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# TECHNOLOGY AND THINKING: A CONFLICT

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## ABSTRACT

This essay is a discussion of the relationship between technology and thinking. Technology is defined as information, communication and media technologies. Though philosophical in nature, this paper is written by a technologist for technologists in an effort to spur engaged thinking about technology, innovation and what it means to be human. Woven into the discussion are the issues of what technology is, happiness in relation to technology, and the conflict between intellect, innovation, frame and being. The argument is made that technology is a deintellectualizing surrogate. Though society may be happy with technology, both society and technologists need reminded to truly think.

> "…the essence of technology, about which much as been written but little has been thought."
>
> - Martin Heidegger, Letter on Humanism, 1947

**Introduction**

The following treatise is a novel attempt to understand the relationship between technology and thinking. Technology is a broad term and could be defined as anything imagined and created that is a tool or extension of the human body or mind. However, modern times call for a modern treatment of the subject. We can only affect the present and future, therefore a reflection of technology in the history of being, though beneficial, is not the focus of this effort. Technology is where it is in its evolution, so of primary concern is the current state of technology. Therefore, I use the term technology to mean its foremost manifestation in my field of study, as information and communication technologies (ICTs).

The main theme throughout this paper is not singly technology or thinking, but the conflict that exists between these powerful *ways of being*. Though I highlight a variety of important issues, my intention is not to deeply explore each, but to form a picture of the conflict. This requires elucidating the interconnectedness of various fields in relation to technology. The multi-fold *Technology and Thinking* conflict of intellect, innovation, frame and being touches on issues including communication, epistemology, politics and morality/ethics. An effort to explore each issue would be a much larger project, for which this could be a precursor. Also, the conflict elements must be properly recognized and the questions asked before solutions can be given to resolve the conflict, if in fact resolution is possible. This approach leads to a revealing of the conflict for what it is. Congruently, I suggest that the bodies of literature used to support my arguments are not disparate, but related by the theme. Thus, the references should be viewed as a collective literature of the conflict between technology and thinking. I also re-emphasize that novelty was sought in the writing of this paper. From a literary point of view this means modest reliance on preceding views and in some cases omission.

With regard to limitations, I do not explore the alternative views to the charges made throughout this paper. However, alternative views are a part of my frame of mind. As a technologist I am enthralled by technology. Technology has reveled many characteristics of the world and given us all much to think about and do. Professionally and academically technology is

what I do. I also espouse a number of views held by my fellow technologists. Primarily, that technology harbors a great number of opportunities for humankind. Yet, to be sincere I am unsure of its place, its goodness and its outcomes. The unsureness led to this scrutiny.

For clarity, what follows is an outline of the argument development within this paper. First, I contrast what technology *is* with what it is not and describe how technology relates to thinking. Thinking, in its true form, is *being* contemplation. This leads to the questions of what and how technology contributes to being. Humans are easily tempted to believe that technology contributes to being by providing happiness, primarily pleasure of the mind. However, I argue that in actuality technology is merely a surrogate for pleasure of the mind. And as an intellectual surrogate, what are the effects? This leads to the main question: Is technology deintellectualizing? The conflict lies within the essence of this question. For humans, particularly those in technological society, a struggle exists between intellect, innovation, frame and being. The problem is that technologists often lack the awareness of or concern for the deterioration of intellectual engagement brought on by technology. In short, technology is in conflict with our humanity, our being, our thinking. As a technologist I must admit to this conflict and I conclude by stating my conflicted stance. The purpose of this theory-focused paper is to raise awareness and ask the questions. The answers lie in thinking.

**Technology *is***

I want to take a moment to discuss what technology *is*. The reason for this is that the phrase "technology *is*" will be used several times and I want to confront a misnomer about technology. The definition of technology has been given for the context of this paper. So, when I say technology *is* a setting, I mean information and communication technologies are a setting. I also view technology in this sense to be a "thing" and disagree with many sociologists and philosophers of technology to an extent on the nature of technology. Modern sociologists tend to think of every*thing* as behavior, including technology, but I cannot agree with such a notion. This highly touted approach is a misunderstanding of what is meant by the terms "techné" and "technology."

In trying to define the term technology many academicians have stated something to the effect of, "The word, based on the Greek root, *techne* (meaning, or pertaining to, art, craft)" (Marx,

1997, p. 966).[1] And sociologists have stated, "technology *is* social behavior" (Pfaffenberger, 1988, p. 17). This is to "hazardously" state technology *is* human, an issue I will confront in this essay. What I can agree to and argue is that technology *is* a surrogate, a mask, for human actors and actions (Marx, 1997). The cautious approach I take is to say techné *is* human and a mode of behavior, which humans tend toward. And although *based* on the word techné, I would never say the same about the modern term technology, which *is* a *product* of techné and a physical manifestation of technique. Unfortunately, this difference is rarely accounted for and thus results in synonymous usage of the terms and erroneous statements.

Techné *is* art, a process that involves *reasoning* and *doing*. An artist imagines a landscape and paints it (techné) = art piece (thing). An engineer imagines a social network and codes it (techné) = network (technology). Reasoning, what might be called "thinking," can result in technology. Unfortunately, this is misguided thinking and therein lies the problem. True thinking is about *being*, the way we *are*. When this focus changes and shifts out of its natural element it is often replaced by something else, particularly techné, the revealing of some*thing* imagined or known (Gotz, 2001; Heidegger, 1998).[2] One result is modern technology, an expression of techné, often in a manufacturing sense, the mass creation of the imagined thing. This takes society further down the road of materialism and further removed from "making that is accompanied by true reason" (Aristotle, 2011, p. 120). Technology (in this context) is not based on true thinking, but on practical thinking, thus it is philosophically detached from being. This is not to say technology is inherently immoral, just that it is detached from thinking. So, though detached, does technology contribute to thinking (being)? And if so, what and how does technology contribute?

**Happiness**

Technologists, those who envision, produce and support technology, would say ICTs are necessary to being in the modern age, a requirement of existence. Aristotle argued, "For of the

[1] Leo Marx gave the term *technology* a fair assessment in this referenced article. I also agree with him that we must always keep in mind that humans are the actors behind technology, though that seems to be changing as technology advances and becomes a potential actor. However, I would still argue that technology is a "thing" (e.g., object, means), just that it is a thing imagined, developed, implemented and promoted by humans. As to his argument, I would state it is "hazardous" to ascribe autonomy to techné.

[2] See Martin Heidegger's *The Question Concerning Technology* for his expository dialogue.

things that exist or come into being of necessity, there is no art" (techné) (Aristotle, 2011, p. 119). Depending on the definition of "necessity," this would separate techné and the resulting technology from lógos (reason). However, if the resultant technology is not only about usefulness, but satisfaction (Gotz, 2001), then it can be understood why one might have hope for the contributory potential of technology. Satisfaction implies the need met or the desire gratified, but also borders on the provision of contentment or happiness, the likely state of one with needs met and desires gratified.

Happiness is simply a condition of happy, the feeling of pleasure or contentment (not in excess). The belief that pleasure or happiness is the greatest good in life has been known by the labels of hedonism, Epicureanism and utilitarianism. Perhaps technology, as a *setting*, is a striving for utilitarianism. This is the would-be goal of democratic technological society, if such a state of being is possible. To use Jeremy Bentham's words, "the greatest happiness of the greatest number" (Bentham & Schofield, 2009, p. 393). And as long as technologists believe the outcome will make society happy, they will continue to create the things they imagine.

Modern society considers technology a higher level of existence and one of happiness, which means society is increasingly dissatisfied with the removal of a technology. Technology is a matter of pride and self-worth. The amount and types of technology a person uses and the way they use technology (tool or extension) says much about the person. The same holds true for a social group. The problem is that once an individual or group has lived on a particular level, they can never happily (satisfactorily) sink to a lower level of existence. The human sense of dignity, which is constantly altered by innovation, will not allow placid degradation. John Mill (2008) stated, "It is better to be a human being dissatisfied than a pig satisfied; better to be Socrates dissatisfied than a fool satisfied" (p. 18). A modern technologist would state: It is better to be a digital citizen dissatisfied than a human citizen satisfied. Evidence: An entire body of literature screams of the necessity to close the digital divide. But why?

Technology primarily supplies pleasure of the mind, as opposed to pleasure of the body. Mill (2008) argued that refined humans seek the higher pleasures of the mind (intellectual pleasures and imagination) above those of the body. Perhaps that is why we are so drawn to a virtual existence. We have virtual modes of communication, personas, avatars, connections, tendencies…life. We love virtual existence as opposed to reality, though virtual existence may

unconsciously make us less engaged emotionally, politically and morally. The argument could be made that digital natives, those raised alongside tools of the digital age, have always had a concurrent virtual existence. Yet, technology is only a surrogate for pleasure. Technology is a falsification of happiness. And just as thinking shifts from being to techné, intellectual pleasure shifts from the mind to virtual reality.

**The Fourfold Conflict: Intellect, Innovation, Frame, Being**

This realization raises another question. Are emerging information and communication technologies deintellectualizing? If technology is a surrogate for pleasure of the mind then what technology does to intellectual curiosity must be of concern. Some scholars have argued that ICTs are surrogates for political engagement (Barney, 2008; Dean, 2005), but what if the problem is much deeper. I would argue that this is not only the case with political engagement, but engagement in general, intellectual engagement. Andrew Barry (2001) has suggested that technology is not always "inventive" (in the useful sense), it can rigidify habits of thought and in some cases could be anti-inventive (p. 213). Neal Gabler (2011) also used the term "inventional" (in the idea sense) when arguing the difference between profit-making inventions and intellectual thought; marketplace "ideas" are "material, not ideational" and though they "change the way we live, they rarely transform the way we think" (para. 23-24). Taken together, "inventive" and "inventional" could define modern "innovation." Technology innovation does not always take society in a *good* direction, a *thoughtful* direction. Yet, the need for pleasure of the mind, happiness, the desire for understanding, the intellectual itch, is materially satisfied by technology. So, technology evolves.

Many people would argue that the next innovative technology or device is intellectual progress. I tend to disagree. Take Google for example. People, engineers, the corporation and technologists consider Google to be innovative, yet what does it do? What do Google's executives wish for Google to do? They want Google to think for us (Levy, 2011).

Excerpts from *In The Plex* (Levy, 2011):

"We want Google to be the third half of your brain." – Sergey Brin (p. 386)

> "[Google] will be included in people's brains. When you think about something and don't really know much about it, you will automatically get information… Eventually you'll have the implant, where if you think about a fact, it will just tell you the answer." – Larry Page, in 2004 discussing the future of Google (p. 67)

> "Ultimately I view Google as a way to augment your brain with the knowledge of the world…you can imagine that it could be easier in the future, that you can have just devices you talk into, or you can have computers that pay attention to what's going on around them and suggest useful information." – Sergey Brin, stated in 2004 (p. 67)

> In 2010 "[Larry] Page…said that Google will know about your preferences and find you things that you don't know about but *want* to know about. So even if you don't know what you're looking for, Google will tell you." (p. 67, emphasis added)

And members of society are seemingly OK letting technology and technologists think for them. I was a fan of Steve Jobs' intellect, but people have claimed he knew what we wanted before we did, though even he cautioned against living with the results of others' thinking (Wired Staff, 2011, para. 1, 19). I would ask: What was his stage of moral development? What guided his intellect and was it good? Did Steve Jobs or Google ever ask: Is this good? Maybe they did, maybe they did not, but the more pressing question is did society, did you?

Though many academicians are cautious (as am I) to submit to technological determinist thinking and maintain that we have choice, individually or socially, in the shaping of technology, it is hard to deny the reality of technological framing. As even anti-determinist Bryan Pfaffenberger (1988) has stated, once a technology is created:

> "…the opportunity for social choice diminishes. An implemented technology carries with it a powerful vision of society in which it is to be used, replete with an equally powerful endowment of symbolic meaning and, sometimes, an obligatory plan for the way people will have to arrange themselves to use it." (p. 16)

LinkedIn is such a technology. It was imagined, created and implemented. Now, if a person desires certain high-tech jobs they must create an account, establish and maintain connections and submit their account as part of the application process. LinkedIn is a frame of high-tech employment that many technologists must use, but even they were not involved in its creation. It is an imposed solution "whose character was decided elsewhere" (Winner, 1997, p. 1015).

But what if someone disagrees with such an imposition? What if that someone is qualified for a position advertised by a company that requires all applicants be LinkedIn members, but does not have a LinkedIn account and does not want to "take part" in the frame? The company claims to be an Equal Opportunity Employer (EOE). But are they? To say the person is free to apply or not apply would be a dangerous and indifferent view. The frame is constraining, reinforces a reliance on established knowledge and inhibits creative behavior (Orlikowski & Gash, 1994). The same behavior in a modern organization results in demise, a reliance on cluelessness and "psychic prisons" in which society or we lock ourselves (Bolman & Deal, 2008). Is this *good*? Not for an organization, not for a living, breathing society, and certainly not for an individual.

Still, are emerging ICTs that automate life and function as an extension for the mind intellectually progressive? They think for us. They choose for us. They suggest for us. They know for us. They know before us. They memorize for us. They speak for us. They act for us. But they are not *us*. They are not true *being*. I type, therefore I am ≠ "I think, therefore I am" (Descartes, 1984). Therefore, intellect is not progressed as a matter of being by technology. Technology is merely an intellectual surrogate, not intellectual.

Darin Barney (2007) has raised the question if technology and democracy can coexist as material ways of being in the world. I raise the question if technology and human intellect can coexist. By this I do not mean can they be components of existence simultaneously (in fact technology would not exist apart from human action), but as a *way of being* is one "the way" and the other sentimental. If *thinking* is *being* as Heidegger and Descartes might say, can technology (inclusive of technologies that "think") and intellect coexist as ways of being in the world? On the level of the individual I would say one is the way of being and the other is sentimental. On the level of the group or society I would say one is rising and the other is falling. Though technology is the result of human practicality and the unrelenting flow of innovation continues at an

exponential rate, what does technology contribute back to human *thought*, to human *being*? Perhaps technology is unconsciously undermining our greatest human resource: the human mind.

**Being *Human***

Technology, as a surrogate, is not only falsifying intellect, happiness and being, but depriving the human of these human qualities. George Grant (1991) described the conflict this way:

> "We can hold in our minds the enormous benefits of technological society, but we cannot so easily hold the ways it may have deprived us…It is difficult to think whether we are deprived of anything essential to our happiness, just because the coming to be of the technological society has stripped us above all of the very systems of meaning which disclosed the highest purposes of man…" (p. 137)

Synonymous with happiness, Aristotle believed the highest good was eudaimonia, or well-*being* (Aristotle, 2011). The good life avoids the extremes of restraint and indulgence. The good life seeks a state of contentment. So, does technology help us (human) achieve contentment or is technology a state of [extreme] indulgence? And with constant innovation are we really ever content?

To confront this I go back to an earlier statement, "I type, therefore I am." Though the act of typing did not exist in the seventeenth century, I place emphasis on the word 'I' or 'ego' in Latin. Ego is a powerful word and unfortunately modern technology encourages 'I' more than 'I' + humankind. We would like to think that technology makes us more social, but that is not the case. All of the following "activities" can be and are increasingly completed through technology *not* through thoughtful engagement and could be visualized with the same 'I' image (see Figure 1): watching a movie, listening to music, playing a game, meeting a friend, having a discussion, buying a product, stating an opinion, education. Even social networks are not so *social*, as they shrink and filter the universe to that of the individual and friends (Gabler, 2011, para. 17). Ironically, happiness as measured by a kind of "hedonometer" on the social network Twitter shows a downward trend in happiness from 2009 to 2011 (Dodds, Harris, Kloumann, Bliss, & Danforth, 2011). This is not to say the downward trend is entirely or even primarily because of ICTs, indeed

many events happened in those years that would cause discontent, such as events in the economic and political landscapes. But one must ask what contribution ICTs, and in particular media technologies, make to the decline.

Information, communication and intellect suffer potential degradation with each passing stage of technological evolution. The oratory (supports community) becomes the book (supports discourse), becomes the status update (supports chatter). Just as the printing press took words from the amphitheater to the hands and eyes of the individual, personal digital devices have taken being from external to internal and information overload has clouded the mind, cooperatively diminishing the connection between 'I' and the world. ICTs individualize us more than they bolster human collectiveness. Therefore, technology is a state of individualistic indulgence and one in which the individual is never content. Think of how quickly people drop everything to obtain the latest gadget and how dissatisfied people are who are unable to partake in the update. No doubt a portion of the discontent is due to the increasing human disconnect and the inability of a surrogate to truly meet a need coupled with a belief that it will. In the physical sense this is my definition of materialism. In the intellectual (intangible) sense this is my definition of what I will call virtualism. Technology *is* a form of materialism that facilitates virtualism.

The purpose of this essay is not to expressly discuss the morality of technology, which is another discussion entirely. But for the moment I will simply state an undeniable truth: Technology and humans via technology have created many problems. At the same time, in general people think of technology as *good* and that it harbors the potential to cure the world's ills, technological or otherwise (Ellul, 1990). Some academicians have also argued that, "technology offers the most realistic means of finding our way through difficult problems" in modern society and it provides opportunities to "think and act freely," although the problems "continue to be largely of our own making" (Adams, 1997, p. 963). Again, this shows a convoluted error in thinking and even more problematic, thinking within a technological frame. And as I have argued, ICTs facilitate neither thinking nor free action. The mere admission that technology *allows* opportunity for thought and action is to admit to the frame. If *human* makes a problem, then why look to technology (perhaps the problem itself) to solve the problem? What if solutions lie outside of technology? What if technology does not allow us to see external solutions? What if

we are looking in the wrong *place*? Why not look in *human*? Why not look at *being*? That is to say, why not *think*?

**Oblivion**

"Technology is in its essence a destiny," said Heidegger (1998, p. 259), which implies both a state of being and a place of being. He took a historical perspective, but the statement can also give insight to the present and future. We are arriving at a destination (place of being), the world as a global technological society. But we are also well on our way to an augmented destiny (state of being), a technological mind (as opposed to a human mind), an internalized technological ego. I apply the same thought Heidegger did about technology's relation to the truth of being, that this truth lies in oblivion. I mean this in both senses suggested by the word. In one sense we are unaware of what is happening. As technology has evolved we have not noticed or cared about its disengaging influence on the mind so long as technology satisfied an intellectual itch. This disengaging is leading to the second sense, that of being forgotten. 'I', as in the thinker, fades into oblivion as 'I', as in the technological mind (ego) or thinking technology, burgeons. Collectively, these senses describe the state of technological *being*. Furthermore, this *thinking* is false thinking of the first and second order, techné and technology, "making, accompanied by false reason, and concerned with what admits of being otherwise" (Aristotle, 2011, p. 120).

**Disclaimer**

Thus, with shame I typed this essay on a technological device, the product of techné and must declare myself a happy hypocrite.

**References**

Adams, R. M. (1997). Social contexts of technology. *Social Research*, *64*(3), 947–964.

Aristotle. (2011). *Aristotle's Nicomachean Ethics*. (R. C. Bartlett & S. D. Collins, Trans.). University of Chicago Press.

Barney, D. (2007). Radical citizenship in the republic of technology: A sketch. In L. Dahlberg & E. Siapera (Eds.), *Radical Democracy and the Internet* (pp. 37–54). Palgrave MacMillan.

Barney, D. (2008). Politics and emerging media: The revenge of publicity. *Global Media Journal - Canadian Edition*, *1*(1), 89–106.

Barry, A. (2001). *Political machines: Governing a technological society*. London; New York: Continuum International Publishing Group.

Bentham, J., & Schofield, P. (2009). *A comment on the commentaries and a fragment on government*. (J. H. Burns & H. L. A. Hart, Eds.) (Reissue.). USA: Oxford University Press.

Bolman, L., & Deal, T. (2008). *Reframing organizations: Artistry, choice, and leadership* (4th ed.). San Francisco: John Wiley & Sons.

Dean, J. (2005). Communicative capitalism: Circulation and the foreclosure of politics. *Cultural Politics*, *1*(1), 51–74.

Descartes, R. (1984). *Principles of philosophy*. (R. P. Miller, Trans.) (1st ed.). Springer.

Dodds, P., Harris, K., Kloumann, I., Bliss, C., & Danforth, C. (2011). Temporal patterns of happiness and information in a global social network: Hedonometrics and Twitter. *PLoS ONE*, *6*(2: e26752). Retrieved from http://arxiv.org/abs/1101.5120v5

Ellul, J. (1990). *The technological bluff*. (G. W. Bromiley, Trans.). Wm. B. Eerdmans Publishing.

Gabler, N. (2011, August 14). The elusive big idea. *The New York Times*, pp. SR1, SR6–SR7.

Gotz, I. L. (2001). *Technology and the spirit* (1st ed.). Westport, CT: Praeger.

Grant, G. (1991). *Technology and empire: Perspectives on North America*. House of Anansi Press.

Heidegger, M. (1998). A letter on humanism. In F. Capuzzi (Trans.), *Pathmarks* (1st ed., pp. 239–276). Cambridge: Cambridge University Press.

Levy, S. (2011). *In the plex: How Google thinks, works, and shapes our lives*. New York [etc.]: Simon & Schuster.

Marx, L. (1997). Technology: The emergence of a hazardous concept. *Social Research*, *64*(3), 965–988.

 

Mill, J. S. (2008). *Utilitarianism*. BiblioBazaar.

Orlikowski, W. J., & Gash, D. C. (1994). Technological frames: Making sense of information technology in organizations. *ACM Transactions on Information Systems*, *12*(2), 174–207.

Pfaffenberger, B. (1988). *Microcomputer applications in qualitative research*. Sage Publications, Inc.

Winner, L. (1997). Technology today: Utopia or Dystopia? *Social Research*, *64*(3), 989–1017.

Wired Staff. (2011, October 5). Steve Jobs, 1955 – 2011 | Epicenter | Wired.com. Retrieved October 6, 2011, from http://www.wired.com/epicenter/2011/10/jobs/