

Reading with Technology: the new normal

MERCHANT, Guy <<http://orcid.org/0000-0001-8436-7675>>

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Reading with technology: the new normal

Guy Merchant

Sheffield Hallam University

UK

Abstract

Widespread changes in communication associated with new technologies have led to a growing interest in digital literacy. Although the concept of digital literacy suffers from a lack of agreed definition, this paper suggests that reading and writing with technology remains a central concern. The written word, a central feature of these communicative practices, is now used in new ways and often in combination with different media as new devices and physical practices are recruited to the task of meaning making. The influence of different ways of thinking about these new literacies has led to the development of the diverse body of research outlined here. Tracing these strands in current thinking about digital literacy helps to identify how literacy has expanded and diversified. But because it is now a significant aspect of full participation in society, reading with technology raises important questions for education. This paper suggests that policy in this area is poorly articulated and argues for more focused classroom research.

Introduction

When the U.S. President, Donald Trump tweeted a message of support for the newly elected British Prime Minister, Boris Johnson, he had no need to wait for a TV broadcast or newspaper report, he knew that his words would be read by millions. They would be read on Twitter, on screens large and small, in all sorts of locations, in many parts of the world; they

would be liked, re-tweeted, and commented on, and they would quickly travel across different media platforms. Aside from the political ramifications of all this, the tweet directly illustrates the power and ubiquity of digital literacy in our everyday lives, and how what it means to read and write has been modified and expanded by new technology. In what follows I explore the relationship between reading, writing and technology in the context of digital literacy, how it is understood and investigated in the literature, and the implications of this for research and practice. To provide some context to this I look at the changing appearance of the written word in the current milieu.

For many people today a large part of everyday experience is mediated by the written word. Urban environments in particular are densely lettered and notices, advertisements, directions, instructions, brand names, and graffiti appear at every turn. The level of saturation is such that it rapidly becomes normal, escaping from our conscious attention. In a similar way the communicative practices of new technology appearing on devices of various shapes and sizes are easily taken for granted. Screens, once associated with cinemas and small TV sets, are everywhere. They are a ubiquitous feature of the digital era playing a central role in everyday interpersonal communication. In fact over the last twenty years what is often referred to as digital literacy has become so fully installed in people's day to day lives that it has become the 'new normal', despite the fact that its distribution and take-up is not even or universal. It is nonetheless part of the hyper-literate textual environment of contemporary life.

In a society in which public services, commercial and financial transactions, business and entertainment are nearly all conducted online, the practices of digital communication have rapidly become a necessity for full participation. And although much has been said and written about the diversification of communication and the power of visual images in

contemporary life (see Kress, 2003, for example), written language continues to be of central importance in this changing environment (Merchant, 2007; Burnett & Merchant, 2019).

Written words, whether produced by hand, by print or on screen are a dominant force in contemporary life. The study of reading, and also the study of writing, which in the end prove so difficult to disentangle, are key to our understanding of this context as they take on new forms and raise new issues for researchers and educators.

The changing nature of reading and writing practices can be looked at from a wide range of different perspectives and this is reflected in the literature. Unsurprisingly, the rapid advance of new communications technology and the millennial spread of the internet has led to an explosion of scholarly work on the topic; work that often generates more questions than answers, leading to surprisingly few conclusions that might inform literacy policy or practice (Burnett et al., 2014). Even the term digital literacy is contested. Originally coined by Gilster (1997, p.1) to describe the ability ‘to understand and use information in multiple formats from a wide range of sources when it is presented via computers’, digital literacy has since been pressed into service to describe just about everything from keyboard skills to the restructuring and distribution of knowledge and information. In a useful conceptual piece Nichols & Stornaiuolo (2019) review the changing uses of the term, pointing out its inadequacies and ambiguities, and providing a refreshed model to account for contemporary concerns, such as those associated with surveillance, control, and profit. Important as these issues undoubtedly are – and certainly they should be included in any informed discussion of the topic – I want to avoid the temptation to define or fix digital literacy. Instead I approach digital literacy as a fuzzy concept, something that means different things to different people, an idea that is open and amenable to discussion - a weak description of the multiple ways in which a relatively new technology is entangled with a complex traffic of material, economic,

social and political forces. But despite this fuzziness, if there is one thing that is at the heart of discussions about digital literacy it is the technology itself, and I use this as a stepping off point.

Reading and writing with technology

If written language is a central feature of our rapidly changing hyper-literate textual environment it is certainly worth reconsidering the fundamental and longstanding relationship between the written word and the ways in which it can be produced, distributed and read. From this perspective, it is important to recognise that technology and the written word are related in two distinct yet interdependent ways.

Firstly, writing is itself a technology. Writing is a technology in the sense that it is a human invention serving a range of practical purposes. In essence the written word enables meaning to enjoy a degree of independence from time and space. Writing is a way of recording, relaying and regulating communication, and it allows us to read in a particular time and place what has been written in another. As such written language has proved to be a particularly powerful technology and a means of enacting influence, control, and exclusion as well as emancipation, enrichment, and enjoyment (Snaza, 2019). Even a cursory look at digital literacy bears this out – from targeted advertising on social media, based on algorithms that track what we read, to the organization of mass protest through the use of mobile technology. The written word is a powerful technology now, as it has been through most of its history.

Secondly, technology is necessary for any kind of text production. Making something that can be read always involves some kind of technological apparatus. The long history of the written word is punctuated by innovations in technology and the creative adaptation of a wide

range of materials and tools (Harris, 2001). This includes the preparation of relatively smooth flat surfaces (clay, bark, vellum, papyrus) and a variety of tools and techniques for making marks on them (stylus impressions, brushes or pens loaded with ink, paint and so on). The geographical spread of these and other innovations in text production immediately dispels any conceit about the distinctiveness of Western civilization. A full history of writing would need to include early markings on clay pots found in mainland China, Phoenician ledgers, birch-bark texts from Northern Pakistan, and the invention of moveable type in Korea. And, of course, such a history would extend from early experiments with computer-based communication to our current use of mobile technologies to exchange email, text messages and all the rest.

In short then, what we call digital literacy can be seen as an attempt to describe the latest phase in the evolution of literacy. The nature of the changes involved and their implications for research and practice in literacy education is a central concern of this paper. Whilst it is often suggested that we have experienced an epochal shift, entered into a new era, or lived through a digital revolution, it is also worth noting that those same old symbols, rendered here in Times New Roman, from Stanley Morrison's original 1932 typeface design, share much in common with much older versions of the alphabet - and that the decoding skills necessary to make sense of words, sentences and paragraphs as they appear on screen are still of fundamental importance, persisting in the face of many other changes. Despite all the ways in which communication is altering, and all the debates about what literacy now is, or indeed could be, there is something fundamental about this act of reading. Learning how to read, a core concern of education, is still of crucial importance even though students' everyday experiences of literacy, the texts they encounter, and their ways of accessing them may have changed quite fundamentally. It remains important even though the writing system itself is

changing with an ever-expanding stock of words, common usages, abbreviations, emojis and gifs. It is worth keeping this in mind whilst also acknowledging that new technologies ‘facilitate expanded communicative repertoires and multiple forms of participation, collaboration and civic engagement’ (Mills & Stornaiuolo, 2018. p.1). This expansion and diversification of communication is a key characteristic of our current milieu, and it is one in which screens play a key role.

Thinking about the differences between page and screen has attracted a fair amount of attention from scholars working in the field. Initial work attempted to underline the overall significance of screen-based communication for educational practice (Snyder, 1998 is an early example of this). More recent work has responded to a moral panic about the amount of time spent in front of screens (Squire & Steinkuehler, 2017; Livingstone & Franklin, 2018). Sitting alongside this is research that seeks to compare different kinds of reading. In this domain there have been a number of investigations of young children’s experience of reading e-books and print texts (e.g.: Moody et al, 2010). Short of making recommendations to e-book and app designers these studies have generally found little difference in how children learn from reading a page as opposed to a screen (Reich et al., 2016). However, a systematic review of experimental research did find small benefits in paper reading when considering reading performance and metacognition (Clinton, 2019). The specific uptake of portable devices, including iPads and other tablet computers has also attracted attention, and in the light of their popularity with educators, researchers have looked at how they can be used in reading and writing activity in the classroom (Burnett et al., 2017).

Seen together these studies suggest that although making meaning from written script is still a key skill in reading on screen, many related behaviours, such as those concerned with narration and navigation, the technical skills of working on screen and accessing apps involve distinct and sometimes device-specific knowledge. Drawing on the pioneering work of Clay (1975) who identified the concepts of print required for book reading, there is a strong case to be made for thinking about the equivalent 'concepts of screen' (Merchant, 2005; Wohlwend, 2015; Kervin & Mantei, 2016), those fundamental understandings that are necessary in order to access and navigate onscreen texts. Identifying these is not exactly a straightforward task. If we consider the relatively short history of computers, the user interfaces that proscribe the physical actions that we must take to make things happen on screen have themselves diversified, and continue to do so. Twenty years ago we might have been talking about clicking and scrolling with a mouse, and although these actions still apply, touchscreen technology has ushered in a whole gestural vocabulary that currently includes tapping, pinching and swiping – gestures that young children need to master in order to read a touchscreen tablet (Merchant, 2015). Just as reading always requires some sort of technological apparatus so it also involves particular kinds of bodily engagement and enables or constrains certain kinds of physical movement.

Other developments in technology begin to gnaw away at some more fundamental assumptions about reading and writing. This is evident in the increased sophistication of voice recognition software, text-to-speech and speech-to-text applications which invite us to reconsider what it might mean to write and read. It is now perfectly feasible to claim that you have 'read' a book without ever having laid eyes upon it or held it in your hands - and then, perhaps, to write a review of it without recourse to pen, paper or keyboard. Until relatively recently this would have been unthinkable. Of course listening to what is read aloud is very

different from the visual experience of reading, and the same goes for dictating writing - but the point is that both practices are now easily available and regularly used. To this extent, at least, literacy has changed radically. Clearly for some, such as the visually impaired, this is a great gain, but more generally it raises significant questions in how we might think about and research digital literacy, what sort of literacies we value, and what reading we should promote in educational contexts. In what follows I address these questions, beginning first by overviewing some of the more influential ideas that have informed research and scholarship in this area.

Influential perspectives in the study of digital literacy

Although the term digital literacy has been widely used in a range of different contexts its specific application to the study of reading and writing has been dominated by research with a sociocultural emphasis. This could be because the rise of computer-mediated communication is so closely interwoven with widespread changes in society. A rather poetic commentary from Michel Serres captures the spirit of this:

In brief, Western humanity abruptly moved, during the 1960s, from means and forces of production to communication networks: the beginning of our century made the victory of the global internet and mobile phones complete. Hermes, the god of intermediaries and translators, the Angels bearing messages and their incalculable number took the place of Prometheus, the old solitary hero of fire. (Serres, 2019, p.17)

Here, Serres is alluding to the shift from a form of social organisation and lifestyle firmly rooted in industrial production to the more fluid structures associated with a post-industrial

economy. Taking a sociological point of view, Wellman has characterised this as a move from local or neighbourhood affiliations to what he calls ‘networked individualism’ in which social ties are simultaneously both distributed and technologically mediated (Raine & Wellman, 2012).

However important this may be, another reason for the dominance of sociocultural perspectives in the study of digital literacy relates less to this broad context and more to the local disciplinary influence of two significant bodies of scholarship. Firstly, social constructivism, associated with the work of Vygotsky (1980) and Bruner (1986), which places its emphasis on social context, and has had a marked impact on recent educational thought and secondly, sociolinguistics, which underscores the role of social and cultural forces on language use and has exerted a strong formative influence in the study of literacy (Heath, 1983; Street, 1984). Ways of thinking about digital literacy from a sociocultural perspective, informed by such thinking, have a number of different (and sometimes overlapping) concerns. Below I identify three influential strands in the field.

1. Literacy studies

Street’s ideas (1984) were instrumental in defining a field of study, now generally referred to as literacy studies, which favoured situated descriptions of communicative practices and research with a distinctly anthropological orientation. In this developing tradition the prime focus was on reading and writing as social action, and it centred on literacy events embedded in specific contexts, conceptualized as local instantiations of more generalized literacy practices (Barton & Hamilton, 1998; Street, 2003). In the study of digital literacy, examples of this sort of work include Barton & Lee’s (2013) study of photo-sharing, Gillen’s (2014) work on the virtual world at the hub of the Schome Park programme and my own focus on

young children reading story apps (Merchant, 2015). However, the influence of literacy studies has been far reaching and constitutes a large and diverse body of work that would be challenging to summarise in such a short article. Taken together though, studies in this strand have served to illuminate the breadth and diversity of digital literacy practices that span a wide range of age groups, populations and languages.

2. *New literacies*

The emergence of a distinct field of inquiry into ‘new literacies’ mostly attaches to the pioneering work of Lankshear & Knobel (2003). With a more explicit focus on the digital, Lankshear and Knobel launched an inquiry into new and emerging practices, and particularly those that involved the use of new technology – practices that often challenged traditional ways of thinking about literacy, and notably how it was defined within the context of compulsory schooling. Drawing on the work of internet scholars and digital activists the third edition of *New Literacies* (Lankshear & Knobel, 2011) clarifies their interest in both the newness of post-typographic texts (which they refer to as the ‘new *technical* stuff’, p.55) and the newness of a mindset that valorizes interactivity, participation and collaboration (they call this the ‘new *ethos* stuff’, p.55). New literacies has been important in charting the development of a whole range of digital literacies from virtual world play (Thomas, 2001) and videogaming (Gee, 2003), to blogging (Davies & Merchant, 2009), fanfiction (Black, 2008), memes (Knobel & Lankshear, 2007), and machinima (Marsh, 2015). In some ways this identification of new trends and practices has now been taken up by media scholars, and can be traced through the work of Jenkins (e.g.: Jenkins & Green, 2018), Ito (e.g.: Ito et al., 2009), and others.

3. *Multimodality*

Drawing inspiration from the pioneering work of Halliday (1978), a social semiotic approach has also proved fruitful as a way of understanding screen-based communication. Kress's thinking on multimodality is key to this. Not only does multimodality offer a different perspective on literacy, it also highlights how we might read text on screens (Kress, 2003; Kress, 2010). Furthermore, emphasizing the role of the visual and auditory dimensions of communication has direct relevance to how we might read something like a WhatsApp post or a Facebook page in which the visual layout, the use of still and moving image, and sound are an integral part of the experience. Meaning is at least partly made by the way in which these different modes interact (Jewitt, 2006). It is also useful to consider the significance of what have been called reading pathways - where attention rests, what is read and looked at, and in which order, and indeed what is ignored. Close observation combined with multimodal analysis has been helpful in this respect (Simpson et al., 2013; Kervin & Mantei, 2016).

Although it would be a mistake to assume that print text is always read in a linear fashion there are certainly more degrees of freedom in screen-based digital texts, and this may allow for more variety in the reading pathways taken, leading to the idea that such texts are often read in a non-linear fashion (Walsh, 2006). Multimodality has frequently been used to describe digital texts, but there is also interest in using its descriptive vocabulary to analyse the interactions that happen around texts. For instance, in an empirical study of young children's interactions with touchscreen tablets Daniels (2016) looked at their speech, gaze and movement as they read on screen using a form of multimodal coding. These findings speak to the increased mobility and interactivity associated with reading the digital.

To summarise then, *literacy studies* is driven by an interest in specific social practices and contexts; *new literacies* with the key changes precipitated by the spread of new technologies; and *multimodality* with the characteristics and defining features of texts and their

interactional setting. Although it is helpful to separate out these three strands of socioculturally-informed research and scholarship, in many empirical studies of digital literacy they are closely woven together. For example, a recent study of literacy in an early years science classroom uses a literacy studies perspective to investigate an instance of new literacies and uses a multimodal approach to analyse the data (Britsch, 2019). The combination of these themes is a strength of the paper.

However generative of empirical investigation sociocultural perspectives may have been, they certainly do not hold a monopoly on knowledge and understanding. Recently, some scholars have argued that a sociocultural analysis offers an inadequate or limited description of reading in the digital age. They have drawn on and developed a range of alternative perspectives. As an example of this, the next section looks at the growing interest in materiality, before giving an overview of what has come to be referred to as the socio-material orientation in the study of digital literacy.

Departures - towards a sociomaterial orientation

In her important study of reading hypertext fiction, Mangen (2008) underlined the need for more detailed examination of the relationship between embodiment and reading on screen. She highlighted the significance of manual dexterity and haptic perception in reading and the pressing need for an account of reading processes that were 'attentive to the affective affordances of different materialities and their relation to the physiology of bodily reception of meaning' (Mangen, 2008, p. 405). This call for more attention to embodiment signaled a return to considering the materiality of reading technology. As we have seen, the recent surge of interest in mobile technologies has brought materiality as well as embodiment and movement to the fore once again.

At the same time though, literacy scholars have begun to test the limits of sociocultural perspectives (Kuby, 2017). Drawing on ideas from new materialism (e.g.: Fox & Aldred, 2017), post-humanism (e.g.: Braidotti, 2013), and material semiotics (e.g.: Law & Moll, 2003) researchers have critiqued the anthropocentric and logocentric focus of sociocultural perspectives (Snaza, 2019). They have raised the concern that by privileging human rationality and sociality, questions of affect, bodily experience, and its complex inter-relation with the material (more-than-human) world are neglected. We can find examples of this sort of emphasis in the literacy research of Leander & Boldt (2013); Theil (2015); and Hackett & Sommerville (2017). Not all of this has concerned itself with reading on screens but the connections are easy enough to make.

My own research with Cathy Burnett and others has worked with these ideas in a variety of contexts, all of which involve children using new technology in one way or another (Burnett & Merchant, 2018a). A sociomaterial orientation to the topic of reading on screen proves to be useful in highlighting a number of relevant issues. A full treatment of these can be found elsewhere (Burnett & Merchant, 2020). Here I give a sense of this work by highlighting three of the more important themes:

Material agency – sometimes referred to as ‘thing-power’ (Bennet, 2010), material agency underlines the close connection between humans and non-humans by drawing attention to how materials act on us. This is particularly noticeable when we consider everyday artefacts or technologies. Sometimes this can be as simple as the way that the Peppa Pig theme tune invites a child to engage with a story app (Burnett et al., 2019a). Clearly, the technologies of literacy, in both the senses referred to above, act on us in ways that can be defined and

observed. But new technologies, apart from simply interesting us (or not) are designed to attract our attention. Portable devices that vibrate, chime, or simply display alerts are an aspect of what is sometimes referred to as push technology. Content is pushed to the individual user. It is personalised, and in doing this it contributes to the variety of ways in which screens invite us to read them. At the same time, as we are increasingly aware, these screens 'read' us too, logging our activity, often with the aim of further personalising the content we subsequently receive. If noting this modifies how we might think about reading, the simple fact that machines regularly read each other spreads the activity of reading right across the human/non-human domain.

Textual instability – watching young children playing and working in a context in which tablet computers are freely available offers plenty of interesting insights (Burnett, et al, 2019a; 2019b). For instance, we noted in this sort of setting that tablets were used for all sorts of purposes, to sit on, to skate on and to pile wooden bricks on. Often they were ignored, fading into the general background of bookcases, plastic trays, toy dinosaurs and all the rest. And then at other times they would be brought into play, as cameras for taking selfies, for the games they might display, or for the story apps we had loaded onto them. At these times they become a text, a text to read or flip through or, as sometimes happened, a text that only had a relatively brief appearance before a small finger pressed the home button, a battery died, or a child simply wandered off. In short, as multifunctional devices computers can become all sorts of things, but they only become texts when the appropriate sociomaterial arrangements line up.

Affective encounters – it has long been accepted that we can be inspired or angered, enchanted or intrigued by what we read. Whether it's Donald Trump's Twitter feed (as in the

beginning of this paper), a Murakami novel, or an email from a friend, the reader's response nearly always has an affective dimension to it. But recent thinking on affect extends this idea beyond the realms of individual response and uses it to account for 'the ways in which people and things come together and generate, perhaps by chance, something that interrupts a situation, and by doing so brings something new into play.' (Burnett & Merchant, 2018b, p. 64). In our work on affective encounters we use examples of reading digital media to illustrate how a particular mood may be unexpectedly and spontaneously generated through social material relations. Following work that has theorised and investigated 'affective atmosphere' (Anderson, 2014; Ehret et al., 2018) we have shown how affect or mood emerges out of human/non-human encounters that include digital devices in different ways.

This brief exploration of the sociomaterial view of literacy helps to illustrate the diversity of approaches and responses that can inform the study of digital practice, and some of the newer directions of research in the field. However, it is interesting to note that in this line of inquiry specific technologies participate in events but never define them or become a focus. This is partly because such technologies are now more common place, and in this sense unremarkable, but also because researchers may wish to counter a monolithic discourse of 'the digital' – a discourse which often inflates its transformative potential at the expense of a more reflective and analytical look at what lies behind particular applications, in terms of their design, programming, algorithms and all the rest (see Burnett & Merchant, 2020). Complementing this sort of analysis, is a growing sensitivity to the ways in which reading technologies are now big business and how corporate interest is entering children's literacy lives, at home, school and the spaces in between in new ways and on a much larger scale than ever before (Paakari et al., 2019).

Digital reading and its implications for research and practice

Whilst it has not been possible in this relatively short piece to give a complete overview of all the relevant research on digital literacy, the sociocultural and sociomaterial approaches I have focused on generate powerful insights into the current state of literacy. But there is also a substantial amount of work in the cognitive sciences that could be brought to bear on the topic. Partly because of my own research interests, and a belief in the importance of looking at digital literacy in context, I have remained with the research I am familiar with, and that which seems to me to have the most relevance to educational contexts. In this final section I turn to the implications of this work for research and practice in digital literacy, with an emphasis on the topic of reading.

Digital literacy has become a significant aspect of full participation in society. Reading from screens, is a dominant mode of communication here in the UK, and elsewhere too.

Nonetheless, other ways of reading and writing have not been displaced. Many people still prefer the print form, enjoy reading and collecting books, and choose pen and paper instead of a keyboard. In fact there is little evidence to support the idea of a decline in the popularity of those well-established reading technologies that have enjoyed a long history. Nor is there evidence to suggest any decline in the use of literacy. In fact Brandt (2015) provides clear evidence that we write more than we have ever done before; and since there is no point in writing without readership, the clear implication is that we read more as well.

It would seem then that the key message is that reading and writing have expanded and diversified in the early years of the 21st Century – a state of affairs that I have referred to here as hyper-literacy. People's reading practices and habits are changed as a result. For instance, it has been suggested that whilst we may read more, we may not read in such a sustained way

as we once did (Liu, 2005). However, such changes are almost impossible to quantify. A more pragmatic approach would recognize that digital literacy is now an integral part of contemporary life, a key component of becoming literate and that its accomplishment is largely, but not exclusively, dependent on reading the written word.

Research and scholarship, as traced through this paper, has a key role to play in shaping what we know about the changing reading environment, and about the specific experiences and practices that texture the lives of children and young people. Such work is increasingly concerned with digital text, whether, for example, the focus is on very young children, their digital play and early encounters with alphabet apps (Merchant, 2014), or on older children's reading and writing in the service of other activity, such as in the development of film scripts (Parry et al., 2017). Clearly research in the sociocultural tradition, as well as in emerging paradigms, has much to offer in this respect.

But new reading technologies also raise specific pedagogical questions. For example, as we have seen, beginning readers need a repertoire of 'concepts of screen' in the first instance, and educators need to know how these can be nurtured and developed. It is also important to know about different kinds of resources for reading. Work on the efficacy of particular story apps in supporting early literacy is useful because this impacts on both classroom activity and the advice that educators might offer to parents (Sari et al., 2017). It is equally important to know more about reading comprehension in a digital environment, and how this may be supported in the classroom (see for example, Kiili, 2018).

On a broader front, educators need to ensure that children have equal access to technology and to know how to build their confidence in using it. This includes striking a balance

between authentic online experience and developing a sensitivity to risk. Although there is plenty of literature, practical guidance and critique on internet safety aimed at children and young people (Haddon & Livingstone, 2017), recent trends suggest that this is becoming an ever more complex area. Measures to protect children from exposure to inappropriate material remain important, but there are other concerns too. Fake news, untrustworthy websites, and the circulation of extremist propaganda suggest the need for a new kind of critical reading (Luke et al., 2018). Furthermore, the increasing concern over surveillance and aggressive consumerism, signaled at several points in this paper, raise further issues for this sort of reading. At the time of writing this is terrain that has yet to be fully explored in classroom contexts.

The rise of digital reading and writing in hyper-literate contexts underscores the need for coherent curriculum provision in the school system. In Burnett et al., (2014), the authors looked at educational responses in a range of different jurisdictions, and there are some useful examples to draw on here. Currently, in the UK at least, policy is poorly articulated and curriculum guidance on digital reading is hard to locate. Aspirational statements about how digital technology will transform society and help to grow the economy are abundant, but how parents and teachers might support the kinds of critical digital reading that are so necessary to participation remains an open question. If digital literacy is the new normal, then some broad agreement on the kinds of practices we value and wish to support in the classroom is well overdue.

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