



a MATTER of SPIRIT

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Technology and Human Dignity

by Nicholas Mele

These days, the word “technology” is usually synonymous with the Internet, mobile devices and computers of all types, but technology began when the first hominid ancestor used a rock to crack a nut or a clam shell. Among the questions each new technology raises, its impact on the dignity of individual persons and the common good of communities persists as most important.

In the 1970s, Dom Hélder Câmara observed of technology: “Is it an exaggeration to say that today more than ever humanity is participating in the creative power of [God] in mastering nature and completing the work of creation?”¹ His

the Creator has brought forth? Weapons development continues apace, encompassing drones, autonomous guns and robots. What is the impact of war at a distance on individuals and communities on all sides of the conflict? Medical technologies identify diseases earlier and offer treatments that prolong human life, but serious issues arise concerning the dignity of the individual and the less and less clear line separating life and death. Perhaps a look at how humanity has reacted to new technologies in the past offers some answers.

Dom Hélder Câmara again offers some insight: “Kindling fire and inventing the wheel were among the first results of this participation [in co-creation].”² To begin a bit closer to our own time than the early Stone Age, the development



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question can be a guiding principle for determining the impact of a new technology on human beings: Is it co-creative? Does it honor the divine image we each are?

Contemporary critics decry families whose members sit at the dinner table, each absorbed in her or his own mobile device, or groups of friends doing the same at a restaurant. As we fuss about problems with new information and communication technologies, we neglect equally compelling and perhaps more significant issues around other technologies that we should explore more deliberately and more thoroughly. Are we completing the work of creation or unraveling what

of agriculture led to: settled communities; specialization of some types of labor and the growth of city-states supported by the farms surrounding the cities; and eventually empires large and small. Although we have no contemporary records of how people regarded the introduction of agriculture, we do know the benefits of a reliable food supply and a settled life, which includes the birth of specialized artists and thinkers. We also have some idea of the cost in the loss of the camaraderie of a small hunter-gatherer band and the ability of nomadic people to flee natural disasters and plague. The changes to human life as a result of the adoption of agricul-



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ture are profound, and many, like divisions of labor and individual accumulation of wealth, are still very much with us. It is clear that few people living today would willingly return to the life of a hunter-gatherer and relinquish most of the tools that were developed on the foundations of earlier technologies, from mastery of fire and tool-making to transistors and television.

Several thousand years later, the Industrial Revolution brought more changes, including the creation of what we now think of as the nuclear family. As farmers, members of an extended family tended to live together and work more closely together, following the rhythms of the seasons and the succession of night and day. Factories, on the other hand, required regular working hours and segregated woman from men according to the work thought suitable for each. Child labor and the departure of younger adults from their birth home and family became the norm. People began to live by the clock, or at least the factory whistle, rather than by the position of the sun in the sky above their fields. The excesses of factory owners and the hardships experienced by farming families, as their markets changed and their land became more valuable to others, gave rise to labor unions, labor laws and the social safety net. Throughout history, but especially throughout recent history, there is an ongoing tension between greed and

of employers in our radically connected world. As I write this, Goldman-Sachs has issued new work guidelines for its bankers, brokers and analysts, urging them to work no more than 70-75 hours a week—apparently 120 hour work weeks are common—and requiring that they take off at least four weekend days a month. Writing in *The New Yorker*, James Surowiecki reports “David Solomon, the global co-head of investment banking at Goldman, told me, ‘Today, technology means that we’re all available 24/7. And, because everyone demands instant gratification and instant connectivity, there are no boundaries, no breaks.’”³

In fact, corporate profits and the accumulation of wealth are directly responsible for many of the dehumanizing effects of technology. The pay for

...because everyone demands instant gratification and instant connectivity, there are no boundaries, no breaks.

a financial analyst is certainly higher than that for a machinist, but the machinist is guaranteed free weekends and holidays, or special compensation if required to work on what would normally be her leisure time. Union-negotiated contracts and unions themselves have been under assault for some time, often excused by corporate officers as a

more human and humane values.

Today, further technological innovations have bequeathed us a 24/7 world. The family or group of friends interacting with their mobile devices rather than one another at table is enabled by new technologies, but one large factor is the demands

direct or indirect consequence of technological change. “Globalization” can be shorthand for the increased mobility of capital and maximization of profits enabled by diverse technologies from satellite communications to supertankers. Whether new technologies result in a net job loss is debatable, but it is clear that most lost jobs are not lost, particularly in manufacturing; they have simply moved to parts of the world where labor is cheap and regulations are limited or non-existent. Even when a kind of job does disappear, new technologies create new jobs, as when television spawned a new entertainment and information sector.

In a new book,⁴ George R. Tyler argues that globalization is a fiction because more export-dependent economies in Europe and Australia have managed to preserve good jobs and actually increase workers’ compensation. In essence, Tyler blames greed and the short-term pursuit of corporate profitability for income inequality and increased poverty in the United States. In the end, the majority of families and individuals suffer as they lose real income to inflation, even while retaining their jobs. Tyler also notes the control that corporate interests have over government policy makers and regulators, elected and appointed, in the US. He contrasts this with the situation in Australia and a number of western European nations.

The pursuit of greater wealth by corporations and the wealthy affects families in other ways. For example, Facebook, Google and

other “free” services collect and then sell their users’ data to marketing firms. We are not paid for a small but significant contribution to the economy, but we are unknowingly opening our lives up to intrusive scrutiny and even more intrusive marketing targeted at each of us. As our preferences become fodder for advertisers, many people become

complicit in enhancing the profitability of corporations. Each time someone “likes” a corporate Facebook page, she or he lends personal influence to the carefully crafted messages corporations use to influence our economic decisions and, through the phenomenon of the filter bubble, limits the choices available to individuals using social media and web search sites.⁵ It is important to recognize that the technology itself is neutral, as humanitarian agencies and advocacy organizations also use the same social media sites and applications to advance access to clean water, education and preventive medicine for the world’s poor.

Getting back to that social group behaving unsocially around a meal table, Sherry Turkle, a psychology professor at MIT, took a long, empirical look at the impact of technology on human dignity in her 2011 book, *Alone Together*. Turkle believes the new information and communication technologies are seductive in that they offer both enhanced socializing with people we seek out and the sense that we are active participants in the lives of others and the events in the news. That immediacy can be a very good thing, uniting us more

immediately and closely than ever before, as Pope Francis recently observed in his 2014 World Communications Day message. It can also be misdirected, so that individuals invest emotionally in artificial relationships and even artificial people, such as in chat rooms where predators assume innocuous identities to identify potential victims, or Facebook scams in which a con artist

...radical connectivity enables individuals to proclaim themselves and their values to the world...

pretends to be the a young relative of an elderly person. Turkle noted in a recent interview that many people prefer texting over talking, whether in person or by telephone, because it allows people to avoid confrontation and to present themselves to others in a carefully curated way. The latter is especially true of young people, Turkle observes, and notes that since our teen years are the time when we experiment the most with our identity, this can be a good thing.⁶

On one side, radical connectivity enables individuals to proclaim them-

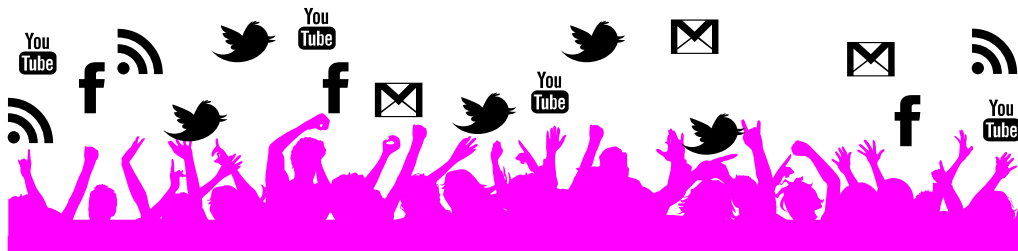
selves and their values to the world, as well as to their familial and social circle members. Far flung families keep in touch through e-mail, Skype and Face-time, all of which help foster relationships despite the geographic separation. Activists use Facebook, Twitter and cell phone networks to organize mass protests and other actions. At the same time, these technologies carry the risk that we will become “talking heads” to one another, or that we will take one another for granted as audiences before whom each of us “performs” our life.

Repressive governments have learned how to identify activists and grassroots leaders through monitoring internet and cell phone traffic. Marketing specialists manipulate us by identifying our insecurities and habits from our web usage. Technologies, like knives, can be tools to empower, educate and connect us or weapons to wound and destroy us.

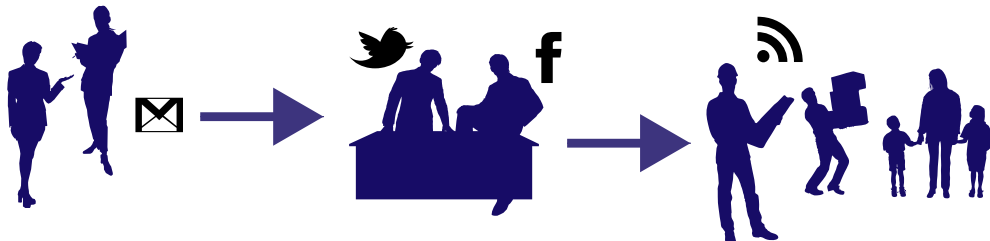
In his 2014 World Communications Day message, Pope Francis noted:

The speed with which information is communicated exceeds our capacity for reflection and judgment...Whenever communication is primarily aimed at promoting consumption or manipulating others, we are dealing with a form of violent aggression... It is not enough to be passersby on the digital highways, simply 'connected'; connections need to grow into true encounters...Media strategies do not ensure beauty, goodness and truth in communication. The world of media also has to be concerned with humanity, it too is called to show tenderness. The digital world can be an environment rich in humanity; a network not of wires but of people.

▲ *Nicholas Mele* is a writer and activist who relies on new technologies in his work. He is on the Editorial Board of *A Matter of Spirit*.



Nine in ten adults agree that **DIGITAL TECHNOLOGY** can turn interest in a **cause into a movement** more quickly than anything else.



Four in five adults agree that digital technology has created a fundamental shift in how **social change** occurs.

The Double-Edged Sword

Environmental & Social Impacts of Technology

by Joy Scrogum

Technology is inherently beneficial. We might define technology roughly as the creation, use and knowledge of tools, techniques or processes to perform a function, solve a problem or achieve a goal, or as a reference to the problem-solving mechanisms themselves.¹ When a problem is solved or a goal obtained, clearly something positive is happening. It's easy to understand how stone projectile points benefitted early humans

by providing greater success in hunting for food and defense against predators, or how written language improved our lives by improving communi-

cation. But sticks and stones can break human bones, and despite assurances otherwise, words can certainly hurt feelings, destroy reputations and confuse or manipulate rather than educate. Technologies may cause as many problems as they solve. Whatever the intent of their creators, every tool we have at our disposal has the capacity for both positive and negative impacts. Often we are so focused on potential benefits that we fail to anticipate costs associated with our innovations. Sometimes we're incapable of anticipating certain costs because we lack the knowledge to recognize the potential problems.

A classic example of unintended negative consequences of technology is human-induced climate change. The Industrial Revolution brought a wealth of new technologies that allowed for increased production and faster transportation of goods, as well as people who might consume them. Mechanization of manufacturing processes; steam power; the expansion of rail-

roads, canals and roads; and other advances transformed the world, enabled by relatively cheap energy production via fossil fuel consumption. The transformation was atmospheric as well as cultural. Increased fossil fuel use meant increased greenhouse gas emissions, which we currently understand leads to global warming. In time, electrical power became commercially viable; internal combustion engines made automobiles practical; and manufacturing developments made cars easier to

...technology marched forward hand-in-hand with our reliance on fossil fuel consumption.

produce and thus, more affordable. We can look back and see how technology marched forward hand-in-hand with our reliance on fossil fuel consumption.

The Intergovernmental Panel on Climate Change (IPCC) recently asserted with 95% confidence that human activities tied to greater greenhouse gas emissions, like fossil fuel consumption, are the main cause of global warming.² Our culture, industry and infrastructure are based on the production of energy through the use of fossil fuels. Everything we have come to depend on—lights that allow activity after sunset, appliances used

to cook, the production of medicines, the machines in the hospital that could save your life, the majority of vehicles that transport goods and people—can be seen as benefits reaped from the choice to build our world around fossil fuel use. We may never have developed certain technologies at all, or as quickly, without that choice. Now that we understand the tie between fossil fuels and global warming, we can't simply flick a switch and instantly convert everything to cleaner technologies. Our fossil fuel-based infrastructure took time to build, and it will take time to develop a new alternative-based one. The behavioral and technological changes necessary to slow and reverse the damage we've done can seem overwhelming; perhaps that's why some people deny the tie between our current technologies and climate change despite the consensus in the scientific community.

In my work, I focus on electronic technologies as examples of the double-edged sword of progress. They also



The E-waste centre of Agbogbloshie, Ghana, where electronic waste is burned and disassembled with no safety or environmental considerations



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A boy mining minerals for electronics in the Democratic Republic of Congo

contribute to climate change, not merely because they use electricity which may have been produced through fossil fuel combustion. The vast majority of greenhouse gas emissions associated with laptops, for example, happens during manufacture, not use—more than 38 times as much.³ Information and communications technology (ICT) allows for increased knowledge and data sharing. It can be used to extend the ability to provide medical services to remote areas,⁴ for example, and can foster global awareness and understanding of other cultures crucial to advancing sustainability. Yet the data centers that ICT relies upon are themselves major contributors to global warming, through electricity used for operation and cooling of servers.⁵

Besides energy, vast amounts of other resources go into the manufacture of electronics. According to the Electronics TakeBack Coalition, “Over 1,000 materials, including chlorinated solvents, brominated flame retardants, PVC, heavy metals, plastics and gases, are used to make electronic products and their components—semiconductor chips, circuit boards, display panels and disk drives.”⁶

Minerals must be mined, which can cause erosion, habitat destruction and

water pollution from chemicals used in the mining process. Tin, tantalum, tungsten and gold are used widely in consumer electronics and are collectively referred to as “conflict minerals.” Mines in the Democratic Republic of Congo (DRC) are controlled by militant groups which manipulate the populace who work in these mines through violent atrocities such as rape and murder. Profits from these mines finance the continuing civil war. Awareness of this unintended social impact of electronics production has led to legislation requiring manufacturers to audit

*These powerful machines...
should not be seen as disposable.*

their supply chains and ensure the minerals they use are not sourced from the DRC.⁷ Recent scandals related to unsafe and unfair working conditions in Chinese Foxconn electronics factories linked to injuries and deaths have further illustrated the hidden social costs of our ubiquitous devices.⁸

On the waste end of the spectrum, the EPA estimates that in 2009, 2.37 million short tons of electronics were ready for end-of-life management in the US; only 25 percent were collected for recycling. The United Nations Uni-

versity StEP Initiative recently launched an interactive world map illustrating e-waste production and flows. The map shows an average of 43 pounds of e-waste was produced per person in the world last year, and that based on current trends that annual volume could equal the weight of 11 Great Pyramids of Giza by 2017.⁹ Another recent report shows that 1 billion smart phones were sold last year—enough for use by one seventh of the world’s population.¹⁰ Given the relatively short time frame over which cell phones are used before they’re replaced by consumers, this could translate into a lot of e-waste. Failure to recycle any e-waste means the loss of resources, including precious and rare earth minerals, used in production as well as the landfilling of hazardous materials. And in countries where environmental regulations and worker safety laws are lax, “informal” recycling of electronics involves crude methods detrimental to environmental and worker health, such as opening devices with hammers; using fire to melt plastics off metals; and separating materials with acid baths which are often then dumped into local rivers.

Although problems are many and complex, all hope is not lost. Tools such as life cycle assessment (LCA) can be used by designers and manufacturers to improve materials choices; conserve resources in manufacturing processes; and modify designs to maximize recovery of materials in end-of-life management. One of the best things consumers can do to mitigate these costs is buy fewer devices. Evaluate wants vs. needs when considering purchases—is it really necessary to replace the device you own with the latest model when the one you have still works? Is your choice motivated by practical reasons or a desire to keep up with trends and use devices as status symbols? Educate yourself on proper maintenance to keep devices running smoothly and use repair services and do-it-yourself guides like

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Prospecting the 21st Century: Data Mining & the Common Good

by Davin Heckman, PhD

Privacy advocates have been warning the public about surveillance and data mining for over a decade.¹ Recent revelations by Edward Snowden, a government contractor turned whistleblower, have confirmed privacy advocates' most dire warnings: virtually all digital communication—internet searches, email, social media activity, phone calls, GPS data—may be monitored. Furthermore, nearly all the metadata is being mined.² And it is being done with the cooperation of the private sector and foreign intelligence services. Moreover, we don't seem to know who is using the data and how they are using it.³

It first might be useful to define two types of data. "Metadata" consists of (1) the data about the data, or a formal description of what a file contains—descriptive metadata—and (2) what its relevant technical properties are—structural metadata. Metadata is standardized to facilitate its compatibility across contexts, platforms and systems. When you search for a library book and see information about authors, publishers, dates, subject keywords, circulation records and so forth, you are looking at a book's metadata. In the case of computer files, metadata can include file type, size, authoring information and date of creation. In the case of cell phone records, metadata would

include things like the phone numbers involved, time, duration and location.⁴

The data file itself is the actual content that metadata describes. This can include anything that can be streamed or stored as digital content: the story in the book, the content of your conversation, the message sent over email, the image captured by your camera. This is information that takes time to decode, requires a high degree of interpretation, is often audio and/or visual and does not usually cohere to universal standards. It is getting easier, though, for machines to read this sort of information as well.

Metadata are descriptive and technical in nature and say little about what the content of the file actually says. The

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...virtually all digital communication... may be monitored.
.....

power of digital analysis is that these relatively concise data points can be read very quickly at very high volumes and can be subjected to automatic statistical analysis to come to conclusions. Furthermore, data from one context can be analyzed alongside data generated in another context because they are structured and codified. Because the machine is indifferent to all but what the algorithm specifies, it "reads"

impartially. Naturally, you can see the attraction for intelligence and law enforcement communities.

The vast majority of data mining is driven by the private sector. Most people carry around digital devices that use metadata to operate. We shop using credit cards and membership cards. We use "free" services like Facebook and paid services like Amazon. We transmit messages, browse the web, identify our relationships, tag photos of people that we know, store documents and much more. Networking this information and analyzing both its metadata and its deep content to build personal profiles and behavioral models is what makes services like Google marketable. And we can sense the contours of these profiles and their assumptions when advertisements appear to reflect our interests. The private sector is infatuated with the very real prospect of first, knowing who we are, and second, shaping who we will become.

There are also examples of non-commercial and non-governmental uses of these technologies. Researchers at Google tracked the spread of the flu by mining search data.⁵ Literary scholars use databases to understand the impact that a cluster of writers has had on the subsequent development of a field or the lifecycle of a genre of writing.⁶ Political campaigns increasingly use a tangle of databases to build models and develop targeted messages.⁷ Projects

like Humanitarian Tracker can data mine crowdsourced reporting—read: grassroots collaborative research—to respond to threats and crises.⁸ The knowledge that is embedded in these networks has enormous potential.⁹

Data mining, like most other research tools, is a two-edged sword. The nature of the public discussion, or lack thereof, means that this sword is being wielded with very little accountability and often against our interests. And the two biggest drivers, the corporation and the state, often work together, further obscuring their operations and allowing a dystopian potential, whether in the hands of states, corporations or criminals.¹⁰ As digital sensors increasingly pervade our environment—in our

As digital sensors increasingly pervade our environment... the potential for use or misuse is too large to ignore.

appliances, on our bodies, in our cars, at the office, when we shop, go to school, visit the doctor, go to the bank—the potential for use or misuse is too large to ignore.

A happier human future will require changes in our approach. First, remember that metadata remains the easiest to mine and interpret. We should not underestimate the difference between humans and hubristic misanthropologies of control.¹¹

Second, we must promote awareness. Snowden's recent revelations were denied by President Obama and inadequately covered by the press. The tech companies who were named as collaborators with the NSA program, some of who have attempted to push back publicly, have suffered economic consequences as

a result of collaboration. Thus, they are not likely anxious to participate in protracted public debates and further the risk that transparency might pose to their brand identities. The President's proposed domestic "reforms," though they are simply meant to placate, are an indication that building pressure could produce positive change.

Third, we should consider ways to empower citizens to use the tool and to guide its use. Some suggestions include:

1. The cultivation of an independent press and watchdog organizations that can meaningfully monitor policy as it develops.
2. The restoration of meaningful checks and balances to the process in the form of actual Judicial and Congressional oversight.
3. The promotion of legislation which gives individuals power over their own records.

As with most social problems, there are no simple solutions—transparency, vigilance and accountability are necessary.

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Flu trends around the world 02/25/2014

► *"Impacts of Technology" continued from page 5*

those available on iFixit.com to extend the useful life of electronics for as long as possible. These powerful machines, invested with so many environmental and social resources, should not be seen as disposable. When purchases are made, consider buying used or refurbished devices and consult resources like the Greenpeace Guide to Greener Electronics¹¹ and the EPEAT product registry¹² to choose devices produced with fewer negative environmental and social impacts. Contact manufacturers to let them know you appreciate steps

they've taken to "green" their products, or that you want to see items made to last with easy upgrades and repairs. Ultimately, manufacturers are driven by market demands, so do all that you can to create a demand for responsibility and mindfulness. Sell or donate unwanted devices that still function.¹³ Learn about recycling opportunities in your area (Earth911.com), and use electronics recyclers certified to process materials safely and responsibly.¹⁴

Technology may be a double-edged sword, but no sword forges or wields

itself. We have the power to develop technologies with care; use them with caution and respect; and redesign them as we become aware of unintended consequences.

▲ **Joy Scrogum** is an Emerging Technologies Resource Specialist at the Illinois Sustainable Technology Center. She is currently the Co-Coordinator for ISTC's Sustainable Electronics Initiative and the project director for the International Sustainable Electronics Competition.

Considering Technology for Worship

by Quentin Schultze, PhD

We have essentially four options when it comes to deciding what to do with technology in worship. **First**, we can reject a technology for a host of reasons. The financial costs might be excessive, especially in light of a congregation's commitments to missions, social justice, education, and more. Rejecting older or newer technologies can be a reasonable decision, especially if they will weaken worship or dissolve congregational fellowship or interfere with service to the community.

One of the major concerns that many congregations have is that presentational technologies automatically will transform worship into entertainment. This apprehension is rarely challenged because it seems so matter-of-fact. Film critic Neal Gabler writes, "The popular megachurch movement of the 1990s, which attracted thousands of worshippers to cavernous auditoriums, even implemented the same devices as any rock group trying to fill a stadium: not only the music but light shows and huge overhead projectors illustrating sermons or showing video clips. Some even had cappuccino carts and food courts."¹ Gabler's argument does not make it clear how the technologies necessarily contributed to the state of affairs that he describes. Many high-tech churches simply do not fall into Gabler's stereotype.

Nevertheless, we have to take possible problems seriously as we consider the role of presentational technologies in worship. And some congregations



will find that particular technologies do not fit well with various modes, styles, or orders of worship. They might indeed discover that because of the worship tradition of their own congregation, projection screens do not foster better worship.

A **second** option is to adopt technologies—to bring them directly into worship. Adoption is the uncritical, unreflective practice of using new technologies more or less as they are employed by people in nonliturgical settings. We all know, for example, that audio ampli-

...technologies generally modify how we think, feel, and communicate.

fication systems and microphones are used in many different ways in society, some of which may be appropriate for worship.

Many congregations acquire their ideas about how to use video clips and slides from outside the church. Two sources of external influence are business and education, where PowerPoint is largely a teaching technology for conveying bullets of information. It should not surprise us, then, that unreflectively adopting this kind of presentational technology sometimes leads a congregation toward a style of worship that in-

creasingly emphasizes didactic instruction as the "delivery of information."

The problem with adopting technologies from outside of worship is that usually we fail to consider their unintended impacts on liturgy. As Winston Churchill said of architecture, "We shape our buildings and afterwards our buildings shape us."² The same is true for all technological practices. As we adopt and institutionalize them, technologies generally modify how we think, feel, and communicate.

Churches are apt to adopt new technologies that symbolize power, which the church wants to use for good. One high-tech church speaks of the concept of "M to the Power of 3... MultiCULTURAL, MultiSENSORY, MultiMEDIA." This was the title of a church's conference designed to teach participants from other flocks about "integrating media, environment and culture into your worship experiences creating spaces for life transformation."³ An organization that promotes the use of cutting-edge technology in liturgy advocates "the best' in technology to match the standards set by the entertainment industry."⁴

This kind of language about the power of media to influence people usually first surfaces in industry. One of the founders of the television channel MTV said during the channel's



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...we face lives of multimedia, multi-messaging, and multi-confusion.

early years, “Our core audience is the television babies who grew up on TV and Rock & Roll... The strongest appeal you can make... is emotionally. If you can get their emotions going, [make them] forget their logic, you’ve got ‘em.” He added that MTV’s mood is “greater than the sum of its parts” and lauded the network for introducing programming that relies on “mood and emotion.”⁵

The **third** approach to using technology in worship is adaptation—wisely adapting new technologies to fit liturgical purposes. This is a difficult way to proceed. It requires us to think carefully about the best ways to use communication technologies within worship for distinctly liturgical purposes. Once we

put the purpose of worship ahead of the use of technology, we place demands on when, how, where, and especially why we use particular technologies. We cannot merely fall back on rhetoric about creating a “new visual language,” “speaking to youth,” or even “staying relevant.” Instead, we have to justify the use of media within specific liturgical practices as worship. I advocate this approach.

The **fourth** approach to using technology in worship, creation, gives the church the most autonomy. Churches could support talented people and institutions in the development of technological innovations specifically for worship. In other words, rather than trying to adapt technologies from other contexts (like buying “secular” art for adorning church walls), congregations could become much more technologically proactive as patrons of liturgical art and presentational technologies. Unfortunately, the church today is not

particularly interested in creating new technologies, although a growing number of liturgical artists are creating worthy material for worship.

Increasingly, we face lives of multimedia, multi-messaging, and multi-confusion. This might convince us to slow down enough to reconsider how high-tech we want our lives to be. Is the church contributing to thoughtless innovation? Is worship, in particular, better off if it pursues high-tech “progress”? Should worship by nature be less high-tech and more high-touch? Or is there a place for high-tech worship that is humbly done, thoughtful, beautiful, and presumably pleasing to God? I think so.

Excerpted from *High Tech Worship? Using Presentational Technologies Wisely* (2004) by Quentin J. Schultze. Used by permission of Baker Books, a division of Baker Publishing Group. <http://www.bakerpublishinggroup.com>

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Changing the World, One Upload at a Time

by *Cassandra Hunter*

If you Google the name Emily-Anne Rigal, you’ll find more inspiration, motivation and positivity than most people put out in a lifetime—yet Emily-Anne is barely 19 years old. She is a student at Barnard College, founder and director of the non-profit We Stop Hate and Lady Gaga’s self-proclaimed “hero.” It’s hard to imagine that she once told a young girl, frustrated with not knowing how or where to start to change the world, “I think that starting small really is the way to do things.”



Emily-Anne Rigal

And “start out small” she did.

Bullied throughout her childhood for her weight, Emily-Anne was eventually forced

to switch schools in order to escape her tormenters. “I lost a lot of my self-respect and my self-esteem... Starting at a place where nobody knew who I was gave me a chance to be open and to be myself, and people gravitated toward that.” Her self-esteem began to improve drastically throughout high school, as did her connections with her peers.

She began making cute, goofy YouTube videos under the name Schmiddlebopper and was able to connect with a larger community, particularly teens. She realized that she could meet teens on their ground—online—and start to spread a message of positivity by using social media for social

good. And so We Stop Hate was born.

The message of We Stop Hate is at once simple and powerful: love yourself. “We focus on raising your self-esteem as a way to stop bullying and promote peace,” Emily-Anne said in an interview with Forbes Magazine, calling the cause “teen-esteem.” Hundreds of videos have been posted to WeStopHate.org, all with a message of self-love and positivity. And just as Emily-Anne had experienced when she switched schools and had the freedom to become comfortable in her own identity, the contributors to We Stop Hate are able to connect, blossom, shape their own identities and finally feel heard. The campaign has spread to Twitter, Facebook and now on-the-ground in the form of “compliment-grams” in high schools.

The effects have been life-changing, and they started with a YouTube video.

The Digital Angels of our Nature

by Michael Bugeja, PhD

In conversation with our Editorial Board, author Michael Bugeja expressed the importance of sounding an alarm as we examine the intersection of morality and technology. In the following article, he takes the long view in naming what will be required for personal and communal moral agency to influence our current digital dilemmas.

As I write in mid-January 2014, these stories about health care, national security and privacy headline the news:

- “Concerns Linger About Enrollment Glitches as Millions Start New Health Coverage”—*PBS News Hour*
- “Obama Calls for Overhaul of N.S.A.’s Phone Data Collection Program”—*New York Times*
- “After Target Breach, Homeland Security Warns Retailers”—*CNN*

Your news may differ somewhat from mine, because a computer program or application may be selecting stories for you by targeting your demographics—age, marital status, income—or psychographics—politics, travel, brands. In any case, you should be familiar with some aspect of these stories:

- The Obama administration noted that 975,000 people signed up for coverage in December which, some believe, means the government has solved glitches undermining the Affordable Care Act since October 2013.
- Because of the actions of Edward Snowden, former National Security Agency contractor who leaked top-secret documents, in-



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telligence agencies now must seek permission from a clandestine court before tapping telephone data.

- Target, the department superstore, was the victim of credit card theft afflicting up to 110 million customers, prompting Homeland Security to warn merchants about the malware at the source of the crime.

We are living in a world undergoing horrendous change associated with morality and machines.

All three stories on this day indirectly involve a topic I have researched since 1999 during the tech boom that promised a global village, delivered a global mall and changed the nature of our relationships and with that, our values and beliefs.

These are huge claims, of course. One requires a book to address them.¹ The best I can do here, in this small but precious space, is present some basic tenets on this truth: *We are living in a*

world undergoing horrendous change associated with morality and machines.

As an ethicist, I have stood on the shoulders of giants: Jacques Ellul, Marshall McLuhan, Neal Postman and Clifford G. Christians, to name a few. Ellul was a French-Maltese philosopher. McLuhan, best known for his maxim, *the medium is the message*, was a communication theorist. Postman was a professor and author of a famous book on television, *Amusing Ourselves to Death*. Christians, research professor emeritus of communication at the University of Illinois, is the foremost media ethicist writing today.

My contribution to ethics is in the definition of the human condition—how it governs our behavior and how we can harness its power. It has two components: consciousness and conscience. Consciousness tells us we come into the world alone and we leave it alone. Conscience tells us what is in me is in you. We must deal with those conflicting messages on a daily basis, a difficult enough challenge in a world without technology. Add omnipresent machinery to modern life, robbing us of time to contemplate, meditate and yes, pray, and our lives become hid-

eously complex and, dare I say, lonely despite all those tweets, posts and texts.

Mine is not a modern-day version of the Christian “shoulder angel,” with conscience on the right shoulder and consciousness on the left. The shoulder angel actually is a literary device so characters may wax philosophic about sinful enticements. The good angel on the right shoulder symbolizes the conscience and the devil on the left, temptation. That depiction dates back to the Roman non-canonical book, *The Shepherd of Hermas*, whence it was decreed that there are two angels in us: “One of righteousness and one of wickedness.”²

From an ethical standpoint, consciousness is not a wicked angel but gives us a sense of *awareness*, involving

and theorized by Christians.

The nature of technology is that of a scorpion. It is what it is, neither moral nor immoral. There is a reason for that: *it is programmed to achieve a certain result*. Technology as we know it in our homes and offices was developed by the US military and enhanced by industry; hence, it does two things efficiently: it surveils and sells, often simultaneously. Ellul believed technology is “a self-determining organism or end in itself whose autonomy transformed centuries’ old systems while being scarcely modified in its own features.”³

In simple terms, that means technology changes everything it touches without changing much itself. Introduce technology into the economy, and

Media: The Extensions of Man:

*In a culture like ours, long accustomed to splitting and dividing all things as a means of control, it is sometimes a bit of a shock to be reminded that, in operational and practical fact, the medium is the message. That is merely to say that the personal and social consequences of any medium—that is, of any extension of ourselves—result from the new scale that is introduced into our affairs by each extension of ourselves, or by any new technology.*⁴

When McLuhan asserts that the medium is the message, he doesn’t mean that technology changes the message: of course it does that. He means that it

...technology changes everything it touches without changing much itself.

how our interactions affect or influence others and ourselves. By expanding our awareness, we can foresee consequences of our actions before taking them and minimize harm. Neither is conscience the angel of righteousness, but an intuitive knowledge of *right and wrong* associated with truth-telling, non-violence and human dignity. Conscience informs us how to live among and view others in community. My work focuses on how to harmonize consciousness with conscience so that one informs the other and influences our actions. When those twin components of human condition synchronize, we feel grounded, confident and able to cope with the rigors, challenges, opportunities and joys of life.

The problem is, the din of technology rules our day. We are losing the ability to hear that still, small voice of the conscience. Worse, because technology is asynchronous—transcending both time and space—we are also losing our sense of awareness, especially about our physical surroundings. Both phenomena are exacerbated by tenets of technology as foreseen by Ellul, prophesied by McLuhan, documented by Postman

suddenly the economy is all about the technology. Introduce it into journalism, and journalism is all about the technology. Introduce it into education, business—even religion—and you have the same effect. Moreover, if you fail to honor the myriad rules of technology, requiring a phalanx of technicians, it ceases to work.

McLuhan coined the famous phrase “the medium is the message” in the opening paragraph of *Understanding*

changes the environment, or culture, of human interaction and discourse. Just look at neighbors and passersby in the street; texting, talking into palms and ignoring their surroundings—to the point of walking into traffic. According to *Forbes Magazine*, texting distractions may have been responsible for 4,280 pedestrian fatalities in 2010.⁵ Those distractions not only threaten interpersonal relationships but also the fabric of society as we knew it only a few years



ago. We are inundated with advertising pitches because our networks, websites and applications—in addition to viruses and malware—have surveilled our demographics and psychographics. Technology knows what we want, and it aims to give it to us, 24/7 from any location with wireless access.

More than anything in this new environment, we do not want to be bored. We become so now when not looking at a screen, during any lull but especially when driving. The US Transportation Department reports that 660,000 drivers use cell phones at any given time while traveling during daylight hours.⁶ This makes a crash 23 times more likely. Distraction is worse in the college classroom. One study claims 90% of college students text each other during lecture.⁷

Postman prophesied this in 1990. He warned that students would be “easy targets for advertising agencies,” especially when “schools teach their children to operate computerized systems instead of teaching things that are more valuable to children.” Whenever you introduce technology into a system, Postman knew, there are winners and losers. Students lost critical thinking.

*Should the losers grow skeptical, the winners dazzle them with the wondrous feats of computers, many of which have only marginal relevance to the quality of the losers' lives but which are nonetheless impressive. Eventually, the losers succumb, in part because they believe that the specialized knowledge of the masters of a computer technology is a form of wisdom. The masters, of course, come to believe this as well. The result is that certain questions do not arise, such as, to whom will the computer give greater power and freedom, and whose power and freedom will be reduced.*⁸

Power is at the core of the technology debate. We see this in the news every day. Let's return to those stories

headlining the news on that particular day in January 2014:

- “Concerns Linger About Enrollment Glitches as Millions Start New Health Coverage.” It's the fourth month of the Affordable Care Act, and we're still talking about the technology rather than our health. *Introduce technology into the health system, and the conversation becomes all about the technology.*
- “Obama Calls for Overhaul of N.S.A.'s Phone Data Collection Program.” Patriot or traitor, you decide; but Edward Snowden ac-



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Power is at the core of the technology debate.

cessed secrets because our spy network computer needed updating and maintenance ... or it would cease to work.

- “After Target Breach, Homeland Security Warns Retailers.” Identity theft is a gross violation of privacy. Cybercriminals heisted the potential to assume identifies of 110 million people, more than one-third of the population of the United States. *This is a prime example of technology's amoral ability to surveil and sell.*

How do we address mega stories like this in a publication dedicated to peace and justice? I need to be frank: morality cannot develop around technology because its nature neither endures “any moral judgment” nor tolerates “any insertion of morality” in the technician's work.⁹ In other words, one can suggest ethical rules of behavior concerning Internet or mobile devices, but cyberspace and those devices are not programmed for moral development; typically, they are programmed to surveil or sell.

To be sure, we use technology for the social good. There are thousands of websites and initiatives dedicated to that. There are just as many that aim to exploit others and/or waste our time. The problem is digital exploitation and time-filling gizmos, games and applications create enormous revenue streams and thereby have more dominant programming and distribution.

How, then, might we develop, create and sustain a morality of technology and its use? Technology has so infiltrated our lives that its values—immediacy, materialism, asynchronicity, amorality—may be in the process of supplanting universal values. Christians would call this a “protonorm”: agreement across cultures about the sanctity of life.¹⁰ The only way to combat that

is through the educational system in a long-term strategy aimed at enhancing literary, scientific and critical thinking skills. As a country, we're too amused right now to make that commitment.

Maybe the shoulder angels—humanity on the right, technology on the left—are at work after all.

▲ **Michael Bugeja**, director of the journalism school at Iowa State University, is the author of *Living Ethics Across Media Platforms and Interpersonal Divide: The Search for Community in a Technological Age* (Oxford University Press); both winners of the Clifford G. Christians Award for Research in Media Ethics.

When I Post, I Wonder...

by Dan Masterton

Americans of all ages are on their phones more and more—in an average day, we spend three hours on social media and unlock our phones 110 times.¹ The proliferation of Internet-connected mobile devices is increasing the frequency with which we check in on our many news-feeds.

When it comes to my phone, I try only to send texts to inform others in little bits or else pop in on someone for fun; if it's going to go more than a couple texts back and forth, I just call. But now it's more than just texts and calls—it's Tweets, Timelines, Vines, Instagrams and Snapchats. So how do I limit these things?

If Facebook didn't exist... would I still print out my photos and show them to friends?

In all my online activity, I try to walk the right side of a fine line—am I honestly, modestly and simply sharing my life, or seeking to create and sculpt an online image of myself? I think the impact that my social media use has on my life and relationships comes from the way I choose to use it.

I like to make “Seinfeld”-ian comments, observational humor à la the mundane conversations between Jerry and George on the '90s sitcom. Sometimes, I share my snark via Facebook status. When I'm considering posting, I wonder, am I doing this to get likes and comments, or simply rebroadcasting what I'd say to people in conversation?

I love to take pictures. I've posted over 100 Facebook albums with comprehensive captions, photo-tags and clever titles. Pictures reinforce memories and animate the narratives of life, and I like to tell these stories visually

on Facebook. When I post an album, I wonder, am I trying to show off and evoke jealousy, or connect others to the memories that my friends and family are making?

I enjoy sharing articles from news sites, others' blogs and religion and spirituality pages. When I share an article or a post from my blog, I wonder, am I fueling petty buzz, or am I trying to spur others to authentic curiosity that moves us to deeper justice and faith?

I love to use social media as an aggregator of that which my friends and others with common values feel is important. The temptation is to editorially tailor the image of myself that they see. That's why I try to be honest, modest

and simple: if Facebook didn't exist, would I still share my sarcastic thoughts aloud to others? Would I still print out my photos and show them to friends? Would

I still dog-ear magazines and cut out newspaper articles to share with others? When the answer is yes, then I post. I share myself authentically. And in between it all, I turn off the little red

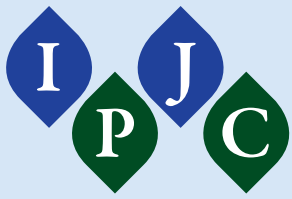


numbers, disable notification pop-ups on my mobile devices and limit myself mostly to WiFi rather than the ubiquitous 3G network. This way I can be plugged in, but not all the way. I try to be technologically active but only so much as it complements my relationships and daily interactions in moderation.

▲ **Dan Masterton** lives in Chicago, IL. A graduate of the University of Notre Dame ('11), Dan is the Campus Minister at Bishop Noll Institute in Hammond, IN, and a Bernadin Scholar working toward a Masters in Theology at Catholic Theological Union in Chicago, IL.

Questions for Reflection

- ▶ As we look at the role of technology today, we can feel overwhelmed or empowered. How might we “co-create” a world with the skills and technologies we have?
- ▶ How might our ways of using technology hinder that co-creation?
- ▶ How am I connecting with people and the world around me in daily life? How am I connecting to the Divine?
- ▶ Do I have rules for myself about when and how I use technology? When do I allow technology to interrupt me?
- ▶ In what ways do I use technology for good or as a time filler?
- ▶ Am I aware of the impact of my technology on the environment? What might I do to offset it?



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Technology by the Numbers

3.6 Average number of hours/day a user spends on social networking¹

Seventy Percent

People in the world **without** access to the internet²

75%

Of the world population has a **mobile phone**³

and

22%

Of people globally have a **smartphone**⁴

24% Of the US population who says the worst thing about a cell phone is always being connected⁵

25% Increase in productivity in developing countries if the Internet was accessible and affordable⁶

160 million

The number of people who could be lifted out of poverty with Internet accessibility⁷

“The meaning of things lies not in the things themselves, but in our attitude towards them.”

—Antoine de Saint-Exupéry