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# Technology and the Biblical Story

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by Derek Schuurman

Years ago, as a young engineer recently graduated from school and sitting in a cubical farm, I recall wondering, “What does the Gospel have to say about my technical work? What does faith have to do with technology? Is there a distinctively ‘Christian’ approach to technology?” The early church father Tertullian once posed the question “What does Athens have to do with Jerusalem?” What he meant by this was, “What does Athens, a city representing culture, have to do with Jerusalem, which represented faith?” In other words, what does faith have

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to do with culture? We can update this question for our day and ask, “What does Silicon Valley have to do with Jerusalem?” or to put it another way, “What do bytes have to do with beliefs?”<sup>1</sup> (Spoiler alert: technology and faith *do* have something to do with each other! In the following sections I hope to sketch a few of the ways they are connected.)

## Technology has a Bias

I’m going to begin with the assertion that technology is not neutral, that it is *value-laden*.<sup>2</sup> To demonstrate this, let’s begin with an example. Consider the automobile: it is not just a neutral tool to get from point A to point B; rather, it fundamentally and radically shapes our environment and culture. Our cities have been built around roads and streets to accommodate the automobile. Where we live, work, shop, and worship are now disconnected. Eric Jacobsen’s book *The Space in Between* describes how the built environment even shapes our churches, our communal life, and our connection with our neighbors.<sup>3</sup>

Likewise, digital technology is not neutral; it changes us in profound ways. In his article “Is Google Making Us Stupid?”, Nicholas Carr writes, “My mind now expects to take in information the way the Net distributes it: in a swiftly moving stream of particles. Once I was a scuba diver in the sea of words. Now I zip along the surface like a guy on a Jet Ski.”<sup>4</sup> Carr further developed his ideas in a book titled *The Shallows: What the Internet Is Doing to Our Brains*, where he suggests that we are turning into “pancake people—spread wide and thin as we connect with a vast network of information.”<sup>5</sup> In another book titled *iBrain: Surviving the Techno-*

*logical Alternation of the Modern Mind*, the author, neuroscientist Gary Small, explores how digital media appear to be changing the very structure of our brains. Research into brain plasticity has revealed that our brain changes in response to what we do, a notion summarized by Hebb's rule: "Cells that fire together wire together."<sup>6</sup> Small describes how technological activities sculpt and shape our brains in certain ways. Small suggests that the digital revolution has "plunged us into a continuous state of partial attention," and in this state people "no longer have time to reflect, contemplate, or make thoughtful decisions."<sup>7</sup> Perhaps St. Augustine was right thousands of years ago when he suggested, "Habit, if not resisted, soon becomes necessity." Technology is not neutral—it profoundly shapes us in unexpected ways.

Sherry Turkle, a thoughtful social scientist at MIT, wrote a book titled *Alone Together: Why We Expect More from Technology and Less From Each Other*. In it, she explores how digital communications and social robotics change us, and she laments how certain technologies encourage us to sacrifice companionship for simply "interacting with something."<sup>8</sup> Her most recent book, *Reclaiming Conversation: The Power of Talk in a Digital Age*, explores the loss of empathy that occurs when we sacrifice face-to-face conversation for mere digital connection.<sup>9</sup>

In another book, titled *The Glass Cage*, author Nicholas Carr explores the effects of automation on work. He describes the "substitution myth," which suggests that automation simply substitutes for some portion of a job without altering us. The fact is that automation "alters the character of the entire task, including the roles, attitudes, and skills of the people who take part in it."<sup>10</sup> He writes, "automation tends to turn us from actors into observers," and cites various studies, including one that found that relying on a GPS instead of exercising our own navigational skills can literally shape our brains in terms of the size of the hippocampus.<sup>11</sup> Again, we may shape our tools, but our tools are literally shaping us. These are just a few examples, and you don't need to look far to come across many writers and thinkers who are making the case that technology

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has a bias and is changing things, including our very selves.

This notion that technology is not neutral is not new. Decades ago, prophetic voices like Neil Postman and Marshall McLuhan were making the point that media was changing us. In his book *Technopoly*, Neil Postman writes, "Embedded in every tool is an ideological bias, a predisposition to construct the world as one thing rather than another, to value one thing over another, to amplify one sense or skill or attitude more loudly than another."<sup>12</sup> Marshall McLuhan coined the cryptic phrase "The medium is the message," by which he meant to suggest that the

medium embeds a bias that goes far beyond the content of a message. For example, the impact of television is more significant than the content of individual shows; everything that goes through it becomes entertainment, including, as we have seen, politics. John Culkin, summarizing Marshall McLuhan, wrote, "We shape our tools and thereafter they shape us."<sup>13</sup> Every technological artifact is created with some kind of bias: it opens up some possibilities, while simultaneously closing down others. Because technology is value-laden, there are definite implications for us as Christians as we engage with technology.

### What is Technology?

First, we need to understand what we mean by technology. Technology is not just about widgets and artifacts. The book *Responsible Technology* defines it as follows:

Technology is a distinct cultural activity in which human beings exercise freedom and responsibility in response to God by forming and transforming the natural creation, with the aid of tools and procedures, for practical ends or purposes.<sup>14</sup>

I like this definition—it recognizes that technology is something that humans do: a human cultural activity. Andy Crouch refers to culture as "what we make of the world," and technology is a significant part of how we shape the world.<sup>15</sup> Furthermore, this definition recognizes that technology is an area in which we exercise both *freedom* and *responsibility*.

Viktor Frankl, in his book *Man's Search for Meaning*, has suggested that the "Statue of Liberty on the East coast should be supplemented by a Statue of Responsibility on the West Coast."<sup>16</sup> Those things go together; with freedom always comes responsibility. This is a biblical notion.

But if technology is an area in which we respond to God, how do we know how we ought to respond? Of course, our ultimate guide for holy living is the Scriptures. But what do the ancient Scriptures have to say about our work with modern technology? The word "computer" cannot be found in a Bible dictionary, and we can't simply force-fit proof-texts. The Scriptures are a lamp unto our feet, but how do we use Scripture to light our way when we are traveling along new paths?<sup>17</sup>

John Calvin once suggested that the Scriptures are like "spectacles" that help us to see more clearly.<sup>18</sup> One way to see more clearly is to ask ourselves "What is the story we are living in?"<sup>19</sup> We live *Coram Deo*, "in the presence of God," within the context of the Biblical narrative; each of our own individual narratives is nested within it. The big sweep of the story of Scripture shapes a Christian worldview, informed by the Biblical themes of creation, fall, redemption, and restoration. Like a transmission that connects an engine to the wheels, a Christian worldview connects the Scriptures to areas like technology, where the rubber hits the road.<sup>20</sup>

Let's briefly examine each of these biblical themes of creation, fall, redemption, and restoration and consider how they make us aware of the world and its meaning, and explore how they might inform how we interact with technology.

### Technology and Creation

We can say, for starters, that technology is part of the latent potential in creation. Sometimes when we think of creation, we think of things like stars, trees, flowers, and animals. But creation is, in fact, all the things that God has ordained to be, and that includes technology, which is part of God's good creation.

Furthermore, in the creation story, humans are given a cultural mandate (Gen. 1:28) and called to work and to cultivate and keep the earth. We are called to "fill the earth"; this does not necessarily mean having lots of children, but it does mean un-

folding all the potential and possibilities in creation: in art, agriculture, music, cuisine, and also technology. God created human beings in his image—something that has many implications, including ones that inform our view of artificial intelligence and of the ways people are distinct from machines.

Creation is complex and diverse; God made each thing "according to its kind," but people frequently seek to reduce things to a common denominator. For instance, in computing we might be tempted to see everything as reducible to information or data or algorithms. But "not everything that counts can be counted."<sup>21</sup> We need to avoid reductionism and remember that creation is both diverse and complex.

In creation, God establishes a pattern of sabbath rest—work and rest are part of the rhythm of creation. But with our 24/7 digital devices, finding time to rest has become more difficult. Our tools shape us, and our tools never rest. Sabbath is a creational reality that we ignore at our peril.

Finally, creation includes laws, limits, and norms. There are creational laws upon which technology relies and which mark the boundaries for what is possible. There are also norms for technology, ways that things *ought* to be and where we are called to exercise freedom and responsibility. We will explore more about these shortly. But first, we will consider why things are not what they should be.

### Technology and the Fall

Somewhere near the beginning, the human family fell into sin, and all creation fell under a curse. In the words of Romans 8:22, "the whole creation has been groaning." In the words of a Bob Dylan song, "Everything is broken." Our work is frustrated by "thorns and thistles," but how has the fall affected technology? How does the fall affect transistors, motors, computers, and chemical reactions? Exactly how technology has been "cursed" and "subject to frustration" is difficult to know. We don't know exactly what a pristine creation might have looked like. But we do know that the fall and sin have had implications in all human activities.

Sin is like a parasite that attaches itself to God's good creation.<sup>22</sup> It may sound paradoxical, but even something like Internet pornography is only possible because of God's creation—he created the pos-

sibility for computer technology as well as human sexuality, but Internet pornography is taking these good creational gifts and distorting and perverting them in a way they were never intended to be. One can say that technology has both a creational *structure* as well as a *direction*.<sup>23</sup> Creational *structures* endure, but they can be *directed* either in obedience to God's intentions or towards more disobedient uses. The common question of whether technology is good or bad is a false dichotomy. Technology is, in fact, part of God's good creation, but the important question is this: in what direction is it pointed? Do we direct technology towards uses that make us more like the people God intends us to be, and closer to the kind of world he wants us to shape, or towards disobedience?

Another important impact of sin is its effect on the human heart—which can also be misdirected. Already near the beginning of the Bible in Genesis 11, we read of the Tower of Babel. It was a technological project that employed new technology for making bricks, but it was directed by people who wanted to build their own bridge between heaven and earth and “to make a name for themselves” (Genesis 11:4). God disrupted their plans, but this temptation to place our trust in technology continues; efforts to build modern-day towers of Babel persist. The term *technicism* is a word that has been coined to refer to the faith in technology as savior or rescuer of the human condition.<sup>24</sup> A recent book titled *Infinite Progress* includes the subtitle “How technology will ultimately solve ignorance, disease, poverty, hunger, and war.”<sup>25</sup> This is religious language, proclaiming a bold trust in technology.

Any time we put our faith in something created rather than the Creator, it becomes an idol. Anything good in creation has the potential to become an idol. John Calvin talks about our tendency to be a “perpetual factory of idols”—and technology is just one of the counterfeit gods we manufacture.<sup>26</sup> For some, the trust in technology extends so far that they look to it for a solution to death. There are some very clever people who firmly believe that eventually we will be able to upload our brain into a computer and live forever in a virtual paradise. This

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idea has sometimes been referred to as “the rapture of the geeks.”<sup>27</sup> Some believe that even the last enemy, death, will eventually be conquered through technology, and that by it we will achieve immortality. But this faith in technology is very mistaken; it is based on faulty presuppositions on what it means to be human, a reductionistic view of life as nothing more than simulating the particles of the brain in software. In his book *Playing God*, Andy Crouch observes that “Every idol makes two simple and extravagant promises: (1) ‘You shall not surely die’ and (2) ‘You shall be like God.’”<sup>28</sup> Psalm 115:8 suggests that all who make and trust in idols will become like them. In this case, the end goal is literally to become a computer.<sup>29</sup>

### Redemption and Responsible Technology

But God did not leave us without hope. I love this passage in Colossians 1, which describes the work of Christ in redemption:

For in him all things were created: things in heaven and on earth, visible and invisible, whether thrones or powers or rulers or authorities; all things have been created through him and for him. He is before all things, and in him all things hold together. And he is the head of the body, the church; he is the beginning and the firstborn from among the dead, so that in everything he might have the supremacy. For God was pleased to have all his fullness dwell in him, and through him to reconcile to himself all things, whether things on earth or things in heaven, by making peace through his blood, shed on the cross. (Colossians 1:16-20)

The repetition of the words “all things” means exactly that: redemption is about *everything*. We read that Christ was there in creation; all things were created through him. Furthermore, all things were created for Christ; he is the *telos*, or purpose of all things. In the words of Lesslie Newbigin, “Jesus is the clue for understanding all that is.”<sup>30</sup> And in Christ all things hold together—the moment-by-moment providence of Christ, in whom all things cohere. The Dutch theologian and statesman Abraham Kuyper once said, “There is not a square inch

in the whole domain of our human existence over which Christ, who is sovereign over all, does not cry: ‘Mine!’”<sup>31</sup> To be sure, redemption is about human hearts, but it is bigger: God is reconciling *all things* to himself; he is on a cosmic salvage operation!<sup>32</sup> In 2 Corinthians 5, God calls us to participate in this work as agents of reconciliation. Gordon Spykman once wrote, “Nothing matters but the kingdom, but because of the kingdom everything matters.”<sup>33</sup> I would add that this includes technology! Our calling is to participate in the renewing of God’s world. But the nagging question still is this: how do we help shape and reconcile technology?

A helpful way forward is to recognize various creational norms that represent God’s order for culture and society, areas where we are called to exercise freedom and responsibility. These norms remind us that when we create a technical artifact, it is not just bits, bytes, wires, gears, and semiconductors, but it includes social, economic, legal, aesthetic, and faith implications.

There are a variety of norms that can help guide our technological activities. One such norm is *cultural appropriateness*. Technology should alleviate burdens while still preserving what is good. Technology used in the workplace, worship, education, and international development must be appropriate to the setting and should fit the culture in which it is being used.

Another normative principle is *transparency* which deals with open communication and providing clear and honest information. This norm requires that users are not misled or confused by technical designs or documentation. It includes the requirement that we not bear false witness, and that any claims made about technology are truthful.

Another important norm is one of *stewardship*. While this norm includes economic factors, it is also concerned with stewarding materials, the environment, and human resources. Technology is not all about economics—profits must be placed in connection with service to God and neighbor.

A norm that deals with the intersection of function and aesthetics is characterized by *delightful harmony*. Good technology is characterized by being a joy and delight to use. People should not be forced to adapt to the tools of technology, but rather technology should be designed with users in mind.

In addition, an important norm is one that deals with *justice*, ensuring that everything is given what it is rightfully due. To act justly is one of the things that the Lord requires of us (Micah 6:8). It applies to our interactions with people and the entire creation. In technology, justice includes issues like privacy, intellectual property, and dealing equitably with workers and customers.

Yet another norm is one of *caring*, and it involves showing love and care for our neighbors, including workers and customers. It deals with doing things because we *ought* to, not simply because we can. The caring norm will resist efforts to automate jobs such as nursing, child care, and elder care. In her book *Alone Together*, Sherry Turkle observes that “some American enthusiasts argue that robots will be more patient with the cranky and forgetful elderly than a human being could ever be. Not only better than nothing, the robots will simply be better.”<sup>34</sup> But such jobs in the “caring professions” require far more than a pair of hands. Turkle emphasizes that “children need to be with other people to develop mutuality and empathy; interacting with a robot cannot teach these.”<sup>35</sup>

Finally, there is a norm which deals with *trust*. This norm has two aspects: the first aspect deals with the dependability of technical products, especially when safety and reliability are essential in applications like air-traffic control and the electrical grid. The second aspect of this norm deals with trust in God. We must always resist the temptation to place our ultimate trust in technology.<sup>36</sup>

All these norms can be summarized by Christ’s call to love the Lord our God and to love our neighbors as ourselves. These norms do not dictate exactly *how* to act, but they point a way forward. Efforts to pursue technology without attention to norms will lead to consequences; creation will ultimately push back. In the words of H.H. Farmer, “If you go against the grain of the universe you get splinters.”<sup>37</sup> These norms are not exclusive; they work together and help lead to flourishing and to *shalom*. We need to remember that the meaning of technology ought to be service to God.<sup>38</sup>

## Technology and the Future

The final biblical theme is the theme of restoration. Where are we going? What is to come?

There are many competing views for the future, and two common competing viewpoints are represented by the technical optimists and the technical pessimists. The optimists trust in technology, progress, and the creative capacity of humankind, and they look forward to a future Utopia ushered in by technology. This is a false redemption narrative that is common in our day and age. On the other end of the spectrum are the pessimists: people who despair about technology, expecting that technology will eventually destroy us. This is a common theme in many sci-fi movies, like *Terminator*, *Battlestar Galactica* and *The Matrix*—movies which depict technology that revolts and turns on humanity. This is a type of “Frankenstein” narrative, but one that is also primarily driven by technology.

The Biblical narrative differs from these narratives and presents a very different perspective of the future. The Bible begins with a garden, but it ends with a “garden city”—a city with all kinds of things in it. In Isaiah 60, we read that the “riches of the nations” will be brought into the city of Zion: camels, precious metals, and lumber. Even the “ships of Tarshish,” symbols of pagan commercial power, are somehow re-purposed “for the glory of the Lord.”<sup>39</sup> In Revelation 21, we read how “[t]he glory and honor of the nations will be brought into it.” God will not make all new things; he will make all things new! In Micah 4, we read that “they will beat their swords into plowshares and their spears into pruning hooks.” Harmful and distorted technology, like weapons, will be transformed and reappear in a form that can be employed for peaceful purposes, like tilling the soil and tending to plants. We see that technology that was once *misdirected* for sinful purposes will be *redirected* to useful purposes in the new kingdom. Perhaps predator drones and battleships will also be there, but re-purposed in service to the Lord.

When I taught computer science, I used to muse with my students that I would not be surprised to find computers in the new heavens and earth, but some of my students remained skeptical. Ultimate-

A helpful way forward is to recognize various creational norms that represent God’s order for culture and society, areas where we are called to exercise freedom and responsibility.

ly, we need to be humble and acknowledge that we only see through a glass darkly, that we don’t know what a world without sin will exactly look like. But I suspect that computers will be there, along with the glory and honor of the nations.<sup>40</sup> The passages in Isaiah 60 and Revelation 21 describe a restoration of meaning as everything is redirected in service to God. In the meantime, we wait for the day of Christ’s return, and in the words of Lewis Smedes,

we are called to “go into the world and make some imperfect models of the good world to come.”<sup>41</sup>

### Conclusion

I want to close by reminding us that while a Christian worldview is important, it is insufficient on its own: a personal relation-

ship with Jesus Christ is essential! Faithfulness is not just a matter of our minds but also of our hearts. Philosopher Jamie Smith writes, “Being a disciple of Jesus is not primarily a matter of getting the right ideas and doctrines and beliefs into your head ...[;] rather, it’s a matter of being the kind of person who loves rightly—who loves God and neighbor and is oriented to the world by the primacy of that love.”<sup>42</sup> As humans, we orient our loves towards some kind of end or purpose. Our lives are animated by some kind of story—either it will be the Biblical narrative, or else it will be some other narrative of our own devising. Our loves are determined by our hearts. Life is never religiously neutral; everything flows from the heart. Proverbs 4:23 counsels us, “Above all else, guard your heart, for everything you do flows from it.” Our hearts, in turn, are shaped by habits, practices, and rituals that gradually shape our desires.<sup>43</sup>

But here’s the rub: our habits and rituals are frequently shaped by our ever-present digital devices. These devices have a liturgy of their own, demanding our attention and mediating much of our lives. They shape and form us in ways we often don’t realize. Marshall McLuhan suggested that “we become what we behold.”<sup>44</sup> In our technology-saturated environments, we need to cultivate counter-liturgies, or what Albert Borgmann, a Christian philosopher of technology, calls “focal practices.”<sup>45</sup> These coun-

termeasures may include spiritual practices such as devotional time, reflection, sabbath, and fasting. It may very well be that the antidote to the shaping power of modern digital technology will lie in rediscovering the ancient practice of spiritual disciplines.

We must recognize the role of the Holy Spirit in our lives to cultivate virtues and to shape our hearts. And not only in our individual lives but also in community, the Holy Spirit works to help us discern together how to live faithfully in this present age. We should not leave the shaping of our digital world to the engineers and computer scientists alone—their work should be informed by insights from Christian social scientists, artists, writers, philosophers, theologians, and fellow pilgrims.

In the words of the respected computer scientist Fred Brooks, “If we would have our creations be true, beautiful, and good, we have to attend to our hearts.”<sup>46</sup> Without a connection to Jesus and a love of neighbor and the help of the Christian community, any work to shape technology or culture on our own strength is bound to fail. “In a world often captivated by dazzling technology, we need to be new creation signposts, people whose hearts and lives seek to be faithful to God.”<sup>47</sup>

### Endnotes

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