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Speed, Technology, and Dromocratic Literacy

Bradley Robinson, Ph.D.
Texas State University
bradrobinson@txstate.edu

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Abstract

The purpose of this paper is to explore the implications of technological speed on literacy in the twenty-first century. Whereas notions of speed within literacy studies have historically focused on theoretical models of the reading process (e.g., fluency), I resituate the concept of speed in relation to literacy by discussing how technological acceleration exerts a considerable influence on contemporary literacy practices. To do this, I draw on the writings of Paul Virilio, a French cultural critic whose work interrogated the intersection of speed and technology and therefore provides a useful set of concepts for thinking about the intersection of speed, technology, and literacy. After offering an account of such Virilian concepts as *dromology*, *dromocratic society*, and *accidentology*, I introduce the notion of *dromocratic literacy* and deploy it to examine two speed-based reading intervention technologies: Accelerated Reader and Blinkist. I end the paper by discussing implications for inquiry and practice related to dromocratic literacy.

Keywords

literacy, technology, speed, Paul Virilio, Accelerated Reader, Blinkist

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Fluency, processing, decoding—the element of speed is inextricably bound to contemporary conceptions of literacy and literacy practices. So is slowness. Marveling at the mind's capacity to rapidly render the written word, Wolf (2018) noted that "only such speeds can enable us to allocate attention to the higher-level deep-reading processes, which in turn constantly feed their conclusions back and forth with the lower-level processes, thus better preparing them for the next words they encounter" (p. 37). In other words, it is the speed of literacy in process that provides the cognitive superstructure where the slower, more reflective aspects of literacy can occur. Speed and slowness are therefore mutually constitutive aspects of literacy.

Speed, however, is not an unequivocal good, which is as true for reading and writing as it is for driving and cooking. In response to the now ubiquitous presence of light-speed technologies around the globe, scholars and thinkers across disciplines worry about the degree to which the forms and conventions of people's daily digital literacy practices (e.g., social media) may privilege pace at the expense of more deliberative, reflective practices of deep reading (e.g., novel reading). Carr (2010) described much of what constitutes digital reading practices as the "speedy, superficial skimming of information" (p. 156), arguing that such reading practices "discourage any deep, prolonged engagement with a single argument, idea, and narrative" (p. 156). Concerns about the effects of digital technologies on literacy find support in empirical research, as demonstrated in a metanalysis conducted by Delgado, Vargas, Ackerman, and Salmerón's (2018), who emphasized how reading comprehension benefits from paper-based reading over screen-based, digital reading.

In this paper, I focus on the mechanism of speed; however, rather than rely on a strictly cognitive understanding of speed in relation to literacy (e.g., fluency), I offer a philosophical

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reframing of speed via the work of French philosopher Paul Virilio in an effort to begin theorizing how speed, technology, and literacy interact with one another. Drawing on Virilio's work, I resituate the concept of speed with respect to literacy by discussing how technological acceleration creates a particular set of conditions that bear upon literacy practices to create what I call *dromocratic literacy*. To develop this line of thinking, I examine two speed-oriented reading intervention technologies: *Accelerated Reader* and *Blinkist*. Because Paul Virilio has not received the same level scholarly attention as other French philosophers (e.g., Foucault and Deleuze+Guattari), however, I begin with a brief account of Virilio's life and work before deploying several Virilian concepts in the context of literacy and technology.

Paul Virilio

In his 1995 novella *Slowness*, Milan Kundera eloquently described the consequences of the modern speed machine:

> Speed is a form of ecstasy the technical revolution has bestowed on man. As opposed to a motorcyclist, the runner is always present in his body, forever required to think about his blisters, his exhaustion; when he runs he feels his weight, his age, more conscious than ever of himself and of his time of life. This all changes when man delegates the faculty of speed to a machine: from then on, his own body is outside the process, and he gives over to a speed that is noncorporeal, nonmaterial, pure speed, speed itself, ecstasy speed. (p. 2)

For Kundera, this "noncorporeal, nonmaterial, pure speed" is a vehicular manifestation of the machinic, a disembodied expression of that which is most essential to the bicycle, the car, the train, or the airplane—that is, speed. Into the third decade of the twenty-first century, the acceleration of society continues, the power of vehicular speed machines now complemented by

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the power of digital speed machines capable of moving information around the world at the speed of light.

For French cultural critic Paul Virilio, such digital light speed is, like the bicycle, the car, the train, or the airplane, disembodied; and it effectively erases physical space, allowing people to travel at light speed without ever actually moving, a state of affairs Virilio termed the "dromosphere" (2012, p. 16). In a passage somewhat akin to Kundera's, Virilio (2000) offered a sense of the dromospheric:

> As a racing driver must first master acceleration, keep his car straight and pay no heed to the details of the surrounding space, so too will it doubtless be for every human activity, both at and away from home. We will no longer admire the landscape but only watch our screens and monitor our interactive trajectory—that is, a "journey" with no distance, a "travelling time" with no actual passing of time. (p. 76)

Growing up in Nantes during the German Blitzkrieg, Virilio experienced firsthand the violent potential of technological speed, an experience which left an indelible mark on his later work. Despite famously observing that "war was my university" (2008, p. 38), Virilio studied architecture at Paris' L'Ecole des Metiers d'Art before working with Henri Matisse as a stained-glass artisan for French churches.

A self-described "anarcho-Christian" (Armitage, 2001, p. 30), as a young man Virilio was radically committed to a brotherhood of laboring priests who rejected the trappings of formalized religion and worked alongside blue collar workers. He was later drafted into France's war against Algerian independence, after which he went on to study phenomenology with Merleau-Ponty at the Sorbonne. He was close friends with Deleuze and Guattari, who borrowed

and elaborated on such Virilian concepts as "deterritorialization," "nomadism," and the "suicidal state," which Virilio (1976) introduced in his book, *L'Insécurité du territoire* (Der Derian, 2000).

Despite his personal and sometimes philosophical connections with Deleuze and Guattari—and Derrida and Foucault, as well—Virilio's work does not fit neatly under the label of postructuralism, particularly given poststructuralism's anti-humanist strain, that is, its tendency to decenter the human subject (Armitage, 2000). A practicing anarcho-Christian, Virilio must be considered a humanist, but perhaps not in the simple sense of holding humanity as supreme at the expense of non-human material, but rather as a "material humanist" (Kellner, 1999, p. 110), one who is profoundly suspicious of the speed and degree to which technologies have come to occupy—and I use that word intentionally—the human body, a process Virilio described as technological "endo-colonization" (Virilio & Lotringer, 2008).

At the same time, and this despite having studied with Merleau-Ponty, Virilio cannot be located decisively under phenomenology either. Of course, some of his concepts (e.g., the logistics of perception) have obvious phenomenological implications; however, Virilio argued that phenomenology was ill-equipped to grapple with speed. "Phenomenology, he wrote, "has been unable to explain that speed is not a phenomenon but the relationship between phenomena" (2012, p. 6). In other words, if phenomenology is concerned with how phenomena come to be experienced, it cannot at the same time examine the relation between the phenomena, and that relation is one of speed. Much of Virilio's work, then, attempted to offer conceptual technologies for dealing with this problem of speed.

Some scholars (e.g., Kellner, 1999; James, 2007) suggest Virilio's work aligns fairly well with that of Walter Benjamin and Marshall McLuhan. James (2007), for example, argued that Virilio's work might be seen as an extension of Benjamin's thinking about machines, particularly

the perspective he offered in "The Work of Art in the Age of Its Technological Reproducibility" (1936/2008). For Benjamin, the machines which reproduce art are always-already entangled with viewers' perceptions and understanding of that art, a claim which anticipates McLuhan's famous observation that "the medium is the message" (1967/2006). Although Virilio's work may serve as a useful complement to Benjamin and McLuhan—and Postman (1987/2006), too—Virilio was mostly interested in the logistical functions of technology and speed, less so in media content per se.

Virilio, who died in September of 2018, was a prolific writer, and his rhetorical style often reflected his obsession with speed and movement. Sentences move quickly, subjects change mid-paragraph. His work is not, as St. Pierre (2000) might say, "clear," but in the best possible way: that is, it is resistant to the "American discourse of antiintellectualism that, on some level, assumes that the ordinary person cannot understand complexity" (p. 478). Indeed, Virilio himself confessed, "I don't believe in explanations. I believe in suggestion, in the obvious quality of the implicit" (Virilio & Lotringer, 1983/2008, p. 52). Virilio's hyper-literate, highly suggestive writing is as seductive as it is at times vexing, yet his thinking nevertheless offers a rich, if idiosyncratic, conceptual technology for challenging how one thinks about speed and digital technologies.

Virilio's Conceptual Technologies

Like Deleuze and Guattari, Virilio was a producer of concepts and he thought of himself as a "conceptual activist." "To be a conceptual activist," he claimed, "means to produce concepts. This is true political activism" (Armitage, 2001, p. 96). For Virilio, then, concepts are active—they can do things—and over the course of his life Virilio unleashed onto the world a veritable barrage of activist concepts: *dromology* (1977/2006), *the logistics of perception*

(1989a*), the vision machine* (1988/1994), *the information bomb* (1998/2005), and *accidentology* (2005/2007), just to name a few. What these concepts seem to hold in common is a uniquely critical view of technology, and here I mean "critical" in the sense of a literary critic or an art critic. "Just look at what an art critic is to traditional art," Virilio once remarked, "and then substitute technology for traditional art, and you have my position. It's that simple" (Virilio & Lotringer, 1997, p. 192). As Kellner (1999) has argued, however, to spend much time with Virilio's work is to become a bit skeptical of his stated disposition towards technology. In other words, despite Virilio's insistence that he is "not against new technologies…only against promoting them" (2012, p. 39), his work is nevertheless deeply and consistently suspicious of technology, especially when it comes to the increasing speed and ubiquity of digital information technologies. In the sections that follow, I introduce several Virilian concepts—*dromology*, *dromocratic society*, and *accidentology*—which together demonstrate Virilio's unique take on speed and technology and provide context for my discussion of *dromocratic literacy*.

Dromology

Central to Virilio's conceptual universe is the concept of *dromology* (from the Greek word *dromos*, or race), which he described as "the science of the ride, the journey, the drive, the way" (Armitage, 2000, p. 35). To understand history and the modern world, according to Virilio, one must grapple with the history of acceleration. In *Speed and Politics* (1977/2006), probably his most famous work, Virilio claimed that "in fact, there was no 'industrial revolution,' but only a dromocratic revolution'; there is no democracy, only dromocracy; there is not strategy, only dromology" (p. 69). That is, for Virilio, the least common denominator of history is the logistics of speed and technology, which in the 19th and 20th centuries involved the development of machines for war and capital accumulation. Such machines, in Virilio's view, were successful to

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the extent that they were fast, an argument no doubt related to his firsthand experience of the German blitzkrieg—or lightning war, speed war.

As James (2007) noted, however, the subject of Virilio's dromology shifted as technology evolved. Virilio's later work around dromology primarily interrogated what James described as the "globally extended informational and metropolitical complex sustained by the high speeds of transport and electromagnetic data transmission" (p. 99). Crucially, then, dromology links economics, politics, and logistics (i.e., warfare) under the rubric of technological speed. Given that the word *speed* itself derives from the Old English word *spǽd,* meaning wealth or abundance—hence the valediction *Godspeed*, or God's wealth—it is worth maintaining the connections among technological speed, capital, and warfare, perhaps even as they relate to literacy. Importantly, dromology has no specific methodological implications, but rather it encourages one to raise critical questions about the influence of technological speed on society.

Dromocratic Society

Given its emphasis on speed and mobility, dromology attends to how access to speed provides access to wealth and power, producing those classes of the speed-rich and the speed-poor that constitute the dromocratic society. As Virilio (1977/2006) described,

> With the realization of dromocratic type progress, humanity will stop being diverse. It will tend to divide only into hopeful populations (who are allowed the hope that they will reach, in the future, someday, the speed that they are accumulating, which will give them access to the possible—that is, to the project, the decision, the infinite: *speed is the hope of the West*) and *despairing populations*, blocked by the inferiority of their technological vehicles, living and subsisting in a finite world. (p. 70)

Virilio's prediction rings true even now, a time when 4 billion billon people are without internet access while those *with* internet access, roughly 3.7 billion people, each day conduct over 4 billion Google searches (Kim, 2016). Among those 3.7 billion people with internet access, just 1.1 billion have access to high-speed internet, and as the World Bank (2016) has reported, the inequities in both basic internet access and broadband reinforce global wealth inequalities, establishing the precisely the sort of classes of speed-rich and speed-poor Virilio anticipated.

Worth pointing out, too, is that it is within this globalized network of digital speed machines that automated digital trading platforms have come to dominate Wall Street. In *The Great Accelerator* (2012), Virilio juxtaposed the breakdown of CERN's Great Collider, a particle accelerator operating at near light speed, and the 2008 stock market crash, an event Virilio attributed in part to the inability of human traders to keep pace with the hyper-fast movement of global capital within digital information networks. Virilio's juxtaposition between CERN and Wall Street was an attempt to underscore humanity's hubristic obsession with speed, or "the cult of the speed of light," as he put it (p. 28), which is central to the dromocratic society.

For Virilio, it is the corporation, the military, and the state who control access to digital speed and leverage it in the interests of their own power and wealth in the dromocratic society, and he argued this state of affairs is inherently undemocratic. "We no longer have time for reflection," Virilio claimed. "The power of speed is *that*. Dromocracy is that. Dromocracy is no longer in the hands of men, it's in the hands of computerized instruments" (Virilio & Lotringer, 1983/2008, p. 71.). In addition to the 2008 stock market crash, recent history is replete with evidence for Virilio's claim, including the proliferation of social media chatbots during the 2016 and 2020 U.S. presidential elections.

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The general point, however, is this: the speed at which digital technologies work undermines the very notion of deliberative democracy, establishing what Virilio called "the dictatorship of speed" (1995, para. 3). Deliberation, which derives from the Latin *libra* for balance, is central to democratic processes and participation because it allows time to think and reflect, time to engage with nuance and complexity, time to arrive at a balanced perspective. For Virilio, technological speed is inimical to reflection; it can only "usher a deep crisis which will affect society and hence, democracy" (p. 1995, para. 6). What results is the Virilian accident.

Accidentology

Robert K. Merton, a renowned American sociologist, is credited with operationalizing the idea of unintended consequences, or as the title of his paper has it, "The Unanticipated Consequences of Purposive Social Action" (1936). In the paper, Merton sought to develop a rigorous methodology for studying the unintended consequences of active interventions into complex social systems. A classic example is the so-called "Streisand Effect," which refers to the unintended consequences of Barbara Streisand's efforts in 2003 to censor an online image of her oceanside mansion by suing the California Coastal Records Project, a digital archive of California's coastline (T.C., 2013). Streisand's lawsuit, which made national headlines, had the unintended consequence of far more people viewing her home than had she done nothing at all. Today, people often speak of the unintended consequences of digital technologies, observing, for example, the unanticipated social outcomes of smartphones on family dinners, or of the introduction of the "news feed" to Facebook in 2006, an event often linked to the viral spread of misinformation in global politics (see Alcott & Gentzkow, 2018).

I mention Merton's notion of unintended consequences because I want to contrast it with Virilio's notion of the accident, which I suggest offers a uniquely compelling view of the relation

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between technologies and their negative externalities. In *The Original Accident* (2007), Virilio wrote,

> According to Aristotle, "the accident reveals the substance." If so, then invention of the "substance" is equally invention of the "accident." The shipwreck is consequently the "futurist" invention of the ship, and the air crash the invention of the supersonic airliner, just as the Chernobyl meltdowns is the invention of the nuclear power station. (p. 5)

For Virilio, then, the creation of a new kind of technology *is* the creation of a new kind of accident, and vice-versa. This is an important point, I think, because it complicates the claim that technologies are tools which can be wielded positively, negatively, or neutrally. From a Virilian perspective, the spread of misinformation via the technological invention of the Facebook news feed is not simply the result of bad actors exploiting a neutral system, but rather an expression of something inherent to the technology itself. Just as planes that fly can, do, and will crash, a social media platform that algorithmically feeds news can, does, and will starve for truth.

Virilio insisted that contemporary society must grapple with the relations between technology, speed, and accidents, going so far as to call for a "museum of accidents" (1989b), a place where society could confront the issue directly. In a society where everything hits at once due to the speed and ubiquity of digital information technologies, to live the digital life is to live the accidents inherent to it, and for Virilio the museum of accidents might help its visitors better understand this philosophical insight. Such a museum, Virilio suggested, might also be instructive for the social sciences:

> At the end of the nineteenth century, museums exhibited machines; at the end of the twentieth century, I think we must grant the formative dimension of the accident its rightful place in a new museum. They ought to exhibit—I don't know how yet—train

> derailments, pollution, collapsing buildings, etc. I believe that the accident is to the social sciences what sin is to human nature. It's a certain relation to death, that is, the revelation of the identity of the object. (Virilio & Lotringer, 1983/2008, p. 47)

Virilio's allusion to social sciences here is provocative, as it implies some relation between the social sciences, technological speed, and accidents. Formulated as a question, one might ask, how have the social sciences—including educational research, perhaps—embraced accelerating technologies, and what particular accidents reveal the substance of such technology-driven social science?

In 2012, a group of social scientists and Facebook-employed data scientists published in the journal *Nature* a letter entitled, "A 61-million-person experiment in social influence and political mobilization" (Bond et al.). For the experiment, the researchers manipulated what users saw in their news feeds, which in this case included information about voter registration and local polling places. The researchers compared the engagement (e.g., clicks) of 6.3 million users living in places where voting records are public. The core finding of this massive experiment was that social media messaging via the news feed can influence people's offline actions, which might—again, this was in 2012—have important social implications. The researchers concluded their letter with the following observation:

> Experiments are expensive and have limited external validity, but the growing availability of cheap and large-scale online social network data means that these experiments can be easily conducted in the field. If we want to truly understand—and improve—our society, wellbeing and the world around us, it will be important to use these methods to identify which real world behaviours are amenable to online interventions. (p. 298)

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Reading the above passage, it is difficult not to think of the 2016 U.S. presidential elections, not to mention the more recent spread of misinformation related to the Covid-19 pandemic, especially the role viral misinformation has played across multiple social media platforms.

Clearly someone was paying attention to Bond *et alia*'s findings, and the social scientific technology they employed was deployed by others in the spread of false news, which I think most would agree did not improve society or support "wellbeing and the world around us." Quite the opposite, in fact. To the extent that the election of Donald Trump was influenced by the technological accident of viral misinformation traveling at the speed of light across millions of Facebook news feeds, it is *not* an anomaly. It is *not* an unintended consequence, at least from a Virilian perspective. President Trump *qua* technological accident betrayed something of the substance of social media technologies as well as that of the social scientific interventions that demonstrated the substantial power of those technologies to guide human behavior.

Virilio, Technology, and the Future

In summary, Paul Virilio's dromological diagnosis is that pervasively accelerating digital speed machines have created a speed milieu, an atmosphere of speed—the dromosphere. For Virilio, speed suffuses essentially all aspects of contemporary social life, leading to a modern imperative of speed that produces the dromocratic society, one in which, as he put it, "the dictatorship of speed at the limit will increasingly clash with representative democracy" (Virilio, 1995, para. 7). Further, Virilio insisted that technologies always-already contain their own accidents, and he once spoke of the "big accident" to come (Wilson, 1994, para. 7). (Perhaps the Anthropocene is the dromocratic epoch, the period of the big accident.) For Virilio, those who live in the dromocratic society are dromocratic citizens whose subjection to the digital speed

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imperative is fundamentally at odds with democratic processes of representation and accountability.

As I mentioned earlier—and as am sure readers will have noted—Virilio's view of technology and speed is stridently critical. If one were to accede to his identification as a technology critic *à la* art critic, then he is an art critic who is deeply suspicious of art and thinks art might very well spell doom for humanity. In 1999, James Der Derian (2000) sat down with Virilio for an interview and asked Virilio to account for his full-throated pessimism toward technology. According to Der Derian, Virilio quickly exclaimed, "I love technology!" Der Derian then added,

> Since I knew from the difficulty in arranging the interview that this was a man without email, fax or even an answering machine, I asked him to explain the apparent contradiction. It's just that he wasn't about to make it easy for the intellectual love of his life. Another aphorism followed: like Jacob, he wrestled with the angel of technology not to prove his disbelief, but to prove his freedom to believe. Sound cosmological advice, I believe, for all in search of a livable relationship with the new techno-deities. (p. 225)

Ultimately, Virilio had nothing positive to say about digital technologies—except that he loved them. Given the fact that digital technologies are going nowhere and are only likely to grow faster and even more ubiquitous, scholars must, like Virilio, continue wrestling with them relentlessly. Perhaps it is through such critique that scholars can explore how to leverage digital technologies in the support of democratic processes. Indeed, to the extent that Virilio's conceptual technologies themselves contain their own accident, perhaps it is the temptation to dismiss his ideas and/or technology *tout court*.

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Dromocratic Literacy

For a field very much interested in speed (e.g., fluency) and technology (e.g., digital literacies), literacy researchers have not often engaged directly with the influence of speed and technology on literacy and literacy practices, the implications of that influence on education and life in a democratic society, or, I would add, the work of Paul Virilio. One exception is Cynthia Selfe (Handa & Selfe, 1992; Selfe, 1999), who has expressed appreciation for Virilio's critical engagement with digital technologies, science, and innovation. Another exception is Lewis' (2013) discussion of how the value of speed has influenced writing practices, an argument Lewis develops by looking at time-based writing assessments like those on the College Board's Advanced Placement examinations. I want to take such thinking a step further by exploring how Pual Virilio's broader corpus offers a rich conceptual technology for exploring how contemporary literacy and literacy practices are embedded in and conditioned by the dromospheric dynamics of speed and technology. I begin by examining Accelerated Reader (AR), a popular reading intervention technology used in schools throughout the U.S., one which has operated at the intersection of speed, literacy, and technology for over two decades. I will then juxtapose Accelerated Reader with the app, Blinkist, a newer, different sort of reading intervention technology, but one which I suggest exists alongside AR within the same milieu of dromocratic literacy.

Accelerated Reader as Dromocratic Literacy

From a dromological perspective, I confess that Accelerated Reader could be seen as low-hanging fruit, so I want to avoid basing my entire analysis on the program's title alone. Instead, I want to consider how the general cultural construct of reading reinforced by Accelerated Reader may contribute to conditioning what I am calling dromocratic literacy. AR is

one of literacy education's longest-running, most widespread reading-intervention technologies, and a great deal has been written about it. Throughout the 1990's and 2000's, in particular, Accelerated Reader featured prominently in debates around standardization, and the program's efficacy was contested within and between literacy journals, including *The Reading Teacher* and the *Journal of Reading* (Vitello, 2014).

Today, Accelerated Reader is owned, marketed, and distributed by Renaissance Learning, an education technology company whose mission is "to accelerate learning for all children and adults of all ability levels and ethnic and social backgrounds worldwide" (About Us, 2019). According to Renaissance Learning, Accelerated Reader is "one of the most heavily researched programs in the world," and when it is "implemented with best practice, specifically around personalized goal setting, student achievement and performance increase more than those who don't use Accelerated Reader" (Renaissance, 2019, p. 2). Although a full assessment of those claims is beyond the scope of this paper, it is certainly true that many researchers have taken an interest in Accelerated Reader, and it also true that quantitative studies offer modest empirical support for the program's effectiveness. In general, however, as indicated by the U.S. Department of Education's "What Works Clearinghouse" report on Accelerated Reader (2016), the program's effect is either mixed, small, or inconsistent across different domains of reading.

Here I am going to sidestep the empirical question of whether or not Accelerated Reader does what it purports to do and explore instead how it might contribute to an atmosphere of dromocratic literacy. Remember that, for Virilio, dromology engages with (a) how the intersection of speed and technology is inextricably entangled with corporate, state, and military power, (b) how access to speed produces classes of speed-rich and speed-poor, (c) how technologies are always-already constituted by the accidents associated with them, and (d) how

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technological speed poses a threat to democratic processes. In the context of Accelerated Reader, then, the following questions arise: (a) How is AR related to corporate, state, and military power? (b) How does AR contribute to the production of a class of speed-rich and speed-poor? (c) How is AR constituted by its own accidents? And (d) how does AR interface with democratic processes? I will engage briefly with each of these questions in the subsequent sections. Before doing so, however, I want to stipulate that I am not attempting to establish any sort of specific, empirical criteria for dromocratic literacy, but rather to ask dromological questions that may offer insight into the nature of literacy within the dromocratic society.

Accelerated Reader and corporate, state, and military power. Judith Paul, a stay-at-home wife with a degree in elementary education, developed what would one day become Accelerated Reader (AR) from her Wisconsin home in 1984 (Stoflet, 2019). Paul's program was a response to the concern that her children's teachers were not providing them opportunities to read the classics she had loved so dearly as a child. Paul developed a list of her favorite books and assigned each book a number of points based on its length and complexity. She then curated a list of multiple-choice questions to accompany each book and awarded her children points based on the number of questions they answered correctly. Intrigued by the program Paul had developed, her husband, Terry, a proto-ed-tech entrepreneur, helped facilitate the development of a computerized version. By 1986, the Pauls had established their own ed-tech company, Advantage Learning Systems, which they sold in 2011 for 455 million U.S. dollars (Vitello, 2014). Although early versions of the platform were confined to a local computer, by the early 2000's the program began incorporating web-based components. Today, Accelerated Reader 360 exists within Renaissance Learning's robust cloud-based ecology of digital learning platforms.

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Given it is owned by Renaissance Learning, Accelerated Reader's relation to corporate power is clear enough, but how is it related to military and state power? For Virilio, all web-based education technologies are inextricably entangled with military and state power as a matter of historical record. It was, after all, in the early 90's that Tim Berners-Lee's invention of HTML led to the World Wide Web, which led to the commercialization of what we now call the Internet (Singer & Brooking, 2018). The World Wide Web itself evolved out of ARPANET (e.g., university), MILNET (e.g., military), and NSFNET (e.g., state). It is also true that Accelerated Reader's progression towards becoming a web-based service aligns fairly well with the emergence of the Internet as we know it today. It is, however, unclear whether and how the Internet's military origins bear upon particular aspects of educational technologies like Accelerated Reader, and I confess to some skepticism on this particular point. The dromological insight that all internet technologies, including educational technologies, are to some degree imbricated with corporate, state, *and* military power is both provocative and compelling, yet to make such a claim would warrant more attention than I can offer here.

Accelerated Reader, the speed-rich, and the speed-poor. In practice, Accelerated Reader still consists of the basic components Paul designed in 1984, which have been adapted to computers, supplemented with sophisticated processing algorithms, and integrated into reading-focused token economies. Such token economies allow students to exchange AR points for material rewards (e.g., candy) or privileges (e.g., extra recess). In a critical review of research into Accelerated Reader, Krashen (2003) found that of the four most common AR practices—access to books, time to read, points-based testing, and rewards—only access to books and time to read them consistently contributed to reading improvement. Nevertheless, schools throughout the U.S. continue assessing AR success, and therefore reading success, through the numbers of

points students accumulate and exchange for rewards. Indeed, it is not uncommon to find students' AR points posted on the walls of classrooms and hallways, even announced over school intercoms or at school gatherings.

The culture of reading that emerges from Accelerated Reader emphasizes efficiency (read: speed), which is why it relies on multiple-choice style assessments that convert the reading process into numerical data teachers can use to monitor students' reading ability as it is defined by the program. The construct of reading they are monitoring, however, may be the problem, at least from a Virilian perspective. As Virilio (1977/2006) himself observed, "Reading implies time for reflection, a slowing down that destroys the mass's dynamic efficiency" (p. 31). Accelerated Reader is not designed to slow readers down. It is not designed to create time for reflection, time to explore the nuance and complexity inherent to written language. Quite the opposite: essentially everything about the program encourages students to speed up, to accelerate, to read more books more quickly in an effort to accumulate more points and more rewards. After all, who wants to be a slow reader, one with fewer points, fewer rewards? When schools adopt Accelerated Reader and its associated practices, they contribute to the creation of classes of speed-read-rich and speed-read-poor—classes of students who accumulate AR points, are celebrated and rewarded for doing so, and classes of students who accumulate fewer, or no, AR points, and are thus marginalized.

Accelerated Reader and accidents. Although Accelerated Reader reward systems are common, Renaissance Learning, the publisher, does not recommend them as a best practice. Indeed, the company appears to be quite sensitive to the effect of points-based systems and actively discourages them (Renaissance Learning, 2014):

> **Potential problems with points.** In sports and other competitions, a player wins by earning more points than anybody else. Sometimes schools approach AR in the same way and recognize students who earn the most points. We discourage this practice. When schools focus primarily on points, students tend to choose inappropriate books and less skilled readers are handicapped. To try to earn more points, some students take quizzes without reading books, and they share answers. All students lose sight of the primary goal, which is to read interesting books at the level of difficulty that is right for each of them as individuals. (p. 12)

And also:

> **Don't emphasize points over comprehension.** Students tend to think of points in concrete terms. In their minds, it's like money or candy—the more you have, the better. In Accelerated Reader, however, this idea has proven to be too simplistic. Our research shows that when students' averages drop below 60 percent, their reading growth, as measured on standardized tests, actually slows down. This is true no matter how much time they spend reading, or how many points they earn. (p. 39)

As the above excerpts suggest, Renaissance Learning is aware of what can happen when *AR*'s point-system is, at least from the company's perspective, poorly implemented: competition, cheating, poor book selections, et cetera.

Given that Renaissance Learning attends to the point problematic in their supporting documentation, how should one think about the reality that such point-systems are common in AR schools? Are they an unintended consequence or a Virilian accident? As unintended consequence, the AR token economy represents a poor implementation of a beneficial technology. If such poor implementation leads to competition and cheating, such externalities are

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the responsibility of misguided educators, not the technology itself. Just as bad actors hijacked Facebook's news feed during the 2016 U.S. Presidential election, bad educators are hijacking AR's point system, corrupting the AR system, and potentially harming young readers. From a Virilian perspective, on the other hand, such token-economies—as well as the competition and cheating associated with them—are the accidents inherent to Accelerated Reader as a reading intervention technology. Given that Accelerated Reader is part of a global education technology corporation, one whose economic value is pegged to its competitive performance in the market where market capital and share price function as their own sort of AR points, perhaps it should be no surprise that such values may be encoded in the products the company develops and deploys.

Accelerated Reader and democracy. As I explained earlier, Virilio believed that technological speed is to some extent fundamentally at odds with democratic processes. If reflection and deliberation are necessary conditions for a healthy democracy, and if technologies tend to inhibit reflection and deliberation, then one should take Virilio's concern seriously. With that in mind, how might Accelerated Reader, particularly the literacy and literacy practices it conditions, support or undermine democratic processes? One possible scenario is that Accelerated Reader helps produce better, more enthusiastic readers and such readers are likely to become engaged, enthusiastic, informed democratic agents who actively leverage their literacy skills in a democratic society. Another possible scenario is that Accelerated Reader and its constitutive accidents condition dromocratic literacy, one that is anti-democratically entangled with speed, capital, and technology. As an instantiation of dromocratic literacy, Accelerated Reader may subvert the democratic values of reflection and deliberation through its emphasis on speed and accumulation. As an empirical matter, it is likely impossible to establish any

legitimate causal relation between Accelerated Reader and the changing nature of global democracy. Indeed, I do not suggest there is one, nor do I suggest that Accelerated Reader is a cause of dromocratic literacy. Rather, I am suggesting that a society driven by technological speed will condition, and in turn be conditioned by, a form of literacy driven by technological speed. If that were the case, then perhaps one should be able to point to other, more contemporary examples of dromocratic literacy, which is what I will attempt to do now.

Blinkist as Dromocratic Literacy

Established in 2012, Blinkist is a Berlin-based digital subscription service that provides simple, fifteen-minute summaries of nonfiction books across a variety of disciplines (e.g., economics, productivity, politics, etc.) (About Blinkist, 2019). The Blinkist team includes "expert readers," who carefully and thoroughly read selected books, identify the books' most important insights, and explain those insights in quick summaries, or "blinks," which subscribers can either read or listen to at their convenience. I mentioned earlier that I did not want to base my entire analysis of Accelerated Reader on its name alone, and the same is true for Blinkist. That said, when titles like *Accelerate*d Reader and *Blink*ist—and *Twitch* and *Twitter* and *Snap*chat and *Insta*gram and *TikTok*—are set alongside one another, it is difficult to ignore the degree to which such branding appears to associate a wide range of literacy technologies with speed. In any case, having already discussed Accelerated Reader, in this section I want to juxtapose it with Blinkist, which is, like AR, at its core a reading intervention technology. In other words, similar to AR, Blinkist intervenes in the reading process in order to accelerate the speed at which people are able to consume books. By situating Blinkist within a Virilian framework, I hope to further develop the broader dromospheric dynamics conditioning contemporary dromocratic literacy.

Blinkist and corporate, state, and military power. Because Blinkist is a relatively young tech start-up, it is worth taking a moment to describe its emergence within the global technology industry. Since January of 2018, Blinkist has accrued over 27-million dollars in venture funding (Crunchbase), with Insight Venture Partners, a global venture capital firm, as its main backer (Lunden, 2018). There are also rumors circulating which suggest that Amazon and other companies may be considering acquisition (Lunden, 2018). Interestingly, despite being founded and based in Berlin, Blinkist's primary target market is the U.S., which is due to the fact that, according to Holger Seim, Blinkist's co-founder and CEO, the "U.S. is obsessed with self-help and self-improvement" (Guttman, 2015, para. 17). Seim also noted, "We are creating a market that didn't exist and expanding one that did" (para. 4).

The market Blinkist is expanding, in Seim's view, is the general book publishing market, which Blinkist believes they are strengthening by elevating books' visibility through the app. But what precisely is the market Blinkist aims to create? Based on his comment about the U.S., Blinkist wants to establish a market at the intersection of self-improvement and literacy, a market comprised of busy people with little time to read. For Blinkist, the lives of these people are filled with short gaps amenable to a speed-focused reading intervention technology. It is worth emphasizing Seim's language, too: Blinkist is "*creating* a market that didn't exist" (emphasis added). In other words, the deployment of Blinkist as a reading intervention technology produces the need it purports to meet—it effectively brings into being its target population, who instead of doing other things with their short intervals of time, will read or listen to "blinks." The important point here is that Blinkist leverages corporate power and digital technology to produce a need related to speed, literacy, and technology which can in turn produce a market by which to profit.

Blinkist, the speed-rich, and the speed-poor. In the case of Accelerated Reader, speed-based classes are produced in two related ways: children read books faster than others, which allows them to accumulate more points, which they can then exchange for goods or privileges. Read-speed classes becomes AR-capital classes. Blinkist, on the other hand, is itself more of an instantiation of the speed-rich class. Consider, for example, the current pricing scheme: $19.99 month-to-month, $39.99 quarterly, and $119.99 annually (Go Premium…, 2019). To put that in context, a month-to-month subscription of $19.99 is roughly equal to one-fifth the average monthly electric bill in the U.S. of $117.00. It is over twice the price of the cheapest current Netflix subscription of $8.99 per month. In other words, Blinkist is not an inexpensive service; indeed, given its rather basic service, I venture to say a Blinkist subscription would represent a fairly luxurious indulgence for most Americans. For the market it has created, however—that is, on-the-go professionals who want to not-read books and are willing to pay for the privilege—the appeal of Blinkist is clear enough: it can help you "excel in your career" and "discover life-changing ideas" (Fit Reading into Your Life, 2019).

Blinkist and accidents. Just as the particular affordances of Accelerated Reader's technological approach to reading intervention affects what reading is and means in classrooms and schools, so too do the affordances of Blinkist affect what reading is and means within the dromocratic society. However, whereas the accidents of Accelerated Reader arise both from the culture of reading it reinforces and the token-economies to which it gives rise, the accidents of Blinkist are perhaps more latent, more abstract. The following excerpt from Blinkist's "About Blinkist" page is useful here:

> Almost none of us have the time to read everything we'd like to read. Yet we lose countless hours to activities that bring us little joy such as commuting, chores and staring

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> at our phones. What if we could turn these little blocks of unallocated time into precious and rewarding moments for learning and reflection?

From a discursive perspective, Blinkist positions itself as a solution to a set of problems. First, because people are too busy to read everything they would like to read, they can use Blinkist to "read" more. Second, people's lives are busy with joyless activities, and Blinkist is not such an activity. It is rather an app that can bring one joy. Setting aside the obvious irony that Blinkist is itself a mobile app, the idea that time is "lost" when commuting and doing chores is telling in its implications. Blinkist aims to profit on the cultural capital of reading as a fulfilling activity, one that smart, successful, and productive people do, while at the same time intervening in their ability to do it. One could, after all, literally read a book while commuting, or one could even listen to an audiobook version. And, of course, one could easily listen to an audiobook while doing chores, a market niche already filled by Audible, yet another subscription-based reading intervention technology.

Just as Accelerated Reader acknowledges the dangers of AR-point reward systems—actively discourages them, even—Blinkist is similarly sensitive to the critique that people who subscribe to Blinkist will read fewer books. As Holger Seim put it, "I don't believe you can convert long form into short form. Less than 10% of our users say they read fewer books, but more than 40% say they read more! We don't want to replace books." Perhaps unsurprisingly, Seim's data is not publicly available, and there appear to be no published empirical studies examining whether and how Blinkist affects the number of books its users read. In any case, Seim's claim that one cannot "convert long form into short form" is at best undermined, at worst belied, by almost everything on Blinkist's website. As suggested by the passage I discussed in the previous paragraph, it is clear that Blinkist markets itself as a substitution for reading, even if

its CEO resists explicitly acknowledging that is the case. Seim's resistance is likely related to another potential accident: reduced books sales and subsequent industry blowback. Although Blinkist's core services do not break copyright laws, the company can only include original book covers and extended quotations with publisher permissions, which they acquire in exchange for a ten-percent royalty (Guttman, 2018). Perhaps one should not be too surprised that Amazon may be considering acquisition.

The last accident I want to address relates to the differences inherent to "blinking" versus reading a book. Interestingly, Blinkist purposefully excludes fiction from its service, evidently believing that fictional stories are not amenable to the Blinkist treatment. Although there is no official word on why nonfiction can be "blinked" and fiction cannot, my sense is that Blinkist likely assumes nonfiction serves practical, not aesthetic, purposes for reading. This is, of course, untrue. Some works of nonfiction simply must be read to be read—to blink them is to miss them. Can a book like Foucault's *Discipline and Punish* be blinked? For Blinkist, yes, it can, and so can *Madness and Civilization*, and "blinks" of both books are available through the service. For me, however, to "blink" such a book is to miss it, a Virilian accident inherent to the affordances of the technology itself. Blinkist users are not simply mis-using a "neutral" technology meant to inspire interest in books in exchange for $19.99 per month so that they then can go and spend more money to read the actual books.

Blinkist and democracy. Returning to the passage I discussed in the previous section, it is clear that, for Blinkist, time spent commuting, doing chores, or staring at one's phone is lost time, time better spent enjoying "precious and rewarding moments for learning and reflection." Although there are any number of reasons why staring at one's phone could inhibit learning and reflection, the idea that time spent commuting and doing chores is somehow similar is less clear.

The belief that any time not spent consuming content of some sort is time wasted, and that if one is going to consume content, why not consume educational content through Blinkist, is characteristic to the dromocratic society. “Democracy is about solidarity, not solitary experience,” Virilio observed, “and humans need to reflect before acting” (Virilio, 1999, p. 87). Blinkist attempts to capitalize on the value of reflection by suggesting that consuming its content, rather than, say, commuting or doing chores in silence, is a reflective practice. That Blinkist has persuaded over seven million people to subscribe to its service underscores the appeal of the dromocratic literacy they offer. From a Virilian perspective, the essential point here is that a society subject to such dromocratic dynamics will be likewise subject to the accelerating disappearance of the public sphere, which is replaced by anti-democratic influences via the corporation and the state, even as they appropriate the language of learning and reflection.

Full Speed Ahead

My purpose in this paper has been to begin theorizing the relation between technological speed and literacy by drawing on the conceptual technologies of Paul Virilio. In particular, I have attempted to use Virilio’s concepts of dromology, dromocratic society, and accidentology to articulate what I have termed dromocratic literacy. The concept of dromocratic literacy is not meant to refer to a specific set of skills or dispositions needed to navigate the dromocratic society—as necessary as they may be—but rather as a conceptual technology for understanding how literacy interfaces with speed and technology. From a Virilian perspective, the accident inherent to dromocratic literacy as a conceptual technology itself is that it suggests the intersection of literacy, speed, and technology is (a) always problematically entangled with corporate, state, and military power; (b) sustaining the status of the speed-rich and speed-poor; (c) inventing new accidents; and (d) undermining democratic processes. To accept such a

diagnosis as comprehensive, I claim, is not to wrestle with the angel of technology, but rather to be defeated by it.

A crucial question facing contemporary digital society, then—one which should be of particular and urgent interest to literacy educators and researchers—is how to find, develop, and nurture those literacy practices that bend towards democracy and away from dromocracy. Resistance to dromocratic forces, Virilio explained, would "mean first and foremost to decelerate, to defuse the race toward the end" (1977/2006, p. 153). For literacy educators and researchers, perhaps the aim should be to decelerate literacy without rejecting technology altogether. What would it mean to be a *de*celerated reader, a slow reader, in a digital media ecology that moves at light speed? What are the slow literacy practices within the context of digital literacies? These are difficult questions, but if it is true that digital speed technologies pose a threat to democracy, then there is a pressing need for decelerated digital literacies for a digital democracy.

Looking to the future, it seems likely that machine driven communication tools (i.e., MADCOMS, or chatbots) will exert an increasingly powerful influence on cultural and political discourses throughout the world. In their book *Like War*, Singer and Brooking (2018) quoted Matthew Chessen, a technology advisor at the U.S. State Department, who predicted that MADCOMS will come to "determine the fate of the internet, our society, and our democracy" (p. 328). To which Singer and Brooking added, "No longer will humans be reliably in charge of the machines. Instead, as machines steer our ideas and culture in an automated, evolutionary process that we no longer understand, they will 'start programming us'" (p. 328). The extent to which MADCOMS are able to "program us" is, in my view, a function of literacy practices, speed, and digital technologies, whereby literacy practices include both the creation and

deployment of bots as well as the human users who read and share content produced by bots. In this way, chatbots are dromocratic literacy *par excellence*.

Given Twitter chatbots' disproportionate role in spreading misinformation during the 2016 U.S. Presidential Election (Shao et al., 2017), it is easy to see the threat they might pose to democratic processes. In a study of how misinformation spreads on Twitter, Vosoughi, Roy, and Aral (2018) found that while chatbots spread true and false news at similar rates, false news ultimately "spreads farther, faster, deeper, and more broadly than the truth because humans, not robots, are more likely to spread it" (p. 5). The researchers speculated that humans are more likely to spread false news than true news because false news is generally more novel and provocative, a phenomenon some social scientists have termed "emotional contagion" (Coviello et al., 2014). Virilio (1998/2005) described a similar phenomenon:

> We today face the threat, no longer simply of a democracy of opinion which would replace the representative democracy of political parties, but the excess of a veritable DEMOCRACY OF EMOTION; of a collective emotion, simultaneously synchronised and globalised, whose model could well be that of a post-political televangelism. (pp. 102-103)

As a manifestation of dromocratic literacy, the proliferation of chatbots and false news exploits users' affective engagement with digital technologies, creating "dromomaniacs" (Virilio, 1977/2006, p. 48) who interface with artificial intelligences designed to manipulate them; who compulsively scroll, click, share; whose literacy practices have been enrolled in support of the dromocracy, the rule of the quickest, even when the quickest might be the bots.

Conclusion

In December of 2018, the New York Public Library organized an evening of conversation between Slovenian philosopher Slavoj Zižek, and Philippe Petite, a French tightrope walker famous for performing a high-wire act between the World Trade Center towers in 1974 (The New York Public Library). During their conversation, Zižek provocatively suggested that Petite's high-wire act was more subversive than the terrorist attacks of September 11, 2001, claiming acts like Petite's are "how you overcome technology. You go to the end. You, as it were, destroy it from within." But, of course, Petite did not destroy the towers; he used them to perform what appeared to be an act of magic, an act laden with the substance of the accident. After all, will he or won't he fall? Indeed, the event of Petite's high-wire act was an assemblage of technology-become-spectacle in large part due to the accidents that constitute it. What was missing from the high-wire act? Speed. Petite's art was an aesthetic of technology, accident, and slowness, and it froze one of the fastest moving cities in the world, or at least a block or two of it. Perhaps literacy educators and researchers might learn something from Petite's performance: that is, to reckon with speed, technology, and accidents through the sublimity of slowness.

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