Approaching Wise Dialogue with Our Technological Test Pilots:

Re-framing the Story of Digital Progress

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Abstract

Research now indicates that young people tend to be at the interactive forefront of new digital technology and thus, they are the ones shaping it through their practices. Have they become our technological test-pilots? This paper is a theological/philosophical exploration of the story of technology embedded in western culture. The pursuit of wise academic dialogue, between the Christian story and the story of technology must become an integral part of Spiritual formation. This requires probing beneath the surface “text” of what culture conveys regarding technology to include the hidden “subtext” of what it is silent about or reluctant to address. Four touchstones will be considered with potential directives towards Christian responses.

 “Technology rocks…seriously!” This statement is the often echoed mantra in the conversations of digital natives ([Bauerlein](http://www.amazon.com/s/ref%3Ddp_byline_sr_ebooks_1?ie=UTF8&text=Mark+Bauerlein&search-alias=digital-text&field-author=Mark+Bauerlein&sort=relevancerank) 3). For those of us who are perhaps a bit older, who might be better classified as digital immigrants ([Bauerlein](http://www.amazon.com/s/ref%3Ddp_byline_sr_ebooks_1?ie=UTF8&text=Mark+Bauerlein&search-alias=digital-text&field-author=Mark+Bauerlein&sort=relevancerank) 3) our refrain is more like, “What you’ve got to be kidding, not another upgrade?” To be certain the modern technology that continues to transform our world is not going away. Passion for hi-tech gadgetry, social networking and a vision of an increasingly digital biosphere permeates the structure of our economy, industry and culture: especially capturing the attention of adolescents and emerging adults alike. Research now indicates that young people tend to be at the interactive forefront of new digital technology and thus, they are the ones “shaping it through their practices.” This might be a just cause for concern.

Have they in effect become our technological test pilots? If so, it is a role we have enabled them to fulfill. Potentially this is the most compelling evidence that less than critical attitudes of trust and acceptance towards technological development saturate our society. We have given our children unprecedented access to it and we leave them alone with it (and new forms of it) for long periods of time. As Craig Detweiler confirms, “Our faith in technology is so complete that we place devices into our children’s hands at earlier ages and stages. We train our kids to look down rather than up” (Detweiler 125-126). Currently on any given day, adolescents are spending between 8-11 hours looking “down” at a screen, sending on average 60 -180 texts to their friends (Pew Research - 2012) (Colvin 61) over 30 of which are sent at night after they climb into bed (Kaiser Family Foundation - 2010).

Ultimately the technological sentiments of our offspring reflect a specific narrative (belief system) that is deeply embedded within western culture. Concurrently, because it is happily married to science, it continues to gain status as well. Simply stated its text is clear, “technology and its advancements are the keys to a brighter future.” Together we absorb and experience this story in numerous ways and subsequently as “cultural stories of this magnitude have a tendency to do,” to use the language of Wilkins and Sanford, technologies born from this narrative, as well as narrative itself are “actively shaping our identity” (Wilkins 18 -26). Obviously, if what culture is telling us about technology is true we have nothing to worry about, but if there is more to the story than what we have been led to believe, then potentially we are being affected by it and such advancements in ways that are not good because of our unexamined naiveté. As Thomas Valovic observes, “jumping on the bandwagon is entirely different than knowing where the parade is headed and how it will affect the more mundane intricacies of everyday life” (Valovic 12). For this reason alone, a deeper analysis of technology’s story would be in order. However this factor, when coupled together with observation that the marriage between technology and science is “increasingly devoid of theological anchors” (Harvey 6), it makes it especially important for us as Christians to critically evaluate and strategically engage it and its permutations. As Albert Borgmann states,

*Since technology as a way of life is so pervasive, so well entrenched and so concealed in its quotidianity (everyday life), Christians must meet the rule of technology with a deliberate and regular counter-practice… a radical theology of technology must finally become a practical theology, one that makes room and then makes way for a Christian practice* (Borgmann 91).

Seeking to contribute a small portion to this process, this paper offers a specific approach towards re-framing the story of digital and emerging technologies. The term re-framing is not to be understood as referring to its pictorial or architectural sense, but rather the definition assigned to its use in the jargon of videography. The image here is similar to the perspective shift that occurs when the camera “pulls back” or “zooms out” and reframes the picture to reveal a broader and therefore a more complete view of a subject.

In the task of unearthing the values embedded in technology’s tale, the proposition here is that for every major component of the multifaceted “text” of what culture conveys to us regarding its potential for our advancement there is a hidden or underlying “subtext” that becomes visible when one *zooms-out* and analyzes what it is silent about or reluctant to address. When applying this method, at least 4 major tensions between “text” and “subtext” emerge as prospective touchstones of a more complete version of the digital story. They are as follows:

1. The cultural text declaring that digital technology ***promotes community*** has with it the underlying subtext that in very tangible ways it can also ***enable isolation***.
2. The cultural text declaring that digital technology can ***enhance our relations***

 bares the subtext that is could also potentially ***dehumanize our interactions***.

1. The cultural text declaring that digital technology can ***strengthen human abilities*** contains the subtext that it can (and probably will) ***out mode many (exclusively) human activities.***
2. The cultural text declaring that digital technology can ***extend our reach*** brings with it the underlying implication that it could also ***allure us towards grasping at more than we should***.

Here too, at the onset, it must also be acknowledged that uncritical versions of technology’s story can operate across a spectrum (Hanks, 29). Certainly there are contextual pockets where technology is viewed negatively. Like the Luddites from antiquity, those who are especially opposed to technological change still exist in varying degrees in our world. It is understood that the touchstones mentioned above, in these circumstances, still apply but the text and subtext components then reverse. In such cases, if what is negative is the cultural text – then what is positive becomes the subtext. Again the idea here is a more unabridged version of the story not a reverse engineered caricature. Research of this nature is a vitally important component in the process of understanding and interpreting what is happening in in a way that reflects and promotes digital wisdom beyond uncritical utopian or dystopian arch-types. Perhaps it is also important to state these *touchstones* may not cover all concerns or unknowns. For example: Does extended use of digital technology pose any significant health risk to users long-term? This was not included as a part of an additional couplet perhaps it could be. Now we will turn our attention to the task of examining briefly each of the four touchstones while offering as well potential directives for each couplet.

**Touchstone #1 Digital** **Technology Promotes Community – It can also Enable Isolation**.

The argument for digital technology’s capacity to stimulate human community is done so from a participatory definition of the term apart from its physical and residential aspects. This would define community as: a feeling of fellowship or solidarity with others, who share common attitudes, interests, and goals. In this sense, technologically mediated relationships can be an

expedient means towards accomplishing these ends. Rachel Wagner in her book *Godwired* maintains, “that the most important defining feature of community online is precisely the unique relationships that are fostered, the feelings that users have when interacting with one another in

meaningful ways: People look for relationship, to be connected and committed to others. They

desire care, to be cared for by their community. They desire value” (Wagner 108).

As a result, in our work, family life and leisure the ability to extend one’s presence and promote one’s interests beyond the constraints of location continues to develop at an extraordinary level. In particular, social media’s influence has given a leg up (however long or short) to the development of community in arenas like, activism and disaster response because of its ability to tell the narratives of our society while instantaneously organizing, recruiting and mobilizing a potentially vast populous quickly (Bauerlein 203).

Under closer scrutiny however, the quality of fellowship digital community alone can afford is at its best its bottommost level because of its inability to take part in community’s intrinsic physical and residential aspects. A distinction has been made by sociologists between the strong ties of family and friends and the week ties that bind us and make us ease with acquaintances in our work environments and in our communities (Turkle 309). According to Turkle, “Facebook and Twitter, *offer* friending rather than friendship – these are the worlds of weak ties. Today’s technology encourages a celebration of these weak ties as the kind we need in the networked life” (Turkle 309). Media generated community provides a surplus of non-physical options that if indulged in keep us isolated from the essential “strong-tie” embodied aspects of meaningful community. The ease with which the one can function as a replacement for the other is at the heart of technology’s capacity to unsuspectingly isolate. Stanford researcher, Norman Nie in 2002 established proof towards this notion by demonstrating that “for every hour spent on the internet at home” his participants devoted “an average of almost 30 fewer minutes with their families.” Slade building off of Nie’s findings concludes, “The more time we spend using technology the less time we spend in real human interaction. Thus…devices once used to relieve loneliness *have* now become, in effect, generators of loneliness” (Slade 237). Digital natives together with those who feel comfortable with internet culture will need to deliberately challenge this tendency in order to counteract its undertow.

Dyer offers a potential directive through his guiding principle *“technology is for the table”* (Dyer, 173), citing 2 John 12 which states, “Though I have much to write you, I would rather not use pen and ink. Instead I hope to come to you and talk face to face, so that our joy may be complete.” He/Dyer concludes:

*When John couldn’t be physically present with his community he was comfortable using technology to communicate with them. But he was always careful to state that he considered technologically mediated relationships to be inferior to embodied relationships… The great temptation of the digital generation is to inadvertently disagree with John and agree that online presence offers the same kind of “complete joy” as offline presence… The danger is that just like the abundance of food can cause us to mistake sweet food for nourishing food and just like the abundance of information can drown out deep thinking, the abundance of virtual connection can drown out the kind of life giving table-oriented (fellowship) that Jesus cultivated among his disciples.*(Dyer 171-172).

The concept of *Technology is for the table* is centered in the ongoing praxis of engaging the tools we use in our technologically mediated lives of microwaves, social media, text messaging and smartphones with an eye towards nurturing meaningful, full bodied community with the precious few face to face encounters we have in our hectic world (Dyer 173).

**Touchstone #2 Digital** **Technology Enhances our Relations It could also Dehumanize our Interactions.**

The first touchstone above, considered the digital reorientation of community. Now we move more specifically to consider the digital reorientation of public space. One of the fundamental ways that modern technology is understood to enhance human relationships rests in its ability to shrink our world and the distances between us. Significant variants in the participatory aspects of community have been brought about by this “small world effect” resulting in the evolution of public space into a profound existence apart from the constraints of physicality. Since this has occurred users have been able to more conveniently buy goods and services (Amazon), obtain and share information (Google), and make and sustain personal connections with others (e-mail/text-messaging/social media). The proliferation of access and convenience, born form such contrivances have fixed their place in our collective sense of normativity.

The internet functions to give users both “an alternative to” public space and “an alternative form of” public space. The former serves as a substitute for activities and transactions that previously required being physically present in the public “market” engaging other human beings in order accomplish such actions. Instead of buying a book or going to the library for example one can obtain the Kindle equivalent with “one click” and no reciprocal human contact whatsoever. The latter “alternative form” retains particular components of human contact but removes the physicality.

Teens in particular have recognized this potential in new media and latched on to it as an occasion to “hang out” with friends perceiving it as a convenient shared settingalternative to meeting up in a physical location: which for many adolescents is often a difficult or problematic endeavor. As Danah Boyd in her book *It’s Complicated* recounts:

*The activities at the core of teens’ engagement with social media look quite similar to those that took place in shared settings in previous generations—at sock hops, discos, and football game stands. Teens hang out, gossip, flirt, people watch, joke around, and jockey for status. These dynamics are at the heart of teen life, and because they play out in a mediated world, teens relish any opportunity to log in and engage with their peers and the teen-oriented social world that unfolds through networked publics* (Boyd 91)*.*

In this way Boyd perceives new media as having the potential to stimulate adolescent social relations in two respects. First, it possesses the ability to function as a much needed social release valve. Though pressures and restrictions of parents are often well meaning, according to Boyd, teenagers across the environmental spectrum have reported that due to their heavily structured lives, transportation constraints and concerns for physical safety, the prospects of seeing their friends face to face in order to hang out with them is considerably limited (Boyd 92). As a result, “many teens turn to what they see as the least common denominator: asynchro­nous social media, texting, and other mediated interactions” (Boyd 92). Boyd appreciates this as a good thing because “it enables youth to reclaim meaningful sociality as a tool for managing the pressures and limitations around them” (Boyd 92). Perhaps even functioning as a corrective against the forces within the lives of adolescents that completely “obliterate unstructured time and unintentionally posi­tion teen sociality as abnormal” (Boyd 92).

Secondly, because social media is a public platform it has a formative capacity to instruct participants on the subject matter of social space. Boyd claims, “It’s where you learn social norms, rules, how to interact with others, narrative (writing a blog), personal and group history and media literacy” (Magid 16). Elsewhere she elaborates, “When teens engage with networked media, they’re trying to take control of their lives and their relationship to society. In doing so, they begin to understand how people relate to one another and how information flows between people” (Boyd 95). These digital “enhancements” to adolescent relations are not without corresponding “endangerments” such as cyber bullying, internet addiction, online predators, sexting and access to other forms of digital pornography. Damaging and certainly dehumanizing in their own way these threats need to be acknowledged and measured in the determination of wise and responsible use of such technology moving forward. Boyd and others are grappling with many of the questions surrounding these issues.

 With that being said, thinking through the potential impact digital environments can have on human relationships is additionally complex. Since social space in the digital realm exists, in significant ways, apart from the occurrence of physicality, a distinction regarding the particular sort of psychosocial learning that takes place among users while in its domain needs to be made. Boyd sidesteps any deep consideration of whether or not social space learning between the online and on ground expressions alluded to, function in the same way, build the same skills, and accomplish the same formative results or pedagogical outcomes.

Careful objective study by the scientific community needs to be employed to determine exactly what those distinctions are and their potential impact upon human growth and development.

A cursory look at presence in its virtual/digital form reveals significant distinctions:

1. Virtual Presence is constructed presence. From profile pics to avatars and everything in between, personal conveyance in digital communities is an intentional and selective construction.
2. Virtual Presence is asynchronous presence. Digital communicants are locking eyes, so to speak, with information rather than the eyes of another person (which is in most cases not real-time). Communication then is shaped by the medium into being less spontaneous, less vulnerable, more prerecorded while having a greater capacity to both create and negotiate interruption.
3. Virtual Presence is sanitized presence. On account of the fact that personal conveyance is constructed in this context, what ends up representing us on the screen is, more likely than not, a cleaned up, spell checked, airbrushed version of ourselves. One author describes it as the art of existential camouflage.
4. Virtual Presence is elastic presence: the more you stretch it the thinner it becomes. Humans have a certain cognitive limit for the number of relationships they can sustain and make sense of in their world. This is sometimes known as Dunbar’s Number named after the anthropologist whose research determined the limit to be about 150 people. Jantz concludes, “our brains just aren’t big enough to hold all the information necessary maintain relationships with multiple hundreds or even thousands of people: the larger the network the shallower your relationships have to be with each member in your circle” (Jantz 70).

In the attempt to look at the picture even more broadly, the consideration turns from concerns of digital social learning, to concerns of digital social conditioning. If the relational enhancements of digital community are connected to the capacities of presence in its virtualized form then the “subtext(s)” here are not just the vulnerabilities associated with the conditions of this mode of presence. The effects would also include what might transpire if being public virtually becomes more prominent, socially acceptable or culturally preferential to the occurrence of physically being in public. Perhaps this is the greatest unknown, to what degree are we being socially conditioned by the use of such technologies towards the devaluing of human physicality?

For many users especially teens, texting and instant messaging on their smart phone have replaced phone conversations. School dances are becoming a thing of the past. Many malls have closed. Certainly these could be indicators of a variety of dynamics and forces that are not necessarily interconnected, but it seems plausible at least to hypothetically suggest that together these could be indicators of a “conditioning effect” upon our society due to the prolonged exposure to the activities of socialization in digital realms. It’s possible that digital advances are already impacting our collective understanding and practice of human being.

In terms of potential directives the first has already been mentioned. It seems important at this juncture for there to be a renewed commitment and a concerted effort across the social sciences to study and test the unknowns associated with these mediums in order better understand their impact upon human psychosocial and sociocultural development. For example one area that seems to be ripe for testing has to do with important questions that still exist surrounding the concept of weak ties mentioned earlier. Turkle and others are concerned that the weak tie capacity of mediated networks might eclipse the pursuit of strong tie relationships. But what goes unnoticed is the assumption that both forms of “ties” mentioned are operating from the same plane. Are digital “ties” the same as physical “ties”? Strong tie concerns aside, what would the consequences be if the weak tie relationships of mediated networks eclipse the pursuit and development of physical weak ties themselves? Slade gives the impression this would be a disaster. He is convinced the digital world promotes:

*A long line of self-serve automata…that remove the “human factor” from the minute human exchanges and retail interactions that used to be essential to the… active mercantile heart of every city…the sum of such casual public contact at a local level…is a feeling of public identity of people, a web of respect and trust and a resource in time of personal or neighborhood need. The absence of this trust is a disaster* (Slade 21).

 Questions and concerns of this nature ought to be studied and tested more objectively as the

answers to such could provide confirmation and guidance us towards a humanizing path of wise

technological use.

 Secondly, coupled with this we need to reassert a conscious appreciation of embodiment

and physicality. Christians could respond in several ways by:

1. Maintaining physical “in public” priorities when it comes to worship, witness and

 Communion while maintaining corporate digital practices that work to support these

 physical priorities.

1. Continuing the practice of deliberately giving embodied care and presence to our physical neighbors.
2. Choosing appropriate doses of virtual alternatives while engaging in a robust “in

public” lifestyle and instilling these and other correlative values - i.e. movement, touch, human connection and exposure to nature in our children while they are young (Rowan 2010).

1. Choosing physical “in public” options as opposed to automatically opting for the ease and convenience of virtual alternatives.
2. Adding digital media to the practice of Sabbath keeping by employing an ongoing one day a week expressions of rest, silence and reflection away from it.

**Touchstone #3 Digital** **Technology Strengthens Human AbilitiesIt could also Outmode many Human Activities.**

The first touchstone, considered the digital reorientation of community. The second touchstone considered the digital reorientation of public space. Now the deliberation at hand is the digital reorientation of human abilities and limitations. Our lives have been significantly impacted and yes benefitted from the construction and use of our brilliant technologies. Much of the digital world that we currently use clearly picks up where human weakness or constraint leaves off. Geoff Colvin, in his book *Humans Are Underrated,* reminds us that machines are improving in many ways infinitely faster than humans (Colvin 2). Thanks to Moore’s Law (the phenomenon that computing power has exponentially doubled every two years since the invention of the transistor) many high-level tasks that in the past only humans could do, machines can now do better and will continue to improve in their ability to do so. Colvin observes:

I’m surrounded by technology that’s better than I am at sophisticated tasks. Google’s autonomous car is a better driver than I am….Computers are better than humans at screening documents for relevance in the discovery phase of litigation, an activity for which young lawyers used to bill at an impressive hourly rate. Computers are better at detecting some kinds of human emotion…The skills that will prove most valuable in the future are no longer the technical, classroom-taught, left-brain skills that economic advances have demanded from workers over the past 300 years…they are becoming commoditized and thus a diminishing source of competitive advantage (Colvin 2-3).

 The good news has been that our technological advances have provided us with things like PCs, Smart Phones and Tablets, Kindle etc. which have strengthened and extended our abilities in countless ways (many of which we’ve already mentioned). The more challenging “subtext” here, is the fact that if Moore’s Law holds up for the next couple of decades this is just the beginning. Exponential doubling power means, “What gets doubled every two years is everything that has been achieved in the history of computing power up to that point. Now that…means going from five billion transistors on a tiny chip to ten billion to twenty billion to forty billion— that’s three doublings, just six years— it means literally more than we can imagine” (Colvin 5-6). The implications are that the same digital technologies have helped us flourish in our jobs, extended our connectivity and conveniently reimagined our public space – will very soon likely replace us in many of our jobs outmoding many of the labor tasks that previously only humans could do or facilitate. Gates confirms “Twenty years from now, labor demand for lots of skill sets will be substantially lower (*because of technology)*. I don’t think people have that in their mental model” (Colvin 14).

If what Gates said stands true, in the near future at the junctures in society where computer abilities clearly outperform human labor which is more expensive and less predictable

our functional models will change to make room for such economic advantages. Such Digital advances could cause a sweeping economic reorientation of human abilities and limitations as it relates to labor with and over and against our brilliant machines. MIT academics Brynjolfsson and McAfee agree, “Rapid and accelerating digitization is likely to bring economic…stemming from the fact that as computers get more powerful, companies have less need for some kinds of workers. Technological progress is going to leave behind some people, perhaps even a lot of people, as it races ahead” (Brynjolfsson, 9-10). Experts are predicting the transformation, what Brynjolfsson and McAfee call, “The Second Machine Age” will be closely equivalent to what society experienced in Industrial Revolution, previously unprecedented exponential transformation (Brynjolfsson, 6).

Everything in this projection of the future (though difficult in a broad and sweeping fashion) may not be entirely bleak as, Colvin asserts, this process contains the possibility, we will rediscover elements of our humanity in a new economy that will set us apart from technology because of its inherent limitations:

The new high-value skills (*will* be) instead part of our deepest nature, the abilities that literally define us as humans: sensing the thoughts and feelings of others, working productively in groups, building relationships, solving problems together, expressing ourselves with greater power than logic can ever achieve. These are fundamentally different types of skills than those the economy has valued most highly in the past. And unlike some previous revolutions in what the economy values, this one holds the promise of making our work lives not only rewarding financially, but also richer and more satisfying emotionally (Colvin 4).

The first two touchstones, because their themes are more directly connected to present reality, the potential directives towards Christian responses were easier discern and propose. These last two touchstones, because their themes are more projections into the future the directives are harder to ascertain. Part of the need at this point is for Christians across the disciplines to be thinking and postulating together about what just, compassionate, economically and globally viable, Christ honoring responses could and should include in light of these future scenarios.

**Touchstone #4 Digital** **Technology Extends Our Reach - It can also Allure Us to Grasp at More than We Should**.

The first touchstone, considered the digital reorientation of community. The second touchstone considered the digital reorientation of public space. The third touchstone considered digital reorientation of human abilities and limitations. The final touchstone considers digital reorientation of human telos.

One classic definition for technology is encapsulated in the idea that it functions to extend the human capacity to reach. It is one thing to think about this idea as it supports the Biblical ends of Salvation, Redemption and Reconciliation of the human family in Christ. It is another thing for humanity to reach in a direction beyond these God given ends. This is reminiscent of Genesis 11and the Tower of Babel. Today it seems were right at the cusp of another such moment in history. Bricks and mortar are amassing. The world is troubled, yet abuzz with anticipation of what might exist just beyond the next technological threshold. It is beginning to sound like the story of technological progress has become in some people’s minds and end in itself. The end. This is a wild reach beyond the biblical narrative in the opposite direction.

At least two such such “reaches” should concern us:

1. Autonomous Military Drones – (elaborate on as time permits).
2. The Singularity – (elaborate on as time permits).-

This is ultimately the call for wisdom and prophecy to harmonize under the baton of the biblical narrative. We must remember, “Technology is in our heads, not just in our hands” (Denton 114).

 Important theological concepts to remember:

1. The same response the early church asserted against the gnostic tendencies of the culture at large is the same response the church today should assert against the Platonic overtones of new media. Christianity is not just about minds but also about physicality: Bodies remembering a particular body, Christ’s body– a broken body, resurrected body and a returning body.
2. Technology (digital and otherwise) is primarily an outgrowth of culture. The same theological truths, principles and processes that apply towards guiding the Church’s relationship to culture apply similarly concerning the Church’s relationship to technology. Stephen Whiting in his paper “Towards a Biblical View of Technology,” has a fascinating section entitled, *Christ and Culture: A Useful* *Macro-Framework* (Whiting 11).He flips Niebuhr’s classic fivefold Christ and Culture outline to read Christ and Technology running it through the same rationale. It’s a helpful way to begin the theological conversation.
3. Regarding the Singularity and other mechanized/digitized alternative endings to the human story other than glimpse of realized human destiny pictured in Revelation 22: they should replace this orthodox ending. It doesn’t communicate or insinuate even with a generous stretch of apocalyptic metaphor the mechanization of humanity. We have a God given, God generated, God determined essence with a unique multi-dimensional capacity for knowing - with the potentiality for knowing Him and one another interdependently. These capacities are fundamentally co-determinate with human frailty and limitation. “His strength is made perfect in our weakness. To try to surpass and ultimately remove these limitations from our experience violates and dissolves that co-determination. In perfecting our weaknesses for the sake of a greater self-actualization of humanity, we will no longer know, much less need, Him, His strength or each other for that matter – now or in eternity.

(Conclude)

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