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The Digital Mind and the Future of Liberal Arts Education

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The Digital Mind and the Future of Liberal Arts Education

— Harlan Stelmach and Martin Anderson —

Today higher liberal arts education is challenged by the continuing emphasis on vocational, business, and science majors among administrators and the decline in the demand for humanities majors among students anxious about their economic future. More fundamental and far-reaching, however, are the historic changes in the physical form in which ideas are preserved and communicated, the time people allocate to contemplating those ideas, and the ways people process them as society shifts from the book age into the digital age.¹ Those who grew up in the book age can visualize the problem by thinking of this question: What is your first memory of reading, particularly away from the cares of the world, reading in a slow and transfixed way that transported you to another world, perhaps into and beyond the text itself, and back again? Now consider the possibility that digital natives, those who have grown up in the digital age, may not be able to answer that question since it may, in fact, be outside their experience. But deep reading, that is, reading that engages “the array of sophisticated processes that propel comprehension,” is crucial

for understanding the texts found in the liberal arts, and a decline in deep reading, brought on by technological change and now likely underway, threatens the future of liberal arts education.²

For perhaps the past decade or so, faculty have lamented this perceived decline in students' ability to read deeply, placed blame on elementary and high school education, and demanded innovative strategies to encourage students to read. All these responses assume that deep reading is still valued by society and by institutions of higher education, but nothing has halted the relentless technologically driven shift towards the digital mind. In fact, it is not clear that business, science, and vocational faculty see the decline of deep reading as a problem. (Curiously, faculty in these fields often do perceive a crisis in simple math skills, which anyone from an older generation who was watched a digital native attempt to calculate change without the aid of a digital calculator can attest.) It is true that typical textbooks assigned in science, business, and vocational education do not require deep reading. Even when they require careful reading and full comprehension before moving on to the next chapter, they generally do not invite deep contemplation or critical evaluation. These texts are to be learned, not contemplated. The brains of the digital natives have been trained, or may even have evolved, so they are no longer capable of reading deeply. Wolf and Barzilli argue that easy access to vast amounts of stored information distracts the digital reader from contemplation.³ In *What the Internet is Doing to Our Brains*, Nicholas Carr documents his own shortening attention span and the numbers of his friends who no longer read anything but short snippets of information. "I can't read *War and Peace* anymore," admits a friend.⁴ What has been lost is the actual capability to read a lengthy text, not just the interest in doing so. In short, the digital mind is trained to retrieve stored information uncritically or to read instructions, skills insufficient for and even antithetical to liberal arts education. To a certain extent these concerns are not new. The decline in reading ability in high school seniors and the demand for majors leading to an immediate job were noted by the Commission on Humanities in

1980.⁵ Television and film were the main culprits then. Computers, video games, and the Internet of the digital age have now made the situation more acute. More and more faculty confront the reality that many of their students, often bright, actually cannot read deeply.

To understand how we reached this point requires some historical background on the evolution of mass education. The democratization of education, based on the liberal arts, is something members of the postwar baby boom generation in the United States, Western Europe, Canada, Australia, and New Zealand have taken for granted, and they, men and women, certainly benefited from it. However, its actual history is quite short, dating only from the end of World War II. Recognizing this fact raises the possibility that liberal arts education may soon be consigned to the dustbin of history. Mass education and democratically extended liberal arts education are not one and the same. Mass education and vocational education are also not one and the same. Mass education, which is mainly vocational education, has about a two hundred year history, dating from about 1800. In the West, socially organized education, as opposed to family driven education, has a long history beginning with the invention of the written word, running through the adoption of paper from China, the founding of universities in the medieval period, and the inventions of the printing press and movable type. The recovery of texts from Greece and Roman during the Renaissance helped define an educated person, a humanist, as someone educated in liberal arts. Socially organized vocational training also has a long history, mainly in guilds. However, historically, vocational skills were separated from fields of knowledge like history, philosophy, literature, and geography. It was the growth of science in the seventeenth and eighteenth centuries that first made inroads on liberal arts education.⁶

In the nineteenth century, ideas about education changed as democratically inclined states sought an educated citizenry, modernizing nation states depended upon vocationally trained bureaucrats, and industrial capitalism demanded a trained work force. In the United States, the higher education system was transformed, especially after the Civil

War, with the rise of specialized, science-based, research institutions.⁷ These in turn were massively increased after World War II. California created a three-tiered public higher education system based on community colleges, state universities, and the multi-campus University of California. Fed by vibrant high schools that thrived for several decades after the war, this coherent system could produce a feeling of inevitability, as though it had always existed and would last forever.

Alvin Kernan, former dean of Princeton's Graduate School and literature professor with experience at Williams, Columbia, Oxford, and Yale, explained the growth in his book *In Plato's Cave*. He cited *Chronicle of Higher Education* statistics:

Table 1

	Between 1960	and	1995:
Number of accredited institutions	2,000	to	3,700
Enrollments	3.5 million	to	12.5 million
Women's share	37%	to	55.5%
Federal aid per year	300 million	to	12 billion (constant dollars)
State support	4 billion	to	46.5 billion
Doctoral degrees awarded	10,000	to	44,000
Total faculty	235,000	to	900,000 ⁸

Kernan also wrote that by 1970 the public education system in the United States was virtually unrecognizable compared to the one that existed in 1940 on the cusp of World War II. Most of this growth came from adding vocational and business majors to traditional majors in liberal arts and hard science. Trends since 1995 are better known and more negative: budgets reduced, access compromised, etc. The period between 1960 and 1995 was a watershed. Kernan wrote that “expenditures for American institutions of higher education had reached 183 billion, and institutions that had been bastions of scholarship standing apart from the worlds of commerce and politics—ivory towers, in the old phrasing—had taken a place at the center of society, holding the keys to good jobs and high incomes, serving as national research institutes, and raising huge amounts of money every year.”⁹

This extensive growth resulted in the slow marginalization of liberal arts majors. The elite schools also changed to accommodate this growth, but they maintained their elite status, converting their endowments into even greater wealth through new investment policies. Consequently, liberal arts education and the humanities seem to be alive and well in these institutions, but elite universities are increasingly for a select few while mass vocational education is for the rest, much like the system that existed prior to World War II. History is still one of the largest majors at Princeton and the fine arts flourish at Smith. However, the implications for liberal arts education in a divided educational system are troubling as we enter the digital age.

Compounding the problem above is planet Google, which is perhaps making us dumber or, rather, less willing to do deep reading.¹⁰ Many a faculty meeting has been devoted to discussing students’ use of non-vetted information from the Internet as source material for their papers. The problems of plagiarism, too, are far more serious in the digital age, a fact that is not news to faculty in the humanities. However, advances in neuroscience may help explain what is really going on. In *Proust and the Squid: the Story and Science of the Reading Brain*, Maryanne Wolf documents the evolution of the reading tools needed to create the reading brain. Wolf argues that “we were never

born to read. Human beings invented reading. . . . And with this invention, we rearranged the very organization of our brain, which in turn expanded the ways we are able to think, which altered the intellectual evolution of our species. Reading is one of the single most remarkable inventions in history.”¹¹ Wolf further argues that our capacity to be “expert readers” and to read deeply “means we can utilize the reading brain to propel comprehension . . . inferential and deductive reasoning, analogical skills, critical analysis, reflection and insight.”¹² All of this allows humans to go beyond the text to make new connections and have new insights. This reading brain has helped to foster nothing less than human consciousness. Nevertheless, modern book culture, which extended reading to a larger segment of society, dates only from the eighteenth century.¹³ Kernan argues that the end of book culture also began after World War II.¹⁴ Mass social book culture, which educated baby boomers experienced as pervasive and eternal, has a history of only about two hundred years, largely limited geographically to Western Europe, the United States, Canada, Australia, and New Zealand.

For deep reading we need time to think, time to carry out the slower, more time-consuming cognitive processes that are vital for the contemplative life and for the development of new insights. This is Proust’s sanctuary of reading, a sacred opportunity to venture into the unknown and back again.¹⁵ Perhaps you recalled a similar experience in response the question posed at the beginning of this essay. This kind of contemplation sounds like Socrates’s “examined life,” and the brain may need this ability in order to learn the humanities. Socrates himself resisted the written word and sought to preserve oral communication as he believed writing degraded the capacity of memory.¹⁶ Many early societies faced a similar transition, from oral tradition to writing, and claims at the time for the superiority of memory and oral communication were common. Ironically, of course, Plato preserved Socrates’s dialogic and narrative world and the idea of the examined life though the written word.

Wolf suggests we are at another transitional moment. Given that our brains are elastic, Wolf wonders if in the new digital age human

beings will lose capacity for deep reading and contemplation. If so, we may also devalue the humanities, which depend on those two capacities. “[The] digital learner seems particularly well-suited for a life of activity and a life of enjoyment, rather than contemplation,” says Wolf. “The emphasis now is on digital media, on efficient, massive information processing; flexible multitasking; quick and interactive modes of communication; and seemingly endless forms of digitally based entertainment, which encourage such lives [solely of activity and enjoyment].”¹⁷

If we were not born to read, and if deep reading was just an adjustment to the capabilities of the brain, then how will the human brain of the future function? The digital age is here to stay. The humanities may have to adapt the reflective capacities of the reading brain to the nimble, multi-functional, multi-model, information-integrative capacities of a digital mind-set. Wolf argues that the two need not to inhabit separate realms.¹⁸ However, co-existence may be only a temporary reality. With the rise of reading and storage of information in written works, there was a historical decline in human use of the brain’s capacity for memory. For example, a West African griot who narrated the history of the Mali kings from memory, mocked reliance on books: “Other peoples using writing to record the past, but this invention has killed the faculty of memory among them. . . . The prophets did not write and their words have been all the more vivid as a result. What paltry learning is that which is congealed in dumb books.”¹⁹ Just as book readers stopped memorizing *The Iliad* because they could read it, digital readers may stop thinking about *The Iliad* because they can download a short synopsis of what they should think about *The Iliad*.

What then is our best chance for a future of liberal arts education? Can we sustain the reading brain and the digital mind? The librarians at Dominican University already claim that electronic databases and e-readers will soon make dinosaurs of book libraries. To investigate learning from books and e-readers, the humanities department at Dominican applied for a National Endowment for the Humanities grant to evaluate the Apple iPad for use in a Great Books seminar. Two

sections of the course would be evaluated, one reading traditionally assigned books and one using the iPad. The question was whether there would be any increase in deep reading using the iPad. While we did not receive the grant, primarily because we contemplated using only one type of e-reader, a collaborator of ours at California Lutheran University had used a similar experiment with Amazon's Kindle in a lower division English class. This study documented three outcomes with the lesser interactivity of the Kindle: 1) there was deeper reading; 2) student writing was more accomplished with better use of sources in the text; and, 3) student use of library resources increased, even checking out books. Students did report enjoying turning pages by pushing a button. This merits comparison to iPad's finger swipe. However, the new highlighting, storage, and search features also need analysis.

Digital technology is a slippery slope. As a technological tool, the book, as used by the baby boomers, had an unchallenged history of about fifty years. Digital technology can become obsolete in a matter of only a few years. Liberal education must consider how the digital mind is evolving. If changes occur at the level of the neuron, what happens to the brain when deep reading is less taught and less valued? What will happen as fast interactive decoding of information takes the place of deep reading or becomes equally important? We do not know the answers to these questions, but we need to be attentive to the possibilities. We may need the reading, contemplative brain to help us with the answers.

And do the humanities have a good friend in American universities today to help address these issues? We suggest not. In *The Last Professors: The Corporate University and the Fate of the Humanities*, Frank Donoghue traces the ideal of the tenured professor that emerged in the early 20th century. According to Donoghue, the only remaining vestiges of this early ideal are the professors in the humanities, who are now marginalized in much of the academy. Science professors, business professors, and social science professors have avoided this fate because they are no longer creatures of the academy. They have government and outside financial sources that create a different role

than the “autonomous, tenured [professor] afforded the time to do research and write as well as teach.”²⁰ These non-humanities professors are more the product of partnerships and research agendas defined by the priorities of the government and corporations. Donoghue traces the devaluation of the humanities back to the late nineteenth and early twentieth century when the new titans of industry, such as Carnegie (steel) and Crane (elevators), considered university professors parasites who were not useful to society. Liberal arts education “prepared students for life on another planet,” Carnegie famously quipped.²¹ The focus of higher education in the United States shifted to “useful knowledge.” Charles Birdseye, father of the man who revolutionized frozen food, claimed that universities needed to be seen as part of the business and commercial machinery and measured by the same standards.²² At the turn of the century, scientific management was introduced into the academy, creating rationalization of faculty productivity (workload standards), and a call was made for the standardization of texts and lectures to increase efficiency.²³ This was also the beginning of the trend to have university boards of trustees dominated by business leaders.²⁴ As a result, Donoghue concludes that the “humanities and the university are not the same.”²⁵

Jonathan Cole also notes the decline of the humanities in his new book *The Great American University*. Cole traces the history of research universities from the model developed by Johns Hopkins in 1876, then replicated throughout the country, especially after World War I.²⁶ As the great American research universities rose, the trend towards useful research continued unabated with government and corporate aid, particularly in science. The result blended the German research and discipline specialization model with the British character development and residential campus model, thereby creating the hybrid university that came to dominate American education. This trend increasingly relegated humanities to the margins of the academy. After two boom decades following World War II, there was a dramatic decline in the humanities starting in the early 1970s continuing through the present.²⁷ Cole argues that the humanities are undervalued

and should receive government support, but notes that this is unlikely given the current priority universities give to health sciences.²⁸

In light of these gloomy statistics, Donoghue concludes that the humanities will survive in the 21st century, but not in the university. "Curricula change over time, and the humanities simply do not have a place in the emergent curriculum of the 21st century." Donoghue inquires: "If the humanities are to flourish outside academe who will train the new generation of public humanists how to read and write?" He points out that it was not until 1922 that the first university in the United States accepted creative projects for advanced degrees, creating a migration of humanists from the world of literary magazines to the academe.²⁹ There may now be a need for humanists to migrate back to the city.

An additional challenge is emerging in the resource divide among institutions of higher education. While elite schools also feel the pressure to become more useful, closing down philosophy and classics majors, Donoghue admits that the elite schools will continue to offer courses in liberal arts education to the gifted and wealthy. This means that democratic education and mass education will increasingly be vocational education, closing off humanities from the vast majority of students. The trend can be visualized in the change in endowments cited by Cole in Table 2.

If liberal arts education will be reserved for a privileged few in elite universities, what about humanities for the rest of society? If democratic, mass education will mean only vocational education, then humanities may need to consider partners outside the academy to sustain deep reading and the liberal arts. This may require creative new relationships between the academy and institutions which promote the liberal arts, such as symphonies, ballet companies, museums, and art galleries, which are mainly located in cities and operate either as non-profits or through government support. Just as science and professional education have found partners in government and business, the humanities may have to partner with these other institutions where the humanities, deep reading, and reflection are valued and sustained.

Table 2

Institution	Endowment-1899	1939	2007
Harvard	12.6 million	135 million	34.9 billion
Columbia	13 million	70 million	7.2 billion
University of California (all campuses)	2.8 million		6.7 billion (Berkeley)
University of Michigan	.5 million		7.1 billion
Yale			22.5 billion
Stanford			17.2 billion
Princeton			15.8 billion
University of Texas			14 billion ³⁰

Dominican University started this kind of relationship about five years ago with the Lines Ballet Dance Company. On our own, Dominican had been unable to sustain a dance program. However, by partnering with Lines Ballet, a company that had many students who wanted a bachelor's degree, Dominican was able to launch a successful dance program and offer a BFA. The program has sixty students who now compete against Julliard and Fordham. The partnership works because Alonso King, a master choreographer with an established dance company, sought a college degree in humanities for his students to complement their dance training. Intense training schedules were a

barrier for his students to traditional college enrollment, so most were foregoing it. Dominican worked with their training schedule to create late afternoon liberal arts classes. Of the first graduating class, all but two ended up in professional companies. Many cities have a lively arts scene that supports companies like Lines Ballet. Perhaps such partnerships and consortial arrangements are a way forward for the humanities in general.

While these creative solutions may prolong deep reading, the fate of liberal arts education may be determined by larger historical forces, such as the demand of people wrapped up in consumer capitalism for a job and the technological shift from the book to digital storage as the tool of learning. It is unlikely that the decline in liberal arts education over the last century resulted from the hostility of a few corporate magnates, but rather from the large demand for jobs, supplied mainly by vocational training. These occupations have grown more complex since the end of World War II so that the specialized knowledge they require does dictate a few years of post high school training, hence the incorporation of these fields into colleges and universities. The shift away from deep reading has largely happened in the family as entertainment moved from reading books to watching television, going to movies, playing video games, and now engaging in all these activities on handheld devices. The impact of a sports-absorbed society also cannot be overlooked. Consequently, increasing numbers of students reaching college will simply not know how to read deeply and no college level strategy will be able to change that. Donoghue suggests reading and writing will be taught outside the university.³¹ Kernan argues that educational institutions are always in transition and “necessary compromises” will be made.³² So the liberal arts education faculty of the future may have to abandon their insistence on deep reading and the book as a tool and use the digital tools available to reach those students who still have an interest in the humanities. Deep reading itself may become like the humanities of the past in classical Greek and Roman times, during the Renaissance, and Enlightenment: the preserve of a small number of people, often the beneficiaries of the

shrinking number of parents who train their children to read in the face of mounting social pressure to abandon such a quaint occupation of the past. The moment in the post World War II West when liberal arts education expanded briefly into a large number of fortunate baby boomers who received primary, secondary, and college liberal arts education based on deep reading may vanish into history. This does not mean liberal arts education itself will disappear, though it is likely to become an ever-smaller part of the future university. However, the tools to teach the humanities, the way the humanities are taught, and the partners who support them may very well have been transformed beyond recognition by a typical faculty member in the humanities today.

NOTES

- ¹Maryanne Wolf and Mirit Barzillai, "The Importance of Deep Reading," *Educational Leadership*, Vol. 66, March 2009, No. 6, 32-37.
- ²*Ibid.*, 32.
- ³*Ibid.*, 34.
- ⁴Nicholas Carr, *What the Internet is doing to our Brain* (New York: W. W. Norton, 2010), 7.
- ⁵Commission on the Humanities, *The Humanities in American Life: The Report of the Commission on the Humanities* (Berkeley: University of California Press, 1980), 4.
- ⁶Bruce Kimball, *Orators and Philosophers, A History of the Idea of Liberal Education* (New York & London: Teachers College Press, 1986), 115-117.
- ⁷*Ibid.*, 161, 163, 170.
- ⁸Alvin Kernan, *In Plato's Cave* (New Haven & London: Yale University Press, 1999), xiv-xv.
- ⁹*Ibid.*, xv.
- ¹⁰Wolf and Barzillai, "Deep Reading," 33.
- ¹¹Maryanne Wolf, *Proust and the Squid: The Story and Science of the Reading Brain* (New York: Harper Perennial, 2008), 3.
- ¹²Wolf and Barzillai, "Deep Reading," 33.
- ¹³Roy Porter, "Print Culture," in *The Creation of the Modern World* (New York & London: W. W. Norton, 2000).
- ¹⁴Kernan, *In Plato's Cave*, xv.
- ¹⁵Wolf, *Proust and the Squid*, 6.
- ¹⁶Wolf and Barzillai, "Deep Reading," 32.
- ¹⁷*Ibid.*, 32.
- ¹⁸Wolf, *Proust and the Squid*, 228.
- ¹⁹D. T. Niane, *Sundiata, An Epic of Old Mali* (Essex: Longman, 2006), 41.
- ²⁰Frank Donoghue, *The Last Professors: The Corporate University and the Fate of the Humanities* (New York: Fordham University Press, 2008), xi.
- ²¹*Ibid.*, xiii.
- ²²*Ibid.*, 5.
- ²³*Ibid.*, 8.
- ²⁴*Ibid.*, 14.
- ²⁵Frank Donoghue, "Can the Humanities Survive in the 21st Century?" *The Chronicle of Higher Education*, Sept. 10, 2010, B4-5.
- ²⁶Jonathan Cole, *The Great American University: Its Rise to Preeminence, Its Indispensable National Role, Why It Must be Protected* (New York: Public Affairs Press, 2009), 19.
- ²⁷*Ibid.*, 156.
- ²⁸*Ibid.*, 157.

²⁹Donoghue, "Can the Humanities Survive,"
B4-5.

³⁰Cole, *Great American University*, 34.

³¹Donoghue, "Can the Humanities Survive,"
B4-5.

³²Kernan, *In Plato's Cave*, xvii.