

Periodicals and Periodicity

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Accustomed to a diet of information in bite-sized morsels, readers increasingly lack the patience and even ability to digest serious books. The collective and ephemeral nature of the new media in turn encourages authors to dash off flimsy essays that would never stand scrutiny on their own. The result is a vicious circle. Although this lament could have been drawn from today's debates about the web, it comes from eighteenth-century German critiques of the periodical (Raabe 1974). It even entered the literary canon. The Theatre Manager in *Faust* worries how to please a jaded public:

If one comes bored, exhausted quite,
Another, satiate, leaves the banquet's tapers,
And worst of all, full many a wight,
Is fresh from reading of the daily papers.

Elsewhere, Goethe complained that ceaseless periodical reading fostered passivity, reducing culture to something "only supposed to distract" (Lowenthal 1961: 34, 21). The parallels command our attention. One ironic benefit of the digital revolution has been renewed interest in the history of "print culture," though often marred by a tendency to view the latter monolithically and focus comparisons narrowly on "technology." Many paradoxes are more easily resolved, and phenomena better understood, if we instead view them from the perspective of genre, with historically conditioned conventions of writing and reading.

The normative status of the codex, reflected in the name of our discipline and even the title of the present volume, leads many to view difference as hierarchy:

Book
venerable
complete
univocal

Periodical
recent
fragmentary, open-ended
polyvalent

individual
 individualistic: authorial
 authoritative
 creative
 permanent

collective
 individualistic: subjective
 suspect, provisional
 derivative
 ephemeral

The periodical was arguably the first original genre to arise following Gutenberg's invention. Like the latter, it was not *sui generis*. Rather, it combined and developed earlier practices, constituting something qualitatively new. The essence of the periodical is periodicity. The periodical is thus not a book *manqué*, but a nonlinear assemblage of parcels of text, the unity of which derives from a common program cumulatively implemented through repetition. Scorn is the price of success as well as novelty. Since the appearance of the first newspaper (1605) and journal (1665), roughly 1.5 million periodicals have conquered the globe: the vehicle of every major cultural and political movement, the preferred means of scientific communication, and the most popular reading matter.

The periodical was protean as well as prolific. It is relatively easy to see what links modern newspapers such as *Asahi Shimbun*, the *Guardian*, *Al Abram*, and *El País* with one another and with the *Aviso Relation oder Zeitung* (1605), *Courante uyt Italien, Duytslandt &c* (1618), *Moniteur Universel* (1789), and *Shenbao* (1872), but what could possibly unite modern journals such as *African Zoology*, *Paris-Match*, *Cigar Aficionado*, *Hispanic Entrepreneur*, and *Fuck You: A Magazine of the Arts*? What can they, moreover, have in common with the *Rambler* (1750), *Revue des Deux Mondes* (1829), *Australian Gold Digger's Monthly Magazine and Colonial Family Visitor* (1852), or *Efemérides barométrico-medicas matritenses* (1743)? Much ink and effort have been wasted in the quest for a definition that can expand to cover all possible variations without succumbing to analytical entropy.

The German school of periodical research pioneered by Joachim Kirchner associates the newspaper with (1) public accessibility; (2) periodicity; (3) timeliness; (4) universality – ascribing to the journal only the former two qualities (Kirchner 1928; Dovifat 1962). Periodicity is a trait shared by the periodical proper (journal/magazine) and newspaper, which are our focus, with several variants of the codex, including annuals (almanacs, gift books, yearbooks), proceedings, monographic series, and part-publication, which began as a rationalization measure in the seventeenth century and became a literary vogue in the nineteenth. Allowing for the inevitable historical exceptions, we will therefore employ “periodical” in the British sense, equivalent to American “serial”: “A publication in any medium in successive parts bearing numerical or chronological designations and intended to be continued indefinitely” (Woodward and Pilling 1993: 1).

Frédéric Barbier and Catherine Bertho Lavenir (2003) posit a tripartite history of media dominated, successively, by the principles of opinion, information, and communication:

- (1) 1751 to 1870, the second revolution of the book: the democratic and industrial revolutions invest print with social and political significance.
- (2) 1870 to 1950, the universalization of the media: heyday of the press, new media of picture and sound, in the mass age of national and global conflict.
- (3) 1950 onward, the networked multimedia world: cultural and economic globalization.

The historian of the book, like the lawyer or evolutionary biologist, will look for the causal logic behind a phenomenon. Writing is some 6,000 years old, the codex over 2,000, and printing with movable type over 550, but the periodical only 400. Hunger for information may be "timeless," but its diffusion implies a social need; its mechanical reproduction, the existence of a market; and the rise of a new genre, a change in reading practices as well as cultural production.

Barbier and Bertho Lavenir begin with the phenomenon that so worried Goethe, the shift from "intensive" to "extensive" reading: from repeated and extended rumination over a few traditional texts, to quicker consumption of a wider range of changing titles. Although debate has focused on the extent of new popular literacy, extensive reading was already the *modus operandi* for intellectuals: at first a necessity for the few, and only later a choice for the many. The periodical proved ideally suited to both audiences, publicizing information formerly and sometimes jealously confined to the private communication networks of princes, merchants, or scholars.

Amidst a variety of overlapping rather than successive genres, we can discern the evolution from ad hoc, single-topic print publication (Germany 1480) to varied content and serial appearance: weekly newspapers (Strasbourg 1605) and dailies (Leipzig 1650, London 1702, Paris 1777). Three influential variants were the Dutch *coranto* (1618–50), a weekly or bi-weekly "running relation" of multiple stories under a changing title, in which form the first French and English "newsbooks" appeared (Amsterdam 1620); and Théophraste Renaudot's *intelligencer* and *gazette* (1633, 1631), official publications on commerce and foreign politics. Periodicity evolved in tandem with the rhythms and reach of the incipient postal services on which the inflow of information and distribution of publications depended. Early newspapers were international in content and orientation: local news required no new communication medium, and censors forbade coverage of internal affairs, along with other threats to state, religion, and morality.

Whereas the newspaper was a popular medium, the journal was an erudite one that displayed a dual tendency toward specialization and popularization as it evolved to address new topics and readership. Most learned journals contained diverse content but inclined toward what David Kronick (1976) calls the derivative (reviews, abstracts, excerpts) or the substantive, as exemplified by the first two titles (1665). Denis de Sallo's *Journal des Sçavans* offered a weekly overview of the "Republic of Letters" "because things age too much if one defers speaking of them for a period of a year or a month" (Martin 1984: 2.199). *The Philosophical Transactions* (later: *of the Royal Society*) emphasized experimental scientific research. The value of the new genre as a supplement and

alternative to soaring book production (250,000 titles in the seventeenth century) and cumbersome epistolary exchanges is easily imagined: the largest German Baroque scholars' libraries numbered 20,000 volumes (typically 4,000–5,000). Leibniz, whose many periodical contributions included twenty-six on the calculus, had some 600 correspondents. The learned periodical henceforth became the principal forum of scholarly communication (1,858 scientific titles by 1790).

Its success inspired periodicals providing amusement or instruction for the growing non-academic market, although their precise genealogy and taxonomy are debated. The monthly *Mercur Galant* (1672, renamed *Mercur de France* in 1724) offered courtly news and culture for the social elite. Edward Cave's *Gentleman's Magazine* (1731) lent its name to a new type of periodical miscellany. The most original subgenre, however, was the essay journal represented by the *Tatler* (1709) and *Spectator* (1711) of Steele and Addison, which, as the latter put it, sought to bring philosophy out of the colleges and libraries to the coffee-houses and tea tables, so as to reach the "blanks of society," particularly the "female world" (Lowenthal 1961: 67–8). Both journals were extensively reprinted and imitated, above all in Germany, where, as Wolfgang Martens (1968) has shown, some 450 "moral weeklies" (1720–60) in effect created middle-class literary culture. Because the newspaper represented a more basic need, it seems everywhere to have preceded the journal: Italy 1631/1668, Sweden 1624/1732, Russia 1703/1755, American colonies 1690/1741, Australia 1803/1821. Until about 1725–30, a nation's first journal was likely to be a learned one; thereafter, general interest.

The periodical superseded the book as the dominant textual medium of intellectual exchange, social commentary, and entertainment in the age of Enlightenment and revolution, movements that emphasized popularization and debate. Continuing repression and stamp taxes notwithstanding, England between the Glorious and American revolutions established a "free" press based on metropolitan newspapers containing a mixture of political and business news, culture, and opinion, financed in part by advertising. In 1695, Kaspar von Stieler declared, "One reads newspapers not in order that one may become learned and skilled in judgment, but only in order to learn what is going on" (Kronick 1976: 17). Judgment was what journals promised: as Addison put it, not "what passes in Muscovy or Poland," but "knowledge of one's self" (Lowenthal 1961: 67). By combining the entertaining with the instructive, journals were to impart cohesion and aesthetic and moral skill to a growing reading public. Hence the importance of reviews: 433 contributors to Friedrich Nicolai's *Allgemeine Deutsche Bibliothek* covered 80,000 titles from 1765 to 1806. The shift from a rule-based to a taste-based, subjective aesthetic demanded that even expert judgment legitimize itself before the tribunal of opinion. Contemporaries spoke of the century of the journal and criticism, both of which increasingly extended to the social.

Politically and culturally fragmented Germany produced the richest periodical culture, a veritable supraregional communication network: between 1609 and 1700, 162 newspapers (200 concurrently by 1800), reaching all but the lowest social strata; 3,494 journals by 1790. Because authorship and reading were inseparably associated with journals, the resultant debate assumed paradigmatic significance. Against those who

praised journals for "diffusing useful knowledge to all estates," critics (ironically, often writing in journals) charged careless authors and opportunistic "journal manufacturers" with feeding the new "plague" of "journal addiction," which joined the diagnosis of graphomania and reading frenzy as causes of cultural decline and (the intemperate soon added) the French Revolution (Raabe 1974: 122, 113, 112). Even defenders of journals worried that their proliferation was overwhelming readers, while dissipating the efforts of writers. Friedrich Schiller's *Horen* famously proposed, by bringing together the best authors and eschewing extreme erudition and populism alike, to eliminate competition and "reunite the politically divided world under the banner of truth and beauty" (Wald 1995: 118). It went from sensation in 1795 to silence in 1798, having failed to accommodate the demands of the genre and public taste. Like the web today, the periodical occupied a liminal realm between the elite and the popular, a site of continual contest between groups that valued reading for different reasons. As the first mass medium, the periodical summoned up deep anxieties arising from the breakdown of the putative unitary public and made visible a commodification of culture whose existence traditional interests preferred to ignore or deny.

In France, centralization and privilege relegated innovation to interstitial niches or sites beyond the legal and geographical boundaries of the kingdom. The 1789 Revolution liberated not just the nation, but the periodical, which in the form of the newspaper encompassed both information and criticism. The revolutionary press – 2,000 mostly short-lived newspapers and 12,000 pamphlets in the first decade – both covered and propelled events. Newspapers, in Jeremy Popkin's words, "served as the Revolution's real 'public space'" (1990: 180), the manifestation of the popular will and public opinion that legitimized the new regime and paradoxically demonstrated its actual disunity. As in the English Revolution before and others later, the initial flood of print dried up under revolutionary dictatorship and restoration. Napoleon permitted only thirteen newspapers under the Consulate and four under the Empire, and his vanquishers likewise sought to restore unity by compulsion.

The periodical was central to the democratic and national struggles that would dominate the next two centuries. For Jürgen Habermas (1991), in the absence of freedom, a critically reasoning, bourgeois, political public sphere emerged from the literary: above all, through journals, as both forums and subjects of discussion in homes and new sites of sociability. Benedict Anderson (1983) suggests that the simultaneous reading of newspapers, made possible by the combination of print capitalism and linguistic diversity, provided far-flung individuals with a concrete experience of belonging to the imagined community of the nation. Paul Starr, countering deterministic notions of technology or capitalism, has emphasized how "constitutive, political decisions" (2004: 3) regarding intellectual property, civil liberties, and systems of communication and transportation shaped the modern media and allowed the republican United States to become the precocious and continuing leader.

The century between Waterloo and Versailles commercialized, popularized, and professionalized the periodical. Publishers and governments, traditionally oriented toward elites, came to view popular reading – like nationalism and primary education – as a

force more profitably harnessed than suppressed. With its unprecedented demand for volume and speed, the periodical rather than the book forced the innovation of production methods and trade practices. In 1814, König's steam-powered, flatbed-cylinder machine printed all 4,000 copies of *The Times* of London overnight. By 1896, a Hoe rotary press could print and fold 96,000 eight-page issues of Pulitzer's *New York World* (circulation nearly 1.5 million) in one hour, from stereotype plates, on rolls of pulp paper running at 32.5 miles per hour. The elimination of technological, juridical, and economic obstacles to the mass circulation of literary commodities rendered periodicals ubiquitous, increasingly cheap, and eventually colorful.

Already in 1826, Michael Faraday found the output of scientific periodical literature overwhelming. The signal development, however, was the rise of alternatives to elite newspapers and reviews, in two waves of popularization: the appearance of penny newspapers and weeklies around 1830, and the advent of the sensationalistic "new" or "American" journalism of Pulitzer and Hearst and their European imitators around 1880 (Harmsworth, Millaud). They coincided, respectively, with populist pressures and the introduction of mass schooling in the era of anti-revolutionary stabilization and national integration. The number of US journals rose from about 100 in 1825 to 3,300 by 1885, and newspapers from 200 in 1801 to 7,000 in 1880. In Britain, there were 267 newspapers in 1821 and 2,504 by 1914. Russian-language periodicals numbered 170 in 1860 and 606 in 1900. Inexpensive newspapers and monthly or weekly magazines provided multigenerational audiences with news, scandal, entertainment, practical information, fiction, and a dose of reformism, along with growing amounts of advertising and illustration. They were the textual equivalent of department stores: urban, democratic, commercial institutions that appealed to women, reshaped markets as well as consumption, and aroused similar anxieties.

Paradoxically, democratization reinforced hierarchy, establishing a periodical great chain of being descending from lofty quarterlies (*Edinburgh Review* 1802, *North American Review* 1815), via "high-quality" illustrateds (*Scribner's Magazine* 1887, *Strand* 1891), related family publications (*Harper's Weekly* 1857, *Gartenlaube* 1853), and cheap, mass-circulation magazines (*Munsey's* 1889, *Collier's* 1888) to fare for the newly or semi-literate (*Tit-Bits* 1881). Russians distinguished between monthly "thick journals" and illustrated weekly "thin magazines" – the appetite for which newspapers whetted rather than spoiled. Renewed debate on the periodical focused less on the quantity of reading matter than the quality of reading practices among a mass public figured as feminine and lower class.

All strata consumed serialized fiction, in part-publications inspired by the success of *The Pickwick Papers* (1836–7), in new family magazines, and (on the continent) in the *feuilleton* or non-political portion of the newspaper (one thinks of Verne, Thackeray, Dumas, Trollope, Conan Doyle). Some theories attempt to explain the appeal of serial literature by opposing "female" fiction to "male" nonfiction or positing complementary rhythms of textual pleasure (goal-oriented male installments within the periodicity of feminine delayed gratification). Certainly, the tangible benefits of the *ménage à trois* between author, publisher, and reader were clear. When Eugène Sue's *Juif Errant* ran in

169 *feuilletons* in the *Constitutionnel* (1844–5), it boosted sales from 5,944 to 24,771 and earned him 100,000 francs.

The key to cheap print was advertising income, which allowed publishers to sell below cost. The appearance and character of periodicals changed accordingly. Between 1908 and 1913, advertising space in the *Saturday Evening Post*, that juggernaut of bourgeois socialization, occupied 35–50 percent of a given issue, and advertising revenues grew by 600 percent, leading the Curtis Corporation to proclaim that its ostentatious new headquarters was “built on faith – faith in the power of advertising” (Cohn 1989: 64). Even as a feminist press emerged, mainstream publishers increasingly targeted women as consumers.

Commercialization fostered journalistic sensationalism and sobriety alike. Sensationalism (like bolder “American” design) compensated for the inherent redundancy of event-based content whose increasing blandness derived from shared wire services (Havas 1835, Wolff 1849, Reuters 1851) and pools (Associated Press 1848, United Press 1907), as well as the political reserve prompted by new ideals of journalistic “objectivity” and the triangulated cultivation of readers, stockholders, and advertisers. A profit-driven press emphasizing reporting replaced a crudely partisan one in the US in the 1830s, Britain by mid-century, and Japan in the 1880s. Critics pointed in vain to the spurious separation of editorial from commercial concerns.

Controversy assumed forms appropriate to the environment of public opinion (“jingoism,” “muckraking”). Periodicals turned the Dreyfus case into “The Affair” that affirmed the power of the press and public intellectuals. One unintended consequence was the Tour de France (1903), a promotional device for a cycling magazine formed by arch-conservatives (including Michelin) who seceded from another over its Dreyfusard politics and advertising prices. Sales increased tenfold to over 250,000 by 1908. The simultaneous circulation of the bicycles, periodicals, and products they advertised epitomized the intimate and uneasy intermingling of the worlds of goods and ideas.

Consumerism, conflict, and consolidation in the era of the two world wars and the Cold War produced both the greatest efflorescence of, and threats to, periodical culture. On the one hand, periodicals embodied and celebrated the commercialization of leisure. Henry Luce’s information and photojournalistic magazines (*Time* 1923, *Life* 1936) and their imitators satisfied the needs of a visually literate middlebrow public accustomed to a fast-paced life and desirous of being informed and modern but not overly intellectual or unconventional. On the other hand, periodicals continued to serve as artillery and fortresses (to use popular nineteenth-century metaphors) in political and cultural wars, as mass media met mass politics.

Both the Nazis and the Soviets sought to create new human types and societies and rejected a free, heterogeneous literary market, although with different rationales and consequences. Pursuing historical debates on overproduction to a draconian conclusion, the Nazis eliminated ideologically acceptable as well as subversive publications. What political “coordination” began, “total war” finished: by 1944, the number of journals had sunk from some 7,300 to 500, and the number of newspapers from 4,100 to 977. Enhanced diffusion of periodicals abroad was the goal of the equally draconian national

switchover from "Gothic" to roman letters (1941), preposterously justified as another blow against malevolent Jewish influence. The Nazis sought to tame a nation of readers; the Bolsheviks, to create one. The latter viewed increasing literacy (21 percent in 1897) and publication, like industrial production, as measures of revolutionary success. Unable to allow either a traditional elite or a new but autonomous popular culture, they created the "Soviet reading 'myth'": a nation of voracious readers united through print by socialist values (Lovell 2000: 21). By the 1960s, the USSR produced some 6,800 periodicals in 60 languages with a circulation of 61 million, including 602 daily newspapers (c. 50 in 1913). This hothouse diversity was to be both the cause and proof of social cohesion, but neither long survived communism itself.

After 1945, the victorious Allies presided over an unprecedented rebuilding of the publishing landscape equivalent to the renewal of devastated cities: a simultaneous loss and opportunity. Although the toll of "totalitarian" dictatorship of right and left was obvious, capitalist democracy proved harsh in its own way. Concentration, which began in the late nineteenth century (Scripps, Hearst, Harmsworth), accelerated and spread. Competition declined. Both the cookie-cutter of communism and the gentle but relentless kneading of the capitalist invisible hand shaped what to many appeared as an increasingly homogeneous product. Put another way: *Der Spiegel* (1947) and *India Today* (1975) look like *Time* for the same reason that Frankfurt and Mumbai look like Chicago.

Precocious or analogous developments such as the Roman *acta diurna*, Chinese *ti pao*, or Mughal manuscript newsletters notwithstanding, the periodical was a modern European invention, a "civilian tool of Western empire-building" (Reed 2004: 10) that non-Westerners came to employ for their own ends. It shaped languages, created canons, and forged identities along a broad spectrum of responses: neither mere imitation nor negation of Western values, nationalism, or technology. Where cultural resistance to the letterpress book or commercialization was strong, periodicals sometimes eased the introduction of print culture. Middle Eastern modernizers such as Faris al-Shidyaq proselytized for the new technology as the means of overcoming backwardness while preserving and democratizing the scribal legacy. His *al-Jawa'ib*, the first non-governmental Arabic paper (Constantinople 1861) became a forum for nationalist cultural revival. In China, lithography, thanks to its low cost and closeness to traditional aesthetics, served as a "compromise technology" (Reed 2004: 89). Illustrated newspaper supplements and journals were the bridge between indigenous woodblock printing and the high-speed industrialized letterpress required for modern news periodicals that flourished after the Sino-Japanese war.

In the Western hemisphere, where the first news-sheet was published in Spanish in Mexico in 1541, local vernaculars never seriously challenged the dominance of colonial languages in print. India, by contrast, developed what Vinay Dharwadker calls "the first fully formed print culture to appear outside Europe and North America . . . distinguished by its size, productivity, and multilingual and multinational constitution, as well as . . . its inclusion of numerous non-Western investors and producers" (1997: 112). The rich print culture (including 14,000 nineteenth-century periodicals in forty

languages) may even have forestalled the violence that accompanied other colonial struggles. The rise of nationalist movements was inextricably linked with periodicals: a fourfold increase in circulation of Bengali newspapers from 1883 to 1888, a quadrupling of Egyptian papers between 1892 and 1899 (and nearly thirty women's periodicals founded 1892–1920), and 474 Ottoman periodicals published in various languages following the Young Turk revolution in 1908.

The periodical flourished because it offered all the agents of the communications circuit distinct advantages: for publishers, financial calculability and a means of recruitment and publicity; for authors, regular income and exposure; for readers, affordable diversity of content. Periodicity allowed for continual intellectual or material response, whose virtual intimacy compensated for the anonymity of the market. Growing commercialization and scale of operations wrought changes in that relationship as well as the genre.

Johann Friedrich Cotta pioneered the integrated enterprise, offering high fees for contributions to an unparalleled complex of periodicals. His political and literary newspapers *Allgemeine Zeitung* (1798) and *Morgenblatt für gebildete Stände* (1807) relentlessly promoted his book catalogue, especially lucrative editions by luminaries such as Schiller and Goethe, won via journal contracts. Other publishers attached their names to flagship publications (*Blackwood's*, *Harper's*, *Scribner's*, *Westermann's*). Complexity and profitability grew hand-in-hand. By 1912, "A single edition of either the *Ladies' Home Journal* or the *Saturday Evening Post* consumed four square miles of paper and 60,000 pounds of ink and required sixty-five railway cars to distribute it" (Cohn 1989: 64). The British press barons used revenues from cheap magazines to subsidize still cheaper newspapers. The printer–publisher–retailer thus evolved into a "pure" publisher and sometimes manager of a multifaceted concern, which was to its forerunner as the railroad was to the textile mill: a network rather than single locus of activity, often requiring public ownership rather than family capital.

The understandable scholarly emphasis on books has distorted our view of authorship. Periodicals fostered the rise of professional writers, incidental writers, and professionals who wrote. A journal's title and the collective reputations of its established authors spread an umbrella of provisional credibility over its new writers. The birth of the periodical coincided with what Foucault (1984) controversially identifies as an epochal reversal in the author function, whereby scientific discourses came to be judged on their merits, and literary discourses required attribution to a named creator. Dieter Paul Baumert (1928) suggests a further differentiation of aesthetic and informational roles. He discerns a sort of bell curve of the authorial persona in journalism, as the dominant activity evolved from mere compilation in the pioneering phase, to individualized literary shaping of material in the Enlightenment and Romantic eras, and editorial selection and arrangement after 1848. As the profile of the average journalist receded, elite contributions (bylines, *feuilletons*) stood out all the more by comparison.

Even for prominent authors, the regularity of periodical work was sometimes both attraction and agony. Schiller, Hegel, Melville, and Robert Nicoll likened the routine of periodicity to the lot of the galley slave. Still, for writers willing to accept the

constraints of serialization in mass-circulation magazines marketed as much to advertisers as readers, the rewards could be considerably more lucrative than book contracts: in F. Scott Fitzgerald's case, \$225,784 versus \$66,588 from 1919 to 1936.

The combination of consistent title and changing content in effect made periodicals objects of both intensive and extensive reading. The *Encyclopédie* expressed a classic ambivalence when it described journals as devised "for the comfort of those who are too busy or too lazy to read entire books . . . a means of satisfying their curiosity and of becoming wise at little expense" (Kronick 1976: 20). Even the latter advantage was only relative. Because print-runs of early journals were 500–1,000 copies and even newspapers rarely sold in tens of thousands prior to the advent of cheap print, a single copy may have been shared by ten or twenty persons, in homes, coffee-houses, clubs, or popular joint-subscription organizations (430 in the German territories between 1760 and 1800; 463 in Paris between 1815 and 1830). Ironically, when periodicals were scarce, the experience of reading them was often collective and oral, but became more individualized and silent after they became a mass medium, reflecting the shift from vehicle of public discussion to object of private consumption. Mass-circulation periodicals were immensely profitable and influential, but whether they succeeded in manipulating their readers is a question that only a history of audiences can confirm. British workers, Victorian ladies on both sides of the Atlantic, and Soviet "new women" all turned to periodicals for entertainment and self-improvement in ways as likely to resist as absorb indoctrination.

As the means of physical production and distribution of periodicals evolved, periodicity settled into normative rhythms: daily for newspapers, weekly or monthly for magazines, and quarterly for "weightier" titles. The periodical that most exuberantly flaunts its periodicity is *La Bougie du Sapeur* (*The Sapper's Candle*, 1980). Named after a cartoon character born on February 29, this humorous "daily" appears only every four years, now accompanied (only every 28 years, of course) by a Sunday supplement. The joke makes sense only in an age so saturated with periodicity that we no longer notice it unless jolted out of our routines. Periodicity of publication was part of the evolution from fluctuating feast-and-fast rhythms to a modern world of factory discipline and time zones (derived from the needs of railroads), in which both work and recreation proceed according to schedule. In *Adam Bede* (1859), George Eliot lamented the replacement of the old, slow leisure by the new, which she described as "eager" and marked by "that periodicity of sensations which we call post-time." In Arthur Schnitzler's stream-of-consciousness novella "Leutnant Gustl" (published in the Viennese daily, *Neue Freie Presse*, 1900), as the dishonored protagonist deliberates whether to kill himself at 7 a.m. local time or railroad time, his presumptive last act is to go to his café for coffee – and the morning paper.

Today, the periodical faces the challenges of rising costs, competition from other media, and changing habits of consumption. Television became the principal vehicle of both entertainment and news, depriving periodicals (especially magazines) of advertising as well as audience and, as a constant generator of narrative, even driving fiction from their pages. Major newspapers have compensated for the loss of immediacy

through expanded analysis of the sort associated with the journal. The genre once reviled as a mendacious compilation of trivia now appears as the nostalgic voice of gravitas. Finally, the center of gravity of the newspaper is shifting. Between 1970 and 1997, the number of dailies, total circulation, and circulation per thousand inhabitants declined in the more developed countries but soared in the developing world ($-25/+65$, $-13/+262$, $-23/+107$ percent, respectively). In 2004, only thirty-five countries registered increases in newspaper circulation, notably China and India (35 and 23 percent). The decline of traditional mass-circulation magazines (particularly large-format illustrateds) has opened the market to larger numbers of consumer publications with lower circulations. Now, as earlier, quantity does not imply longevity. In the nineteenth century, US magazines typically lasted for two years. In 1989, only 20 percent survived more than four.

The challenge of the Internet soon eclipsed the "print versus video" debate. Web periodicals are still primarily pendants of paper versions, but increasingly online only (*Slate* dates from 1996). Their long-term economic and conceptual models remain unclear. One-fourth of adult Americans read news online daily, but the expectation of "free information" has militated against charging for "content." Most electronic periodicals are typical transitional products that recapitulate the aesthetics and functions of the previous technology, resulting only in enhanced diffusion of static texts (disparagingly known as "brochureware" or "long-distance photocopying").

A reconceptualization of both the periodical and its intellectual property regime is arising from the information explosion in the sciences (7,888 biomedical journals in 1959 versus 19,316 in 1977; 10,000 articles in *Physics Abstracts* in 1955 versus 146,500 in 1996). Soaring numbers and prices of scholarly periodicals issuing from monopolistic commercial presses devour library acquisition budgets at the expense of monograph purchases. The problem is compounded in developing countries, where the inability of scientists to keep up with current research prevents them from contributing to it. In 1991, the Third World accounted for only 1.5 percent of the journals and 5 percent of the papers in the Science Citation Index. Scholars and librarians associated with the "open-access" movement therefore urge a switch from paper to digital format and profit to reciprocity, on the principle that work produced without remuneration should be available online without restriction through peer-reviewed journals (over 2,000 so far) and repositories.

As David Kronick (1976), Joost Kircz (1998), and James O'Donnell (1998) have observed, the character of the learned journal as a means of disseminating, storing, and retrieving information highlights essential features of the periodical genre and the transformative possibilities of electronic publication, which expands the boundaries of the text and the reader's capacity for interaction with it. Decoupling the text from an inalterable physical incarnation renders diffusion in principle universal and instantaneous, and underscores the primary function of the publisher as middleman. A single article can share several journal titles, whose assignment as credentialing and locator mechanisms could follow "publication." The interactive capacity for continual updating allows the periodical to recapture the immediacy that it once ceded to audio-visual

media, enabling users to respond to or even modify published texts, blurring the boundary between author and reader, and loosening the "fixity" that Elizabeth Eisenstein associated with print. Indeed, the new Anglo-American Cataloguing Rules replace "serial" and "monograph" with "continuing" and "finite" resources, both of them updatable.

Of course, ease of publication does not guarantee readership, not when "blogs" are being spawned at a rate of one per second. But research will become easier because we will search for information itself rather than the title of the journal or article that contains it. Pursuing this logic, some scientists envision a new form of scholarly communication in which "different types of information, at present intermingled in the linear article, can be separated and stored in well-defined, cognitive, textual modules" (Kircz 1998: 210), linked to one another both within and between publications. This possibility of boundless interconnection reminds us that, alongside the view of the periodical as inferior to the book existed others that claimed complementarity or even superiority. The early German Romantics, for example, developed a theory of the periodical as evolving encyclopedia or collectively authored book greater than the sum of its parts. By transcending the dilemma of selection versus expansiveness, the digital periodical may replace the book as the normative textual genre and become the portal through which we enter the coveted realm of the universal library. In the process, ironically, its hallmark – periodicity – may be radically transformed as we also enter a continually updatable hypertextual present.

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