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### The Intertwined Transformation of People and Technology

To say that we as people live in what Kathrine Hayles proclaims to be a “post human” world would be an understatement. Just about everything people do in the 21<sup>st</sup> century, whether it be personal or work-related, involves some use of devices such as phones, computers and televisions—not to mention the specific programs used on these devices in order to get important jobs done. This has become true to the extent that many would find it difficult to imagine life without practically infinite knowledge at the tips of their fingers in almost no time at all. For many, particularly members of younger generations, it is even more difficult to imagine that there was ever a time when “technology” as it is broadly defined today did not exist. This meant that people were confined to more traditional methods of learning, sharing information and communicating with one another. Whereas things like texting and watching films and t.v. are commonplace in today’s world, speaking to others and engaging in entertainment in the not-so-distant past involved things like writing physical letters instead of typing and reading books instead of watching images move on a screen. With all of this in mind, it is important to ask one question in particular: how do the transformation of technology and the evolution of human beings directly tie into each other? Is there some deeper meaning behind why technology is increasingly impacting our lives to the point where many of us can’t imagine living without it? To understand the answers to these questions is understand just why we as “post human” individuals are so different from people of the past, both close and distant.

Technology, particularly computers in their multiple forms, has literally altered the way our brains function as well as the way we interact with and understand other people. This is something which is arguably both understandable and a bit disturbing given the state of the world around us. In “Post-Human Futures: Human Enhancement, Artificial Intelligence and Social Theory,” Mark Carrigan and Douglas V. Porpora discuss the process of what they call “digital-based enhancement.” Digital-based enhancement is defined by them as “the use of technological tools (such as information and communication technology [ICT], artificial intelligence [AI] and robots) to increase the capabilities of human persons, groups and social organizations to overcome certain limitations internal or external to them.” (Carrigan and Porpora, 23) Though they use the term openly, they also admit to not totally understanding just how this process is undergone or when it occurs. They write, “The challenge is great due to two complex sets of reasons: first, because the human is difficult to define, as its boundaries are always historically open; second, because digital devices are not mere tools but rather social forces that are increasingly affecting our self-conception (who we are), our mutual interactions (how we socialize), our conception of reality (our agency) and much more.” (Carrigan and Porpora, 23) This is precisely what is going on in today’s world except it is to an incredibly intense degree as human beings all around the world deal with dangerous issues on a daily basis. Technology undoubtedly plays a part in how people get through both personal turmoil and external issues. Just as Carrigan and Porpora write, the human is not so easily defined as we are constantly changing in broad and subtle ways at an increasingly quick pace.

In a world irreversibly impacted by a global pandemic for the past year and a half, technology has gone from convenient and helpful to necessary in order for most of us to thrive in

our jobs and education along with our personal relationships and daily lives. In short, our lives have essentially become split between the tangible and the digital. Though we exist in both places, it has become obvious that we give certain parts of ourselves to each aspect of our constantly transforming lives to the degree that one half may be unrecognizable to the other. For instance, many people develop an internet persona which is totally different from who they are in person. Still, both the person's internet persona and their in-person personality would be considered parts which make up a whole to most people who know them. In this way, some might say that people have become something akin to cyborgs—complex combinations of the human and the digital with intelligence and personalities not solely belonging to one or the other but instead born of the two working together. Though we may not literally resemble the Terminator, Robocop or any other fictional portrayal of half-human and half-robot beings, we have certainly taken on characteristics that are startling in their similarity to them. This is just one example of how computer technology, and specifically the programs we use on it, has affected us as people. We've become something different than what we were only decades ago simply by allowing technology to have such power over what we do and who we are.

This is where the concept of “blended interaction” introduced by Hans-Christian Jetter, Harald Reiterer and Florian Geyer is especially intriguing. In “Blended interaction: understanding natural human-computer interaction in post-WIMP interactive spaces,” the authors write, “Interactive spaces are ubiquitous computing environments for a computer-supported collaboration that builds on and enhances the preexisting motor, spatial, social and cognitive skills of group users. Typically, post-WIMP computing devices, e.g., interactive walls, tabletops, tablets, smart phones and post-WIMP interactive techniques, e.g., multi-touch, tangible, pen or gesture input, are integrated into established non-digital work practices and work environments

such as meeting rooms, design studios and libraries.” (Geyer, Jetter, and Reiterer, 1) Blended interaction exists in order to help explain when users perceive user interfaces as natural or unnatural. The goal of this interaction is essentially to achieve an ideal and unobtrusive form of computational support when working together with other people. Though the authors of this article present work-place examples, this use extends past work to personal activities such as spending time with friends, as well. In both scenarios, computers exist as unifying factors possessing the ability to enhance whatever work or personal hobby groups of people are trying to achieve. It is only inevitable that this would lead to a dependence on computers on the part of human beings—many of whom have grown up to witness just how much they’ve changed in a relatively short period of time. It is safe to say that regardless of whether people view the human and computer relationship as necessarily “natural”, most view it as normal and subsequently allow it to change our perceptions and behaviors over time. Just as technology would not be where it is today without human intelligence, work and creativity, people would not be where we are today without the influence technology has had on us. Its impact on our culture is undeniable as it has formed much of it in many different ways—including but not limited to work, personal lives and identities.

When it comes to the political and economic impacts that computer technology has had on people and vice-versa, there are multiple different examples which permeate much of our lives whether we are constantly aware that it is happening or not. For one thing, billion-dollar companies like Apple have made unfathomable amounts of money on the promise of delivering new computer technology every year alone. Whether the differences in new and previous models of phones and desktops are minimal or big, it is guaranteed that thousands upon thousands will be waiting to give portions of their paychecks to Apple in order to get their hands on the brand

new devices. This is not only a huge economic phenomenon across the world but a cultural one, as well. Despite the questionable background of certain million to billion-dollar technology-driven industries, the products they come out with have brought people together to discuss the changes and then utilize them to the best of their abilities.

This is where the political impact of advanced computer technology development comes into play. It is not only everyday people who use software programs on their devices but politicians and those who support them, as well. These programs include things like Twitter, YouTube and Instagram—all of which can be used to instantly share information. People have been using these platforms for years in order to advance their political careers by way of getting people to support their ideals, beliefs and plans. This extends past politicians to practically anybody with access to a phone who wishes to share information and/or to persuade people to believe information. The very presence of powerful people on the internet has sparked intense debates concerning politics as well as more specific topics like human rights issues, voting, travel and much more. Some worry that social media in particular gives people too much influential power, especially when they believe they are not being told the truth. It is difficult enough to understand peoples' intentions in person, but only reading someone's words in the form of text on Twitter or Instagram makes it just that much more difficult to decipher true meaning/intensions. Out of the many positives that have come from computer technology and its innumerable programs, this is one aspect that a number of people view as negative. In "Living with Computers: The Digital World of Today and Tomorrow," James W. Cortada writes, "As with many other things in life, software presents positive and negative experiences, such as Facebook. As in the most industrialized economies, the majority of adults worry about the negative effects of computing on children, because the little ones could be exposed to immoral

content, harmful material, or false information. In fact, some two-thirds think mobile phones have posed a negative influence on children. Yet, the more developed an economy is the more residents believe they must have access to such technologies to go about their lives.” (Cortada, 42) This is a truth which many take for granted: today’s kids were born into an age of increasingly advanced technology that will, in part, inevitably shape their lives. This being true, there are those who worry what kind of damage the constant presence of computer technology could do to them in the grand scheme of things. At the same time, many of these people acknowledge just how necessary the use of these devices has become in today’s world. The issue, like many, is far from black and white and not immediately solvable on the basis of uncertainty alone. When it comes down to it, people must decide if the benefits of daily technology use outweigh the potential downsides.

When it comes to the specific stats concerning what people think about computer use, people are divided. In “Living with Computers,” Cortada writes, “Adults believe that mobile computing frees up their time and improves their productivity, although a minority in most countries acknowledges they waste time using their smartphones. The older a user is, the more likely they are to believe these technologies save time, while many under the age of 30 say these technologies encourage unproductive uses.” (Cortada, 44) Though people may be divided on the use of the technology itself, no one in the readings I’ve come across has denied the incredibly wide impact that computer technology and its programs have had on human beings and our interactions with one another. It has come to the point where we are not recognizably “human” compared to people of the past but instead something totally different born from a digitally-driven age in which almost nobody can avoid using digital technology at some point in life. It is not a question of if, but when. If no other event in the past has made sure of this,

the pandemic definitely has. For the past year our jobs, education and social lives have transformed immensely. Despite this, companies and individuals alike continue to develop new computer technology and software programs to aid us in the vast majority of our endeavors (ie. shopping, learning and socializing with others).

Though our connection with technology is far from a new phenomenon, it is one which continues to perplex and even disturb people once they stop to think about how it has impacted them personally. While both people and technology continue to evolve over time, the question of just why the two are so intertwined and what that will mean for us going forward may never have a definitive answer. Truthfully, the relationship differs from person to person and therefore may be more subjective than objective. The influence of people on technology and technology on people is clear as day. The reason behind this influence along with the long-lasting consequences it may hold, however, are not quite so obvious. We as people understand technology and software programming to the degree that our brains allow us to. Looking deeper may take even more time and development than has already taken place.

## Works Cited

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