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Smarter Than You Think: How Technology Is Changing Our Minds for the Better

A Review of the Literature

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Abstract

In our class, Information Technology and Creative Practice, we have spent much time learning about influential people directly responsible for the evolution of computer technology to its current state of the art. To complement our journey through this rich and relevant history, I will be reflecting upon the non-fiction book *Smarter Than You Think: How Technology Is Changing Our Minds for the Better* (Thompson, 2013). This book was an appealing read to me. The author takes into account how current technology and digital media is being used by the general public and attempts to draw conclusions on how it may be affecting the thinking process of individuals and global populations. Is technology making us smarter, or not? If Thompson's (2013) research and reasoning is accurate, we are to believe that it does.

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I often take for granted the many processes and corners that computers allow me to cut from my mental routine: Remembering phone numbers, studying a map, remembering birthdays. Not to mention the instant access to knowledge and entertainment that has all but arrested my collection of paper publications and physical media. As convenient as these changes may be to everyday living, how do they affect our thinking as individuals, as learners, or as cultures? *Smarter Than You Think: How Technology Is Changing Our Minds for the Better* (Thompson, 2013) analyzes instances of humans creating, utilizing, and competing against computer technology.

Human vs. Computer vs. Human w/ Computer

When IBM supercomputer Deep Blue defeated world chess champion Garry Kasparov in 1997, it was revolutionary. While it appeared that Deep Blue had tricked Kasparov with a devious ruse and finished the game in nineteen moves, it would be altogether too human to assign motives to the supercomputer's actions. Deep Blue really only had one directive, much less an actual strategy: brute force computations. Imagine the mental impossibility for a human brain to calculate every possible move of every chess piece on the board and select a course of action based on most favorable odds of winning, and doing that for every piece, for every game, without fatigue. These are the brute force calculations for which Deep Blue existed, and this is how it beat the best chess player in the world.

Instead of taking a Luddite approach to computer participants in chess, Kasparov acted upon a rather symbiotic idea. Thompson (2013) explains:

“What would happen if, instead of competing against one another, humans and computers collaborated? ... Together, they would form what chess players later called the centaur: a hybrid beast endowed with the strengths of each. ... In June 1998, Kasparov played the first public game of human-computer collaborative chess, which he dubbed “advanced chess...” (Thompson, 2013, p.2).

Two New England men (Steve Cramton and Zackary Stephen) who were chess amateurs ran with this concept and took the creative practice of information technology to yet another level. Using three off-the-shelf laptops and consumer grade chess strategy software, Cramton and Stephen defeated Hydra (an even more powerful computer than Deep Blue) in 2005. Their victory was attributed to their expertise in computer collaboration. The centaur proved to be superior to both the man and the machine. This trivial piece of world history sets the stage for how technology has created another highly effective tool for humankind to further our Olympian aspirations. Thompson (2013) concludes that a human using a computer becomes more powerful than either one alone.

Total Recall

Forgetting can be a valuable asset to the human psyche. The human brain is unable to remember absolutely everything, and Thompson (2013) points out that complete retention would clutter your thought process so badly no creative thought could be achieved. Things that remain in your memory are of importance for your identity, whether it is an impressionable moment or information that you committed there. Of what use is information that we regularly forget, such as every single workday commute, every cup of coffee you ever drank, or every word of every book you have read in your lifetime? Thompson (2013) points out that it is unnecessary for humans to be able to remember this seemingly infinite span of moments in the average lifespan, and yet, what if we could? What value would this information present?

The concept of the “lifelogger” (Thompson, 2013) is introduced; communities of people who use audio, video, and other various logging technology to record every moment of their lives with wearable hardware. Thompson (2013) narrates the lifelogging of several interview subjects, his research on others, and science fiction parables of similar themes. He makes the point that the constant record keeping is paradoxical to the nature of how human brains create memories, but the data collected could be useful to posterity. Enter MIT speech scientist Deb Roy, who in 2005 had his entire house equipped to capture video and audio in every room simultaneously, at all times. The system logged 300 gigabytes of data per day, every day, for two years, starting with the birth of his son. As a speech scientist, Roy used this data to analyze how babies learn speech and language. Upon detailed research, it was rich with possibilities and new ideas for child language development. Roy had created the most detailed memoir in history.

Yet would this info be valuable to anyone but Roy’s family and a small part of the speech science community? Who else would want to access this information, much less process it? Probably no one, but that does not negate its validity. In this case lifelogging has been proven to be a scientific asset, where most people may shrug it off as an egotistical indulgence if the lifelog did not have a higher purpose. Regardless of opinion, this is an effective way to compliment human memory and use technology to record events with accurate preservation. The digital data stands as the unquestionable witness, without prejudice, completely objective. It can help us draw conclusions from events that humans may have not simply forgotten, but barely registered as existing at all.

Storage Space

Perhaps the foremost question on my mind about information technology is if our constant reliance on it makes our mental retention poorer. Do we become too lazy to remember anything

but logins and passwords? This was also Socrates' concern, as well as many other philosophers and scholars throughout history. Thompson (2013) devotes an entire chapter to this question with interesting conclusions. His explanation of ubiquitous, outsourced, archived information that is now available on demand makes it sound like this is another social norm:

“Yet somehow, the Internet age feels different. ...It's less like consulting a book than asking someone a question, consulting a supersmart friend who lurks within our phones. ...In a way this is precisely what's going on. We're beginning to fit digital tools into another very ancient behavior: relying on social memory for facts. It turns out that historically, we store the knowledge not only in the objects around us, like books. We store knowledge in the *people* around us – our friends, coworkers, and romantic partners. While we think of knowledge as an individual possession, our command of facts is often extremely collaborative.” (Thompson, 2013, p.122)

Thompson (2013) points out that information storage in the internet age mimics every other age. As normal as Thompson (2013) makes our collective knowledge behavior seem, in the digital world it is still rife with an ancient problem: false information. With free access to user-defined reference sites such as Wikipedia there is the even higher risk for spreading incorrect information or revisionist history. Myths are still prevalent on the internet, if just from the average person's input on blog postings or forums. Information is correct most of the time, such as my Google and Bing results for: “how to stop a nosebleed.” All matching websites on the first page of results gave essentially the same information. However, when I searched for: “who killed JFK,” the spectrum of uncertainly blossoms. As Thompson (2013) speculates, it really is like asking supersmart friends because inevitably these friends are going to have answers based on their opinions.

While these types of factual and biased errors have always existed when recording information, the process of preserving and archiving has always been beneficial to humankind. It allows us to use what we have learned as a collective species and apply it to new aspirations.

We do not need to rediscover electricity every time we flip a light switch, or more to the point, I do not have to be a programmer in order to use Adobe Creative Cloud. I am allowed the convenience of performing my role as multimedia producer instead of software programmer. The granted nature of information may cause individual humans to pay less attention to subjects they have little interest in, and conversely, allow them spend more time investing their memory into things they are passionate about.

Thompson's (2013) book approaches computer collaboration, information retention and branches out on several others such as video gaming and education. His conclusion is that computers challenge, expand, and amplify our thinking, and thus, our collective intelligence. The book never hovers too long in one area to make the read feel like a textbook or research publication. While it is clear he did do a fair amount of research, travel, and personal interviews, this book reads very casually as if to flag down its core audience in the New York Times bestseller list. Being a working class consumer of technology and personally engaged with the effect the digital world is having on our everyday lives, I cannot help but think this book was written for people like me. While the social and mental subject matter of this book will still be relevant in years to come, it may unfortunately share the same outmoded fate as the technology it attempts to help us embrace. Due to the exponential growth and influence of computers in our modern lives, I am sure there will be no shortage of data to revisit these topics again in the next decade.

References

Thompson, Clive (2013). *Smarter Than You Think: How Technology Is Changing Our Minds for the Better*. New York, NY: Penguin Group.