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Media Technologies, the Organization of Knowledge, and 1870s Literary Culture

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In chapter sixty-three of Anthony Trollope's *The Way We Live Now* (1874-5), the fraudulent financier, Augustus Melmotte, senses that the game might be up. Having appeared mysteriously in London from Paris, he has risen to the top of society, hosting a dinner for the Emperor of China and standing for election to Parliament. Melmotte has climbed with the company he chairs, the South Central Pacific and Mexican Railway; however, while that company, existing to raise capital, is vulnerable to a loss of confidence, his downfall is due to rumours about a private financial affair. Melmotte has forged a signature and gossip, Trollope writes, 'got into the air, and had floated round dining-rooms and over toilet tables'.[1] While he is content to brazen out what is said about him, there are more material matters to resolve. On entering his office Melmotte bolts the door, removes some papers, and burns all but one. This, 'he put bit by bit into his mouth, chewing the paper into a pulp till he had swallowed it' (p. 474). Melmotte then takes breakfast, and, later in the day, learns that he has been duly elected.

The Way We Live Now is alert to informational flows, whether these are through formal networks such as the telegraph or post or more informal such as rumour and gossip. The novel is particularly interested in how credit depends upon information — what is known about someone or something, and when — but it does not neglect the material media that

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[1] Anthony Trollope, *The Way We Live Now*, ed. by Francis O'Gorman (Oxford: Oxford Worlds Classics, 2016), p. 458.

allow information to be stored up, moved around, and put to work. As a number of recent scholars have noted, the reader is introduced to Melmotte in first relational terms (the giver of a ball; the father of his daughter; the husband of his wife) and second through what is said about him (where he might be from; how he made his money; that Paris was too hot for him).[2] This narratorial evasiveness ensures the reader speculates about Melmotte, the master speculator, who, in turn, is subject to the speculation of others. Yet when the narrator finally gets around to describing Melmotte's appearance, the first thing we learn concerns his size: Melmotte is 'a large man' (p. 31). When he next appears, the narrator not only repeats this information, but also makes clear to the reader that it has been repeated ('It has been already said that Mr. Melmotte was a big man' [p. 70]). It is Melmotte's bulk that anchors informational flows just as it is his actions that set information flowing. Information might be circulated, shared from person to person, but Trollope registers the embodied work that makes it move.

Consuming the document, Melmotte assimilates it into his bulk while preventing anybody else putting it to work. Given Trollope's career in the Post Office, it is not a surprise that he was particularly attuned to both the importance of material infrastructure and mediating bodies of various kinds. He joined the Post Office as a young man in 1834, published his first novel in 1847, and maintained both careers until retirement in 1867. Trollope began *The Way We Live Now* in May 1873, a few months after he and his wife, Rose, settled into their new London townhouse after visiting the Australian colonies. The manuscript was completed by December 1873 and the novel began to appear in twenty shilling monthly parts from February 1874 (the first was advertised to be published on the 31

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[2] Anna Kornbluh, *Realizing Capital: Financial and Psychic Economies in Victorian Form* (New York: Fordham University Press, 2014), pp. 95-7; Jessie Reeder, *The Forms of Informal Empire : Britain, Latin America, and Nineteenth-Century Literature* (Baltimore, MD: Johns Hopkins Press, 2020), pp. 99-100.

January 1874).[3] The two-volume book edition was published in June 1875, a few months before the conclusion of the serial in September.

In what follows, I use Trollope's novel to explore how changes in media technology made information matter in the 1870s. Taking the nationalisation of the telegraph network in 1870 as a starting point, I explore how telegraphy, in particular, encouraged information to be understood as disembodied and mobile, reliant on yet distinct from the material media upon which it depended. This understanding was complemented by an intense interest in infrastructure and information work in the period. In my first section, I consider how Trollope represents 'the now' at a moment when telegraphy renewed fantasies of a single, unified, standard time. The second section examines how text was made informational in the period and the types of people who carried out this work. The third turns to what was left over, the material considered to possess informational content that required curation, storage, and retrieval. Trollope's novel proposes to represent the present as lived and so registers the various technologies employed to make time pass. As his longest novel, the reader cannot but be aware of the work necessary to tell time, as well as the selections and orderings on which the sensation of narrative time passing depends. But as a novel, the present as read is fundamentally different from that as lived. A 'now' to be told and retold, *The Way We Live Now* keeps its present safe as long as its bulk is accommodated, somewhere, ready on the shelf.

Telegraphic Time

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[3] See John A. Sutherland, 'Trollope at Work on The Way We Live Now', *Nineteenth-Century Fiction* 37.3 (1982): 472–93 (474). For the advertised date, see 'New Serial By Anthony Trollope', *Pall Mall Gazette* 21 (January 1874): 16.

In chapter fifty of *The Way We Live Now*, Marie Melmotte has her elopement foiled by a telegram. As she alights her train at Liverpool to join her fiancé on the boat to New York she is stopped and forced to return home.

> It may be well doubted whether upon the whole the telegraph has not added more to the annoyances than to the comforts of life, and whether the gentlemen who spent all the public money without authority ought not to have been punished with special severity in that they had injured humanity, rather than pardoned because of the good they had produced. Who is benefited by telegrams? The newspapers are robbed of all their old interest, and the very soul of intrigue is destroyed. Poor Marie, when she heard her fate, would certainly have gladly hanged Mr. Scudamore. (p. 377)

The telegraph broke the link between communication and locomotion, substituting instead a technology that seemingly liberated information from material media. Disembodied and apparently instantaneous, telegraphic signals approached the rapidity of thought itself. What was the use of scheming, Trollope asks, if plans could be foiled as fast as they could be conceived?[4]

In his autobiography, Trollope revealed that it was Frank Ives Scudamore's promotion to Under Secretary at the Post Office ahead of him that prompted his resignation.[5] In 1865, Scudamore had been commissioned to report on the feasibility of nationalising the telegraph network and his promotion allowed him to see the project through.[6] One of his key innovations was to extend the network beyond the city-centre and railway station offices established by the telegraph companies. Discussing this passage, Clare Pettitt notes

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[4] Trollope rehearses a well-worn telegraphic trope. See Iwan Rhys Morus, '"The Nervous System of Britain": Space, Time and the Electric Telegraph in the Victorian Age', *British Journal for the History of Science* 33.4 (2000): 455–75 (462).

[5] Anthony Trollope, *An Autobiography*, ed. by Nicholas Shrimpton (Oxford: Oxford World Classics, 2014), pp. 173–4.

[6] See Charles R. Perry, 'Frank Ives Scudamore and the Post Office Telegraphs', *Albion* 12.4 (1980): 350–67.

Trollope's 'sideways glance' at the financial scandal that was unfolding as he was writing.[7]

The costs of extending the network exceeded the budget and so Scudamore diverted £812,000

from other sources, mainly deposits in Post Office savings banks. As Pettitt notes, the

financial improbity resonates with the broader theme of the novel, but so does the extension

of the network that prompted it. Britain had had *de facto* standard time since 1848 when the

railway companies began to take time telegraphically from Greenwich but the extension of

the telegraph into post offices would allow standard time to diffuse more fully into the

country. *The Way We Live Now* is a novel of contemporaneity: just as the penny post declared

citizens all shared the same national space, so the extension of the telegraph network enabled

them to share the same national moment, too.

Nationalisation prompted renewed fantasies of standard time. An unsigned article in

Fraser's Magazine in July 1870 noted the efficiencies achieved by a stationery firm that had

adopted Greenwich time and asked readers to imagine what profit would 'be secured to the

nation when […] every telegraph office clock is regulated from Greenwich, and further when

the leaven of accuracy thus introduced diffuses its influence throughout the whole time

system of the country?':

> Then shall there be no more disputes between the followers of the old church clock
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> and the new, no more arguments between the watchmaker who sends his best
>
> chronometer to the nearest town to fetch the most reliable time it can supply, and the
>
> scientific inhabitant who urges the infallibility of the sundial's indications. Like well-
>
> trained musicians, the chimes of all England will strike out in unison at the signal of
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> their leader, the horometrical factotum on Greenwich Hill.[8]

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[7] Clare Pettitt, 'In-Between Times: Trollope's Ordinal Numbers', in Frederik Van Dam, David Skilton, and Ortwin Graef (eds), *The Edinburgh Companion to Anthony Trollope* (Edinburgh: Edinburgh University Press, 2018), pp. 228–41 (pp. 233-4).

[8] 'Telegraph Time', *Fraser's Magazine* new series, 2 (1870): 19–30 (19).

Dictated from the Royal Observatory and calculated from the stars, standard time was

understood as rational and modern, its objectivity providing ideological cover for the broader

imperial project. By 1872 all post office buildings were instructed to maintain Greenwich

time; in 1880 the Definition of Time Act made Greenwich time the legal standard throughout

Britain (with Dublin time standard in Ireland).[9]

Contemporaneity, however, requires more than the ticking of a clock and the

technologies of synchronicity created uneven temporal effects. Nationalisation resulted in

part due to the agitation of provincial newspapers who were dependent on the telegraph

companies for news from London (and so in many cases abroad). In 1865 the three leading

companies merged their 'intelligence departments' creating a monopoly for telegraphic news.

The Provincial Newspaper Society, which represented weeklies, had long complained that the

companies' charges were opaque while their news was often tardy and of dubious quality. In

cooperation with proprietors of provincial dailies, the number of whom had been growing

since the removal of the last of the taxes on knowledge, they formed a rival service, the Press

Association, ready for nationalisation. Striking a deal with Reuters for international news

and staffed by journalists, the Press Association provided a cheaper service that was better

attuned to the needs of its members. They also supplied provincial news for the London

papers and for Reuters to sell abroad.[10]

In 1886 the Provincial Newspaper Society boasted of the levelling effect provided by

the Press Association and the other agencies that flourished after nationalisation. 'By the

multiplication of local newspapers', they write, 'and the perfection of the system whereby

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[9] See Morus p. 469.

[10] See Andrew Hobbs, 'Case Study 23: William Saunders and the Industrial Supply of News in the Late Nineteenth Century', in David Finkelstein (ed.), *The Edinburgh History of the British and Irish Press, Volume 2: Expansion and Evolution, 1800-1900*, 2 vols (Edinburgh: Edinburgh University Press, 2020), pp. 736–42; Andrew Hobbs, *A Fleet Street in Every Town: The Provincial Press in England, 1855-1900* (Cambridge: Open Book Publishers, 2018), pp. 180-1; William Hunt, *Then and Now; Or, Fifty Years of Newspaper Work* (Hull and London: Hamilton, Adams, and Co., 1887), pp. 90, 111-24; *The Provincial Newspaper Society, 1836-1886: A Jubilee Retrospect* (London: printed by Page, Pratt, and Turner, 1886), pp. 74-86.

they are kept informed, hour by hour, of what is transpiring in the kingdom and all over the globe, the dwellers in provincial towns and districts are now in as close touch with current events as are the inhabitants of the metropolis' (p. 85). By bringing current events closer, the agencies enabled readers, no matter where they were, to share the same moment. Yet what was consumed as news was not current events but information carefully crafted; information that was then encoded and decoded and had to pass through the hands of sub-editors and compositors before it could find its place on the page. These processes, combined with different modes of distribution and the overlapping rhythms of newspapers, meant that what should have exerted a synchronising effect – perhaps robbing newspapers, as Trollope suggested, 'of all their old interest' – became a technology that generated surprising temporal effects (*The Way We Live Now*, p. 377).

Such effects were on the page for readers to see. On Wednesday 2 April 1879 both the *Daily News* and the *Standard* reported that Sir Ughtred Kay-Shuttleworth, the Liberal MP for Hastings, had died the previous Monday. As this news had been picked up by the Press Association, it also appeared in provincial papers, with further reports appearing in later editions taken from the London papers. In Kay-Shuttleworth's constituency, the news 'created the utmost consternation'; in Burnley, where the Shuttleworths were the local aristocrats, 'the alarming news caused the greatest excitement'.[11] The news was alarming, too, for Kay-Shuttleworth, who read about his death over breakfast.

Kay-Shuttleworth set about bringing himself back to life by inserting corrections into the network. He contacted the *Daily News* and they published a correction, notifying the agencies in time for it to appear in late editions of the dailies and editions of the evening papers. He also made sure to appear at Parliament as soon as it sat, the Parliamentary

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[11] 'Reported Death of Sir U.J. Kay-Shuttleworth, Bart., M.P.', *Burnley Gazette* (Saturday 12 April 1879): 6, and 'Local News', *Burnley Advertiser* (Saturday 5 April 1879): 5.

reporters – by then appraised of his supposed death – filing amused notices to appear the following day. Once his resurrection had been established, attention turned to the manner of his dispatch. The Kay-Shuttleworths' daughter, Nina, was born on Sunday 30 March and Sir Ughtred penned a note announcing the birth for insertion in the *Morning Post*, putting his name and address, as sender, on the reverse. The compositor compiling the 'Births, Deaths, and Marriages' saw the name, and, neglecting to turn over the note, assumed it was a notice of Kay-Shuttleworth's death. While the column was in proof the news was seen, padded out, and sent on.[12] The mistake was spotted at the *Morning Post* and only the birth was announced but by then it was too late.

Information travelled unevenly, news pooling into columns to construct a present through local configurations of time and space. For instance, the *Standard* noted Kay-Shuttleworth's death on page five but attentive readers of the Parliamentary report on page two would have noticed he voted the day afterwards.[13] For readers of provincial dailies, Kay-Shuttleworth was dead or alive depending which edition they read. Readers of the weeklies would have both his death and resurrection in retrospect, a narrative complete that allowed readers to enjoy the uncanny consequences of his temporary undead state.[14] Yet not all the weeklies afforded their readers such pleasures. The *Ayrshire Weekly News and Galloway Press* reported Kay-Shuttleworth's death on Saturday 5 April, well after he had been resurrected elsewhere, and never published a correction.[15]

Scholars often remark on the rushed nature of the narrative in *The Way We Live Now* and the distinctive temporal jumps employed by Trollope as he tries to encompass everything

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[12] See 'Reported Death of Sir U.J. Kay-Shuttleworth, Bart., M.P.', p. 6
[13] 'The Vote of Censure' and 'The Queen at Baveno', *Standard* (2 April 1879): 2, 5. The *Daily News* has something similar.
[14] See, for instance, 'From Our London Correspondent', *Hampshire Independent* (5 April 1879): 5.
[15] 'Ayrshire Weekly News and Galloway Press', *Ayrshire Weekly News and Galloway Press* (5 April 1879): 4.

happening at once.[16] For instance, chapters fifty-nine to sixty-three cover the period of

Melmotte's triumph just as he begins to fall. Trollope tells the reader the dinner and party

occurred on Monday 8 July with the election the following day. The chapters move through

the events in chronological order, more or less one chapter each, all except chapter sixty,

which begins 'A few days before that period in our story […]' (p. 450). Such recursions

happen within chapters too. Chapter fifty relates Marie Melmotte's journey to Liverpool and

return to London; it then follows her fiancé over the same period, even though we know he

will never make the journey. For Pettitt, it is Trollope's use of 'switchback and fast-forward'

that is important (p. 234). Rather than use the 'more juxtapositional meanwhile' to set up

concurrency, Trollope alternates his narration of events 'to maintain the illusion of an

isomorphic relationship to linear time' (p. 235). Time ticks on in Trollope, but the narrative,

while ostensibly checking in with time's forward march, switches back and forth to present 'a

self-consciously disrupted serial' (p. 235).

Pettitt understands the novel as part of 'the extending media network', a 'proliferating

spread' that models 'the work of connectivity without completion which is coming to define

the experience of living in a global world' (p. 237). Newspapers are part of this network and

Pettitt duly notes what the novel shares with newspaper form. This might be taken further

with regards the emerging temporal texture prompted by the expansion of telegraphic news.

As the death of Kay-Shuttleworth demonstrates, news from a distance might be more current

than that closer and the different routes through which information travelled could create

temporal overlaps to the extent somebody could be dead on one page and alive the next.

Trollope's skips backwards and forwards create knots of time situated alongside one another

constellated, like newspaper articles, to represent a provisional present. The serialisation of

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[16] See for instance Geoffrey Baker, *Realism's Empire: Empiricism and Enchantment in the Nineteenth-Century Novel* (Columbus, OH: The Ohio State University Press, 2009), pp. 131–52.

the novel makes this even more explicit. Trollope signed a contract with Chapman and Hall

for twenty parts, each with thirty-two pages and two images. Trollope, however, composed

the novel as a series of one hundred chapters, allocating five to each part, writing the book

from beginning to end switching back and forward in time as required but paying little

attention to where the division into parts would fall. Rather than crafted instalments, the

parts are slices of the novel, the divisions arbitrarily dividing up incidents in the story and

presented as that month's reading. Just as the metronomic beats of newspaper deadlines

determined the content gathered together to constitute 'today', so did Trollope's parts, the

arbitrary divisions determining which portions of the novel were allocated to particular

periods of time.

The difference between an issue of a newspaper and one of Trollope's parts is that

while the issue anticipates its successor it does not know what it will contain. Newspaper

continuity is predominantly formal – layout, typeface, types of articles, tone – whereas the

novel is plotted, events in one part informing those to come with the end always coming

closer. As Pettitt argues, one way to understand the disrupted seriality in Trollope is as an

affront to linearity. With every recursion or leap ahead Trollope troubles the position of that

inevitable ending, distributing activity laterally in time, and, as the chapters are bundled into

parts, in space too. The 'proliferating spread' of the novel acknowledges that the present

exceeds representation and so any representation of it is necessarily deliberate and selective.

Trollope's temporal knots reproduce the experience of reading the newspaper, article after

article; they also operate to defer the closures that plotting inevitably brings.

Processing Text

Trollope has become notorious for his mechanical method of textual production. In his

autobiography he recounts how he began work at half past five each morning, spending the

first half an hour rereading yesterday's work before writing for the next two and a half hours.

He calculated that he could write 250 words every fifteen minutes and so produce ten

manuscript pages each day (*An Autobiography*, pp. 169-70). As he had already signed the

contract for *The Way We Live Now* before beginning work, he knew he was being paid £3,000

for twenty parts of thirty-two pages each. As each printed page contained 520 words, if he

wrote his ten manuscript pages each morning's work would earn him roughly £22 10s, or just

over tuppence a word.[17] Trollope was a well-remunerated writing machine.

Trollope liked to compare the writing of novels to other manufacturing processes and

his autobiography is full of reference to shoemakers and tallow-chandlers. Telegraphy

commodifies language, charging those who the used the wires for the number of words

transmitted. While a shilling permitted the public to send twelve words, the press could send

fifty. At nationalisation, the Press Association managed to extend this to seventy-five, and,

crucially, established a price of tuppence for duplicate messages allowing the same news to

be sent cheaply to multiple titles.[18] As international cables remained in private hands prices

were higher and newspapers that prided themselves on foreign news had to set aside

considerable sums (Brown, *Victorian News and Newspapers*, p. 15).

Agents and agencies offered news for sale long before both the advent of telegraphy

and the nationalisation of the network.[19] The reduction of charges that came with

nationalisation, however, permitted the agencies to broaden the range of services provided.

Central Press, for instance, founded by William Saunders in 1863 to supply London news to

provincial publications, initially provided content only in stereotype and duplicate flimsy

(carbon copy), material formats better suited for printing than for the distribution of

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[17] This assumes he wrote exactly 2,500 words a day as set out in *An Autobiography*. For Trollope's actual schedule writing *The Way We Live Now* see Sutherland, 'Trollope at Work', pp. 475-8.

[18] See Lucy Brown, *Victorian News and Newspapers* (Oxford: Clarendon, 1985), pp. 13-14.

[19] See Hobbs, 'Case Study 23'. Thanks to Andrew Hobbs for recommending Victoria Gardner, *The Business of News in England, 1760-1820* (Houndsmills: Palgrave Macmillan, 2016).

information *per se*. An initial circular set out what they offered: a summary of the news; a compilation from London, foreign, and colonial papers; an analysis of leading articles; a money article, market reports, reports on local events occurring during the day; a leading article; a London letter; a Paris letter; Parliamentary sketches; notices of magazines and books; and a compilation of literary and religious news (Hobbs, 'Case Study 23', p. 737; Hunt, *Then and Now*, pp. 73-4). They also published a newspaper, *Central Press* (later *Sun and Central Press*), which was printed on one side so content could be inserted alongside local matter or pasted up in clubs and news rooms.[20] In 1868, after negotiation with the Press Association, Saunders added telegraphic news to Central Press, and, in 1871, sold off the older branch of the business to the Conservative Whigs, retaining the telegraphic side as Central News (Hobbs, 'Case Study 23', p. 740).

While Central News's principal clients remained newspapers, telegraphy allowed the agency to directly supply clubs, hotels, and bars, as well as institutions like working mens' clubs, libraries, and mechanics' institutes (Brown, *Victorian News and Newspapers*, pp. 120-1). The telegraphic service also permitted a finer differentiation between types of content, allowing subscribers to not just select from a range of services but also different levels within them. An 1872 advertisement states subscribers could choose between 'General News'; 'Parliamentary Reports'; 'Sunday Telegrams'; 'Special Telegrams'; 'Shipping News'; 'Sporting'; 'London Stock Exchange'; 'Trade Reports'; and 'Markets'. Within 'General News', eight different services were offered ranging from 'Brief Morning Express', which provided 'special news from the London papers' at 5am for £1 19s per quarter, to 'Full General News', which was supplied from 6pm to 3am and provided political, general, and

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[20] See 'London Papers', *Newspaper Press Directory and Advertisers' Guide, Containing Full Particulars Relative to Each Journal Published in the United Kingdom and the British Isles* (C. Mitchell and Co.: 1872), pp. 17-30 (p. 17), and '*Central Press*', p. 140.

commercial information, plus a digest of news, railway traffic, and extracts from specialist

newspapers for £9 15s per quarter.[21]

Editors bought content to fill white space but they also had space to sell. Advertising

had long been an integral part of nineteenth-century print culture but the removal of the duty

on advertisements (1853) made them cheaper and paper (1861) meant more space in which to

display them. Advertisements were usually costed by the line, column, or page, the

designations capturing how advertising content was poised between verbal information (the

line) and matter to fill space (the column or page). Rates varied according to size, but also

frequency and content. *Blackwood's Edinburgh Magazine* sold space on its wrapper that

ranged from ten lines for a shilling to the whole page for £4 but also offered advertisers the

much cheaper opportunity to insert a bill of eight or sixteen pages (£4 4s or £5 5s

respectively).[22] The *Daily News*, which, like most newspapers, derived significant sums from

its classified advertisements, charged a shilling for four lines for employment advertisements

but 5s for five lines for missing friends, 'cypher correspondence', and births, deaths, and

marriages (with discounts for multiple insertions). Charges also varied according to where an

advertisement appeared. Trade advertisements were 12s 6d for five lines over two columns

or ten lines in a single column on the back page; double column display advertisements on

the front were twice as expensive at 5s a line.[23]

Commodified language had to be processed so that it could be distributed to

consumers and such work created opportunities for new kinds of workers. Employment for

women had become a prominent aspect of the Woman Question in the previous decade,

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[21] See 'The Central News (Formerly Central Press): Telegraphic Services', *Newspaper Press Directory and Advertisers' Guide* (1872), p. 149.

[22] See 'Advertisements of Magazines and Periodicals', *Newspaper Press Directory and Advertisers' Guide* (1872), pp. 198-200 (p. 198).

[23] See 'Notice to Advertisers', *Newspaper Press Directory and Advertisers' Guide, Containing Full Particulars Relative to Each Journal Published in the United Kingdom and the British Isles* (C. Mitchell and Co.: 1877), p. 167. These charges were still cheaper than those for the *Times*. See 'The "Times" Newspaper', *Bow Bells* 9 (9 September 1868): 150.

prompted by the activities of the Langham Place Group and the publication of Josephine

Butler's *Women's Work and Women's Culture* (1869). Women already worked in journalism

(including the agencies), but media technologies allowed young upper-working-class and

lower-middle-class women to enter the workforce in increasing numbers.[24] Whereas existing

employment for these women tended to be domestic (service, governessing, nursing) or

involved working with the public (shopwork, barwork), these opportunities provided

respectable, skilled employment and access to new spaces of information management.[25]

The Post Office increased the numbers of women working as telegraphists and it was

widely acknowledged as providing suitably paternal supervision for its new workforce.[26] In

1877, Trollope published an account of these women in *Good Words*. Throughout, Trollope

is keen to assure the reader of the suitability of telegraphy as an occupation for women, yet he

does so to create space for prurient speculation. Whereas those grounded in telegraphy might

be interested in the technology:

> To me it was the condition of the girls — their appearance, their welfare, their
>
> respectability, their immediate comfort, their future prospects, their coming husbands,
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> their capabilities, their utility, and their appropriateness in that place — or
>
> inappropriateness.[27]

Learning about their working lives permits Trollope to wonder about their personal lives (the

'coming husbands') and while the article insists on the appropriateness of the occupation for

women it leaves 'inappropriateness' dangling the other side of a dash.

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[24] Hobbs notes Saunders employed two women subs, 'Case Study 23', p. 741. One was a Miss Young; see 'The Press Agencies', *Aberdeen Evening Express* (7 December 1883): 3.

[25] See Katherine Mullin, *Working Girls: Fiction, Sexuality, and Modernity* (Oxford: Oxford University Press, 2016); Judith Walkowitz, *City of Dreadful Delight: Narratives of Sexual Danger in Late-Victorian London* (London: Virago, 1992), pp. 41-80.

[26] See 'The Post Office and the Telegraphs', *Graphic* 3 (1871): 162. See also Mullin, *Working Girls*, pp. 19-21.

[27] Anthony Trollope, 'The Young Women at the London Telegraph Office', *Good Words* 18 (1877): 377–88 (379).

To carry out their work the women must become passive conduits through which information can flow. There is 'no ground for fearing', Trollope writes, 'that any undue use is ever made of those multitudinous communications which are always passing under the eyes or through the ears of these young women' (p. 384). The sight of 'two pretty girls in the distance' talking, however, reminds him of their personhood and so enables a slide into a safely circumscribed erotic fantasy. He wonders what they are talking about, 'not from curiosity' but so he 'might judge somewhat of their inward natures — whether they were good or bad, happy or unhappy, pure or impure' (pp. 379-80). He then goes on to imagine taking them to the zoo, anticipating with relish 'what they would have to say about Madame Tussaud's horrors', and providing dinner before sending 'them home happy' (p. 380). Trollope's defensiveness with regards to his motives reassures readers both that their telegrams are secure and his own fantasies are proper yet even as he asserts all is good, happy, and pure, the binary opposites tantalisingly remain. While he should be listening to an account 'of the newest system of telegraphy by sound' his attention drifts to a promiscuous network of a more libidinous kind, 'taken up with those two pretty girls — and with others' (p. 380).[28]

As Katherine Mullin has set out, telegraphic work was presented as peculiarly suited to women, the operation of keys recalling the piano and the interpretation of the sounder requiring something like musicality (pp. 20-2). This association between telegraphy and femininity created space for other technologies to be pitched as suitable for feminine clerical labour. When Remington introduced the Sholes and Glidden typewriter into Great Britain in 1876, they employed a woman as demonstrator and early observers noted the similarity of its keys to those of a piano and telegraph and that the new device resembled a sewing machine.[29]

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[28] See Kate Thomas, *Postal Pleasures: Sex, Scandal, and Victorian Letters* (Oxford: Oxford University Press, 2012), pp. 116-8.
[29] See for instance 'The Month: Science and Arts', *Chambers's Journal of Popular Literature, Science, and Arts* 13 (1876): 558–60 (558). For the reference to the sewing machine see 'The Type Writer', *Times* (25 April

There was also something inherently telegraphic about typing, the typist's body becoming a channel through which apparently liberated information could flow. Christopher Keep argues that it was the presentation of typewriting as work for women that secured the new technology's fortunes. Initial take-up was slow until the YWCA in New York City began to offer dedicated classes for women in 1881.[30] Bureaux opened in Boston and New York shortly afterwards, the first in Britain being the Ladies Type-Writing Office in 1885 (Mullin, *Working Girls*, pp. 24-5).

As typists were judged on the amount of words typed per minute, their labour was understood as textual processing and valued according to how much writing was produced (Keep, 'Blinded By the Type', pp. 149-154). There are no typists in *The Way We Live Now*, but the novel does worry about literature at a time of text processing. It opens with Lady Carbury preparing the way for the publication of her *Criminal Queens* by soliciting favourable notices from three of her literary acquaintances. The notices duly appear but only two are favourable. Lady Carbury tells her publisher she will write and defend herself against the charges in the third; her publisher dissuades her, saying he thinks the review 'a very good advertisement' (p. 84).

The suggestion is that Lady Carbury's work is text processing rather than genuine authorship, and the same is true of the editors and reviewers who churn out literary material in return (even the bad review gets recycled into a puffing advertisement for a later edition of *Criminal Queens*). Yet Trollope also acknowledges how close his own work comes to text processing. Throughout his autobiography there is an awareness that perhaps he writes too much and a suspicion that his books succeed because of his reputation.[31] Later in *The Way*

1876): 6. See also Mullin pp. 25-7; Christopher Keep, 'Blinded by the Type: Gender and Information Technology at the Turn of the Century', *Nineteenth-Century Contexts* 23.1 (2001): 149–73 (154-7).

[30] Christopher Keep, 'The Introduction of the Sholes & Glidden Type-Writer, 1874', *BRANCH: Britain, Representation and Nineteenth-Century History* (2013), https://branchcollective.org/?ps_articles=christopher-keep-the-introduction-of-the-sholes-glidden-type-writer-1874 (accessed 4 August 2023).

[31] For Trollope's attempt at anonymous publication see *An Autobiography*, pp. 128-9.

We Live Now, Lady Carbury attempts a novel and while the narrator gently mocks her pretensions, her methods, working out how many pages constitute three volumes and how many words are required for each page, are much like Trollope's. As many scholars have noted, not only did Trollope's routinised literary methods and interest in the quotidian ally his writing with clerical work but his writing was often considered feminine too, oriented more towards the women readers who frequented the circulating library than discriminating literary readers thought to be predominantly men.[32] Trollope was proud of his achievements but nonetheless registered just how close novel-writing was to other forms of textual labour. The difference, of course, was that Trollope was amply rewarded. Mullin reports the women who worked for the new typing bureaux earned tuppence for every hundred words (p. 25). Every word of *The Way We Live Now* was worth one hundred times as much.

The Accumulating Print Archive

After moving into his new townhouse but before starting *The Way We Live Now*, Trollope organised his library. This entailed a new catalogue, one which placed his collection into bibliographical order and located each volume on his shelves. 'As all who use libraries know', he writes, 'a catalogue is nothing unless it show the spot on which every book is to be found' (*An Autobiography*, p. 218). Trollope had his catalogue printed in 1874, fixing the relationship between bibliographic and physical space and so turning the catalogue into a historical document.[33] While Trollope could presumably add manuscript additions as he acquired new books and find space for them in his library, the printed entries of the catalogue recorded the state of his collection as arranged in 1874.

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[32] See for instance Thomas, *Postal Pleasures*, pp. 70-7; Nicola Thompson, *Reviewing Sex: Gender and the Reception of Victorian Novels* (Houndmills: Macmillan, 1996), pp. 66-86.

[33] See Richard H. Grossman and Andrew Wright, 'Anthony Trollope's Libraries', *Nineteenth-Century Fiction* 31.1 (1976): 48–64.

If the telegraphic imaginary prompted fantasies of disembodied information, the wires that stretched across the landscape provided a reminder of the infrastructure upon which it depended. Similarly, the production and circulation of printed matter, especially more ephemeral material such as newspapers, provided evidence of information's reliance on material media. While the ever-increasing production of print was celebrated as a sign of cultural modernity, it caused problems for those who tried to keep up with what was printed or wanted to find things printed in the past. The decade saw a number of attempts to assert control over what threatened to be an overwhelming print archive. The compilers of catalogues and indexes had to conceptualise the printed material they attempted to describe then implement that conception in material form. As this also meant print, often in the form of the codex, such attempts to master the archive constituted a reflexive examination of print as material media in which content could be stored up and recovered.

In the natural sciences, the accumulating literature threatened to obscure important work, muddy claims of priority, and prevent scrutiny of prior science. The first volume of the Royal Society's *Catalogue of Scientific Papers* appeared in 1867, with others to follow until the completion of the first series, covering papers published 1800-1863, in 1872. The *Catalogue* listed papers by authors, subordinating place and date of publication to the arbitrary order of the alphabet. Without an index, readers could only look up papers if they knew who wrote them, and, while references allowed them to locate the paper, because each entry under an author's name was numbered in bold the most visible information was the author's oeuvre. The *Catalogue* reinforced the idea that scientific progress occurred incrementally through the publication of papers, in specific journals, each paper written by one or more named authors.[34] Two further volumes appeared in 1877-1879 that covered

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[34] See Alex Csiszar, *The Scientific Journal: Authorship and the Politics of Knowledge in the Nineteenth Century* (Chicago, IL: Chicago University Press, 2018), pp. 224-38 (especially pp. 224-5).

1864-1873, breaking the alphabetical series and implying that further series, and so further breaks, would be necessary if the *Catalogue* was to continue to keep up with the progress it tracked.

The difficulty of mapping a growing archive was felt most acutely by those attempting to assert control over the newspaper. Samuel Palmer's *Index to the Times Newspaper* was not the first attempt at a newspaper index (the *Morning Post* published one in 1847) nor was it the first attempt to index the *Times* (Jacob Giddings published two annual indexes in 1863-1864). It was, however, the most successful. Begun in 1868, Palmer indexed the *Times* in quarterly instalments, keeping up with the *Times* as it was published while also working backwards towards its beginnings. For Palmer, the *Times* was an archive of valuable information and so his index listed articles by subject. Its periodicity served a practical purpose, allowing him to use the proceeds of one volume to fund the next, but it also rewrote the dailiness of the newspaper into a more capacious quarterly 'recent'. While this made the events of the recent past searchable, as issues of the index accumulated the resulting archive was cut into slices of three months each. Readers wanting to look up something had to know in advance the quarter in which it happened, and, for subjects that extended over time, search volume after volume hoping the same headwords had been used in each.[35] Palmer's *Index* needed an index.

William Frederick Poole's *Index to Periodical Literature*, initiated at the first meeting of the American Library Association in 1876, was another attempt to turn serial literature into a repository of recoverable information.[36] Published in 1882 with 230,000 references to 232 periodicals, the index transformed a large and forbidding archive into an elegant, if hefty,

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[35] For the eccentricities of Palmer's headwords see Henry B. Wheatley, *How to Make an Index* (London: Elliot Stock, 1902), pp. 221-3.
[36] See William Landram Williamson, *William Frederick Poole and the Modern Library Movement* (New York and London: Columbia University Press, 1963).

single volume.[37] Poole achieved such coverage through collaboration, commissioning

librarians in the United States and the United Kingdom to index specific periodicals in their

collections.[38] Like Palmer's *Index* but unlike the *Catalogue of Scientific Papers*, Poole's

Index was a subject index. For Poole, periodicals contained the most important writing of the

day and provided the most effective means of disseminating it, but the seriality of the

medium doomed such writing to oblivion, buried under the aggregation of subsequent issues

(p. iv). The *Index* was intended to allow readers to recover these articles, regardless of where

or when they were published or by whom they were written. Entries were organised under

headwords that corresponded to subjects but derived, in most cases, from article titles.

References directed readers to a periodical, volume, and page, but there were no dates.

Although author names, where known, were given in parenthesis after the article title there

was no index of authors and searches under an author's name would only lead to articles

about them. By subordinating the bibliographic features of the periodical to an apparatus for

finding articles, Poole's *Index* attempted to liberate periodical content from its print context

and situate it, instead, within a bibliographical order of its own making.

Between the covers of Poole's *Index* was a version of the periodical archive that

existed in no actual collection. Its articles suspended in bibliographical space, it was readily

understood as a universal index in which anything might be found (as long as it was likely to

appear in British and American middle-class reviews and magazines). Fears that recorded

knowledge might be lost amidst printed abundance often prompted such fantasies of universal

recollection. In October 1877, for instance, the Index Society was formed with two

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[37] See James Mussell, 'Trading in Death: Miscellaneity and Memory in the British Nineteenth-Century Press', *Reading Miscellanies, Miscellaneous Readings: Interrelations between Medial Formats, Novel Structures, and Reading Practices in the Nineteenth Century*, ed. by Daniela Gretz, Marcus Krause, and Nico Pethes (Hannover: Wehrhahn Verlag, 2022), pp. 141-64 (pp. 153-4); James Mussell, '"Night Work or Night Play": Periodicals, Archives, and Poole's Index', in Media (B)Orders Between Periodicals and Books. Miscellaneity and Classification in Nineteenth Century Magazines and Literature, *Pfennig Magazin zur Journalliteratur* 4 (2019): 34-43.
[38] See 'Preface' to the *Index*: William Frederick Poole, 'Preface', *Index to Periodical Literature* (Boston: James Osgood, 1882), pp. i-xii.

interrelated objectives: to compile 'subject indexes and indexes of standard books of facts' that might be circulated amongst members; and to prepare 'a general index of universal literature.'[39] According to the Society's Secretary, Henry B. Wheatley, one would lead to the other. Recognising that publishers were unlikely to issue indexes for existing works the Society would produce them themselves. As their work progressed, these indexes, along with others already published, would be gathered into a central office and so provide the basis for the 'General Reference Index'. More than just an index to indexes, its object was that 'anything, however disconnected' could be incorporated and 'much that would otherwise be lost will there find a resting place'.[40] The Index Society was absorbed into the Index Library in 1891, Wheatley blaming its failure on the lack of common ground amongst members. He did not give up on the universal index, however, promoting it again in his *How to Make an Index* in 1902 and citing Poole's *Index* as an important predecessor (pp. 215-20).

A perfect index or catalogue would assert bibliographic control over the troublingly vast and complex print archive. The difficulty was that print imposed its own constraints on the bibliographical resources produced. This tension between ideal order and pragmatic compromise informed the most ambitious bibliographical project initiated in the decade: the printing of the catalogue of the British Museum's library. While the size of the collection was often celebrated as an example of national pride, others worried it was growing at an alarming rate, its treasures subsumed by works of dubious value.[41] The catalogue, then in manuscript, provided the only way for readers to navigate the collection, but its form appeared anachronistic in an age of printed modernity and its increasing bulk troublingly reminded readers of the growing collection in the stacks.

[39] See untitled article, *Pall Mall Gazette* (31 October 1877): 8. For the Index Society see Mary Piggott, 'How the Index Society Began — and Ended', *The Indexer* 22.1 (2000): 33–5; Henry B. Wheatley, *How to Make an Index* (London: Elliot Stock, 1902), pp. 206-10.
[40] Henry B. Wheatley, *What Is an Index?* (London: Index Society, 1878), p. 40.
[41] See, for instance, 'Memories of the British Museum', *Illustrated Review* 3 (1872): 494–5; 'The British Museum Library — How to Use It', *Illustrated London News* 29 (27 December 1856): 657.

In 1841 an attempt had been made to print the catalogue and so allow it to circulate beyond the walls of the library but delays and inaccuracies prompted the Trustees to halt the project after the publication of a single volume, 'A'.[42] The then Keeper of Printed Books, Antonio Panizzi, argued that the catalogue be comleted first in manuscript, a project complicated by the increasing amount of material accessioned by the library. Three copies of the printed volume were interleaved and made the start of a new manuscript catalogue that would work letter by letter through the library's collection; meanwhile, new accessions for letters not yet reached would be recorded in the existing manuscript catalogue.[43] In 1850 the revised catalogue numbered 153 volumes; the old catalogue 73 volumes.[44] In 1866, twenty five years after the appearance of 'A' in print, the new catalogue numbered 931 volumes, the old 305. By 1869 the new catalogue had grown to 1500 volumes; 1875, just six years later, it reached 2,000 (McCrimmon p. 42; Garnett pp. 72-3).

While this catalogue served the needs of readers and librarians and was able to accommodate the collection as it grew there were continued calls that it be printed. One advantage of print was that the catalogue could then become the basis for the long-cherished universal catalogue. This had been suggested as far back as 1850, Charles Wentworth Dilke proposing the British Museum prepare not just a catalogue of their holdings but everything known to have been printed up to a certain date. If this was printed, stereotypes could be made of each entry and then exchanged with those of other nations, creating a universal catalogue that, because entries were on separate stereos, could be expanded should further

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[42] For the history of the 1841 catalogue see A. H. Chaplin, *GK: 150 Years of the General Catalogue of Printed Books in the British Museum* (Aldershot: Scolar Press, 1987), pp. 1-39; Barbara McCrimmon, *Power, Politics and Print: The Publication of the British Museum Catalogue, 1881-1900* (Hamden, Conn: Linnet Books, 1981), pp. 19-23.

[43] Chaplin, *GK*, pp. 38-43; Richard Garnett, 'The Printing of the British Museum Catalogue', in *Essays in Librarianship and Bibliography* (London: George Allen, 1899), pp. 67-86 (pp. 70-1).

[44] See 'The British Museum: New One Hundred and Fifty Three Volume Catalogue', *Gentleman's Magazine* 33 (1850): 397-402 (398).

material come to light.[45] The Society of Arts revived the idea in 1875, Henry Cole sending

specimen sheets to the Prince of Wales, who, in turn, instructed the Society to form a

committee to assess the cost of a universal catalogue to 1600.[46] In 1877 the Library

Association endorsed the plan and formed its own committee that recommended the British

Museum provide slips from their collection as the basis for the project. George Bullen, then

Keeper of Printed Books, declined, fearing the willingness of librarians to dedicate the

necessary time and more concerned with his own catalogue for books to 1,640 from the

British Museum catalogue. When he spoke at the Society of Arts committee, Bullen argued

that the first step towards any general catalogue should be the completion and printing of the

British Museum catalogue. To the disappointment of those at the Library Association, the

committee agreed (Chaplin pp. 50-1).

Meanwhile, the Superintendent of the reading room, Richard Garnett, warned that the

manuscript catalogue was soon to overwhelm the accommodation available. To save space,

catalogue slips began to be printed in 1879, the cost offset by savings in rebinding as more

entries could fit within each volume. Once the principle was established, Garnett was able to

make the case for whole volumes to be printed when taken for rebinding. Printing began in

1881 and the whole catalogue was in print by 1900. 2,050 manuscript volumes were reduced

to 374 (Chaplin pp. 64-6; McCrimmon p. 148).

Garnett believed a universal catalogue to be 'a Utopian Catalogue', its advocates

'men before their age' (pp. 83-4) yet he knew, too, that the British Museum catalogue was

itself necessarily provisional. Printed over twenty years, some volumes were more up-to-date

than others, and, given the rate of accessions, all were out-of-date on publication. The copy

in the reading room was kept current, the printed slips pasted into its blank columns tangible

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[45] See 'Report of the Commissioners Appointed to Inquire into the Constitution and Government of the British Museum; with Minutes of Evidence', *Athenaeum* 1176 (11 May 1850): 499–502.
[46] William E. Axon, 'The Universal Catalogue of Printed Books', *Academy* 364 (1879): 369.

evidence of the work undertaken to chase the collection as it grew. Those circulated more widely, however, remained historical documents that recorded the library as it was whenever that particular volume was printed. The fixity of print imposed form on abstract bibliographical conceptions, but, in doing so, generated further conceptualisations of what printed material might represent. For Garnett, the printed catalogue should be circulated so that others could identify its gaps. It would also, eventually, need to reprinted, assimilating the printed slips and providing fresh white space to be filled until time to print again. The universal catalogue might have seemed utopian to Garnett in 1882 but all attempts to use print to manage information are motivated by a strain of utopianism. As Trollope would know when he bought another book, bibliographic work is situated in an economy of generative provisionality that produces further information and so requires more printing.

Material information

Each individual part of *The Way We Live Now* came wrapped in a blue cover. At the centre, time sits personified as on old man despairing atop the globe while scenes from the novel play out in bags of money orbiting around. At the top is Melmotte, staring out at the reader, and each of the scenes focuses on his life rather than any of the other characters in the novel. Some bags seem to float weightlessly, conjuring up the financial bubbles that result from errant speculation. Others seem heavier, weighed down by the mass they contain. Connecting them together appears to be string but it looks, tantalisingly, like electricity.

     The Way We Live Now was Trollope's largest novel and at its centre is a large man. As the cover makes clear, Melmotte sits at its heart, manipulating informational flows in a way that Trollope thinks characteristic of the 'now' in the novel's title. Melmotte is also the subject of informational flows in the novel, whether it is credit or the gossip that swirls about him. But just as characters tell stories about Melmotte, so too does Trollope, Melmotte's bulk

anchoring not just the broader world of the novel but sustaining its moment too. Narrative time is told as the reader turns the novel's pages, Melmotte a battery from whose energy Trollope draws to spin out the story until it is time to stop. That time comes at the end of chapter eighty-three with Melmotte's suicide and so the novel switches its narrative energies from duration and deferral to more conventional narrative ends. With Melmotte out of the way the marriage plots reassert themselves so that, by chapter one hundred, everybody is either sorted out or married off.

The nationalisation of the telegraph network in 1870 allowed the technologies of the present to proliferate, generating the potential for new forms of contemporaneity. Yet while telegraphy seemingly set information free from material media, it depended on a complicated infrastructure that included wires, batteries, and telegraphists. Similarly, when readers browsed the printed catalogue of the British Museum, they encountered the collection as abstract, weightless bibliographical information. While printing was in process, however, Garnett noted that if the catalogue ran to 600 volumes it would require 1,500,000 pounds of type.[47] Whether telegraphic or bibliographic, driven by electricity or narrative, information required a body and bodies were put to work to make it move.

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[47] Richard Garnett, 'The Past, Present, and Future of the British Museum Catalogue, in *Essays in Librarianship and Bibliography*, pp. 87-108 (pp. 96-7).