" (sadly, a follow-up article never appeared) (215). In a 1905 article titled "Which is the

most beautiful place in the world?," several "well-travelled" celebrity readers, including Mrs.

Humphry Ward, John Oliver Hobbes (pseudonym of Pearl Craigie), and the mountaineer Sir

Martin Conway, responded to the question with brief essays (385-92).

The *Strand*'s richly illustrated format enabled Newnes to include another participatory

journalism technique: articles about its monthly production. K. Jackson notes that the *Strand*

"presented a plethora of facts about technical and financial aspects of the publishing industry,

about issues of production and distribution, and about the history, scope and output of

[Newnes's] own publishing company" (*George Newnes* 98). Some of these articles included

illustrations that revealed the inner workings of the *Strand*'s material production. These articles

fostered readers' medial awareness, encouraging them to imagine the print history of each *Strand*

number and position themselves within the community that contributed to its production.

"A Description of The Offices of the *Strand Magazine*," published in the periodical's

second year (1892), was pivotal to the *Strand*'s efforts to foster readers' consciousness of its

production processes and community. This article, as discussed in my Introduction, documents a

typical day in the monthly magazine's production. Elaborate letterpress descriptions of the

Strand's offices and production rooms complement detailed images that take up over half the space of this eight-page, double-columned article. Ample details entertain an interested general audience and introduce them to the steps of periodical production, but do not include enough detail to overwhelm readers with technical knowledge.

Images of the stereotyping room and electrotyping rooms illustrate the thematic emphases and composition of the article (figure 28) ("A Description" 601). Each picture depicts workers and machines in action, ascribing nearly equal weight to the human agents and technologies involved in producing Newnes's periodicals. Varying facial features, posture, and clothing distinguish the human figures as individuals, but all similarly avert their gaze from the reader, focusing soberly on the work at hand. Thus, while the images depict Newnes's employees as individuals, they visually emphasize the status these persons share as workers. The machines and tools the staff work with are also documented in detail. Indeed, the print technologies in each room occupy as much visual space as the human figures, if not more, although each picture is compositionally organized around a central cluster of workers. The detail and space devoted to machines complement the narrative's extensive verbal descriptions. However, the pictures faithfully depict peripheral details of each space, too, such as the light from workroom windows and a row of coat hooks on a back wall. This context adds texture to the narrative, adding visual dimensions to its documentary realism without simply reproducing photographs—a practice that, in 1892, was not yet ubiquitous in mass print. In fact, the images showcase the representational capacity of wash drawings reproduced using halftone reproduction, another recently established print process.

As the pictures of the stereotyping and electrotyping rooms demonstrate, "A Description of the Offices of the *Strand*" educated readers in the machines and mechanical processes

involved in illustrated periodical production. The article also, as Ann Hale and Shannon Smith

note, revealed the human labour and infrastructure involved in making the *Strand* (670). The

article enumerated quotidian details that imbued the creative, editorial, and mechanical aspects of

the *Strand*'s production with vitality. Like the illustrated interviews of celebrities, "A

Description" gave readers a backstage view of the *Strand*'s life, inviting readers into a privileged

knowingness about the popular periodical.[26] By imparting inside information about the

magazine's production, the *Strand*'s editors initiated readers into the (large) inner circle of the

Strand community. The *Strand* also encouraged readers to identify with the human agents

involved in magazine production by individualizing these agents, bridging the conceptual gap

between producer and consumer to strengthen readers' sense of affiliation with the magazine

and, in turn, their brand loyalty.

Other articles on the *Strand*'s production also included readers in the network of agents

who contributed to the magazine's production. Some of these articles individualize human

contributions to the *Strand*—for example, by printing a portrait of George Newnes and illustrated

interviews with the magazine's popular authors, such as H. Rider Haggard and Arthur Conan

Doyle ("Illustrated Interviews No. VII" 2-17; Trevor 633-640). Other content, such as "How

Novelists Write for the Press," describes specific classes of periodical contributors (295-298).

These articles imbricated readers' technological imagination with their identities as participants

of the New Journalism, positing readers as agents in the networked activity of cultural

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[26] Mussell has characterized "A Description of the Offices of the *Strand*" as "derivative" of the illustrated interview—a genre that the *Strand* pioneered (*Science* 74). The illustrated interview was underwritten by the New Journalistic principle of individualization, focusing on personality, domestic interiors, and other aspects of personal life to shape a portrait of the interviewee as a unique individual. In these idiosyncratic and private details, the interviewee would emerge as a concretely real person with whom readers could relate.

production. Readers situated themselves in this network not only by participating in competitions

and such, but also by soliciting editorial coverage of the magazine's production. As Mussell

points out, the *Strand*'s editors specifically indicated that "A Description of the Offices of the

Strand" and the portrait of Newnes published in December 1892 were produced "in consequence

of the repeated wish of readers" ("Portraits of Celebrities: Mr. George Newnes" 593, cited in

Mussell, *Science* 74). In 1896, the *Strand* presented readers with another way to engage their

technological imagination and participate in periodical production: by contributing to its new

feature, "Curiosities." This feature became a site for exploring uses of the hand camera, a newly

available technology that galvanized popular amateur photography and drew readers into the new

media milieu.

Eastman Kodak and the Hand Camera's Socio-Technical Frame of Reference

Until the 1880s, photography was too complex an undertaking for all but commercial

professionals and "a very few avid amateurs" (Jenkins 1). By 1900, the entry level for

photography had lowered considerably. A novice could now simply press the button on a hand

camera to take each exposure and then send it to a local photographer or factory to have the film

developed and new film roll loaded in (16). This change revolutionized the industry and

photography's position within popular culture (1). While many social and technological factors,

as well as individual innovators, contributed to vernacular photography's expansion, Jenkins and

other media historians have placed the American entrepreneur George Eastman "at the heart of

the . . . key conceptual and technical changes which created the mass amateur market" and

transformed the industry (2). Like Newnes, Eastman mobilized a populist history, an altruistic

purpose, and a corpus of promotional materials to forge a strong brand identity across the

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products of his company, Eastman Kodak. Newnes closely directed the messaging of his publications, particularly *Tit-Bits* and the *Strand*, and positioned himself as the benevolent, paternalistic leader of a community centered around his publications. Similarly, Eastman wrote much of the advertising copy for Kodak in its early years (Collins 57) and maintained a public identity as the patriarch of amateur photography.

Eastman Kodak modified existing technologies to pioneer amateur hand camera technology, developing light, portable cameras and equipment that were easy to use and to manufacture (Jenkins 14).[27] Relatively small and light-weight detective cameras were already available from several manufacturers, but these were too finicky for most amateurs to produce "presentable images" (Collins 55). In 1895, Kodak launched the Pocket Kodak Camera, the first amateur snapshot camera. This Pocket Kodak and other early folding cameras appealed primarily to an upper-middle tier of amateur photographers who could afford to invest a modest sum of time and money on personal photography. The first Pocket Kodak's smaller and more affordable successor, the Folding Pocket Camera, expanded this demographic, becoming the first folding camera to catch on with a wide consumer market (Collins 76). The Brownie camera, which was smaller and cheaper still, entered the market in 1900. Through a succession of cameras and photographic equipment, Kodak catered to multiple amateur demographics, ranging from serious to casual non-professional photographers.[28]

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[27] These innovations included roll film, which was easier to use than single-use glass plate negatives; factory-based film development, which gave photographers the option to let professionals take care of this technically complex chemical process; and the hand camera (Jenkins 8-11).

[28] Throughout the late-nineteenth and early-twentieth centuries, Eastman Kodak refined many other photographic supplies and developed new equipment, such as a portable film development tanks and bicycle carrying cases. These accessories catered to a broad spectrum of professional and non-professional photographers.

Eastman Kodak influenced the socio-technical frame of reference for amateur photography technology by contributing to the frame of functioning for the hand camera and the frame of use for the photographer. In this instance, the frame of functioning pertains to the hand camera's technological activity and the knowledge this activity mobilizes; the frame of use pertains to the hand camera's social and symbolic meanings (Flichy 83-85). These two frames interacted through a feedback loop that involved strategies and tactics. The hand camera's producers acted as strategists in designing this technology to be used in a specific set of ways, for a specific set of purposes. The camera's users, as well as other agents that interacted with the technology after it had been shaped by strategists, became tacticians by poaching its intended functionality, using it as they saw fit (Flichy 90).

The hand camera's frame of functioning was primarily the purview of Kodak's designers and producers (Flichy 87). As its first slogan, "You press the button—We do the rest," indicates, Kodak designed a frame of functioning that sharply constrained user input. It prioritized simplicity of manufacture and use for all its cameras, from the middle- and upper-tier folding cameras that offered a user many setting options, to the lower-end box cameras, such as the Brownie, which offered few to no options for adjustment (Collins 98).[29] But whether an amateur photographer used a fool-proof, point-and-shoot box camera or a slightly more complex folding camera, Kodak's "complete system" of equipment and resources for snapping and developing photographs made advanced technical knowledge unnecessary to photography. In short, Kodak took care of every aspect of photography except for selecting a subject and taking a picture (Collins 56).

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[29] According to Collins, the Brownie "averaged out the difficulties of photography," embodying "the sum of those figures" in its design (98).

Kodak distributed user manuals and guidebooks to educate novice photographers on the hand camera's frame of functioning. However, it strategically provided only enough information to persuade readers of Kodak's technological superiority and to instruct them on intended product uses (Collins 60). Even more detailed Kodak literature, such as the personal portrait guide, "At Home with the Kodak" (1915) and the periodical *Kodakery: A Magazine for Amateur Photographers*, focused chiefly on the steps involved in taking, but not developing, photographs. These publications offered minimal explanation of the film development process, although they always included at least one promotional item about Kodak's film development services. When Kodak introduced a mobile film development tank, the process of film development remained largely closed to users. Kodak streamlined the steps of development so users could simply mix the appropriate ratio of pre-made powders and water and follow the instructions ("Kodaks and Kodak Supplies" 5-8).

Kodak's highly determined frame of functioning limited user agency, grooming consumers to depend on Kodak's supplies and services rather than invest the additional time and money required to use more elite photographic equipment or devise home-made methods. Strategies to foster user dependency were important to Kodak's success: most of the company's profits came from developing film, which was a periodic expenditure for most consumers, rather than from selling cameras, which involved a one-time consumer purchase (Skyrme). In its promotional literature, Kodak presented its constrained frame of functioning as a public service: thanks to Kodak, individuals who lacked the technical knowledge, financial resources, and leisure time of the elite amateurs could enjoy the freedom "to take pictures of the things that they themselves [were] interested in" (*Book of the Kodak Exhibition* 2). This rhetoric reinforced

Kodak's efforts to "cultivate an image of itself as a benevolent, even paternalistic institution" (West xxiii).[30]

Kodak's robust branding and marketing campaigns indicate the company sought to influence not only the frame of functioning, but also the frame of use for portable amateur cameras. Kodak held amateur photography competitions, seminars, and exhibitions, and published literature and promotional ephemera, all of which contributed to a homogenous narrative of snapshot photography's place in popular culture and individual lives. According to Kodak, snapshot photography's purpose was to document special occasions and happy times for the sake of recording memories. The "true witchery of Kodakery," the company claimed, is "in the recording not only of the unusual and the picturing of our travels, but even more in its portrayal of the every-day, common places at home" (*Book of the Kodak Exhibition* 3). While professional photography was often carefully planned and staged like a public performance, amateur snapshot photography could—and should, according to Kodak—be spontaneous and personal. Snapshot photography was also democratically progressive, according to the Kodak ethos, providing all people with means to create their own visual archives (Collins 59). By disregarding technical and artistic expertise, Kodak's version of democratic photography was naïvely simplistic, presenting a "childlike" perception of experience and its documentation in snapshots (West 7). Even the idealized Kodak Girl's autonomy was limited: as West indicates, her ever-youthful appearance reinforced her amateur status (53). Kodak thus encouraged a narrow range of user participation. Although Kodak's appeal rested largely on giving consumers

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[30] Eastman was highly conscious of brand reputation: one of Kodak's early slogans was the declaration, "If it isn't an Eastman, it isn't a Kodak." Though this slogan is oddly tautological, it underscores the integrity of Kodak products.

agency as producers of cultural expressions, Kodak limited this agency by discouraging media literacy and technological awareness.

Kodak made every effort to determine how amateur photographic technology fit into the cultural landscape, but the frame of use was still necessarily the domain of the individual snap-shooters who integrated photography into their everyday lives. "Curiosities" in the *Strand* offers an interface for studying how individuals integrated Kodak's strategies into their snapshot practices. Flichy describes a technology's interface as the "point of articulation between the frame of functioning and the frame of use" (83). Here, the agents involved in the two frames indirectly negotiate with one another. Kodak's user manuals and other promotional ephemera were part of this interface. Although "Curiosities" was not part of Kodak's initial frame of functioning, and therefore not part of the initial interface, it became a secondary interface enabling amateur photographers to use participatory journalism to adapt and subvert the frames of functioning and use formulated by Kodak. In "Curiosities," readers became producers in the new media milieu.

"Curiosities" in the *Strand*

The first instalment of "Curiosities," occupying the last four pages of the *Strand*'s editorial contents, appeared in August 1896 (figure 29). The feature has no credited author or editor. Its letterpress takes the form of a series of notes, each about five sentences in length, each of which describes a halftone image printed beside, underneath, or above it. Although most notes and images form square blocks, their layout varies from page to page; overall, the images take up slightly more page space than the notes. The subtitle over each image names its "curious item"; these include "Entrance to an Armenian Church" (237); "A Bicycle Made Entirely Out of Wood"

(237); "The Smallest Bank-Note in the World" (240); "A Chinaman's Hand" (238); "The

Convent Sherbanu Who Escaped from a Zenana at Amritsir" (238); and "Potato Cockatoo"

(239). The feature includes a total of fifteen items, each illustrated with one or two images from

photographs. One of these items, the "Potato Cockatoo" (a potato that resembles a cockatoo's

head), was sent to the *Strand*'s offices "by Miss Constance Williams, of Banbury, and

photographed by [the *Strand*'s] own artist" (239).[31] Another item, a scrap of Dr. Livingstone's

diary, is housed by "Dr. Grattan Guinness of Harley House, Bow" (239). The feature does not

identify the immediate sources of the other thirteen items or the identities of their photographers.

The notes describe distinctive features of each visual item, detailing its original use, and, for the

many foreign and historic oddities, giving some indication of their date and place of origin.

The text's tone is conversational, enthusiastic, and amused. "Curiosities" presumes a

readership already familiar with the *Strand*'s contents and community. Referencing the author of

the popular Sherlock Holmes stories serialized in the *Strand*, the note for "Dyak Darts and

Quivers" declares, "Readers of Dr. Conan Doyle's fascinating book, 'The Sign of Four,' will

recall with interest these deadly little things." The remainder of the note is a quoted passage from

Conan Doyle's book in which Watson and Holmes discuss poisoned blow darts (239). As a

novel, *The Sign of Four* was not one of the many Sherlock Holmes stories serialized in the

Strand, but readers were likely familiar with this work, given Conan Doyle's popular association

with the magazine and *The Sign of Four*'s frequent republication in the 1890s.[32]

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[31] Constance Williams' potato was the first of many root vegetable oddities to appear in
"Curiosities." Given the similar subject matter of the 1892 instalment of "The Queer Side of
Things," curiously formed root vegetables seem to be a preoccupation of the *Strand* community,
or perhaps of the Victorians.
[32] The novel was originally serialized in *Lippincott's Monthly Magazine* in 1890 and
subsequently republished in several British periodicals. *The Sign of Four* was also published in

As an assortment of anthropological, historical, and local phenomena, people, and events, "Curiosities" was part of a genre of non-fiction content in the *Strand* that I describe as novelty journalism. This genre includes the miscellaneous novelty articles, often organized under a theme, that Jonathan Cranfield calls "useless information" and "snippets" (*Twentieth-Century Victorian* 2). They may have been useless, but such articles evidently appealed to readers, as the *Strand* persistently published novelty journalism from its inception until at least 1918. This subset of non-fiction editorial content took advantage of photomechanical image reproduction technology and the *Strand*'s highly visual layouts to create multimodal print exhibitions in which the everyday dovetailed with the fanciful. The *Strand*'s other non-fiction focused on quotidian aspects of British life or, when it branched into the more unusual, was grounded in scientifically empirical explanations (for example, "Some Wonders of the Microscope," 1896). Novelty journalism, in contrast, straddled the *Strand*'s twin realms of fiction and non-fiction; it displayed oddities as strange as fiction, but made all the more curious because they were real objects and events, documented as such through photography. The *Strand*'s novelty journalism adopted a stance toward such curiosities that reflects the same cultural preoccupation with exhibiting and classifying anomalies that Chapter Three identified at work in *Pearson's* population journalism. However, the *Strand*'s novelty journalism took a more overtly imperialist stance, focusing on foreign practices that the magazine's producers deemed bizarre. Examples of the *Strand*'s photographic novelty journalism include "The Topsy-Turvy House at the Paris Exhibition" (1900), an article documenting a house constructed entirely upside-down from roof to wine cellar (211–14), and "Wonders of the West," a fin-de-siècle feature reporting on North American

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several single-volume editions during this time, including an edition by Newnes in 1896 (Towheed 43).

novelties such as a wooden animal menagerie, a whistling choir, and long-distance hot air

balloon sliding (776-85). These articles combine textual narrative with captioned images from

photographs that depict the foreign novelty's visually impressive features. As the *Strand*'s

longest-running novelty journalism feature, "Curiosities" similarly combined text and

photographic images to showcase odd phenomena.

Scholarship on the *Strand* includes little analysis of "Curiosities." Pound points to its

consistent publication at the end of the *Strand*'s editorial contents as evidence that it "was not

always a compliment to the general intelligence of readers" (54-55).[33] However, we might

interpret this feature's unchanging location as an editorial strategy for making it dependably

available for consumption. Rather than having to sift through an issue's contents to find the latest

instalment of "Curiosities," readers could flip directly to the last page of editorial contents to

locate similar features in readily accessible locations. This strategy appears to have been

effective, as twenty-first century magazines continue the practice.[34] More significantly, this

feature became the enduring keystone of the *Strand*'s participatory journalism. It achieved this

distinction by transforming into a dynamic forum in which reader-contributors used their

technological imagination to produce multimodal print expressions that explored snapshot

photography's role in popular culture.

By the second instalment of "Curiosities," notes began including more information about

each item's history and contributor. For example, readers were informed that a photograph of a

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[33] In the introduction to her *Index to the Strand Magazine*, Geraldine Beare mentions "Curiosities" in passing, but the feature does not make it into the index itself (xx). Cranfield cites "Curiosities" as an example of the *Strand*'s prominent visuals ("Arthur Conan Doyle" 27, note 9). Jackson reaffirms Pound's view of "Curiosities" as a legacy of the *Tit-Bits* editorial style (*George Newnes* 94).
[34] For example, the winner of the *New Yorker*'s cartoon caption contest appears at the back of the editorial contents each week ("Caption Contest Rules").

stuffed elephant head was submitted to the *Strand* offices by "Mr. Geo. F. Butt, F.Z.S., of

Wigmore Street, W.," whom the editors describe as "an eminent naturalist and taxidermist"; a

photograph of a beach fort built of wet sand was submitted by "Mrs. T.T. Ross, of Trevean,

Penzance" (357). Of the feature's nine items, four are credited to named contributors. The

Strand's editors describe two of these contributors as scientists (George Butt and one Mr. J Edge

Partington, an ethnographer), but the other two do not receive a vocational distinction,

suggesting they were amateur documenters of oddities.

Throughout its duration, "Curiosities" continued to include a combination of items

credited to reader-contributors and uncredited items procured by the *Strand* editors. However,

the ratio of reader-contributed items to editor items changed over the first few years of the

article's publication. "Curiosities" started actively soliciting reader contributions beginning in

January 1897, when underneath the feature title appeared the statement: "We shall be glad to

receive Contributions to this section, and to pay for such as are accepted" (115). This statement

continued to preface each instalment of "Curiosities" until the feature disappeared in 1918.

Strand readers evidently complied with the request, as their contributions gradually took over

"Curiosities." Occasionally, a reader contribution took the form of a curious drawing, an

amusing foreign handbill, or even a creatively addressed envelope. Most contributions were

photographs that readers would submit with explanatory letters. "Curiosities" provided a wide

point of access through which any reader with a camera could participate in the *Strand*'s

photographic journalism and receive credit and payment for it.[35] Some of the *Strand*'s other non-

fiction content included images from amateur photographs—for example, a 1900 article on

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[35] Unfortunately, I have found no information regarding the method or size of the *Strand*'s
payments to "Curiosities" contributors.

steam boiler explosions is illustrated with photographs by the chief engineer of the Manchester

Steam User's Association (Horner 80). However, this contribution required the perspective and

expertise of an industry insider. Thanks to the new hand camera technology, amateur enthusiasts

could document and publish private and local phenomena in "Curiosities" without specific

training and expertise.

The *Strand*'s editors likely anticipated an intersection between participatory journalism

and amateur snapshot culture when they began soliciting reader contributions to "Curiosities."

The feature synergistically linked the entrepreneurial and populist mandates of Eastman and

Newnes. Just as Eastman recognized illustrated print media's importance for popular culture,

Newnes understood the potential of the snapshot for participatory journalism. Kodak sought to

establish amateur snapshot photography's culture and codes of use through various publications

and ephemera; "Curiosities" presented another potential avenue for establishing snapshot culture.

The feature particularly appealed to the middle tier of amateur photographers who had sufficient

leisure time and money to snap images of novel subject matter and tinker with photographic

processes. Indeed, the feature's proximity to the *Strand*'s advertising pages brought it into

dialogue with the full-page and half-page Kodak advertisements that often appeared in the

magazine (figure 30).[36]

Evidence from both the *Strand*'s Kodak advertisements and "Curiosities" suggests that

many of these amateurs used folding Kodak cameras, which gave users more options to

[36] From 1888 onward, Eastman used advertising in popular American and British periodicals
such as the *Strand*, *Lippincott's*, and *Harper's Bazaar* to target upper and middle-class
consumers (Collins 57). Copies of the *Strand* that retain their original advertisements are scarce,
but an existing original monthly issue published in London in August 1911 includes one full-
page Kodak advertisement, and a quarterly edition of the magazine published in New York in
1901 (May through July) includes three Kodak advertisements ranging from full- to half-pages.

manipulate the shot. Some enthusiasts apparently developed their own film, although others may very well have used simple box cameras and left film development to Kodak's professionals.[37] Many of the notes that appear alongside "Curiosities" items quote their contributor to identify the images as Kodak-produced snapshots. For example, an 1898 snapshot, depicting a man on a balcony, "was taken with a Kodak camera from another balcony high above" (Phillips 357). The note for a snapshot in an instalment from 1900 indicates that its contributor took the photo with a Kodak suspended on the ceiling ("A New Style in Photography" 240). "Curiosities" boosted a sense of loyalty and community among two overlapping groups—Kodak users and *Strand* readers—by linking participatory cultural expression to mass consumption.

As amateur photographers became its primary reader-contributors, "Curiosities" became a participatory feature framed by the ordinary amateur's perspective. Initially, editors drew on New Journalism's strategic use of novelty, digestible tidbits, and conversational tone to present "Curiosities" as a miscellaneous exhibit of local and exotic artifacts accompanied by brief commentary. Over time, readers tactically superseded editors to fashion "Curiosities" into an exhibit of snapshots that were diverse and novel but largely derived meaning from their relative positions on a community-centered forum. Reader-contributors tactically appropriated Kodak's strategies for amateur photography—that is, elements of the hand camera's frame of functioning—and incorporated the resulting snapshots into multimodal print—its frame of use. In the forum of "Curiosities," reader-contributors used the technological imagination to create

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[37] Photography historians such as Marc Olivier have demonstrated the importance of acknowledging differences between the various Kodak cameras, which afforded different snapshot processes and produced different results. Investigating the particularities of snapshot technologies enables Olivier to critique the assumption, made by serious amateur photographers and, later, by photography historians, that snapshot photography was uncritical and inartistic (2-3).

multimodal print expressions that functioned not as private mementos of personal experience, as Kodak intended, but as cultural knowledge shared within the *Strand* community.

The May 1901 instalment of "Curiosities" illustrates that the types of individuals who contributed to the feature and the subject matter of their contributions changed over its first few years of publication (figure 31). The feature for this month includes nineteen items; of these, only one has no contributor information and was therefore likely submitted by the editors. Two others are credited to anonymous individuals. One of these was a soldier in an unnamed war (which readers would identify as the Second Boer War, then in progress in South Africa) who submitted a New Year's card fashioned from painted khaki because stationary was scarce at the battle front. All other "curious items" in this feature are from photographs. Because "Curiosities" typically included the names and addresses of contributors who gave this information, we know the geographical range and gender of reader-participants. Less than half of the signed items (eight of nineteen) came from within the United Kingdom. Of the remaining items with named contributors, five came from America, one from Canada, one from Australia, and one from Spain. The latter appears to have been contributed by a British or Anglophone citizen ("Mr. W. L. Smith, of the Eastern Telegraph Co."), rather than a Spanish national (600).[38] This range indicates that "Curiosities" became more international in scope as it became more participatory; in the early years of this feature, contributors were chiefly British. Information about contributor identities attests to increasing contributions by women, and even, as simple box cameras became popular, children. Items evidently submitted by children were relatively rare, as most contributors did not list their age, but one to two of each 1901 instalment's named contributors,

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[38] As this single instalment of "Curiosities" suggests, the reach of the *Strand*'s participatory journalism extended across the English-speaking world, even though the magazine's other contents, such as its fiction, primarily depict middle-class English culture.

or roughly 5%, were female—a small but notable percentage, given the prior scarcity of women's contributions to "Curiosities." This diversity of contributor locale, age, and sex reflects the diversity of the *Strand* community, as well as the appeal of amateur photography to the technological imagination.

Of the nineteen items, two document contemporary novelties that would be foreign to most British, colonial, or American readers of the *Strand*. Most items are connected geographically and temporally with the reader-contributors themselves, refuting the imperialist preoccupation with exotic anomalies evident in early instalments of "Curiosities" and the *Strand*'s other novelty journalism. Reader-contributors reoriented the feature's focus toward the subject matter of their lived experience. The local items they submitted to "Curiosities" record unusual local events, such as a gas explosion or a swarm of bees spontaneously gathering on a man's hand, as well as unusual feats and creations, such as a home-made, wheeled wind carriage and a "curious old sign" (598-600). One item, "A Literary Bird," references the *Strand Magazine* itself: an image from Hamilton, New York depicts a nest into which an Oriole has woven a piece of the *Strand*'s cover. The contributor playfully notes that the bird "showed excellent taste" in choosing its materials (Embody 597). Self-conscious puffing of Newnes's publications (including the *Strand*, *Tit-Bits*, and the *Million*) was not unusual in "Curiosities"—perhaps the result of contributors' canny recognition that such product placement would improve their chance of getting an item published in the feature.

In its range of contributors and subject matter, the May 1901 feature depicts typical "Curiosities" content as it appeared in monthly instalments at the turn of the twentieth century. "Curiosities" maintained many of its early conventions, such as the tidbit format, the relative sizes and layout of letterpress and images, and the general range of eligible subjects. However,

the May 1901 instalment also reflects an increased prominence of reader contributions, a change in trends of subject matter, and a shift in item documentation method. As "Curiosities" became reader-driven, the feature focused increasingly on phenomena that contributors could document in their own neighbourhoods. Serendipity and an eye for the novelties of one's day-to-day life became more important criteria for participating in "Curiosities" than access to exclusive foreign locales and rare archaeological artifacts. These criteria reflect the feature's increased participation by the middle-class, British and American consumers who dominated both the hand camera market and the *Strand*'s readership.

The changing authorship of "Curiosities" item notes between 1901 and 1902 also contributed to the feature's transition to a more fully participatory forum. While the feature was participatory from its inception, contributors initially had limited agency to shape how their images were framed by titles and letterpress. Until the end of 1897, every note was written by the *Strand*'s editorial staff, giving the feature a consistent tone despite its diverse content. In many of the notes that credit items to reader-contributors, detailed information about a subject or the circumstances under which it was photographed indicate that the *Strand* editor(s) drew on explanatory letters, sometimes quoting one or two sentences verbatim. For example, the note for an item titled "A Tree Tied in a Knot," from February 1898, quotes contributor Aubrey Colquhoun: "Mr. Colquhoun writes, 'I have a tree in my garden which has tied itself into a knot in its growth; the knot is more than 12in. in circumference.'" The editors of "Curiosities" proceed to offer their own explanation for this unusual growth, declaring "No doubt some years ago this branch, at that time a mere twig, got twisted or knotted… and was never afterwards disturbed." The note concludes with the editors' statement that "this remarkable growth does not interfere with the vitality of the tree" (237). This comment performs the curatorial work of

reinforcing the curious character that links the item to the feature, as well as indirectly referencing Colquhoun's letter a second time.

Between 1901 and 1902, the proportion of quoted material in each note increased until almost every note was a direct statement from an item's contributor (still framed as such by quotation marks). An absence of grammatical or spelling mistakes suggests that the *Strand*'s editors still silently intervened, correcting any typographical errors. The *Strand* editors continued occasionally to write a note about a reader-contributed item, perhaps because the contributor included no explanatory letter (as sometimes stated by the editors), or because the letter's handwriting was indecipherable. However, by 1902, most of the letterpress and images in "Curiosities" appear to be the work of reader-contributors, marking the feature's shift to fully participatory journalism in both the visual material and its curatorial commentary. This meant that contributors could more directly curate their images in their accompanying text. In effect, this shift increased readers' editorial agency as participants in the *Strand* community. Their witticisms, declarations, and exhortations would be printed at the *Strand* offices, along with reproductions of their snapshots, and circulated among the *Strand*'s international readership. The general style and subject matter of notes written by editors and reader-contributors did not noticeably differ, but the *Strand*'s readers could better interpret the spirit in which an item was submitted by looking for clues in the composition and tone of a note written by the contributor. Some notes indicate contributions were made in earnestness and awe, while others were made in mirth. For example, an image of a restaurant with the text "LE ACC" painted on an exterior wall is accompanied by a note in which the contributor, F. P. Walker, describes this painted text as a "source of wonder" for local inhabitants. At the end of his note, Walker reveals that the cryptic lettering was the result of an ambitious paint job begun in the middle of the clause, "CYCLE

ACCOMMODATION." This revelation serves as a punchline, and Walker's playfully hyperbolic diction augments its humour: "Apparently daunted by the magnitude of the task, and remembering the proverbial brevity of life," the painter abandoned the job (239). Walker thus combines note and image into a multimodal joke.

This shift to reader-authored notes underscores that, although an invisible editorial selection process determined the monthly assortment exhibited in "Curiosities," reader-contributors made the feature their own. In this feature, individual contributors' voices superseded the editorial "we" of the *Strand*'s staff. Readers tactically appropriated the multimodal potential of "Curiosities" to exhibit their accomplishments, share images of personal interest, and, as the remainder of this chapter will relate, exchange ideas for vernacular photography.

Kodak's Strategies and Amateur Photographer Tactics in "Curiosities"

The form and content of readers' multimodal contributions to "Curiosities" demonstrate that readers' tactical appropriations of this feature dovetailed with amateur photographers' appropriations of hand camera technology. In some ways, reader contributions adhered to Kodak's prescriptions for the hand camera's frames of functioning and use; in other ways, the novelty items and notes readers contributed to "Curiosities" clearly deviated from these prescriptions. Some of the feature's photographs depict momentary novelties, responding to Kodak's call to use snapshot photography to archive memorable experiences. An item from October 1902, "Capturing an Octopus," depicts a cephalopod that the photographer and a friend "overpowered and secured" just off the coast of Australia. The contributor, A. S. Faulkner, notes that "no one here had ever see such a huge octopus before." Indeed, his impulse to obtain a

record of the moment was shared; he mentions that the event made local news and that many "photographers availed themselves of the opportunity to secure prints of this unique catch" (Faulkner 480). "A Fortunate Little Lady," from the same instalment of "Curiosities," serves as an archive of an archive. In the image, a crowd of dolls surrounds a young girl's face. The child, Miss. B. Priest, explains in her note that the forty dolls visible in the image represent only half of her large collection. The reproduced photograph displays the collection, but may also appeal to readers as an archive of both the collection and the collector, whose youth renders her appearance and her curatorial impulses subject to change over time (B. Priest 478).

Virtually all the snapshots reproduced in "Curiosities" exhibit a sense of play that draws in part on the feature's general tone of amusement, but also on Kodak's prescriptions for the snapshot camera's frame of use. As West observes, Kodak "inject[ed] play into the experience of photography" (4). This playfulness augmented the heady combination of the fanciful and the real with which all the "Curiosities" items were imbued. The 1899 item titled "A Good Jump" exemplifies the playfulness of snapshot photography: the image depicts a group of young women, linked arm in arm, at the midpoint of a collective hop (figure 32). Suspended in midair, their feet tucked behind them, the girls express a sense of play through their kinetic posture and their gleeful facial expressions. Moreover, like many snapshot subjects appearing in the reader contributions to "Curiosities," they look directly at the camera, acknowledging the performative nature of their activity and inviting the image's viewers in on the game. Socio-cultural context adds to the image's ludic appeal: such emphatically physical humour and enthusiastically direct engagement with the camera's gaze contradicted Victorian expectations for female propriety, particularly in a group portrait (Noble 117).

As the frolicsome yet performative spirit of this item's subjects suggests, reader-contributors drew on Kodak's principles of spontaneity, informality, and playfulness, but they also created their own photographic techniques and sensibilities. Collectively, their contributions to "Curiosities" articulated a shared value system separate from Kodak's model. *Strand* reader-contributors appropriated snapshots as components of multimodal cultural expressions. In turn, Kodak eventually refashioned and incorporated this innovative tactic as part of the stabilized frame of use for hand cameras and amateur photography.

Building homemade snapshot cameras was one way that "Curiosities" contributors appropriated vernacular photography. In the note for a relatively unremarkable image of a house from 1899, the contributor relates that her thirteen-year-old son took this snapshot with a pinhole camera "apparatus" that he made using an old cigar box (C. Taylor 120). Another item from the following year documents amateur "telephotography," the practice of photographing a distant object. A brief but specific description of the contributor's home-made telescopic camera accompanies two photos that he produced using the device (Robinson 480). A third item from 1903 documents a "top-hat camera," pictured in a photograph, that uses a lens and glass-plate negative, and a stool and walking stick constituting a stand (W. Hayles 238). Through these homemade technologies, "Curiosities" contributors took control of snapshot camera design, resituating and individualizing this process outside the frame of use formulated largely by Kodak.

Trick photography—i.e., snapshots that made photography itself the curiosity on display—offered myriad opportunities for "Curiosities" contributors to tactically appropriate vernacular photographic culture by devising their own methods and values. Unlike other types of "Curiosities" items, such as local attractions and unusual feats, trick photography items were

chiefly the purview of reader-contributors. Indeed, they constituted the only new category of subject matter to emerge in "Curiosities" as readers became the feature's dominant contributors. Amateur photographers produced trick photographs in various intentional and unintentional ways, ranging from the creative positioning of subject matter to unusual chemical reactions, exposures, and post-production touch-ups. The first page of the May 1901 "Curiosities" feature, includes one such item, a "remarkable snap-shot" taken from below an individual suspended, fifty feet in the air, between two trees (figure 31) (Willis 595). The image is novel in both the feat it depicts and the point of view it takes, using perspective to subvert photographic conventions. In the trick photography of "Curiosities," particularly keen amateur snap-shooters found a new opportunity to express their technological imagination. The production process required for these "Curiosities" submissions involved more user intervention than simply pointing and shooting. Such creativity was important to how "Curiosities" contributors appropriated Kodak's snapshot prescriptions and shaped their own conventions for vernacular photography. From subverting snapshot subject matter to manipulating film development, contributors deployed tactics at multiple levels of production to create innovative journalism.

The first instance of photography itself as curiosity appeared in March 1897, when two English aeronauts took snapshots of London from a hot air balloon (Green, Spencer and Sons 358). In May 1897, a naturalist documented naturalists' birds' nests in three photographs and an unusually long note (Kearton 597). While these items drew attention to the photographic process in interesting circumstances, their outputs were produced by skilled semi-professionals, the aeronauts and the naturalists who used photography in their occupations (597). The first instance of amateur trick photography appeared later that year, when E. F. Fox contributed a snapshot of the view from below old Brittany church tower (figure 33). The note for her photograph, written

by the editors, offers information about the position and technique she used to obtain this "curious perspective": "Of course the operator was inside the tower. In taking the photo, the camera was held lens upwards" (Fox 359).

A second amateur trick photograph appeared in "Curiosities" two months later, in November 1897. Like Fox's item, it is an optical oddity, but unlike the church tower snapshot, this photograph's curiosity was created unintentionally. In a portrait that the contributor, H. H. Horton, took of his sister, the profile of a "curious, impish-looking little woman" appears to the right of the sitter's chair (figure 34) (600). In December 1897, an item titled "Astonishing Photographic Freak" includes a photograph in which a horse seems to be missing one leg. The item's note quotes the contributor's letter, in which he describes this unusual development as an unexplained "mystery" (Neeves 799). By including such comments, the feature's editors encouraged readers to attend to the wonders wrought by photographic mediation of the world.

Between 1898 and 1903, at least one item of amateur trick photography appeared in every "Curiosities" feature. This subset of "Curiosities" snapshots could comprise almost half of an instalment's items. Trick photography items included those snapped from unusual perspectives, such as the view of a man from one storey directly above him (Phillips 357) or from his feet in dramatically foreshortened perspective (figure 35) (Knapp 116). Several items depict an urban landscape as viewed from high above (for example, "Looking Down from Blackpool Tower," Smith 800). Some show intentionally manipulated photographs, such as a composite image in which the face of the contributor's friend is superimposed on the body of an ecclesiastic with results that the *Strand* editors describe, in the epigraph for this chapter, as "bizarre and comic" (figure 36) ("A Good Joke—Not Clerical" 478). Another item includes a photograph in which a young man appears to be reading studiously while flipping over a gate on

one hand; the contributor reveals that the image was not produced by snapshot, as it seems, but by careful time exposure ("Studying Virgil" 360). These photographs utilize many tricks, some accidental, and some intentionally undertaken in production or development. The production of "A Good Joke—Not Clerical" involved carefully compositing images during the darkroom development process. Other types of manipulation, such as double exposure, were typically unintentional (Skyrme). All of them draw attention to the acts of taking, developing, and/or looking at photographs. Notably, nearly all trick photography items include some explanation of the process that produced them. For example, the anonymous male contributor of "A New Style in Photography," explains that the snapshot was taken "while [the young women] were all lying on the floor with their heads together, and the Kodak suspended on the ceiling" (figure 37) (240). By revealing his technique, the contributor enables readers to imagine the production history of this image, connecting it to the new media milieu. Just as "A Description of The Offices of the *Strand*" drew attention to the periodical's production process, then, "Curiosities" contributors drew attention to the possibilities at play in the intersection of new media and print culture, production and use. In this sense, reader-contributors fostered the technological imagination of other readers.

Although trick photography remained outside the use guidelines Kodak espoused, contributors gradually established its conventions within the forum of "Curiosities." Some contributors boasted that their images were unlike anything previously published in the feature, implying the value of amateur innovation in a competitive community. The contributor of an item titled "An All-Night Photograph" surmises that he is probably the first amateur photographer to take his own portrait "whilst asleep" (Harrington 355). Other contributors took pride in reproducing or adapting a technique that had already appeared in "Curiosities"—as

illustrated by the multiple snapshots taken from below in a tall, narrow structure, beginning with

Fox's image of a Brittany church tower (figure 33). For example, within six months of the

publication of Fox's snapshot, E. Wightman Bell submitted a similar image, snapped underneath

the spire of a church in Lincolnshire (116). Almost every variety of trick photography appeared

multiple times over the publishing history of "Curiosities," each one submitted by a different

contributor. The recurrence of these tactics attests to their popularity and to patterns of use that

an international community of "Curiosities" contributors established over time.

Snapshot Subversion and the *Strand*'s Participatory Community

Through trick photography, the amateur photographers who contributed to "Curiosities"

transformed the playfulness of Kodak snap-shooting into a creatively subversive practice. The

patterns of use that they established within the feature conflict with many of Kodak's

conventions for vernacular photography, prioritizing unorthodox aesthetic values such as visual

distortion and abstraction over Kodak's ideal of the well-lit, clearly defined human subject or

landscape.[39] The trick photographers of "Curiosities" intentionally subverted Kodak's ideals to

upset readers' expectations, compelling interest in their work and recognition of their

distinguished technological imagination and/or curatorial wit.

Reader-contributors to "Curiosities" also reimagined snapshot photography's functions

within the *Strand*'s participatory community. A reader contribution from 1901 directly links

snapshot photography to the *Strand*'s popular serialization of the Sherlock Holmes stories. The

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[39] At the turn of the twentieth century, most amateur cameras produced the clearest pictures in bright daylight (Collins 122). Kodak worked this into the implicit messaging of their advertisements and the explicit prescriptions of their manuals, encouraging people to take photos of outdoor activities.

photograph depicts the Lower Reichenbach Falls "not long after the time when Dr. Conan Doyle… ended the life of his hero." The contributor, George Mason, says, "I thought your readers might be interested in seeing a photo. [*sic*] of the place where [Sherlock Holmes's] body is stated to have been recovered" (Mason 796). This item documents a real place to situate fiction-based imagining, playfully conflating the imagined with the real and thereby contributing to the new media culture that turned lived experience into spectacle.

Other items in "Curiosities" make less direct references to the *Strand*'s detective fiction but similarly draw on its precepts to imagine creative uses for snapshot photography. These items use text and image to create multimodal mystery narratives in which the snapshots provide evidence for uncovering a truth. A small mobile camera lends itself easily to secret surveillance—indeed, the Pocket Kodak's immediate predecessor was known as the detective camera because it was relatively easy to hide, though not to operate (Collins 54). However, Kodak literature posited snapshot documentation as a means of archiving memories, not collecting evidence. Nonetheless, Conan Doyle's Sherlock Holmes stories and other detective fiction in the *Strand* demonstrated that photographs could be appropriated as evidence in either a professional or an amateur investigation. For example, in Conan Doyle's first Sherlock Holmes story, "A Scandal in Bohemia," published in the *Strand* in 1891, the case centers on recovering photographic evidence. While the King of Bohemia initially prizes this photograph as a token of his affection for an American opera singer, Irene Adler, it becomes even more valuable as proof of their dalliance that could be used for blackmail. For readers familiar with such fiction, the use of snapshot photography for surveillance offered an obvious avenue of exploration. "Conclusive Evidence," an item from October 1898, depicts a boy dressed in work clothes and sound asleep on a bench. In the item's note, the contributor, Fred Common, writes that the boy, his employee,

was supposed to be dusting at the time: "You can judge his amazement and chagrin when I showed him this photograph" (480). Invoking the print conventions and literary imagination of illustrated detective fiction, Common combined candid snapshot evidence with a textual narrative that explained what the image proved.

"Curiosities" items delineated connections in the *Strand*'s production network while individualizing its participants. Some contributors' notes mention the magazine's offices, perhaps drawing on "A Description of the Offices of the *Strand*" and/or their own visits to the firm, which Newnes kept open to the public. One "Curiosities" contribution from 1901 used an image of the *Strand* offices in place of text to address an envelope (figure 38). In this case, the envelope itself was the curious item. In the accompanying note, *Strand* editors credit the "postal authorities" for appropriately interpreting the photograph as information about the addressee based on its material context (i.e. its position on a mailing envelope) ("The Post Office and Ourselves" 799). As a multimodal expression, this "Curiosities" item reimagined postal conventions, appropriating the snapshot as both signifier and signified. The item implicitly depended on the collective knowledge of the *Strand* community, including postal workers, for successful communication and circulation.

Other notes specifically address the community of "Curiosities" readers and editors through comments such as, "I am sure [this photo] is quite unique, even amongst the interesting collection that has been appearing for some time in the Strand Magazine [*sic*]" (A. Priest 599). In keeping with the self-referential tendencies of periodicals (as evident in the *Strand's* description of its production offices), contributors' notes occasionally referenced previous items or contributors. For example, in the note for an item titled "Helping Atlas," contributor Frank H. Williams supposes that a photo of himself "turning head-over-heels for the amusement of a few

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friends" is "a fitting companion to 'A Candidate for Apoplexy'," an image that appeared in a previous number of the *Strand* (612). "Curiosities" contributors also referenced one another intertextually, particularly in trick photographs. For example, we can read E. Wightman Bell's aforementioned "Looking up a Church Tower" as intertextually referencing E. F. Fox's snapshot (figure 33) by using the same compositional style and photographic technique (Bell 116). These direct and indirect references to other participants in the *Strand* network fostered a sense of community and idea exchange. Many periodicals, such as *Tit-Bits*, used participatory strategies to facilitate the development of reading communities, but through "Curiosities," the *Strand* added a new dimension to the participatory agency of its readership. As contributors to the *Strand* network, the amateur photographers who submitted to "Curiosities" asserted their individuality, framing images in their own words and drawing comparisons to shape how their cultural expressions related to other items in the forum. This assertion of individual identity and creativity in multimodal print culture was itself tactical, because it personalized the typically generalized protocols of vernacular photography.

For female contributors to "Curiosities," exercising this agency also had socio-political connotations. As previous examples suggest, a significant portion of the feature's items were contributed by and/or depicted women. Women readers engaged in participatory journalism throughout the nineteenth century, and they constituted a substantial portion of the *Strand* community (Beetham, "In Search"; Fraser, Green, and Johnston). However, "Curiosities" made individual women's participation in both periodical production and snapshot culture highly visible. A large portion of the hand camera market was female; Kodak's use of a character it termed the Kodak Girl in its promotional literature reflects its effort to target female consumers. The Kodak Girl first appeared in 1893; fashionable, but also independent and adventurous in her

activities, she was often depicted alone, traveling, and participating in outdoor leisure pursuits (West 53-57). She appealed to women as "an idealized image of youthful femininity and exuberance" (53). In her appearance and demeanour, the Kodak Girl was inspired by the New Woman, an oft-maligned figure who embodied discourses about women's rights and roles. Kodak recognized that in her self-reliance and energetic engagement with the world, this figure reflected an attitude shared by members of the company's growing female market. The Kodak Girl represented the autonomy a modern woman could exercise as a snapshot photographer, using her camera to document experiences for personal satisfaction.

Although male contributors far outnumbered female contributors to "Curiosities," the feature's consistent inclusion of items by women increased their visibility as participants in snapshot culture. Indeed, women's contributions to "Curiosities" evoked cultural debates about women's roles that were embodied by the New Woman and, to a lesser extent, the Kodak Girl. A number of female contributors to "Curiosities," such as E.F. Fox, fit the Kodak Girl's profile in that they were unmarried and used their cameras while out and about in the world. The female subjects of "Curiosities" items such as "A Good Jump" (figure 32) and "A New Style in Photography" (figure 37) also resemble the Kodak Girl in their youthful exuberance and willingness to actively engage with the camera's gaze. Crucially, however, Fox's trick photography item proves the young women who participated in the *Strand*'s snapshot journalism could not be reduced to so many Kodak Girls. "Curiosities" offered women an opportunity not only to become more visible participants in the *Strand* community, but also to produce subversive multimodal cultural expressions that shaped the hand camera's frame of reference. "Curiosities" showcased women's contributions to the magazine that were far more innovative in

their engagement with amateur photography than the personal mementos snapped by the Kodak Girl.

As a forum for amateur photographers of all demographics to exchange ideas and share their creations, "Curiosities" became the *Strand* community's analogue for the correspondence pages of specialized photography periodicals. Such periodicals presented forums for serious amateur and professional photographers; for example, the *Amateur Photographer* printed the images of competition winners and the correspondence of readers soliciting and offering answers to photographic dilemmas (18-19). While the *Amateur Photographer*'s full title identifies it as a "popular journal," the technical specificity of its subject matter indicates a readership of relatively advanced photographers. Journals such as the *Amateur Photographer* were careful to distinguish their contributors and readers from the lower tiers of amateur snap-shooters (Sternberger xi). Until *Kodakery* was published in 1913, the only print media that enabled casual amateur photographers to exhibit photographs and share methods were more improvised venues such as the *Strand*'s "Curiosities" feature.

"Curiosities," 1904-1918

In the first few years of the twentieth century, the range of subject matter and item format in 'Curiosities" crystallized into a set of conventions from which contributors seldom deviated for the rest of the feature's print run. This may have been due, in part, to the *Strand*'s relative cultural stagnancy in this period. As Cranfield has argued, the magazine adapted little to changing cultural perspectives and the new media milieu after 1903 (*Twentieth-Century Victorian* 99-100, 105). However, the stabilization of snapshot photography's socio-technical frame of reference may have been the most direct factor in the entrenchment of "Curiosities."

Kodak's continually shrewd business strategies, including marketing campaigns and patenting initiatives, maintained the company's central position in this frame. Kodak's name became synonymous with amateur photography, and its version of snapshot culture did not include subversive processes such as trick photography.

After 1911, "Curiosities" shrank in size and began to share page space with a puzzles section, suggesting its importance to participatory journalism had declined. The feature continued to print multimodal items curated by contributors and oddities selected by *Strand* editors, but these were joined by crosswords, riddles, and other items that invited reader interaction, but did not foster a sense of reader community. By 1913, "Curiosities" had dwindled to two sides of a single page, which it shared with puzzles of various kinds. The feature made its last appearance in August 1918, and the *Strand* offered no explanation for its demise. Many of the imaginative photographic methods that "Curiosities" contributors devised did not become part of the technology's stabilized socio-technical frame of reference. Nevertheless, "Curiosities" presents an important record of how print media literacy and the technological imagination of periodical readers contributed to an early chapter in the history of vernacular snapshot photography. Moreover, a relationship between illustrated periodicals and reader-contributed photographs became an enduring aspect of the snapshot's role in popular culture. Many periodicals would follow the *Strand* in becoming sites for exploring snapshot photography's cultural roles. For example, in 1906, the *Pall Mall Magazine* inaugurated its own amateur photographer competitions, publishing the winning images in its pages ("The Amateur Photographers' Prize Competition" 1051). Eventually Kodak followed suit, launching *Kodakery* in 1913; even elite journals, such as the *Amateur Photographer*, began including articles on hand cameras ("Hand-Camera Notes"). By this time, the socio-technical frame of reference for

vernacular photography had begun to stabilize; the role of snapshots in popular culture altered little over the following decades (J. Taylor). *Kodakery*'s emergence signals that the use of periodicals as a forum for amateur snap-shooters had become part of this stabilizing frame of reference. "Curiosities" thus demonstrates that the late-Victorian technological imagination influenced how users consumed and produced twentieth-century media and mass culture.

Conclusion: The Victorian Technological Imagination and the History of the Present

[S]ome of my readers are asking the question how far illustrated journalism has any justification at all. There are many who mourn that the stage, from presenting plays, as in Shakespeare's time, in a way that left everything to the imagination, now, under the brilliant stage-managers of to-day, affords resplendent pictures of every detail in a fashion that would have struck amazement to the heart of the playwright of the seventeenth century. Much, no doubt, has been sacrificed in this readjustment, as, indeed, is the case with the very art of learning to read.

Clement Shorter, "Illustrated Journalism: Its Past and Present" (1899)

In an 1899 essay for the *Contemporary Review*, titled "Illustrated Journalism: Its Past and Present," Clement Shorter appraises the innovations and triumphs of pictorial news practices. As the article's title implies, Shorter, editor of the *Illustrated London News* and other successful magazines, directs his gaze chiefly to the past, rather than the future. Although the final section of the article ventures into speculation about what is in store for the illustrated magazine, its arguments indicate that Shorter is too sure of what the past suggests about the future. While he concedes that the public will not "get tired of photographs"—referring to the popularity of halftone images reproduced from photographs—Shorter erroneously maintains that images reproduced from artwork will remain essential to illustrated journalism, declaring: "the future of the black-and-white artist who illustrates current topics is absolutely assured" (492). Moreover, Shorter takes the continued success of pictorial journalism for granted. He boasts that the illustrated magazine has become indomitable, so that the most "we can all of us wish for it" is that this medium maintain the high standards set by the founders of the *ILN* and the *Graphic* (494). Contrary to Shorter's forecast, images reproduced from artwork became rare in pictorial news reporting of the twentieth century, and illustrated print journalism lost its position at the forefront of popular culture. The major late-Victorian pictorial weeklies and monthlies gradually

disappeared: the *Graphic* ceased publication in 1932; *Pearson's Magazine* ended in 1939. After slowly waning, the *Strand* ceased publication in1950. The *ILN* had a longer lifespan, but underwent an increasingly reduced publication schedule from the 1980s onward. After publishing only two issues per year for almost ten years, the magazine went out of print in 2003.

As we look back from a moment when most of our cultural records and communication media have been digitized or are born digital, the demise of these print magazines may seem as inevitable to us as the news weekly's continued success seemed to Shorter. However, neither outcome was ever a given. According to the tenets of media archaeology, to impose a linear narrative of inevitable progression—as Shorter does when he compares the illustrated magazine to the "resplendent" modern theatre in the above epigraph—is to obscure the myriad, entangled histories of the present. As Jussi Parikka explains, media cultures are "sedimented and layered, a fold of time and materiality." In these folds, "the past might be suddenly discovered anew, and the new technologies grow obsolete increasingly fast" (3). Thus, while illustrated print journalism was gradually marginalized in twentieth- and twenty-first-century mass culture, popular late-Victorian magazines continue to collide with later media in surprising ways. Following a summary of the preceding chapters, I will briefly address how the illustrated magazines that have been central to my analyses have influenced twentieth- and twenty-first century mass media and culture.

Technological Imagination and Reader Engagement in Turn-of-the-Century Illustrated Magazines

This dissertation has examined how the technological imagination of late-Victorian readers was developed in the *Illustrated London News*, the *Graphic*, *Pearson's Magazine* and the *Strand Magazine*, fostering critical awareness of how mass culture was mediated by illustrated

periodicals and other new media. Victorians situated print media within the real and imagined socio-technological contexts of their production and used an array of tactics to appropriate meaning. Articles, stories, and pictures about print production in the illustrated press fostered print media literacy, the precondition for readers' technologically imaginative engagement with periodicals. Through this literacy, readers could recognize traces of the production process in the interacting visual, verbal, spatial, and material aesthetics of their favourite magazines. Such aesthetic evidence of a periodical's production history contributed to how readers interpreted its depictions of popular culture. When a periodical's producers strategically drew attention to such evidence to deliberately invoke the technological imagination, readers became aware that the physical print object conditioned their experience of the cultural information in its pages. In other words, readers' capacity to perceive mediation increased.

Readers' awareness of mediation in illustrated periodicals influenced how they understood periodicals as part of the new media milieu. Between 1880 and 1910, the *ILN* increasingly incorporated visual and multimodal storytelling techniques. This shift from largely verbal to largely pictorial narrative modes offers evidence of the illustrated periodical's "second birth" as a popular medium (Gaudreault and Marion 5). Through their rebirth, turn-of-the-century weeklies and monthlies became self-consciously visual, multimodal new media that depicted popular culture as mediated and its participants as active users. Stimulated by the rebirth of illustrated periodicals in the context of emerging mass media, readers increasingly understood popular culture as mediated by a network of media and technologies.

Readers' medial perception influenced how they interpreted dominant cultural values represented in illustrated periodicals, such as consumerism, population politics, imperialism, and gender roles. I have characterized the power dynamic between producers and reader-consumers

within the periodical environment in the framework of Michel de Certeau's theory of strategy and tactic (xix). Through interacting advertisements and editorial aesthetics, producers of the *ILN* and the *Graphic* prompted readers to conflate reading and consumption. Similarly, through spectacular population journalism, *Pearson's* producers encouraged readers to conflate popular culture with a politics of population normalization that Michel Foucault terms biopolitics (*Security* 477). However, readers could tactically appropriate the same aesthetic characteristics that mobilized such strategies. Producer strategies invoked the technological imagination to acquire cultural authority, but readers could poach these techniques, using their imagination to participate in mass culture as critical and productive agents. Through curatorial tactics such as scrapbooking and interior decoration, readers could remove and repurpose magazine images, creating new meanings by transposing them from the public sphere to domestic contexts. Through appropriative tactics such as hyper-reading (N. K. Hayles 62), readers could produce counter-interpretations, exerting agency as both consumers and producers of print. Reader tactics even extended to the production of periodical content; in "Curiosities," readers used their technological imagination to appropriate multimodal periodical production. "Curiosities" also shows how illustrated periodicals influenced user engagement with new media and mass culture: in the twentieth century, the use of reader-contributed photographs to illustrated periodicals became an enduring aspect of the snapshot's role in mass culture.

The Technological Imagination and the History of the Present

My dissertation has implications for understanding Western society's past and present relationships with media. Following Karl Marx, many media and social theorists argue that industrialization led to decreasing knowledge of production processes and the separation of

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production and consumption in the eyes of the Victorian public (Stiegler 77). As technologies of

production and expression replaced human labour, individuals lost their knowledge and memory,

becoming mere economic actors with no individuality within mass consumer populations (Marx

71). Emerging consumer culture used this alienation to propel commodity fetishism (Marx 165).

Dependent on machines of production and expression, consumers passively accepted

capitalism's terms of distribution and consumption (Stiegler 82). According to Max Horkheimer

and Theodor Adorno, consumers thus became docile audiences of visually oriented media, mere

cogs in the culture industry's machinery (100).

Historically, this narrative recapitulates Victorian criticism of popular media, and

particularly illustrated print, as unwholesome entertainment consumed by the unthinking masses

(King and Plunkett 36). The critics who voiced these arguments, such as William Wordsworth,

presupposed that the less educated readerships to whom illustrated magazines most appealed,

including women and the working classes, lacked the capacity to assess the form and content of

popular print (40). Drawing on recent periodical scholarship and original research, my

dissertation traces a more complex picture of readers' participation in popular culture than either

Victorian social critics or contemporary theorists of the culture industry have painted. By

showing that late-Victorian illustrated periodicals reconfigured themselves as new media, my

research strengthens the link between the active readers of magazines and users of the new, non-

print media of the twentieth century. As nineteenth-century popular culture developed into

twentieth-century mass culture, tactical practices of periodical consumption and production

contributed to the active, heterogeneous terms of media engagement. Victorian print media

literacy established a precedent for other media literacies. As readers, mass culture participants

attended to how production history influenced a periodical's affordances; as viewers, listeners,

and users, they could similarly attend to how production history influenced the affordances of other mass media—and use the knowledge they gained from this process to appropriate mass cultural representations.

Late-Victorian illustrated periodicals also influenced the terms of twenty-first century media engagement. The late-Victorian print history of digital media is often overlooked; while Shorter erred by relying too heavily on the past to predict the future, users of contemporary digital media conversely err by failing to look to the past to better understand our present and future. An emphasis on the supposed newness of digital technologies, fostered by the dominant discourses of our era's "informational capitalism," has made it easy to forget the past that collides with our digital present (Parikka 13). Scholars of history and culture have taken various approaches to remedying this oversight. In Victorian studies, as Alison Chapman points out, scholarship connecting historical print and digital media constitutes a major branch of scholarship (435). My dissertation contributes to these efforts by modeling a media archaeological approach to understanding how nineteenth-century periodical history is embedded in the present. As Chapman indicates, much scholarship on the Victorian history of digital media focuses on informational structures. However, my case studies demonstrate that the multimodal, aesthetic affordances of print media also warrant close examination. Periodical aesthetics conditioned the interpretive horizons of historical readers by mobilizing producer strategies and creating opportunities for consumer tactics. As I have shown, the dynamic between strategies and tactics facilitated by turn-of-the-century periodicals influenced consumer interaction with other mass media.

Crucially, digital media that adapt the aesthetic strategies of specific Victorian print media similarly condition user agency and reiterate Victorian cultural values. The *Strand*'s

participatory journalism, for example, strongly resonates with current social media's community

engagement. "Curiosities" offers a prehistory of snapshot-based social media such as Instagram,

demonstrating that multimodal cultural production took the form of community-driven new

media exploration from its early years. Comparing the particularities of the *Strand* and Instagram

is important to understanding how each media expression engages the technological imagination

and facilitates both producer strategies and user tactics. If an invisible editorial process filtered

the contents of "Curiosities" in the *Strand*, unseen algorithms filter the Instagram content

available to users on their devices. At the same time, "Curiosities" contributors used their

imagination to develop their own hand camera techniques and snapshot-based cultural

expressions, as do the many Instagram users who develop unconventional or otherwise

subversive posts.

Linking contemporary digital platforms to Victorian periodicals such as the *Strand* can

clarify our perspective on historical user engagement. Such an approach can also function in the

obverse, deepening our understanding of the historical politics that condition digital user

engagement. For example, *Pearson's* population journalism offers new insights and connections

into biopolitics and the strategies of representing human characteristics and activities. Many

digital data visualizations deploy aesthetic strategies that emerged in late-Victorian print; these

aesthetic strategies mobilize a politics of normalization which warrants scrutiny and critique. As

Johanna Drucker argues, "The imprints of the disciplines of origin are still present in the

schematic organization according to which . . . visual forms produce meaning." The visually

oriented media that we engage with on a regular basis therefore "replicate ideologies in graphics"

(Drucker, *Graphesis* 64-65). As Drucker's insight suggests, the biopolitics of modern political

economy is only one of many Victorian ideologies that condition visual knowledge production in

digital contexts (an area that has gone largely unexplored, and that I hope to investigate in future research). However, just as Victorian readers could exert tactical agency through medial criticism of *Pearson's* data visualizations, a digital platform's users might tactically scrutinize its data visualization methods. Like the data visualizations of population journalism, digital data visualizations often rely on their spectacularity to compel user attention, despite Edward Tufte's admonition to avoid chartjunk. Recursively drawing user attention to their mediation of cultural knowledge, such visualizations present users with an opportunity to critically interpret their use of qualitative methods to represent quantitative data.

These sketches gesture toward the expanse of yet-unexplored periodical titles, genres, features, and production practices that contributed to digital media's Victorian print genealogy—the plural developments, convergences, dead ends, and continuances of nineteenth-century print practice that directly and indirectly shaped digital media. Recognizing how Victorian socio-technological contexts and practices continue to condition digital media aesthetics will deepen our understanding of the ways in which digital media strategically facilitate user knowledge production and users tactically respond to those strategies. On a broader scale, this recognition will also deepen our sense of the sedimented layers of past and present media culture that fold into one another. To refurbish an old maxim, we must recognize the storytelling methods of the past, in all their cultural and medial particularities, to fully understand the storytelling methods of the present—and, in turn, to imagine how we will tell the stories of the future.

Appendix: Figures

Figure 1. Excerpted page from "Our Note Book" by G. K. [Gilbert Keith] Chesterton. *Illustrated London News*, 5 Jan. 1907, p. 4.
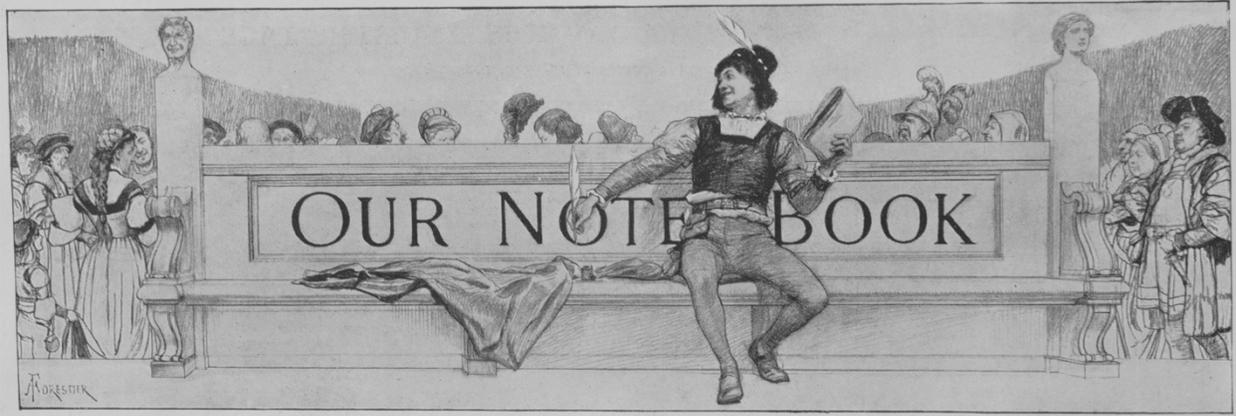
Figure 2. A. [Amédée] Forestier. Halftone illustration for "Our Note Book." *Illustrated London News*, 5 Jan. 1907, p. 4.
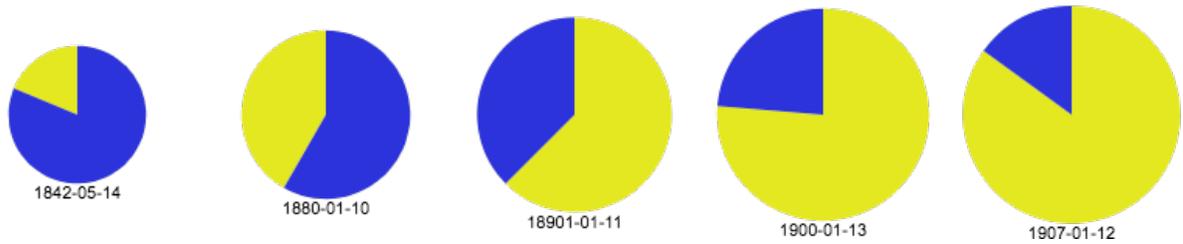
Figure 3. Visualization depicting the ratio of illustration to letterpress in the *Illustrated London News*, 1842-1907. The yellow area of each pie chart represents the number of pages in which images occupy at least 50% of page space. The blue area represents the number of pages in which letterpress occupies at least 50% of page space. Statistics taken from random samples.

Figure 4. R. [Richard] Caton Woodville. "The Start of the Coronation Procession: Their Majesties in Their State Coach Leaving Buckingham Palace." Halftone illustration. *Illustrated London News Coronation Procession Number*, 14 Aug. 1902, p. 2. *[Figure redacted]*

Figure 5. R. [Richard] Caton Woodville. "The Nobility of India in the Empire's Coronation Procession: The Indian Honorary Aides-De-Camp to the King Passing Up St. James' Street." Halftone illustration. *Illustrated London News Coronation Procession Number*, 14 Aug. 1902, p. 21. *[Figure redacted]*

THE MANNERISM OF THE MEMBER.—I.: THE TWENTIETH CABINET MINISTER.

DRAWN BY OUR SPECIAL ARTIST, S. BEGG.

THE NEW CABINET MINISTER

S. BEGG.

THE RIGHT HON. LEWIS HARCOURT, M.P., FIRST COMMISSIONER OF WORKS, RECENTLY PROMOTED TO CABINET RANK.

The Cabinet has now twenty members, an unusually large number. Normally it cannot consist of less than eleven Ministers, but more usually it is made up of from fifteen to seventeen. Many consider a large Cabinet a bad thing. Mr. Harcourt, who is forty-four, received splendid political training as Private Secretary to his father, the late Sir William Harcourt. He has been First Commissioner of Works and a P.C. since 1905. He married Miss Mary Ethel Burns, only daughter of the late Mr. W. H. Burns, the partner of Mr. Pierpont Morgan in England.

Figure 6. Samuel Begg. "The New Cabinet Minister." Halftone and line-block illustration. *Illustrated London News*, 13 Apr. 1907, p. 550.
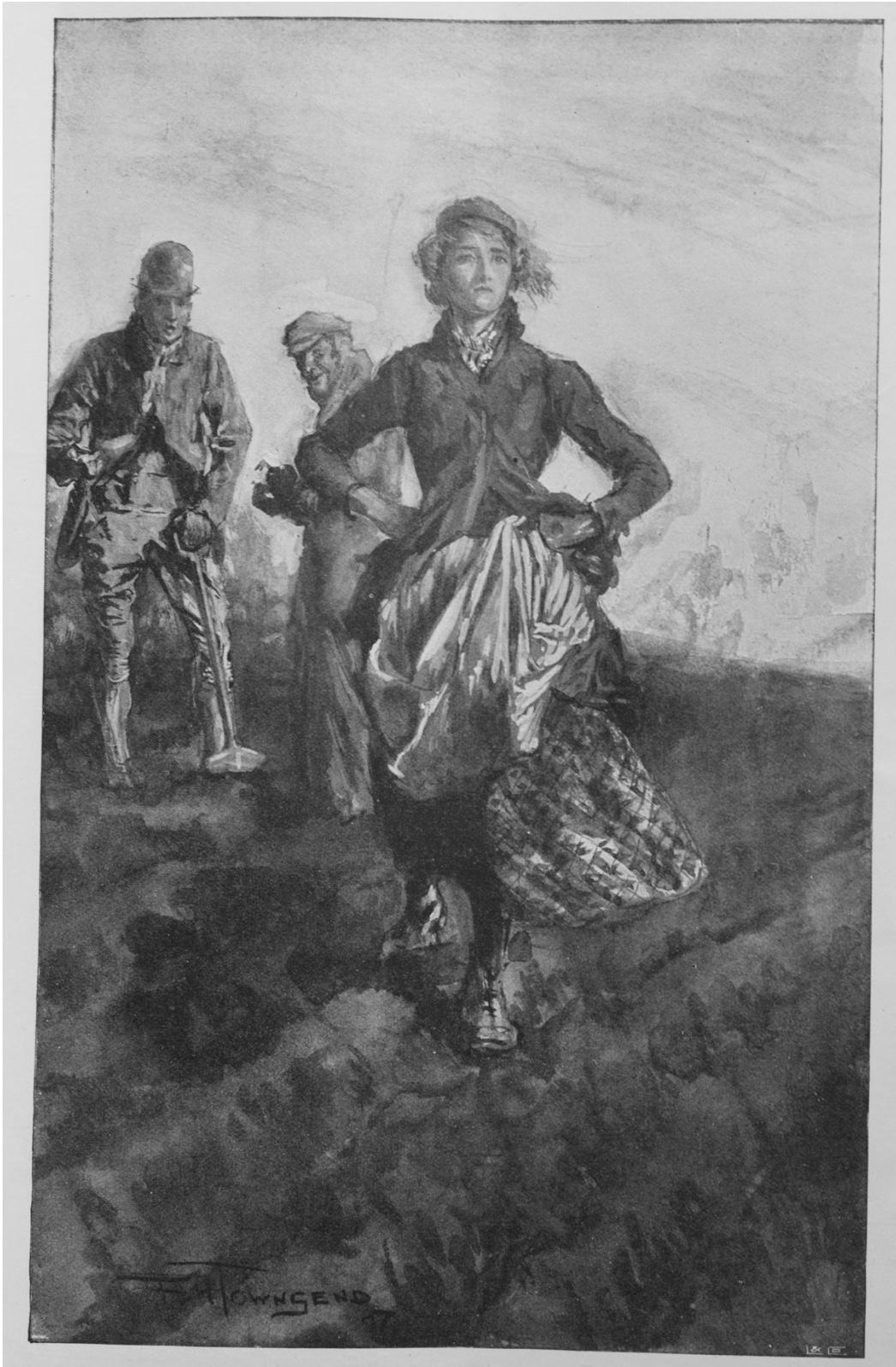
Figure 7. F. H. [Frederick Henry] Townsend. "Aisy now; aisy. Come back till I tell ye a story." Halftone illustration for "The Planters," by Shan F. Ballock. *Illustrated London News*, 25 Sept. 1897, p. 415.

WALTER WOOD'S SUGGESTION FOR A STORY WITHOUT WORDS.

DRAWN BY R. CATON WOODVILLE.

"FOILED BY KING FROST."

"The men at the wheel volunteer for the forlorn hope, and the skipper orders the boat out. Axes and boiling water are fetched; both are necessary, because the tackle is frozen."

[SEE MR. WOOD'S NOTE ON PAGE 29.]

Figure 8. R. [Richard] Caton Woodville. "Foiled by King Frost." Halftone illustration for "Stories Without Words." *Illustrated London News Christmas Number*, Dec. 1906, p. 20.
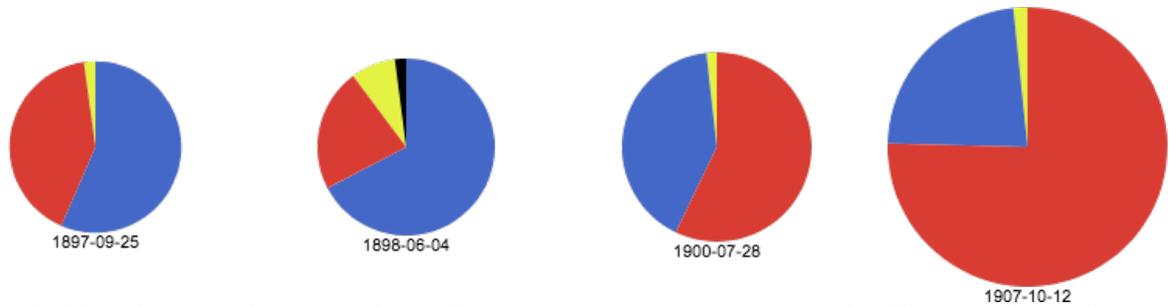
Figure 9. Visualization depicting the different types of images used in the *Illustrated London News* between 1880 and 1907. The blue area represents halftone images from artwork; red represents halftone images from photographs; yellow represents line-block images from pen-and-ink drawings; black represents wood-engraved images. Statistics taken from random samples.

Figure 10. Halftone illustration for "Art, Music, Drama." *Illustrated London News*, 5 Jan. 1907, p. 56.

Figure 11. A. C. T. "The Little Brother and Sister: The Little Sister Placing Her Golden Garter Round Her Brother's Neck." Halftone illustration for "Fairy Stories by Photography: Grimm Illustrated." *Illustrated London News Christmas Number*, Dec. 1907, p. 20. *[Figure redacted]*

Figure 12. Detail from A. C. T., "The Prince Climbing Rapunzel's Golden Hair." Halftone illustration for "Fairy Stories by Photograph: Grimm Illustrated." *Illustrated London News Christmas Number*, Dec. 1907, p. 24. *[Figure redacted]*

Figure 13. Advertising page. *The Graphic*, vol. 25, 22 Apr. 1882, p. 411.

Figure 14. Pears' Soap advertisement. *The Graphic*, vol. 43, 24 Jan. 1891, p. 120.

Figure 15. Savory and Moore advertisement. *The Graphic*, vol. 73, 27 Jan. 1906, p. 120.

Figure 16. Advertising page. *The Graphic*, vol. 61, 13 Jan. 1900, p. 61.
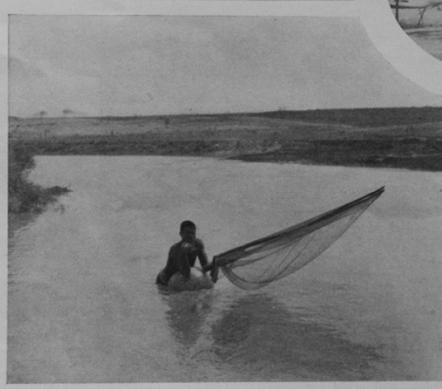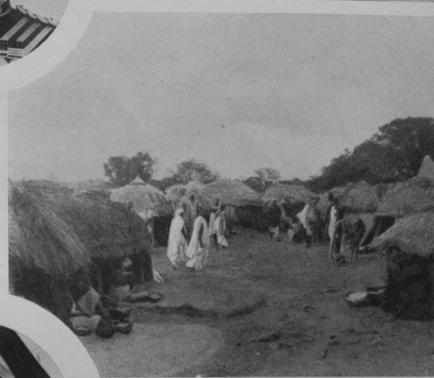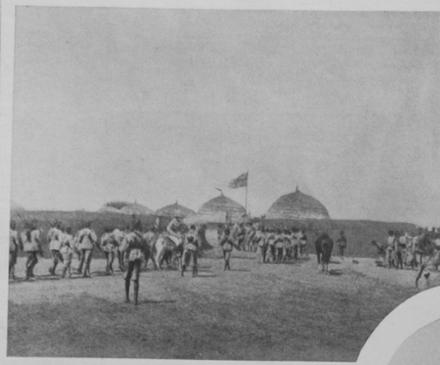
Figure 17. "The Close of the Campaign in Northern Nigeria." Halftone illustration. *Illustrated London News*, 29 Aug. 1903, p. 310.
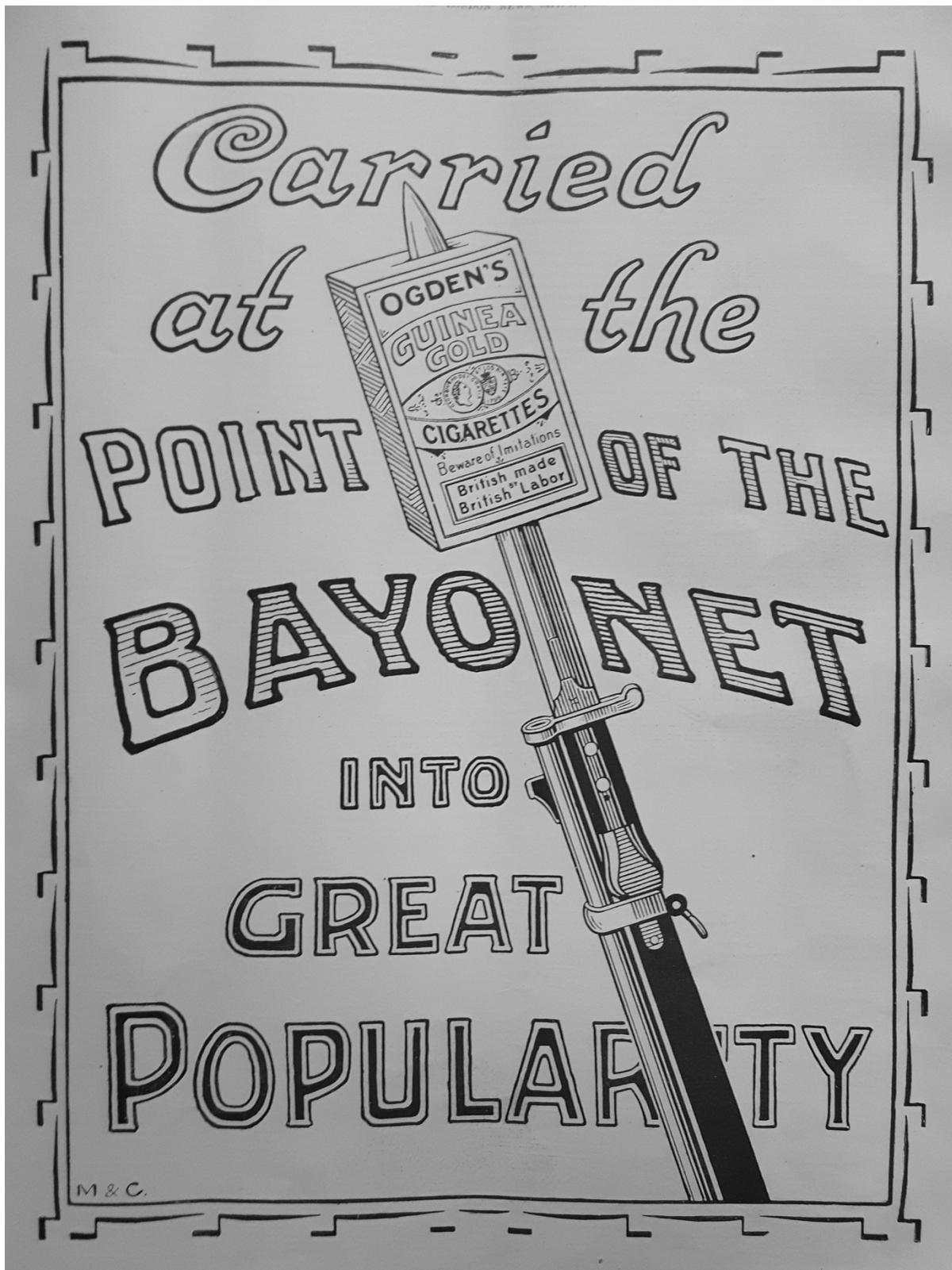
Figure 18. Ogden's Cigarettes advertisement. *Illustrated London News*, 9 Sept. 1899, p. 367.
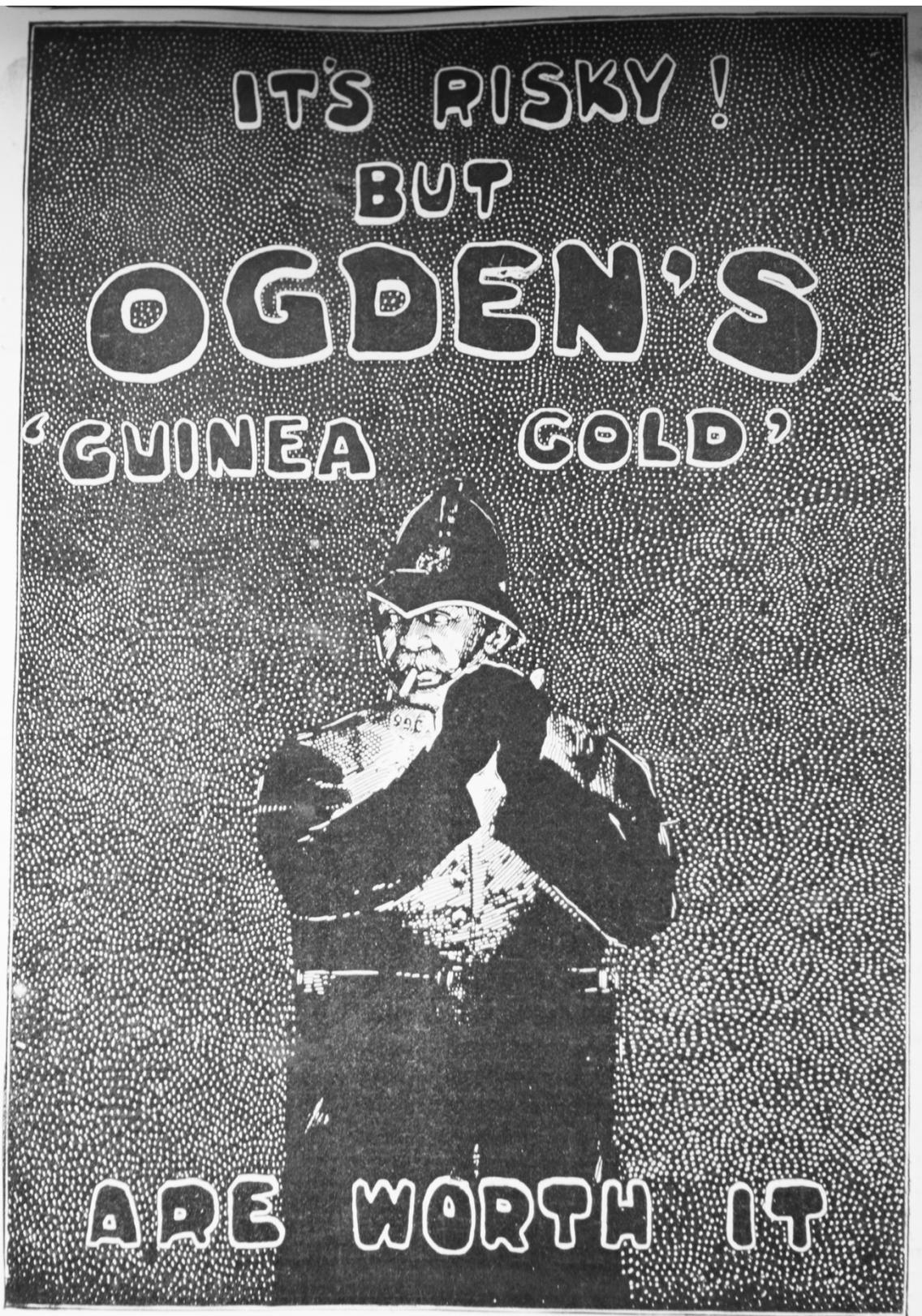
Figure 19. Ogden's Cigarettes advertisement. *Illustrated London News*, 21 Oct. 1899 p. 591.

Ireland. Germany. Netherlands. Norway. Sweden. France. Austria. Canada. Great Britain. U.S. Italy.
1467lb. 1300lb. 840lb. 740lb. 740lb. 700lb. 663lb. 660lb. 238lb. 200lb. 48lb.
The yearly consumption of potatoes per head in different countries.
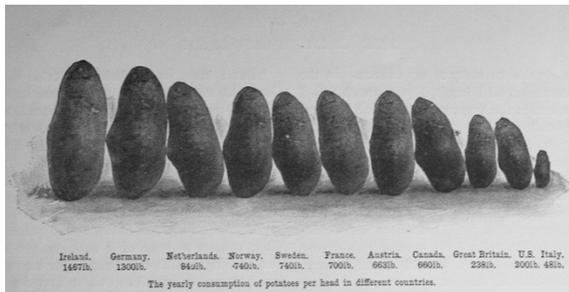
THE WORLD'S BILL OF FARE.

By George B. Waldron.

THE average man, if asked what is the most important crop of the world, would unhesitatingly say, "Wheat." This is true in England, France, and the United States, but far from the case in the world as a whole. The first place must be given to the potato. Ireland is not the only country of Europe which subsists largely on that vegetable. Of all the staple crops of the world, the potato takes the first place, the annual crop being more than 4000 million bushels, against 2500 million bushels of wheat, 2600 million bushels of maize, 1300 million bushels of rye, and 750 million bushels of barley. Of the total potato crop, Europe produces fully seven-eighths, which is two and one-half times as much as her wheat, and all her cereals together are but 50 per cent. more.

In the consumption of the potato, Ireland, as may be expected, stands at the head. Her average annual consumption per inhabitant is 1467 pounds, or a daily average of 4 pounds. Next comes Germany, with over 1300 pounds to each person. Her total consumption reaches 1170 million bushels, or more than a quarter of the entire consumption of the world. Then come the Netherlands, with a per capita consumption of 840 pounds; then Norway and Sweden, with 740 pounds; France, 700; Austria-Hungary, 663; and Canada, 660 pounds. At the other end of the list stands Italy, with only 48 pounds to each inhabitant. The United States requires 250 million bushels of potatoes a year, or 200 pounds for each person. This is less by 38 pounds than the average consumption in Great Britain, and about the same as that of Australia. European Russia uses

France. Canada. Italy. Great Britain. U.S. Austria. Russia. Japan.
467lb. 360lb. 307lb. 250lb. 240lb. 230lb. 93lb. 22lb.
The yearly consumption of wheat per head.

U.S. United Kingdom. France. Germany. Russia. Italy.
147lb. 100lb. 77lb. 64lb. 50lb. 34lb.
The yearly consumption of meat per head.
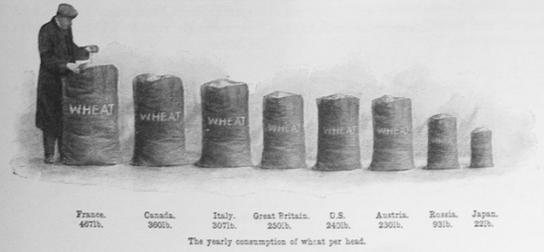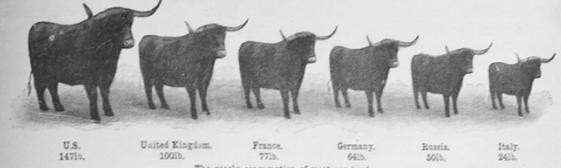
850 million bushels, or 481 pounds per head.

In the consumption of wheat, France heads the list, requiring 300 million bushels a year, or 467 pounds to each inhabitant. Next comes Canada, with 360 pounds per head, and a total of 30 million bushels.

In the United States the consumption of wheat is 240 pounds, requiring a total of 300 million bushels. Italy requires 307 pounds per head, or a total of 160 million bushels. Germany, Russia, Great Britain, and Hungary each use about the same total, 165 million bushels; but Great Britain's per capita consumption is 250 pounds, against 93 pounds for Russia, 180 pounds for Germany, and 230 pounds for Austria-Hungary. At the other end of the list is Japan, with but 16 millions total, making a consumption of 22 pounds to each inhabitant.

Where these countries lack in the consumption of wheat, however, the deficit is, as a rule, made up in other grains.

Rye is the grain most in use in Russia, where 580 million bushels are consumed each year, or an average of 307 pounds to each inhabitant. At the head of the list of European countries stands Denmark, with 320 pounds; then Sweden, 314 pounds, and Norway, 224 pounds. Italy uses but 29 pounds per head, and Germany only 26 pounds, while France requires 53 pounds, or a total of 36 million bushels. The rye used for food in the United States aggregates about 30 million bushels.

In the United States the consumption of

U.S. Canada. France. Germany. Italy. United Kingdom.
133 eggs. 90 eggs. 78 eggs. 72 eggs. 47 eggs. 39 eggs.
The yearly consumption of eggs per head.

bushels, or 22 pounds to each inhabitant.

The use of oats for human food is also, as a rule, largest where wheat is least common. Norway, for example, stands near the head of the list, with 112 pounds to each person. Germany uses 97 pounds; the

U.S. Gt. Britain. Italy. India. Japan. Bombay Province.
4lb. 9lb. 14lb. 200lb. 300lb. 547lb.
The yearly consumption of rice per head.

Figure 20. Excerpted pages from "The World's Bill of Fare" by George B. Waldron. *Pearson's Magazine*, vol. 6, 1898, pp. 666-67.

THIS DIAGRAM SHOWS THE PERCENTAGE OF THE MODES OF SUICIDE.
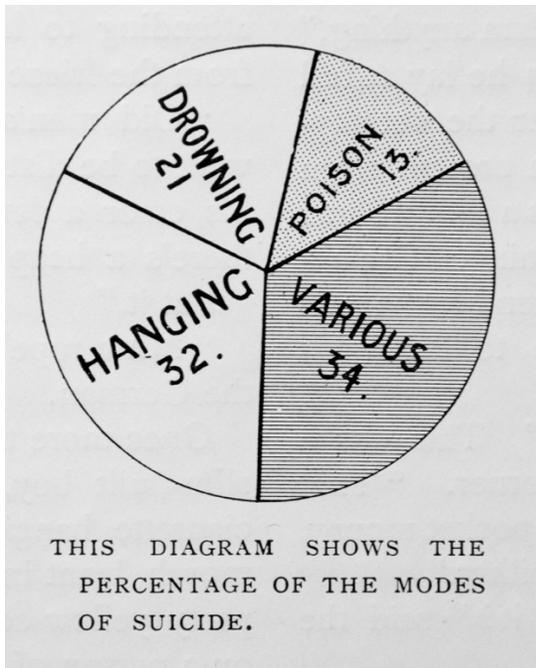
Figure 21. Link-block illustration for "Is Suicide a Sign of Civilisation?" by J. Brand. *Pearson's Magazine*, vol. 2, 1896, p. 667.

THE DIAGRAM SHOWS THE PERCENTAGE OF SUICIDES ACCORDING TO SEX.
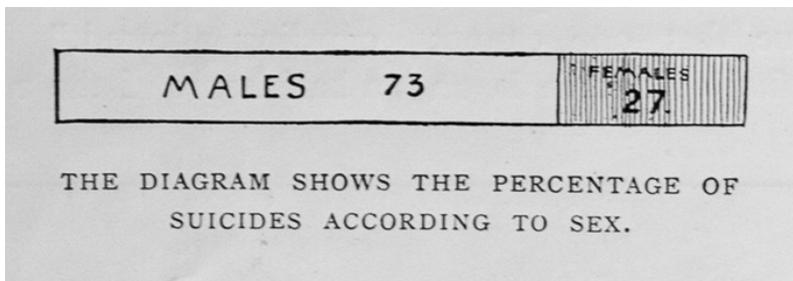
Figure 22. Line-block illustration for "Is Suicide a Sign of Civilisation?" by J. Brand. *Pearson's Magazine*, vol. 2, 1896, p. 666.
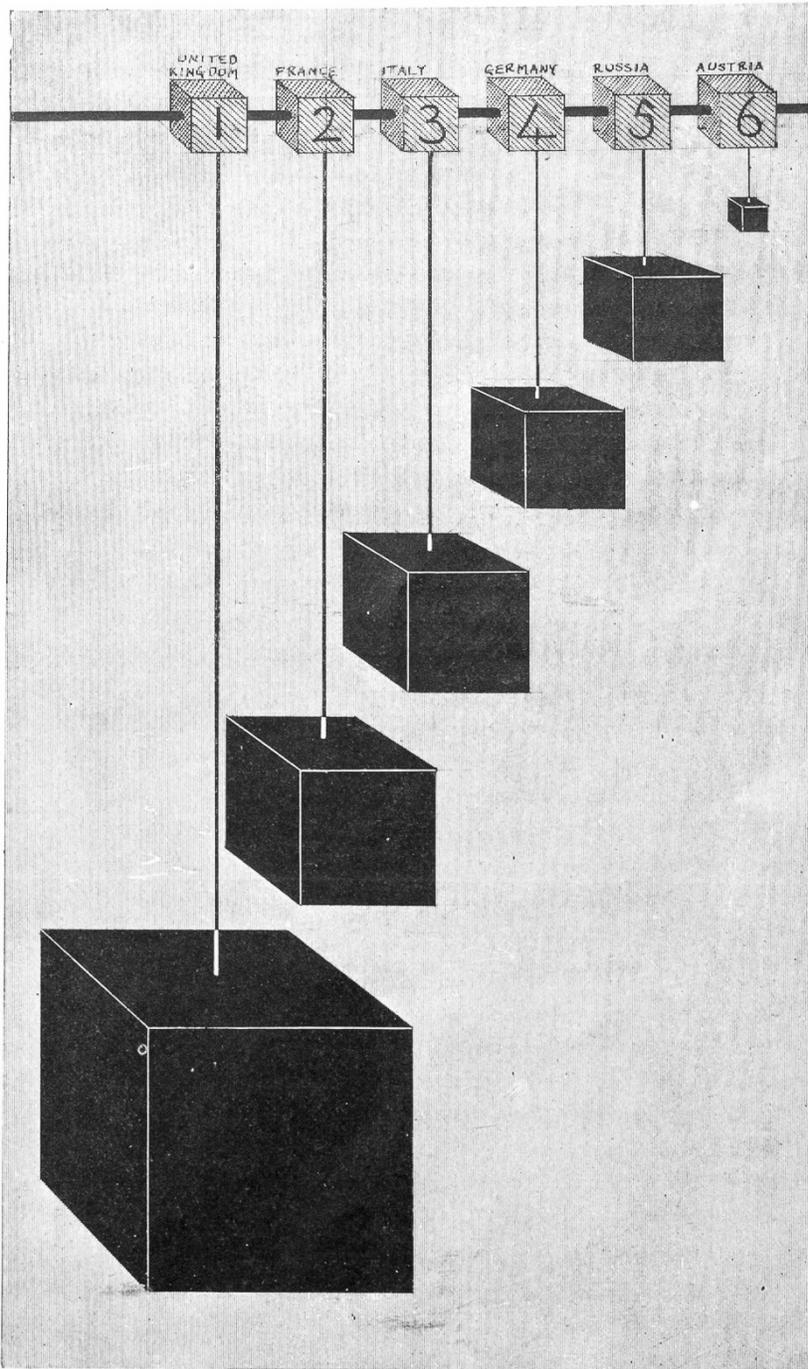
9. The Six Great Powers of Europe with their respective Colonies or Dependencies, etc., hanging to them. In each instance the size of the hanging cube (representing colonies or dependencies) is in proportion to the size of the "home" country to which the black cube is attached. The sizes of the black cubes vary from that of the United Kingdom, which is 93 times as big as the shaded tube (1) to the size of the little black cube which is only one-tenth of the size of the shaded cube (6) Austria-Hungary.

NOTE.—Since this diagram was made, the most recent information regarding Italy, including the unreserved recognition, of the independence of Abyssinia and Shoa, lessens the size of Italy's black cube, and places Italy in the fifth place instead of in the third place.

Figure 23. Line-block illustration for "The Lion's Share" by John Holt Schooling. *Pearson's Magazine,* vol. 3, 1896, p. 617.

Figure 24. Excerpted pages from "The Mathematics of Marriage" by T. D. Denham. *Pearson's Magazine*, vol. 5, 1898, pp. 396-97.

Figure 25. Halftone illustration for "The Mathematics of Marriage" by T. D. Denham. *Pearson's Magazine*, vol. 5, 1898, p. 397.

The Marrying Female. No. 1 represents all the women who marry in one year; No. 2, the portion, rather more than one-half, who marry between the ages of twenty and twenty-five; No. 3, the portion, one-quarter, who marry between the ages of twenty-five and thirty; and No. 4, the portion, less than one-quarter, who marry at all other ages.

No. 1.   No. 2.   No. 3.   No. 4.

marry earlier and oftener in France than we do, whereas in Chili only twenty-six in a hundred are married, five widowed, and sixty-nine single. The disturbed state of the country, the constant insurrections, and the consequent killing off of young men of marriageable age are the chief factors of Chili's apparent aversion to married life.

From these inquiries we are naturally led to the question: How long does married life last? In England, an average husband and wife on their wedding-day may expect to live together for twenty-seven years, in France only twenty-six, in Holland and Belgium twenty-three, but in Russia thirty. If, therefore, you want to enjoy a long married life go to Russia. You may expect a period of thirty years to elapse before you are parted either by death or divorce.

Young people will be more particularly interested in our next problem:—Where to live if you want to be married? The highest marriage-rate for any European country is in Austria-Hungary. The average there is more than 17 per 1000 per annum. The lowest rates are in Ireland, only 10 per 1000, and Sweden with 11 per 1000. Con-

sequently the chance of a person getting married is more than half as good again in Austria-Hungary, as it is in Sweden or Ireland.

To English people it will be more valuable to know which are the marrying counties of England, and which the non-marrying. The lowest marriage-rates in 1895—the most recent year for which the full and accurate returns are available, were 11.1 per 1000 in poor little Rutlandshire, 11.3 in Middlesex, 12.1 in Cumberland, and 12.2 in Surrey, in Hertfordshire, and in Herefordshire.

The highest marriage-rate, 17.2 per 1000, was in London, as one would naturally expect—so many of the fashionable marriages being solemnised in the metropolis. Next in order come Nottinghamshire, East Yorkshire, Warwickshire, Lancashire, and South Wales, with a marriage rate slightly in excess of 16 per 1000. Curiously enough, the same counties have been respectively at the top and bottom of the list for the previous ten years.

Let, then, all candidates for spinsterhood bury themselves in Rutlandshire, while intending brides and bridegrooms are advised to make for London with all speed.

The Marrying Male. No. 1 represents all the men who marry in one year; No. 2, the portion, not quite one-half, who marry between the ages of twenty and twenty-five; No. 3, the portion, more than one-third, who marry between the ages of twenty-five and thirty; and No. 4, the remainder, one-sixth, who marry at all other ages.

No. 4.   No. 3.   No. 2.   No. 1.

At what age do people marry? The most popular time for a woman to get married is from her twenty-first to her twenty-fifth year, inclusive. More than one-half of the women who marry at all, marry in these five years of their life, and another quarter marry between the ages of twenty-five and thirty. With men, not quite one-half marry between the ages of twenty and twenty-five, and more than a third between the ages of twenty-five and thirty.

The average age of marrying is just over twenty-six for women and just under twenty-eight for men. These figures include re-marriages. For spinsters only, the average age is twenty-five, and for bachelors, twenty-six and a-half. It is a noticeable fact that, in the last ten years, the average age of marrying has, for men and women alike, gone up half a year.

Quite an astonishing number of men and women in England and Wales still sign the Marriage Register with marks. The total in a recent year of 20,157 illiterates out of 456,408 persons marrying, was made up of 9239 men and 10,918 women, nearly one married person out of every twenty being illiterate! With the spread of education,

however, the proportion of illiterates is becoming smaller each year.

There are quite a number of different ways in which a person may be married in this country. The most popular is by banns, according to the rites of the Established Church. Six hundred and thirty-three out of every 1000 marriages in England are solemnised in this way. One hundred and forty-seven per 1000 are civil marriages in a Registrar's office, 160 per 1000 in registered places of worship of other Christian denominations, including 40 in Roman Catholic churches, 39 by licence, 5 according to Jewish rites, and 3 per 10,000 by the Quakers.

The most noticeable points in connection with these statistics are that in the last fifteen years the civil marriage-rate has increased five-fold from 29 per 1000 marriages to 147 per 1000, the total according to the rites of the Established Church has decreased from 896 per 1000 to 686 per 1000, and for other Christian denominations has increased from 73 per 1000 to 161 per 1000.

From 1864 to 1895, the marriage-rate in England has decreased to the extent of two per thousand of the population annually. In Scotland and Ireland it has remained

Figure 26. Excerpted pages from "The Mathematics of Marriage" by T. D. Denham. *Pearson's Magazine*, vol. 5, 1898, pp. 398-99.

According to the last census twelve out of every twenty of the female sex were single, seven were married, and one widowed.
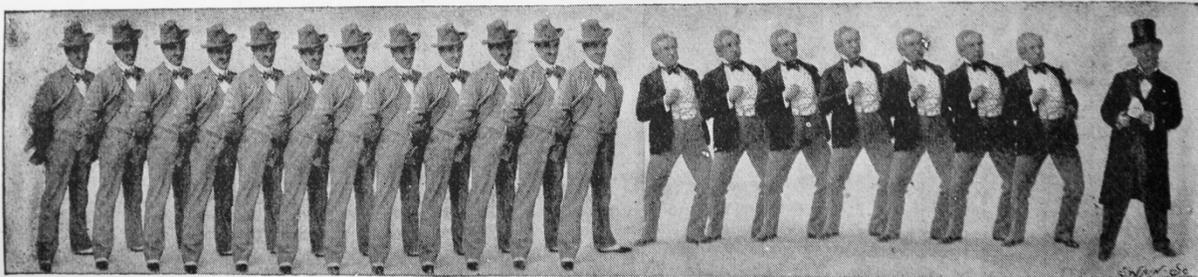
According to the last census twelve out of every twenty of the male sex were single, seven were married, and one widowed.

Figure 27. Halftone illustration from "The Mathematics of Marriage" by T. D. Denham. *Pearson's Magazine*, vol. 5, 1898, p. 396.
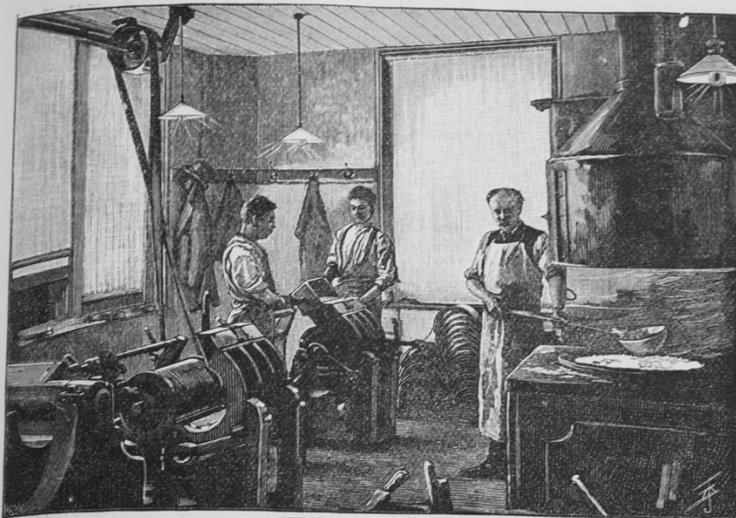
STEREOTYPING ROOM.

a hand-press, a few of which machines are here to be observed, kept only for proof purposes. When all the matter is corrected in this form, and all the illustration-blocks prepared of their proper size and shape, the type and the blocks, if any, are "made up" into pages, being fixed in iron frames, called chases. All this is very quickly said, and seems very simple, but numbers of cor-

rections and revises are made, and much labour, patience, and ingenuity expended in fixing the proper sizes of the illustrations, and fitting them to their proper places.

When at last the pages are "made up" and firmly screwed and wedged into their chases, the work is but begun. More proofs are taken and corrected, and the chases, with their contents, then go to the electrotyping department, at the top of the building. This workshop is the dirtiest and the most interesting in the place. The dirt cannot be helped—it is clean dirt, so to speak—and is simply graphite, or powdered black-lead, which, being an absolute essential to the process, gets everywhere.

But first let us suppose the made-up page
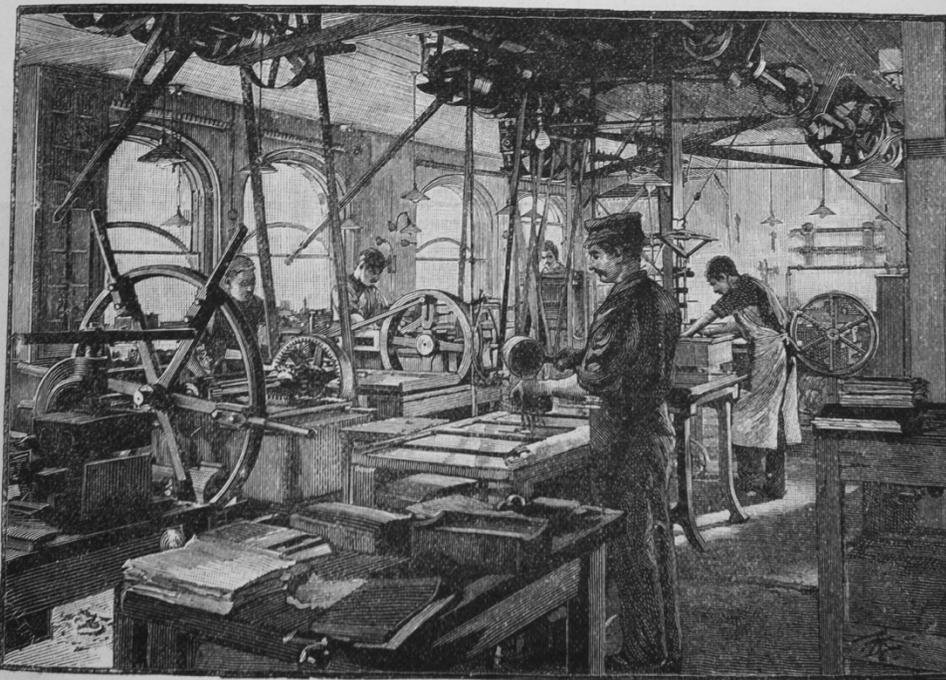
ELECTROTYPING ROOM.

Figure 28. Halftone illustration for "A Description of the Offices of the *Strand*." *Strand Magazine*, Dec. 1892, p. 601.

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ENTRANCE TO AN ARMENIAN CHURCH.

Here is a very interesting photograph, showing the entrance to an Armenian Church, situated in the Bitlis district. You will observe that the door is half-way up the wall, instead of being on the ground level. The Vali of Bitlis—a decent fellow, for a Turk — was once asked what was the reason for this architectural peculiarity. His reply was significant. "If the entrance were on the ground level, the Kurds would come in force and drive their cattle into the building. The Kurdish chiefs think there's no stable like an Armenian church." When the devout congregation have successfully negotiated the ladder, it is drawn up, and then the service proceeds without fear of rude interruption. All things considered, it must be a trifle wearying to attend service in one of these churches. There are no seats, and the congregation are detained from five to seven hours.

A WONDERFUL BOTTLE.

This is an ordinary white glass wine bottle, of European manufacture, brought from Monghyr (Ur of the Chaldees). It is without a flaw, and on the inside an Ode of Hafiz (a celebrated Persian poet of the fourteenth century) has been beautifully inscribed by a Mohammedan, whose method of executing it no one has ever been able to discover.

A BICYCLE MADE ENTIRELY OF WOOD.

A monument of patience and perseverance. It was a French peasant who constructed this cycle, using only wood for every single part. The very nails employed to fasten together the parts are of hard wood; and although Coventry might ridicule the machine, it is interesting to learn that its ingenious maker frequently rides it to the market-town some miles away.
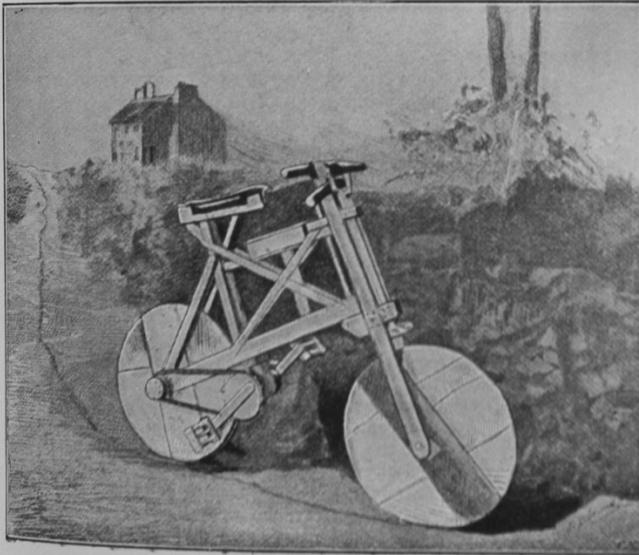
Figure 29. Excerpted page from "Curiosities." *Strand Magazine*, Aug. 1896, p. 237.

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Figure 30. Kodak advertisement. *Strand Magazine*, Aug. 1911, p. 15.

Curiosities.*

A PLUCKY FEAT.

Mr. Douglas N. Willis sends a remarkable snap-shot taken at the Python Mine, Kandoops, B.C. The photo. represents a friend of the sender suspended by his knees on a rope swung 50ft. above the ground between two fir trees. One of the trees was stripped by the men for a flag pole, to be used during the Boer War and in celebration of British successes. The photograph was taken directly from below, and is eloquent testimony to the nerve of Mr. Willis's young friend.

MAMMOTH MIMOSA THORNS.

Mr. McTaggart Cowan, of 53, Ashton Terrace, Glasgow, sends a photograph which illustrates in a remarkable manner one of the many hardships that meet Mr. Thomas Atkins in his struggles with the enemy. The photo. represents the gigantic thorns of the mimosa bush, which of course is plentiful in South Africa. The sizes are, reading from top to bottom, 4¼in., 6¼in., 6½in., 5¾in. Surely bushes covered with thorns as large as penholders would be sufficient to disorganize the most efficient cavalry! It is curious to note *en passant* that the pods of these mimosa bushes supply a large quantity of tannin, and the fruit, having been found highly serviceable in America for cattle feeding, was officially recommended, in 1877, for cultivation in South Africa for like purposes.
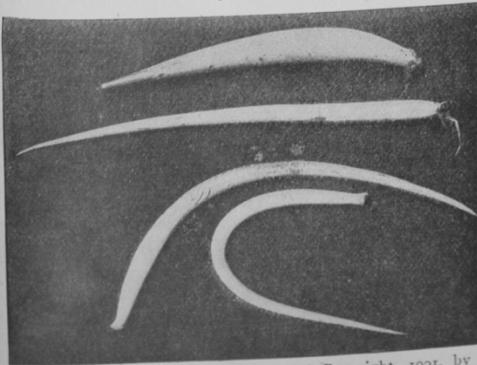
A LIGHT-FINGERED CLOCK.

Mr. H. D. Gasteen, of 66, The Common, Woolwich, in sending the next photo. writes: "I inclose a photo. of a funny occurrence which happened not long ago. Someone carelessly left an opened letter against the dial of the clock shown in my photograph. As the minute hand went round it got between the sheets and gently lifted its strange burden in the manner shown. I just arrived in time to photograph it."

Figure 31. Excerpted page from "Curiosities." *Strand Magazine*, May 1901, p. 595.

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Figure 32. Lilian Noble. "A Good Jump." Halftone illustration from "Curiosities." *Strand Magazine*, Jan. 1899, p. 117.
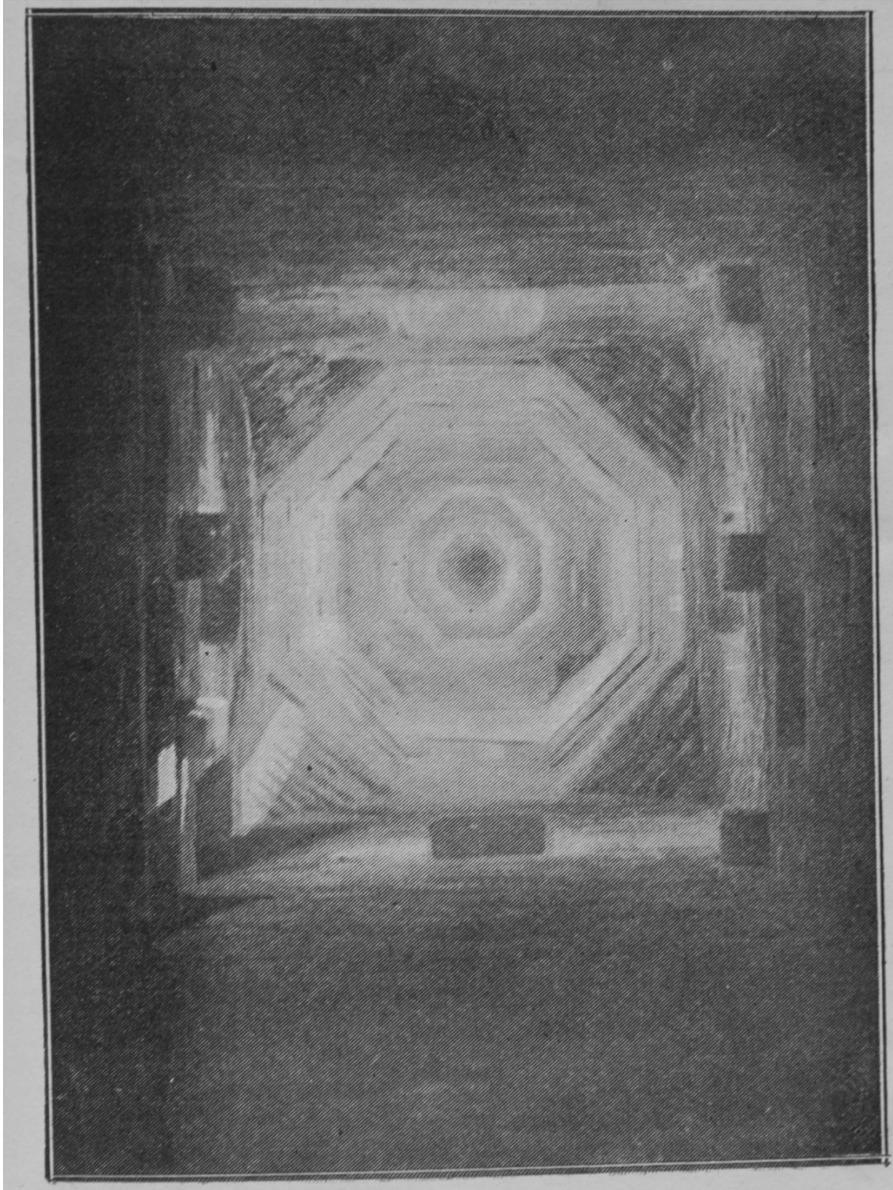
Figure 33. E. F. Fox. "A Photographic Curiosity." Halftone illustration from "Curiosities."
Strand Magazine, Sept. 1897, p. 359.
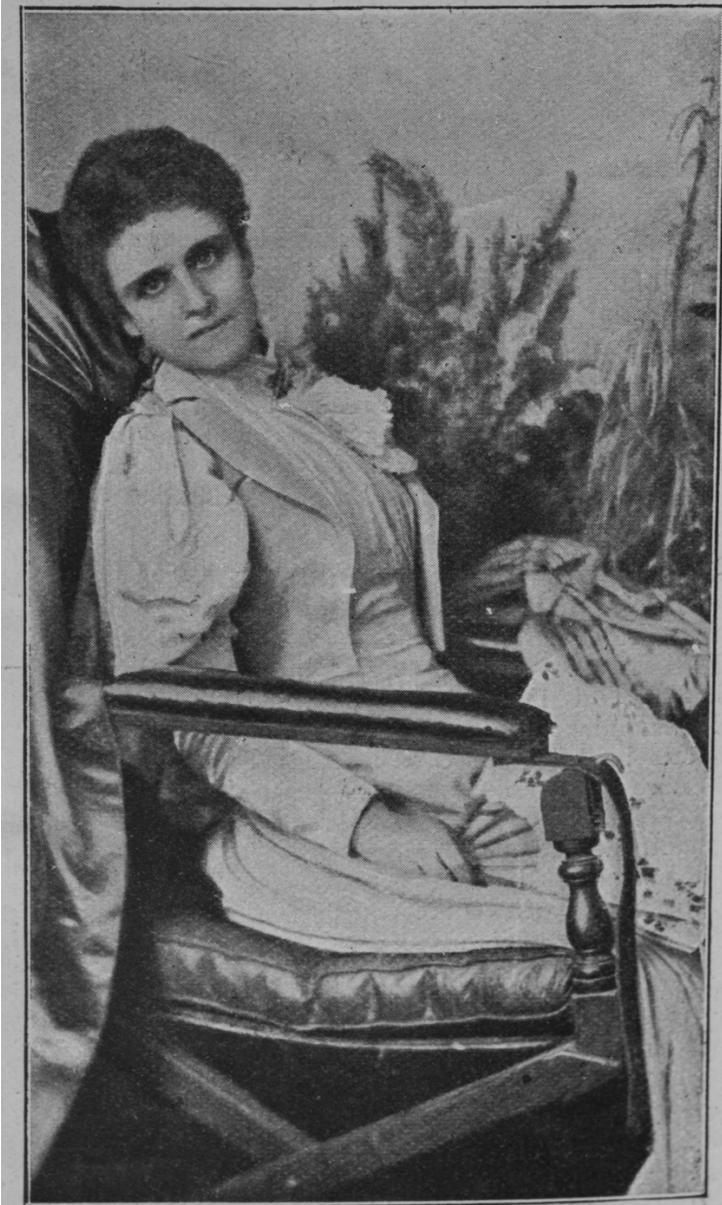
From a Photo. by Nicholas, Madras.

Figure 34. E. H. Horton. "A Photographic Freak." Halftone illustration from "Curiosities."
Strand Magazine, Nov. 1897, p. 60.
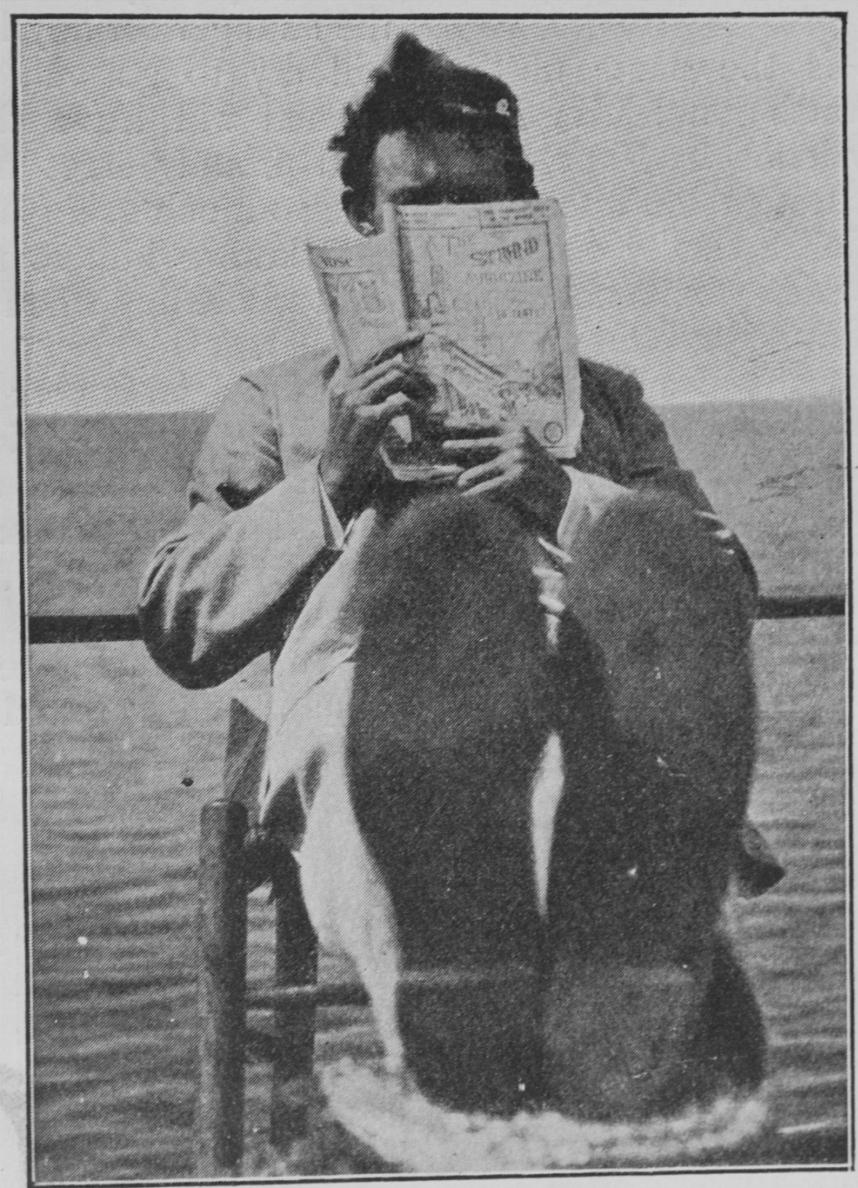
Figure 35. C. Horace Knapp. "Taken by a Child." Halftone illustration from "Curiosities."
Strand Magazine, Jan. 1901, p. 116.
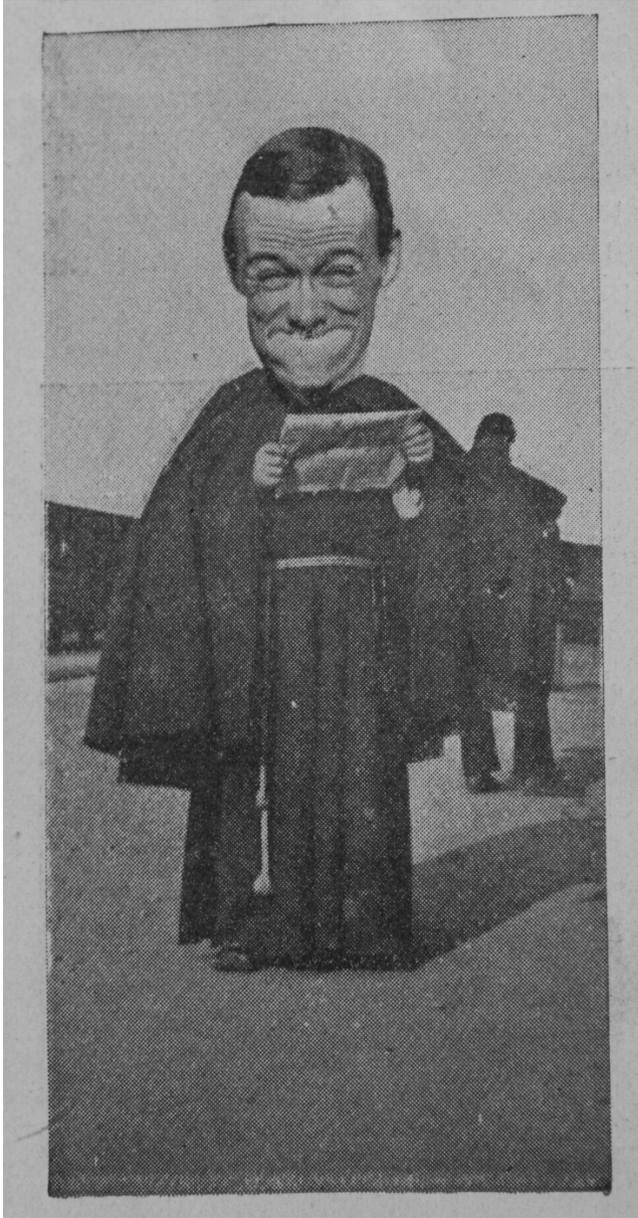
Figure 36. "A Good Joke—Not Clerical." Halftone illustration from "Curiosities." *Strand* Magazine, Oct. 1898, p. 478.

Figure 37. "A New Style in Photography." Halftone illustration from "Curiosities." *Strand Magazine*, Aug. 1899, p. 240.
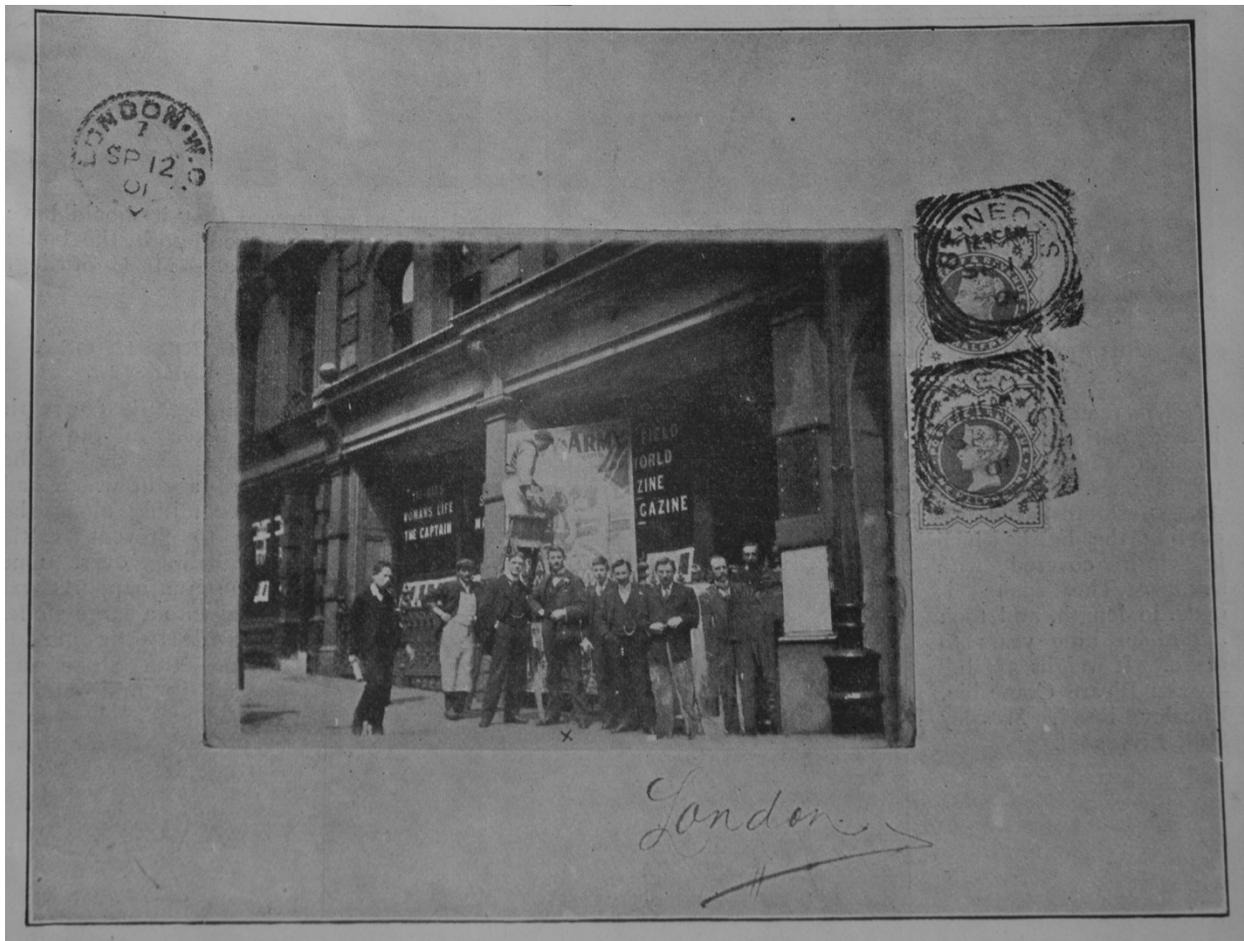
Figure 38. "The Post Office and Ourselves." Halftone illustration from "Curiosities." *Strand Magazine*, Dec. 1901, p. 799.

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