The notion of literature as an obsolete form, out of sync with its own time, has been a familiar one ever since modern media displaced the literary from its previous centrality in culture. Expounding on poet Kenneth Goldsmith’s express ambitions of bringing literature up to date with contemporary media culture, this article engages the larger stakes of his work with a view to an ‘updated literature’ – a literature, as it is here considered, ‘beyond textuality.’ Informed by the theoretical perspectives of Friedrich Kittler and the broader field of media archaeology, the article posits literature’s turn toward the generalized ‘informational milieu’ (Terranova) of contemporary network culture and its concomitant break with modernist notions of medium specificity. Although the provocations of both Goldsmith and Kittler have received much previous attention, in seeking here to bring them together in a committed way, this article also moves beyond the limits of their own approaches to contemplate a ‘contemporary literature’ that – more than just a literature on a par with its time – is one that actively inhabits, modulates, reflects, and shares the modes of temporal production that define contemporary media culture.
I want to tell you what we do is I plug in your name Marjorie plus Perloff OK? And what it does is it searches after it searches every. Right. Right. Oh, it doesn’t matter it it just sees the string Marjorie plus Perloff … no this is incredible. That’s incredible. You don’t have a Macintosh, do you? You do? Charles would lead me … lead me … that’s easy I’ll tell you how to get that. Don’t you have speakers? Cause you can get any little even on your Powerbook you can get sound. It’s built in … they have speakers on there. What Altavista? Oh, you did. w w w dot altavista dot digital dot com. Of course, of course. Dot altavista this is a new language, Marjorie. No one word. Altavista. There’s no spaces in URL’s. Dot. Digital. Dot. Com. Dot. Digital. Dot. Com. OK. (Goldsmith 2001: 30–31)

This is the voice of the poet Kenneth Goldsmith speaking with Marjorie Perloff, the influential literary scholar who is well known for keeping up with the poetic avant-gardes. Their conversation is recorded in this way in Goldsmith’s work Soliloquy, a book presented as an unedited transcript of every word he spoke during a week in April of 1996, excluding the words of his interlocutors (hence the title). At the time a budding poet as well as a computerate and host of UbuWeb.com (then a service for ‘internet design solutions,’ soon the site of what would become an indispensable archive for avant-garde literature, music, and art), Goldsmith is here overheard as he’s guiding Perloff, an internet novice, into the new environment of the digital. His enthusiastic effort notwithstanding – and without disparagement of Perloff in particular – the challenge of keeping up to speed with the poets and the poetry that today are part of this environment is – as I will argue – a continuing issue for literary criticism.

Still, when it comes to ‘keeping up’ in contemporary literature, the very idea of it presents its own problems. For, if there is a common perception of ‘contemporary literature’ today, it must be that the very notion is an oxymoron – or at least a paradox. The repeated refrain – lamented by the publishing industry while celebrated by those capitalizing on digital attention – is that literature has become outmoded, displaced from its previous centrality in culture by other forms: new media has emphatically rendered literature old.\(^1\) It is worth recalling that this notion of literature as outmoded and out of sync with its own time is not a new – but a recurrent – one, confirmed at each occasion of literature’s confrontations with new media, whether they have been of the mechanical, electronic, or digital kind. As we have learned, the Gutenberg era ended first with film and phonography, then again with television, and, finally, with

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\(^1\) Attesting to the prevalence of such perceptions, a new journal of literary studies recently launched with the express purpose of engaging the notions of the contemporary as ‘the time of the post-literary condition.’ See Callus and Corby (2015). For a summary of the anxieties of literature’s obsolescence ca. 2000, see Fitzpatrick (2002).
Google Books (Kittler 1999; McLuhan 1962; Marche 2012). Indeed, modern literature’s troubled relations with its own time seem to have much to do with what media philosopher Friedrich Kittler has considered its retreat – in the wake of the so-called media revolution of the mid-nineteenth century – to ‘the margin left to it by the other media’ (1990: 250), a position from which the various projects of modernist and avant-gardist literature have appeared as efforts to reconfigure literature’s relationship with the present.

With the work of Kenneth Goldsmith, however, this cultural and temporal gap between literature and the contemporary finally may be closed – at least according to his own account. Trained as a visual artist, Goldsmith turned to poetry in the mid-1990s, intrigued, as he later described it, by the ‘aesthetic fight’ and ‘marvelous conversation’ taking place in poetry ‘right now’ (Goldsmith 2014). This sense of an urgency in poetry would perhaps first relate to the case Goldsmith has made for his own mode of practice – referred to as ‘conceptual’ or ‘uncreative’ writing – as a veritable updating of literature, a project aimed at putting literature on a par with the contemporary. Seeking to discern the nature of our contemporary conditions, Michael Davidson, in his introduction to a *Contemporary Literature* special issue on twenty-first-century American poetry, diagnoses an historical ‘crisis condition’ connected with the pervasive processes of globalization and informatization constitutive of the ‘information society’ (2011: 602). This situation, he suggests, entails something like a crisis in poetry too, a challenge even to the category of the literary:

> Perhaps the greatest challenge to poetry raised by this crisis condition is the question of literariness itself, of whether the category that has historically contested the ordinariness of ordinary discourse can claim some distinctness in an information society. Can literature be “as such” when it so avidly incorporates the language of the media and marketplace, indeed, when it courts these fields as primary source material? (602)

To probe into literature’s dubious distinctness in today’s ‘information society,’ I argue, is precisely the concern of Goldsmith’s project. In fact, that literature can still ‘be’ without making claims to medial distinctness is what I take his work as demonstrating.

Hoping to clarify the stakes of this proposition, the purpose of this essay is to expound on the case Goldsmith has made for his practice as *updated literature*, an update reflective of a change in literature’s medial conditions. Here, however, my interest is less in Goldsmith’s self-understanding than in the seeds I take his practice to contain for the development of a more general understanding of literature’s place in contemporary
media culture. Also, in place of a proper reading and in line with Goldsmith’s claim that conceptual writing demands a ‘thinkership’ rather than a ‘readership’ (2018: 144), I offer what one might call a conceptual reading of his work – a reading geared to the conceptual implications of his practice. Because I take these implications to be inseparable from literature as a material practice, it is to the notion of Goldsmith’s poetics as a ‘media poetics’ that I attend. Furthermore, informed by the materialist media philosophy of Friedrich Kittler and the field of media archaeology that has developed in its wake, the essay’s main contention is that ‘updated literature’ assumes a break with notions of medium specificity – the modernist identification of literature with ‘text’ or ‘writing’ – turning instead toward the generalized ‘informational milieu’ of contemporary network culture (Terranova 2004b). In other – and slightly rougher – terms, what follows is an attempt to flesh out Goldsmith’s concise literary history, according to which, ‘There was modernism. Then there was digital’ (2015).

**Literature After the End**

Contrary to the diagnosis by Davidson cited above, the crucial conditions of contemporary literature would, for Goldsmith, seem to have less to do with notions of crisis than an intuition of what media scholar Felix Stalder – in a hyperbolic tone reminiscent of Goldsmith’s own – identifies as the ‘enormous proliferation of cultural possibilities’ arising with the ‘digital condition’ or, ‘after the end of the Gutenberg Galaxy’ (2018: 1–4). Such an acute sense of possibility *after the end* is precisely what Goldsmith seems to locate in the literary. Developed in response to the proliferation

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2 The current essay is part of a larger study on the relationship between literature and information as explored by contemporary North American experimental poetry, focusing on the work of Tan Lin and Danny Snelson in addition to Goldsmith’s. At issue here, then, is a form of poetry that circulates within the traditional ‘institution’ of literature (in Peter Bürger’s sense), while testing the viability of its established assumptions in a digital age. This is a field that can be demarcated from that of digital-born or ‘electronic’ literature, which maintains its own constructions of ‘the literary’ (cf. Cayley 2018). For a recent overview of the field(s) of electronic literature, see Rettberg (2019).

3 For an example of a ‘close reading’ of Goldsmith’s transcription works, see Marczewska (2018: 123–160). Although crucial for a broader understanding of Goldsmith’s practice, a discussion of the political controversies surrounding aspects of his work is beyond the scope of this article. For a thorough discussion of the political paradoxes of Goldsmith’s ‘copy poetry,’ see Edmond (2019). For a critique of the field of experimental poetry from the point of view of race and privilege, a critique also targeting Goldsmith’s claims to a poetics of ‘post-identity,’ see Hong (2014).

4 For an introduction to the broader field of media archeology, see Parikka and Huhtamo (2011). For a narrower take, see Ernst (2013a). Making this field operable in the context of literary studies, Lori Emerson introduces the notion of media poetics as ‘the literary exemplar of media archaeology,’ a practice she defines as a mode of experimenting with ‘the limits and possibilities of writing interfaces’ (2014: xiv). In my own approach, ‘media poetics’ explores the idea of literary media change.

5 The full aphorism reads: ‘There was no postmodernism. There was modernism. Then there was digital.’ Notably, Goldsmith himself elsewhere emphasizes the persistence of modernist forms in the digital (e.g. 2016: 22–25).
of the internet in the mid-1990s, Goldsmith’s practice of literature as ‘information management’ (Goldsmith 2018: 147–48) was conceived to reflect a change in literature’s medial conditions, a change he compares to the situation of painting upon the invention of photography in the nineteenth century: ‘With the rise of the Web, writing has met its photography’ (2011c: xvii). In the same way, he contends, that painting is said to have altered its course upon its encounter with photography, ‘a technology so much better at what the art form was trying to do,’ digital media has ‘set the stage for a literary revolution’ (xvii). Citing Peter Bürger’s refutation of photography’s alleged role in the withering of the mimetic function of art on the grounds that the model would not be transferable to literature – according to Bürger, ‘no technical innovation’ could have produced a comparable effect here, Goldsmith asserts on behalf of the ‘revolution’ of his time that ‘[n]ow there is’ (xviii). Now that the writer, like the rest of us, is ‘focused all day on powerful machines with infinite possibilities, connected to networks with a number of equally infinite possibilities,’ his role ‘being significantly challenged, expanded, and updated’ (Goldsmith 2011b: 24).

Although this media historical narrative will be complicated quite a bit below, what we for now can take from it is the notion of a crucial change in literature’s medial conditions, a change calling for an update of its basic modes of operation. However, despite the unreserved claims to up-to-dateness made by Goldsmith on behalf of his practice, one might find it difficult to conceive of any less topical works than his, made up – as they are – of yesterday’s news and weather reports. Based on the copying of information previously captured, stored and transmitted, the ‘informational phase’ of Goldsmith’s literary career (Goldsmith 2017: 65) has – beyond the aforementioned Soliloquy – resulted in works such as Day (2003), a complete transcription of an edition of The New York Times, published as an 836–page book of poetry; The Weather (2005), Traffic (2007), and Sports (2008), a trilogy comprising transcriptions of radio weather and traffic reports, as well as of a baseball game broadcast; and Seven American Deaths and Disasters (2013), a series of transcriptions of news reports related to incidents such as the Kennedy assassination, the Challenger disaster, and the 9/11 terrorist attacks. These works, which all seem to involve the mere transfer of information from one medium to another, could arguably be said to betray a rather rudimentary understanding of today’s complex media environment. Consider, for instance, Day, Goldsmith’s book-bound rendition of The New York Times, a weighty tome composed by means of manual transcription and OCR-processing of a printed copy of the newspaper. As a work that seems to depend on digitization only in a trivial sense, namely in the sense that it involves the ‘material process of converting ... analogue information into digital bits’ (Brennen and Kreis 2014), Day might appear
as a simple demonstration of this process, a performance, perhaps, of literature’s migration across the putative divide between digital and print. What this essay will suggest, however, is that precisely because of its ‘rudimentary’ nature – its way of ‘involving’ or being ‘limited to basic principles’ (ODE) – Goldsmith’s practice also elicits a consideration of the basic principles of literature’s digitalization, what might be defined as the ‘restructuring’ of the literary around ‘digital communication and media infrastructures’ (cf. Brennen and Kreis 2014).

When it comes to his own account of his practice and its relation to the digital, it has centred on the perception of a change in culture’s relationship to text, a change he attributes to the condition of information overload (Goldsmith 2011b: 24–25). The perception of the digital as an environment of textual abundance might evoke notions of an explosion of ‘the textual condition,’ Jerome McGann’s name for that ‘most complex and advanced’ manifestation of the ‘network of symbolic exchanges’ that is human culture (1991: 3). Invoking common ideas of culture as text, McGann notes that to participate in such a culture is ‘to have entered the textual condition’ (3), an entering, he reminds us, that has been poetry’s special task to contemplate: ‘The object of poetry is to display the textual condition. Poetry is language that calls attention to itself, that takes its own textual activities as its ground subject. … [P]oetical texts operate to display their own practices, to put them forward as the subject of attention’ (10–11). Perhaps needless to say, these assumptions coincide with the twentieth century paradigmatic notions of ‘literariness’ as a mode of textual self-attention and –reflection, key concepts in literary theory from Viktor Shklovsky’s ‘Resurrection of the Word’ (1914) to Kittler’s identification of ‘literature’ with the ‘typewriter’ (1986) via the various formalist and (post-)structuralist theories of textuality launched in between.

From the perspective of Goldsmith, however, poetry’s self-sufficient cultivation of the textual condition appears to be an exhausted scenario – the literary generation of texts is redundant in a situation of overload. His ethos being that the ‘world is full of texts, more or less interesting; I do not wish to add any more’ (2011b: 1), Goldsmith posits the mere action of ‘moving information’ (1) as an adequate response for literature to the digital condition. ‘[O]n the Internet,’ he observes, ‘text is mostly skimmed or copied or emailed or archived or ftp’d or PDF’d or Instapapered or bookmarked or liked. Or in other words, language on the web is managed as it is information or parsed more than it is really read.’ Thus, he concludes, what matters in this environment is not what the information is, but that we ‘keep busy moving’ it (2013). As for his works, it is their ‘concept’ that counts: ‘My books are unreadable. All you need to know is the concept behind them. Here’s every word I spoke for a week. Here’s a year’s worth of weather reports …’ (2011a). Alongside this downgrading of the text, Goldsmith’s
notion of a shift in literature from textual production to ‘moving information’ further entails the inversion of a range of notions traditionally associated with the literary: conceptual writing is said to take ‘uncreativity,’ ‘unoriginality,’ and ‘illegibility’ as its key precepts (2018: 142–43). However, despite Goldsmith’s insistence that the digital prompts us to update our notions of the literary, the critical discussions of his work have mainly served to maintain what literature was according to the conceptual frameworks of modernism.

‘Twenty-First Century Modernism’

Previous discussions of Goldsmith’s work have commonly centred on issues related to the repurposing of text and the ‘literary status of appropriation’ (Dworkin 2011: xli). While largely embraced as a new form of writing, his work is, at the same time, placed within the broader traditions of appropriation–based practices in modernist literature and art – traditions spanning collage poetics and conceptualism, Oulipo and pop art. Constrained more specifically as a continuation and renewal of a modernist poetics of citation, engaging notions of ‘writing’ as ‘rewriting’ or, in the customary French terms, of ‘écriture’ as ‘récriture’ (Perloff 2010: 1–4), the work of Goldsmith and associates is considered to attest to ‘a return of modernism’ or, a ‘21st-century modernism’ (Dworkin 2007: 30; Perloff 2002). As summarized by Perloff, from T.S. Eliot’s The Waste Land to ‘the discourse of the Internet …, citationality, with its dialectical removal and graft, disjunction and conjunction, its interpenetration of origin and destruction, is central to twenty-first-century poetics’ (2010: 17). In this reception context, Goldsmith is seen to engage the same, fundamental issues of artistic production that were also the concerns of his modernist predecessors, notably the status of notions such as authorship and work, creation and expression, originality and reproduction. Implicit in these approaches is the understanding that works of uncreative writing fully comply with the established notions of ‘literariness’ alluded to above. According to an early definition by Craig Dworkin, such self-reflexivity is apparently what constitutes the conceptual in conceptual writing, a mode, he says, where ‘the instance of writing is inextricably intertwined with the idea of Writing: the material practice of écriture’ (n.d.).

For all their emphasis on material conditions, however, what has been missing from these discussions is an interest in the material conditions of the digital, a consideration of which might allow us to shift the discussions from the frameworks of modernism – frameworks originally construed around the fundamental questions for art and literary

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6 On conceptual writing as a literature of – variably – ‘appropriation,’ ‘citation,’ ‘quotation,’ and ‘iteration,’ see also Edmond (2019); Marczewska (2018); Greaney (2014); and Goldman (2011).
production in the age of technological reproducibility. For, crucially, the digital poses its own set of questions, questions not primarily concerned with the conundrums of creation and reproduction, original and copy, authorship and appropriation – or at least not in the same way. For one, the digital is not a textual environment; rather it is a complex composite of a range of different media forms, inciting a shift, states Matthew Fuller, regarding the types of cultural issues at stake, a shift by which ‘the question of the copy in relation to an original becomes of less significance than the kinds of context, the media ecology ... that text, image and computational elements operate in and as part of’ (2013). Inquiring into the implications of digital materiality for our conventional notions of the literary, Matthew Kirschenbaum has shown how not only ideas of original and copy but even basic conceptions of the text as an entity are rendered problematic in the digital realm. Supplanting the analysis by McGann, Kirschenbaum’s account conjures notions of textuality’s technological dissolution into the continual copying of 0s and 1s: the material basis of what he calls ‘the .txtual condition’ (2013: 58–60). For Kirschenbaum, the implications of this shift for literature are ‘obvious’ (67). Contemplating the nature of this condition from the perspective of media archaeologist Wolfgang Ernst, he suggests that as textual signs turn into digitally processable data, ““history” becomes a form of media, and the writing of the literary – its alphabetic semantics – is replaced by signal flows capturing the full spectrum of sensory input’ (67). As Ernst himself speculates, the fact that digital media do not store anything, that they have ‘no memory’ but rather depend on ‘flows’ and processes of transfer, suggests that in place of the old notion that ‘culture depends on storage (historic architectures, libraries, museums),’ the culture of the future will be based on ‘permanent transfer’ (2013a: 138, 98). Digital streaming and networked-based communication will – as they already do – rule the day.

Continual copying, permanent transfer and updating: in this environment, information is ‘moving information.’ Based on such accounts, today’s digitally driven information overload would be less suggestive of an explosion of ‘the textual condition’ than its veritable implosion, setting the notions of the digital as an ‘expanding universe of textuality’ (McGann 2001: 5) aside. However, although literature’s dissolution in this situation might be ‘obvious’ from the point of view of media theory, Goldsmith’s hands-on experimentation suggests something else: literature’s active participation in

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7 This is not to say that ‘the discourse of the internet’ may not be informed by modernist idioms, as Perloff and others have argued, or that Goldsmith does not revisit them, he clearly does. However, the emphasis on discursive continuities have often failed to register the implications of media change in a specific enough way. For approaches that – in contrast to the ones I draw on below – emphasize the continuities between modernism and the digital, see for instance Manovich (2002) or Pressman (2014).
today’s media culture of ‘permanent transfer’ and network flows. Hence, if the notion of a literature grounded in ‘moving information’ may be said to reflect the broader cultural shift to the ‘digital condition,’ it also calls for a rethinking of literature’s relationship to textuality. How, though, can we speak meaningfully about the literary outside or beyond its textual condition? Before suggesting a way to make sense of this notion – toward an ‘updated’ conception of the literary – a consideration of literature’s relationship to ‘information’ is needed.

**Literary Information Management**

The claims to the contemporary, to the new, and the updated made by Goldsmith regarding conceptual writing are regularly echoed by critics. Brian Reed, for instance, celebrates the work of Goldsmith and associates for being able to ‘convey a contemporaneity, a sense of immediately addressing the here and now’ (2013: xiv). For Luke Skrebowski, conceptual writing represents literature’s catch-up with contemporary art as an art ‘of’ contemporaneity. As such, he says, it serves as ‘a signal form of the contemporary as well as a dynamic contemporary form’ (2016). In Scott Pound’s view, the ‘cultural logic’ behind the notion of writing as information management ‘could not be more contemporary’ (2015: 317–18). In an information age or society, the topicality of a literature conceived of as ‘information management’ would perhaps seem self-evident. However, although it is often commented that Goldsmith’s work is somehow about information or that it is reflective of the current information overload and glut, little attention has been paid to the meaning of ‘information’ in this context or to the special relationship between literature and the concept of information. In the accounts by Perloff, for instance, relating today’s poetics of ‘unoriginal genius’ to the notions of ‘the environment of hyperinformation’ and ‘the information age’ (2010: xi; 4) ‘information’ first of all figures as an aspect of our current surroundings – a context where literature takes place, and that it is able to make strange or critically represent. It could be suggested that the meaning of ‘information’ indicated in such an approach coincides with what information scholar Geoffrey Nunberg describes as the concept’s ‘abstract sense,’ the sense by which ‘information’ is taken as ‘a kind of intentional substance present in the world’ (1996: 513). This, Nunberg explains, is precisely the sense of ‘information’ evoked in our notions of ‘the information age’ or the ‘information explosion,’ the very meaning that ‘bears the ideological burden in discussions of the new technologies’ (513) – and also, it would seem, of literature’s relationship to these

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8 Paul Stephens’ *The Poetics of Information Overload: From Gertrude Stein to Conceptual Writing* (2015) is an important exception, although it only offers a brief commentary on Goldsmith.
technologies. The notion of information as an abstract ‘presence’ (514), one, in other words, ‘abstracted’ from concrete forms of inscription and circulation would, however, seem to get in the way of an understanding of the specificity of these forms and of literature’s historically variable modes of engaging with them.

Historically, the relationship between literature and information has been a conflicted one. As summarized by Tara McPherson, Patrick Jagoda, and Wendy Chun, ever since the emergence of modern media and information technologies in the mid-nineteenth century, literature’s relationship with information has taken the form of a veritable ‘border war’ where literature’s crucial difference from information has been maintained (2013: 615). This conflict might more broadly be related to what, in John Guillory’s formulation, is literature’s ‘disregard for communication’ (2010: 340), to invoke the greater category that the concept of information is associated with. Tracing this notion back to John Stuart Mill’s 1833 definition of poetry as ‘soliloquy’ or language ‘overheard’ – a language whose ‘peculiarity’ lies ‘in the poet’s utter unconsciousness of a listener’ (340) – Guillory notes how a license ‘not to communicate’ has circulated since Mill as a general ‘topos of literary culture’ (339–340). According to Guillory, it was the idea that indifference to communication ‘results in a thickening of the medium’ which later paved the way for the modern, media–oriented conception of literature, a conception centred on the ‘technique of writing’ (340–341).

Noting that this ‘border war’ has only intensified with the spread of digital media, McPherson and colleagues urge us to question the separation of literature from information and consider instead what insights their conjoining might produce (2013: 615–16). For such an inquiry, Goldsmith’s project would seem to be a perfect case. However, in previous discussions of his work, the separation of the literary from the informational has consistently been reinstated.

A case in point – revealing, in an interesting way, of some of the conceptual difficulties Goldsmith’s work presents – is Scott Pound’s ‘Kenneth Goldsmith and the Poetics of Information,’ whose stated intention of devoting serious critical attention to the notion of ‘poetry as information management’ is also very much in line with my own (2015: 316). For whereas Goldsmith’s own statements about his work have commonly been set aside by his readers as ‘gimmicky’ provocations, Pound sees them as part of ‘an important investigation of the stakes of media change for poetics,’ one that self–consciously exploits the ‘tension between information culture and literary culture’ (316). Using strategies geared to a bridging of these cultures, Goldsmith’s project, Pound states, presents itself as a ‘convergence poetics’ and a ‘cultural hybrid’ (318–19). For Pound, however, this bridging is merely feigned. As he contends, the real point of Goldsmith’s project is to make us consider ‘the strange prospect of a literature
that chooses information culture over literary culture as its ground’ (317). But this, he implies, it cannot do without losing itself. Commenting on Goldsmith’s outsourcing of authorial agency to technologies of information capture, Pound maintains that by ‘automating intentionality, Goldsmith institutes what is, in literary terms, a cultural breach – one that moves us from literary device to technological device, from a literary economy to an information economy, from the smithy of the author’s soul to the vapid noosphere of the information common’ (323). However, as he insists, Goldsmith’s work is ‘not a critique, and still less a mockery, of literary culture.’ Rather, it is ‘a defense of literary culture couched in the form of an investigation’ (325). Merely performing its own removal from ‘the conceptual sphere of the literary,’ it is, ultimately, a work that privileges the literature of the book, while at the same time ‘reflecting media change’ (328n5, 318).

Although appealing for shifting our attention from ‘the texts themselves’ to literature’s confrontation with contemporary media (328), Pound’s approach reproduces the perception of an inevitable ‘cultural breach’ between literature and information, thus confining Goldsmith’s work to a conception of literature that would seem to depend precisely on such a breach. The problem I am trying to get at is that what is otherwise a highly apt consideration of Goldsmith’s work regarding ‘the stakes of media change for poetics’ (316) still remains closed to the idea of a media change taking place within poetry or, that literature may choose information ‘as its ground’ and still ‘be,’ to invoke Davidson’s formulation.

Here, the suggestion I would like to make is informed by Kittler’s identification of modernism with a medium-specific concept of literature. According to his account, which by now will be familiar to many, the conception of literature as synonymous with ‘word art’ or ‘writing’ (1990: 185) – an art dedicated to the cultivation of the textual condition – emerged in response to the invention of technical media in the second half of the nineteenth century. It was only as a result of its encounter with media such as phonography and film that literature came to be recognized as a medium, a textual medium, separate from the domains of other media. The history of this encounter is by Kittler related in terms of an ‘embittered competition’ (259) that would ultimately lead to literature’s displacement from its previous centrality in culture. On this account, the constitution of literature as text or ‘writing’ amounted to a retreat to the ‘the margin left to it by the other media’ (250).

9 Thus, with Kittler – and contra Goldsmith – we might say that literature ‘met its photography’ around the same time as painting, and that the transfer of authorial agency to media technology – according to Pound a scheme initiated by Goldsmith in the context of contemporary media change – was rather a modernist scenario. On these issues, see also North (2001).
Crucially, for Kittler, media – whether we speak of writing, the gramophone, or the computer – are material devices for processing, transmitting, and storing information (370). Hence, to say that literature is medially constituted is – based on his ‘information-theoretical materialism’ (Kittler 2017: 5) – to say that it is informational. What Kittler highlights, however, is the contingent nature of literature’s relationship to specific media and information systems, in other words, its historically variable modes of ‘managing’ information.

Now, to stay with Kittler’s framework while fast-forwarding to contemporary concerns, what seems to be at stake with literature’s encounter with today’s new media is not simply the relationship between literature and information, but as I contend, the modernist conception of literature’s medium specificity. To shed light on this, however, Kittler’s own reflections would be of little help; his work takes little interest in what possibilities the digital might hold for literature. To the contrary, for him, the digital computer was ‘the medium to end all media’ (Winthrop-Young 2011: 131), erasing the difference between image, sound, and text by turning everything into numbers (Kittler 1999: 1–2). In the digital, writing and text no longer have anything to do with literary information processing; the computer’s coded inscriptions are not for humans to read: ‘Under the conditions of high technology, literature has nothing more to say. It ends in cryptograms that defy interpretation and only permit interception’ (263). As one central commentator usefully reminds us, though, when Kittler talks about the end of ‘media,’ he is talking about ‘concepts rather than media as such’ (Winthrop-Young 2011: 74–75). Thus, his idea of the end of literature under the technological domination of digital media would refer to the expiration of a historically specific concept: modernism’s medium-specific concept of literature as ‘writing’ or ‘text.’ At its very limits, then, the media historical framework outlined by Kittler allows us to contemplate the notion of a literature beyond textuality – oriented instead toward the informational forms and processes that are specific to today’s media environment. Such a notion, I suggest, is what is made actual by Goldsmith’s ‘updated’ literature – it is a literature no longer confined to the textual condition.

In the final section, I draw out the implications of this claim by turning to a key work by Goldsmith while suggesting that the breach signalled in Goldsmith’s proclamation ‘There was modernism. Then there was digital’ should not be taken in the epochal terms of literary historical periodization, but instead as registering something like a switch between different ‘media times’ (cf. Ernst 2013b).

Information Management as Time Management – ‘Reading’ Day

We can now relate Goldsmith’s concern with up-to-dateness to the ‘reorientation to a poetics of time’ that is reportedly a feature of conceptual writing (Goldsmith 2011b: 43).
Whereas Goldsmith, highlighting the time-consuming nature of the very work of ‘moving information,’ often portrays his work as a time-based, durational practice, this poetics of time also seems to have a more productive side to it. That is, Goldsmith’s works – all based on the remediation of events already captured, stored, and transmitted – are very much about timing.

From the perspective of Kittler and the field of media archaeology, media technologies are fundamentally seen as techniques of ‘managing time’ (Krämer 2006: 96). With the technological storage of sense data, time becomes a variable ‘that can be manipulated’ – either symbolically, as in the medium of writing, or physically, which is the special ability of modern technological media (96). What this means is that media ‘do not simply exist in time’ but operate as veritable ‘timing agencies’ – they are mechanisms of a genuine ‘chronopoetics’ (Ernst 2016: vii, 7–9). But even though writing’s capabilities of time management may be limited to ‘mere tales’ of it (Kittler 2017: 7) – to acts of signification and representation – this would seem to say little of the capabilities of literature, as Goldsmith’s work suggests. At least, I propose, it is as an attempt at coordinating the ‘timing agency’ of the printed book with that of digitally networked media that the interests of Goldsmith’s ‘updated literature’ best come to light.

How, though, should we make sense of the recirculation of old news in terms of a contemporary ‘updated’ literature? Here, I will deal with this question by means of some remarks on Day, Goldsmith’s transcription of a copy of The New York Times – a work of ‘moving information’ that reportedly progressed ‘word for word, letter for letter, from the upper left hand corner to the lower left hand corner, page by page’ (2003: cover).

Opening with the line ‘All the News That’s Fit to Print’ – the motto printed since 1896 in the upper left corner of The New York Times front page – Goldsmith’s poetic edition of the newspaper appears as something like a test case for whether ‘the news’ is in fact still fit to print. However, rather than ‘the news’ in their ca. 1900 conception, the question of fitness raised by Day would concern the relationship between print and information’s circulation in today’s media environment. In fact, to speak of Goldsmith’s works as based on the recirculation of old news as I have done betrays an ‘old’ conception of ‘news,’ one by which ‘information’ is tied to the time of the new (‘the news’ as ‘new information’). If this is somewhat confusing, we can recall that the newspaper was already declared an ‘arena of literary confusion’ by Walter Benjamin in 1934 (2003). As a medium that played a crucial role in the formation of the modern concept of information (Osborne 2013: 62), the newspaper has been on the front line of the ‘border war’ between literature and information, and it has, as such, its own literary history. According to Dworkin, the ‘century-old rivalry between poetry and

10 See for instance McLuhan (1954). For a critique of McLuhan’s account, see Wershler (2011).
the newspaper’ is one of the crucial contexts that *Day* enters into, while Ezra Pound’s definition of literature as ‘news that stays news,’ and Mallarmé’s insight that his poetry consisted of the same stuff as the newspaper – printed words – are singled out by him as particularly relevant to Goldsmith’s work (2011: xlii, livn43).

Newspapers, however, as media scholar Wendy Chun (2016) explains, ‘are not what they used to be’ (27):

> Whereas Walter Benjamin, comparing the times of the story and of the news, could once declare that “the value of information does not survive the moment in which it was new. It lives only at that moment; it has to surrender to it completely and explain itself to it without losing any time,” now newness alone does not determine value. (118)

Now, that is, in the era of digital networked media, the value of information depends on its capacity for surviving newness: new media demand that information stays in circulation, even beyond ‘the moment in which it was new’ (118). In other words, while the value of information still ‘depends on timing,’ Chun makes clear that ‘the timing of networked information differs from that of its print predecessors’ (118). As she carefully demonstrates in accounts spanning the technical level of machine memory and the habitual practices of human users, networks, though ‘truly time-based’ – ‘are not based on the regular obsolescence or disposability of information, but rather on the resuscibility … of information’ (2011: 169, 172). From the workings of the computer’s regenerative memory to the ‘re-gestures,’ as Goldsmith calls them (2011c: xix), through which we respond to networked content, information is made to remain in networks by means of varied acts of repetition (Chun 2016: 89–90). As Chun asserts, this is no longer the temporality of the newspaper’s ‘regularly planned obsolescence,’ rather, it is a time where information ‘flow[s] noncontinuously,’ old information is frequently ‘discovered’ as new, and new information is ‘already old’ (2016: 26, 3; 2011: 172). Whereas in print cultures, obsolete information is, as if by definition, information that is out of circulation – office staff file away yesterday’s memos, libraries sort out ‘dead books’ (Guillory 2004; 113; Ernst 2002: 115) – in digital networks, information remains ‘undead’ (Chun 2011: 133–35). Thus, if the concept of information was once associated with captured ephemerality and eternal returns of the new – the temporality of novelty that defined modernism – in the digital, information is not as ‘ephemeral as we think’ (Goldsmith 2011b: 182).

‘Ephemeral,’ the *OED* tells us, indicates ‘liv[ing] only for a day.’ And although *Day* presents itself on its back cover as a ‘monument to the ephemeral,’ this self-description could arguably be accused of stretching that modernist topos to the
point of parody. Think, for one, of Day’s dubious qualities as ‘news that stays news’ or, for that matter, of the questionable ‘heroism’ – to allude to Walter Benjamin’s assessment of Baudelaire’s effort at extracting ‘the new’ from the ‘ever-selﬁsh’ – of Goldsmith’s transcription work. Rather than a parodic monument, however, as a work of ‘updated literature,’ Day is about something else. For, if modernism has been seen as the cultural manifestation of a particular temporal experience, the experience of the new as ‘permanent transition’ (Osborne 2013: 24, 179), then Goldsmith’s work can be seen to reﬂect another paradoxical temporality – the time analyzed by Chun as the ‘enduring ephemeral’: the time of a constant degeneration and regeneration, constant disappearing and reappearing, erasing and rewriting of networked information (2011: 137–73). Benjamin’s modernist analysis of the logic of the new, according to which ‘what is always again new is not something old that remains, or something past that recurs’ (2002: 843), helps make clear that news and networks represent crucially different modes of information and time management. For, distinct from the newspaper’s planned obsolescence, in network time, ‘the new quickly becomes old, and the old becomes forwarded once more as new(ish)’ (Chun 2016: 26, 3).

**Literature beyond Textuality**

The logic and gesture of the forward – of the repost – I contend, is also what conditions the workings of Day or, Goldsmith’s ‘new(ish)’ poetics. Here, the printed book is no longer geared to the tasks of ﬁling, archiving, or monumentalizing time, but rather to keeping ‘news’ in motion. Thus, in Goldsmith’s case, ‘contemporary literature’ is not simply a literature on a par with its own time, but one that actively inhabits, modulates, reﬂects, and shares the modes of temporal production that deﬁne contemporary media, from the microtemporalities of computation to the dynamic times of network culture. As suggested, Day’s timing – its mode of managing time – is not a matter of textual ‘information management’ but, again, of managing moving information. The signiﬁcance of Goldsmith’s practice, then, can be found in its reorientation of literature away from the margin of the ‘textual condition’ toward other media – a gesture of putting literature into connect mode. On a broader level, this would be reﬂective of a situation where the ‘modernist landscape of medial specialization’ (Wellbery 1990: xxxi) has dissolved into a generalized ‘informational milieu’ where, according to the seminal analysis by cultural theorist Tiziana Terranova, what is at issue is not ‘struggles over meaning’ on the models of twentieth-century critique, but the conditions of information’s circulation, and the connections and mutations effected by its ﬂows (2004a: 53–55). As Terranova contends, if this milieu has given rise to a ‘network culture,’ this is not about a link-up of ‘distinct fragments, each with its own identity and structure,’ but rather what she calls a ‘meshwork’ of overlapping formations:
It is increasingly difficult to think of cultural formations as distinct entities because of our awareness of the increasing interconnectedness of our communication systems. ... [This] is about an interconnection that is not necessarily technological. It is a tendency of informational flows to spill over from whatever network they are circulating in and hence to escape the narrowness of the channel and to open up to a larger milieu. What we used to call “media messages” no longer flow from a sender to a receiver but spread and interact, mix and mutate within a singular (and yet differentiated) informational plane. ... Every cultural production or formation, any production of meaning, that is, is increasingly inseparable from the wider informational processes that determine the spread of images and words, sounds and affects across a hyperconnected planet. (2004b: 1–2)

As Terranova makes clear, to understand such a culture, we need to adopt an ‘informational perspective’ – one attuned to the sense that the ‘dynamics of information’ are today taking ‘precedence over those of signification’ (2004a: 54–55).

Such a perspective, I have tried to argue, has already been adopted by contemporary literature. To speak in such terms is perhaps only to reaffirm the Kittlerian notion that to the extent that Goldsmith’s works are ‘messages,’ they ‘are messages about their own medium, they discuss and perform their own medial conditions, and are thus highly revealing instances of the media conditions of their day’ (Winthrop-Young 2011: 4). What they more specifically reveal of these conditions, however, would be that literature apparently has no medium of its ‘own’ anymore. Rather, it seems to have escaped the ‘narrowness of the textual channel’ to open itself up to a larger informational milieu. Here, texts confessing things to themselves is not a viable mode, the soliloquy no longer an inhabitable topos in the age of digital networks. Fit, rather, to participate in a media culture of permanent transfer, ‘updated literature’ is less about the cultivation of distinctness than it is about sharing.

What activities, then, might literature here enter into? What type of interventions might it partake of, and what tactics might it employ? I pose these as open questions. For, beyond contributing to opening literature up to this milieu, the work of Goldsmith – aside from his free-information activism – stops short of articulating the wider stakes of network culture. As demonstrated by Terranova, however, what the informational perspective on culture ultimately reveals is a new terrain also of political struggle, a site for active engagements with the uneven dynamics of networked relations (2004b: 3). Further attending to this terrain of the ‘politics of information’ would be among the obvious tasks for updated literature and its criticism today.
Competing Interests
The author has no competing interests to declare.

References
Benjamin, Walter. 2002. The Arcades Project. Translated by Howard Eiland and Kevin McLaughlin. Cambridge, MA: Harvard University Press.

Benjamin, Walter. 2003. "The Author as Producer." In Understanding Brecht, translated by Anna Bostock, 85–103. London: Verso.

Brennen, Scott, and Daniel Kreis. 2014. "Digitalization and Digitization." Culture Digitally (blog). September 8, 2014. http://culturedigitally.org/2014/09/digitalization-and-digitization/.

Callus, Ivan, and James Corby. 2015. “Editorial: Countertextuality and the Political.” CounterText 1 (1): v–x. DOI: https://doi.org/10.3366/count.2015.0002

Cayley, John. 2018. "Weapons of the Deconstructive Masses (WDM): Whatever Electronic Literature May or May Not Mean." In Grammalepsy: Essays on Digital Language Art, 147–64. New York: Bloomsbury. DOI: https://doi.org/10.5040/9781501335792

Chun, Wendy Hui Kyong. 2011. Programmed Visions: Software and Memory. Cambridge, MA: MIT Press. DOI: https://doi.org/10.7551/mitpress/978026262015424.001.0001

Chun, Wendy Hui Kyong. 2016. Updating to Remain the Same: Habitual New Media. Cambridge, MA: MIT Press. DOI: https://doi.org/10.7551/mitpress/10483.001.0001

Davidson, Michael. 2011. "Introduction: American Poetry, 2000–2009." Contemporary Literature 52 (4): 597–629. DOI: https://doi.org/10.1353/cli.2011.0052

Dworkin, Craig. 2007. “The Imaginary Solution.” Contemporary Literature 48 (1): 29–60. DOI: https://doi.org/10.1353/cli.2007.0023

Dworkin, Craig. 2011. “The Fate of Echo.” In Against Expression: An Anthology of Conceptual Writing, edited by Craig Dworkin and Kenneth Goldsmith, xxiii–liv. Evanston: Northwestern University Press.

Dworkin, Craig. n.d. "Introduction: The UbuWeb Anthology of Conceptual Writing." UbuWeb. Accessed October 1, 2020. http://www.ubu.com/concept/

Edmond, Jacob. 2019. Make It the Same: Poetry in the Age of Global Media. New York: Columbia University Press. DOI: https://doi.org/10.7312/edmo19002

Emerson, Lori. 2014. Reading Writing Interfaces: From the Digital to the Bookbound. Minneapolis: University of Minnesota Press. DOI: https://doi.org/10.5749/minnesota/9780816691258.001.0001

Ernst, Wolfgang. 2002. “Agencies of Cultural Feedback: The Infrastructure of Memory.” In Waste-Site Stories: The Recycling of Memory, edited by Johanne Villeneuve and Brian Neville, 107–20. Albany: State University of New York Press.

Ernst, Wolfgang. 2013a. Digital Memory and the Archive. Edited by Jussi Parikka. Minneapolis: University of Minnesota Press. DOI: https://doi.org/10.5749/minnesota/9780816677665.001.0001
Ernst, Wolfgang. 2013b. "From Media History to Zeitkritik." Theory, Culture & Society 30 (6): 132–46. DOI: https://doi.org/10.1177/0263276413496286

Ernst, Wolfgang. 2016. Chronopoetics: The Temporal Being and Operativity of Technological Media. Translated by Anthony Enns. London: Rowman & Littlefield.

Fitzpatrick, Kathleen. 2002. “The Exhaustion of Literature: Novels, Computers, and the Threat of Obsolescence.” Contemporary Literature 43 (3): 518–59. DOI: https://doi.org/10.2307/1209111

Fuller, Matthew. 2013. “Several Repetitions on the Nature of the Copy.” Concreta, no. 2. http://www.editoralconcreta.org/Several-Repetitions-on-the-Nature

Goldman, Judith. 2011. “Re-Thinking ‘Non-Retinal Literature’: Citation, ‘Radical Mimesis,’ and Phenomenologies of Reading in Conceptual Writing,” Postmodern Culture 22 (1). DOI: https://doi.org/10.1353/pmc.2012.0007

Goldsmith, Kenneth. 2001. Soliloquy. New York: Granary Books.

Goldsmith, Kenneth. 2003. Day. Great Barrington, MA: The Figures.

Goldsmith, Kenneth. 2011a. “Against Expression: Kenneth Goldsmith in Conversation.” Poets.Org. 2011. https://poets.org/text/against-expression-kenneth-goldsmith-conversation.

Goldsmith, Kenneth. 2011b. Uncreative Writing: Managing Language in the Digital Age. New York: Columbia University Press.

Goldsmith, Kenneth. 2011c. “Why Conceptual Writing? Why Now?” In Against Expression: An Anthology of Conceptual Writing, edited by Craig Dworkin and Kenneth Goldsmith, xvii–xxii. Evanston: Northwestern University Press.

Goldsmith, Kenneth. 2013. “Lecture: Uncreative Writing.” Open Transcripts. July 18, 2013. http://opentranscripts.org/transcript/uncreative-writing/.

Goldsmith, Kenneth. 2014. “I Look to Theory Only When I Realize That Somebody Has Dedicated Their Entire Life to a Question I Have Only fleetingly Considered.” Keynote lecture, Frieze New York Art Fair, May 11. https://media.sas.upenn.edu/pennsound/authors/Goldsmith/Goldsmith-Kenneth_Frieze-talk_I-look-to-theory-only_05-11-2014.mp3.

Goldsmith, Kenneth. 2015. Theory. Paris: Jean Boîte Editions.

Goldsmith, Kenneth. 2016. Wasting Time on the Internet: The Art of Mindless Surfing. New York: Harper Perennial.

Goldsmith, Kenneth. 2017. The PXL-MAD Lectures. Gent: Het Balenseer.

Goldsmith, Kenneth. 2018. “A Week of Blogs for the Poetry Foundation.” In Postscript: Writing After Conceptual Art, edited by Andrea Andersson, 141–51. Toronto: University of Toronto Press. DOI: https://doi.org/10.3138/9781442621015-015

Greaney, Patrick. 2014. Quotational Practices: Repeating the Future in Contemporary Art. Minneapolis: University of Minnesota Press. DOI: https://doi.org/10.5749/minnesota/9780816687343.001.0001

Guillory, John. 2004. “The Memo and Modernity.” Critical Inquiry 31 (1): 108–32. DOI: https://doi.org/10.1086/427304
Guillory, John. 2010. “Genesis of the Media Concept.” Critical Inquiry 36 (2): 321–62. DOI: https://doi.org/10.1086/648528

Hong, Kathy Park. 2014. “Delusions of Whiteness in the Avant-Garde.” Lana Turner, no. 7. https://arcade.stanford.edu/content/delusions-whiteness-avant-garde.

Kirschenbaum, Matthew G. 2013. “The .Txtual Condition.” In Comparative Textual Media: Transforming the Humanities in the Postprint Era, edited by N. Katherine Hayles and Jessica Pressman, 53–70. Minneapolis: University of Minnesota Press. DOI: https://doi.org/10.5749/minnesota/9780816680030.003.0003

Kittler, Friedrich A. 1990. Discourse Networks 1800/1900. Translated by Michael Metteer. Stanford: Stanford University Press.

Kittler, Friedrich A. 1999. Gramophone, Film, Typewriter. Translated by Geoffrey Winthrop-Young and Michael Wutz. Stanford: Stanford University Press.

Kittler, Friedrich A. 2017. “Real Time Analysis, Time Axis Manipulation.” Translated by Geoffrey Winthrop-Young. Cultural Politics 13 (March): 5–18. DOI: https://doi.org/10.1215/17432197-3755144

Krämer, Sybille. 2006. “The Cultural Techniques of Time Axis Manipulation: On Friedrich Kittler’s Conception of Media.” Theory, Culture & Society 23 (7–8): 93–109. DOI: https://doi.org/10.1177/0263276406069885

Manovich, Lev. 2002. “Avant-Garde as Software.” Artnodes, no. 2 (December). DOI: https://doi.org/10.7238/a.v0i2.681

Marche, Stephen. 2012. “Literature Is Not Data: Against Digital Humanities.” Los Angeles Review of Books, October 28, 2012. https://lareviewofbooks.org/article/literature-is-not-data-against-digital-humanities/

Marczewska, Kaja, 2018. This is Not a Copy: Writing at the Iterative Turn. New York: Bloomsbury.

McGann, Jerome. 1991. The Textual Condition. Princeton: Princeton University Press.

McGann, Jerome. 2001. Radiant Textuality: Literary Studies after the World Wide Web. New York: Palgrave Macmillan. DOI: https://doi.org/10.1007/978-1-137-10738-1

McLuhan, Marshall. 1954. “Joyce, Mallarmé, and the Press.” The Sewanee Review 62 (1): 38–55. https://www.jstor.org/stable/27538333.

McLuhan, Marshall. 1962. The Gutenberg Galaxy: The Making of Typographic Man. Toronto: University of Toronto Press.

McPherson, Tara, Patrick Jagoda, and Wendy Hui Kyong Chun. 2013. “Preface: New Media and American Literature.” American Literature 85 (4): 615–28. DOI: https://doi.org/10.1215/00029831-2367265

North, Michael. 2001. “Authorship and Autography.” PMLA 116 (5): 1377–1385. DOI: https://doi.org/10.1632/S0030812900113392

Nunberg, Geoffrey. 1996. “Farewell to the Information Age.” In The Future of the Book, edited by Geoffrey Nunberg, 103–38. Berkeley: University of California Press.
Osborne, Peter. 2013. Anywhere or Not at All: Philosophy of Contemporary Art. London: Verso.

Parikka, Jussi, and Erkki Huhtamo. 2011. Media Archaeology: Approaches, Applications, and Implications. Berkeley: University of California Press.

Perloff, Marjorie. 2002. 21st-Century Modernism: The “New” Poetics. Malden: Blackwell Publishers.

Perloff, Marjorie. 2010. Unoriginal Genius: Poetry by Other Means in the New Century. Chicago: University of Chicago Press.

Pressman, Jessica. 2014. Digital Modernism: Making It New in New Media. New York: Oxford University Press. DOI: https://doi.org/10.1093/acprof:oso/9780199937080.001.0001

Pound, Scott. 2015. “Kenneth Goldsmith and the Poetics of Information.” PMLA 130 (2): 315–30. DOI: https://doi.org/10.1632/pmla.2015.130.2.315

Reed, Brian M. 2013. Nobody’s Business: Twenty-First Century Avant-Garde Poetics. Ithaca: Cornell University Press. DOI: https://doi.org/10.7591/cornell/9780801451577.001.0001

Rettberg, Scott. 2019. Electronic Literature. Cambridge: Polity Press.

Skrebowski, Luke. 2016. “Approaching the Contemporary.” Amodern, no. 6. http://amodern.net/article/approaching-the-contemporary/.

Stalder, Felix. 2018. The Digital Condition. Cambridge: Polity Press.

Stephens, Paul. 2015. The Poetics of Information Overload: From Gertrude Stein to Conceptual Writing. Minneapolis: University of Minnesota Press.

Terranova, Tiziana. 2004a. “Communication beyond Meaning: On the Cultural Politics of Information.” Social Text 22 (3): 51–73. DOI: https://doi.org/10.1215/01642472-22-3_80-51

Terranova, Tiziana. 2004b. Network Culture: Politics for the Information Age. Pluto Press.

Wellbery, David E. 1990. “Foreword.” In Discourse Networks 1800/1900, by Friedrich A. Kittler, vii–xxxviii. Stanford: Stanford University Press.

Wershler, Darren. 2011. “News That Stays News: Marshall McLuhan and Media Poetics.” The Journal of Electronic Publishing 14 (2). DOI: https://doi.org/10.3998/3336451.0014.208

Winthrop-Young, Geoffrey. 2011. Kittler and the Media. Cambridge: Polity.