What Is Digital Dementia?

Twenty-five centuries after Socrates dismissed writing as a techne that would implant forgetfulness in its users' souls, a 2007 study conducted at Trinity College Dublin found that 25% of survey participants under 30 years old couldn't remember their own home phone number without consulting their handheld device. Only 40% of those under 30 could remember family birthdays, compared to 87% of participants over the age of 50 (Robertson). The primary researcher, Ian Robertson, suggests that the results are due to *technology-induced memory atrophy*. Similarly, ongoing research by South Korean psychiatrist Yoon Se-chang suggests that "As people are more dependent on digital devices for searching information than memorizing, the brain function for searching improves whereas an ability to remember decreases" (Chung-a). The result of this dependency, suggests Se-chang, is a form of *digital dementia* that manifests itself in decreased memory performance. His observations were further corroborated by South Korean marketing research group Embrain, which conducted a study in 2007 of the relationship between forgetfulness and the use of digital devices. In a survey of 2,030 salaried men, Embrain noted that 63% reported suffering from forgetfulness, and of these, 20.4% blamed the digital devices that relieve them from the need to memorize information (Chung-a). An article in the *Korean Times* sums up the problem in appropriately anecdotal terms: "Unlike before, people these days are not required to make much effort to remember things as they are just a button away from all the necessary information which is stored in cell phones, PDAs or navigators." The image conjured up by these studies is that of a gadget-dependent race of humans who "will appear to be omniscient and will generally know nothing" – that is, they will know nothing without access to their digital prostheses.

Besides the fact that evidence of digital dementia seems to be rooted in anecdotal observation (primarily self-reporting), another problem with the concept is that it appropriates the term dementia, and simplifies it in ways that would be condemned by the scientific

community. First of all, it is essential to note that there are various types of dementia with identifiable symptoms and causes, including vascular dementia, Kreutzfeld-Jacobs Disease, Alzheimer's Disease, and Dementia with Lewy Bodies, among others. Dementia, as any neuroscientist would suggest, is not exclusively about memory loss. The word itself simply denotes impaired mental function, and it points to a broad range of symptoms that impact not only memory, but also communication and language, attention, reasoning and judgment, and visual perception, among other cognitive functions. For this reason, the term *digital dementia*, which emerged in response to perceived memory loss, is much too broad. And yet, the label is instantly recognizable by those who are wary of technology's impact on their own cognitive functions.

In his recent book *Digitale Demenz*, renowned German neuroscientist Manfred Spitzer provides an unforgiving and unforgetting damnation of digital media. Drawing on fMRI scans, neural network models, and statistics, Spitzer arrives at such indemnifying interjections as "Digital media are detrimental to learning and thus to the mental development of babies!" (220)[1]. Like Nicholas Carr and Maryanne Wolf, Spitzer turns to the concept of brain plasticity to suggest the many ways in which the use of digital media impacts cognition. The result of his research does little to inspire confidence or trust in the future generations of digerati:

> In 2020 the brains of multitasking teens and young adults will be *networked* differently than the brains of people older than 35 years, and this will result in bad and sad consequences. They will hardly be able to remember anything; most of the energy will be spent on exchanging short social messages or on entertainment and diversion from a really deep commitment to the people and to knowledge. (207)

Unlike the previous diagnoses of digital dementia cited above, Spitzer's work is rooted in sound neuroscience, and his conception of dementia is certainly more well-rounded than those

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[1] Translations of Spitzer's *Digital Dementia* in this text are Rudolph Hänsel in his essay, "The too frequent use of digital media reduces the mental capacity of our children."

based primarily on memory atrophy. Where Spitzer's work falls short, however, is in his suggestion that the changes wrought in the brain by exposure to digital media are *permanent* changes, such as those wrought by Alzheimer's Disease, for example. But the symptoms he describes are more akin to those experienced by individuals with *reversible dementias* like depression, alcohol and drug abuse, and nutritional deficiencies (Tripathi and Vibha, 2009). Spitzer himself compares Internet usage to alcohol consumption, suggesting, "Not by practice, but by the longest possible abstinence [do] you acquire the healthiest way to deal with it" (1).

Clearly, digital dementia is not a cognitive death sentence. Moreover, perhaps we are missing the point by focusing on the reversibility of digital media's cognitive effects. Who is to say that we will want to reverse these effects at all? Like the human brain, digital media are also *plastic* in nature. As media and brains coevolve, the effects of digital media observed by Spitzer today may not be consistent with effects observed in a decade or more. What's more, who is to say that digitally demented brain is not impaired at all, but rather, that it is an enhanced brain? This would be the transhumanist argument, as I will discuss in greater detail below. As science, then, the concept of Digital Dementia may not hold water, and it obfuscates and possibly belittles forms of dementia that have been scientifically validated. Also, by labeling cognitive effects wrought by technology as a disability, techno-naysayers are at once engaging in a questionable form of ableist rhetoric, while discounting the possibility that new media might actually enhance attention, memory, and affect, especially as our brains continue adapting to new media technologies. Still, in spite of the inflammatory rhetoric and questionable science surrounding digital dementia, it continues to be a compelling concept.

Theories about technological impacts on cognition are indeed difficult to prove, especially since the central concept that fuels the work of digital naysayers – brain plasticity –

might also provide counterarguments, as noted in my comments above. But such speculations may serve as useful thought experiments. As David Wills suggests in *The Dorsal Turn*, we are helpless when it comes to understanding the impacts of technology on the human race, and for this reason, we should reserve "the right to *hold back*, not to presume that every technology is an advance" (6). Recognizing McLuhan's maxim that "We see the world through a rear view mirror," Wills calls for a conceptual account of how technology "defines and redefines the human," keeping in mind that these definitions take place "downstream from the point at which a given technological creation was brought into effect" (8). Socrates, for example, could not have predicted that literacy would lead to the invention of topical logic, the mastery of linear narrative, and the blossoming of philosophical education. Given our helplessness in such a situation, media theorists should turn not only to scientific proof, but also to inventive speculation, which means working less like scientists and more like digital artists or science fiction writers.

What I propose, then, is not to abandon the concept of digital dementia, but to treat it as intelligent science fiction, teasing out the ways in which this ersatz disease can be a learning tool for researchers who are interested in how the human brain coevolves with technology. In order to build a more robust conception of digital dementia, I will examine it from the perspective of various types of memory impairment, focusing primarily on the types of dementia most commonly associated with Alzheimer's Disease. The result will not be a scientific taxonomy, but a speculative taxonomy, a generative exercise that may not provide solutions, but that will open doors for discussion.

Dominic O'Gorman