

TODAY'S TECHNOLOGY AND THE
FUTURE OF CHRISTIAN DISCIPLESHIP

TRANSHUMANISM

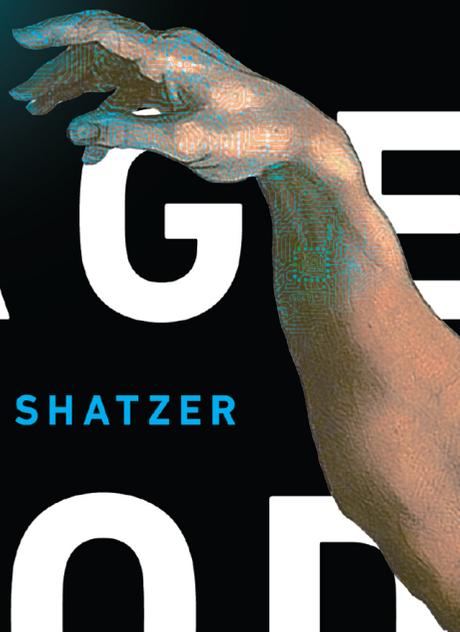
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IMAGE

OF JACOB SHATZER

GOD



JACOB SHATZER **TRANS**
HUMANISM

AND  THE

I M A G E
OF **G O D**

**TODAY'S TECHNOLOGY AND THE
FUTURE OF CHRISTIAN DISCIPLESHIP**


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INTRODUCTION

In the early 1960s, Hanna-Barbera produced a space-age counterpart to its animated sitcom hit *The Flintstones*. While that show had been set in the distant past, the studio set this new show, *The Jetsons*, in the “distant” future: the early 2060s. The Jetsons live in Orbit City, with its houses, stores, and office buildings rising into the sky on pillars. Cars fly. Robots clean and crack one-liners. Family life is filled with the same gaffes that make up your normal sitcom, but technological advances (and sometimes malfunction) provide fun distractions.

Even though we see that *The Jetsons* got a lot wrong, we’re constantly tempted to think about technology this way. Gadgets will continue to evolve, but humans will stay basically the same. Michael Bess calls this the Jetsons fallacy and argues that it pulses through many influential sci-fi visions of the future. Alien species and intelligent robots coexist right alongside unmodified humans, who grapple with challenges and often emerge as the heroes. Yet this is a fallacy because radical technological change will radically shape humans as well. As Bess puts it,

The only problem with this comforting picture of the future is that it is probably not true! We are headed into a social order whose most salient new feature may well be the systematic modification of human bodies and minds through increasingly powerful means. The process is already underway today and seems unlikely to slow down in the decades to come. The prevalence of

the *Jetsons* fallacy suggests that many people in contemporary society are living in a state of denial, psychologically unprepared for what is actually far more likely to be coming their way.¹

In other words, technology changes us, so our future probably isn't one where humans are exactly the same and robots just come alongside us. The change will be deeper.

A Christian version of the *Jetsons* fallacy would go something like this. Discipleship is about following Christ, and we can direct any technology toward that end rather easily. As long as we avoid obvious sin (don't use your smartphone to watch pornography, for instance), technology will continue to be a blessed add-on to the life of faith. But one futurist puts the problem with this idea very simply: "Humans were always far better at inventing tools than using them wisely."² Thinkers such as Bess would say that this Christian version fails to grapple with the potential for technology to change radically the way we think about what it means to be human and what sort of future we hope for.

But is this just an overreaction, built on fear? Has this sort of change happened before on any scale? Perhaps we need to ask a different question.

TIME

What time is it?

That seems like a straightforward question, doesn't it? One that we ask and answer routinely. But if we probe the question more deeply, we see that it is not so simple. In fact, technology has profoundly shaped the way we ask and answer this question. Let's follow this "time question" back through time.

We tell time differently than our parents did. Today, people more often wear watches for style than for need: we are more likely to check the time on our phone or our computer than on a watch. Not only are our devices different, but the level of precision we expect has changed as well. In a 2014 *Wired Magazine* article, Adam Mann trumpets accuracy: "Throw out

¹Michael Bess, *Make Way for the Superhumans: How the Science of Bio-enhancement Is Transforming Our World, and How We Need to Deal with It* (London: Icon, 2016), 7.

²Yuval Noah Harari, *21 Lessons for the 21st Century* (New York: Spiegel & Grau, 2018), 7.

that lame old atomic clock that's only accurate to a few tens of quadrillionths of a second. The U.S. has introduced a new atomic clock that is three times more accurate than previous devices."³ These atomic clocks synchronize time for much of our technology, such as power grids, GPS systems, and the Apple Watch. Sometimes when I am getting close to the end of a class and I'm unsure of the exact time, I'll query my students, "What time does Siri say it is?" When it comes to dismissing class, students expect precision.

The differences in timekeeping and time telling continue. Our parents told time differently from their Civil War-era great-grandparents. Clocks and personal watches entered mass production early in the twentieth century, so it would have been much more common for our parents to rely on them than those living in the nineteenth century. The timepieces aren't the only differences: time zones around the world were not standardized until the late nineteenth century—largely to keep the trains running on time and not into one another.

To jump even further back, those Civil War-era great-grandparents told time differently than Martin Luther did. After the Reformation, clocks got smaller and more accurate. In the 1540s the first public tower clocks came into use, providing an official time for villages and towns.⁴ In the 1570s, inventors gave the world the minute hand, an advance over clocks marking only the quarter-hours.

Martin Luther told time differently than Saint Augustine did shortly before the Roman Empire fell. Augustine's options included sand clocks, much like the hourglasses that sometimes accompany board games today. But candles formed to mark the passing of hours did not see the light of day—or the dark of night—for another four hundred years.

And this progression relates solely to what we call clock time, which itself varies through history and between communities. It isn't the only kind of time.

³Adam Mann, "How the U.S. Built the World's Most Ridiculously Accurate Atomic Clock," *Wired Magazine*, April 4, 2014, www.wired.com/2014/04/nist-atomic-clock/.

⁴For more on timekeeping, particularly in England, see Paul Glennie and Nigel Thrift, *Shaping the Day: A History of Timekeeping in England and Wales, 1300–1800* (New York: Oxford University Press, 2009).

We could multiply candidates for types of time, but let's just add two: natural time and religious time.⁵ Prior to the spread of the mechanical clock and a more abstract calendar, hours were marked by natural time, and days by religious time. What time is it? Well, how many hours since daybreak? How much daylight left? What time is it? What part of the church year is it? Before Easter? After?

We're beginning to see how complicated the question "What time is it?" really is. Obviously, the answer depends on what type of technology is or is not available. But we need to push one layer deeper. How do these different ways of telling time, these different technologies of timekeeping, affect the way we experience time and think about time? How do humans live and love differently when we consider our days through different frameworks? As one writer puts it, "What kind of time you perceive really depends on what kind of clock you are reading."⁶ Fully answering these questions for the technology of time would take us too far afield, but raising the issue helps us see how deep questions about technology really go.

To take one example, standardizing clock time played an important role in unifying the United States as a nation. As scholar Thomas Allen has argued, standardized clock time "created a shared 'simultaneity' of experience that linked individuals together in an 'imagined community' moving together through time."⁷ According to some scholars, this standardized clock time competed with and triumphed over other forms of time: "The abstract rationality of the clock . . . works to drive all other meanings out of time. Clock time supersedes modes of temporal experience based in religion, nature, or other 'premodern' cultural traditions. Both of these accounts make rational, value-free temporal structures central to modern nationhood."⁸ According to this notion, the way we experience time influences the way that we feel connected (or disconnected) from others. Building a nation requires the ability to feel connected to a vast number of people, most of

⁵On types of time see, for example, Glennie and Thrift, *Shaping the Day*, 42-47.

⁶Kara Platoni, *We Have the Technology: How Biohackers, Foodies, Physicians, and Scientists Are Transforming Human Perception, One Sense at a Time* (New York: Basic, 2015), 120.

⁷Thomas Allen, *A Republic in Time: Temporality and Social Imagination in Nineteenth-Century America* (Chapel Hill: University of North Carolina Press, 2008), 6.

⁸Allen, *Republic in Time*, 7.

whom I will not meet or see. Religious time and natural time serve to connect me with those who share my religion or my location, and those times help me to see the world in a certain way. Abstract clock time, however, opens up a way of thinking about the world that makes it possible to imagine a nation, to feel connected to a larger group of people.⁹ In part this connection relies on the fact that early clock time, especially in early modern Europe, was mainly kept in public places—town clocks—rather than on private devices—watches, phones.¹⁰ At the same time, the fact that timekeeping devices are now standardized to the same “time” reinforces this communal connection over large distances. Different ways of thinking about time encourage or make possible different ways of thinking about a community, a people, an “us.” A community keeps common time.

Let’s consider one more example: how the mechanical clock changed the human view of work. In a 1967 essay, E. P. Thompson argues that mechanical clocks altered factory work in England by restructuring work habits and similarly encouraging an inward notion of time. This restructuring “led individuals to accept the Industrial Revolution’s basic premises of quantifiable wage labor and systematic production.”¹¹ Mechanical time changed the way workers viewed time and the value of their labor. It hit them in the wallet.

Other scholars of time have noted a third example of the impact of standardizing clock time. This measurable change has been an important piece in a larger movement toward the importance of measuring and standardizing in terms of uniform operation.¹² The development of standardized clock technology has made it possible to measure and value standardization.

These changes weren’t met as a neutral technology that could be directed in various ways, either. For instance, as late as 1830, rebellious popular classes in Paris attacked clock towers all over the city because clock time was used to oppress them.¹³ Clock time is embedded in power relations, in

⁹Benedict Anderson, *Imagined Communities* (New York: Verso, 2006), 22.

¹⁰Glennie and Thrift, *Shaping the Day*, 24.

¹¹Allen, *Republic in Time*, 8.

¹²Glennie and Thrift, *Shaping the Day*, 91.

¹³Jonathan Martineau, “Making Sense of the History of Clock-Time, Reflections on Glennie and Thrift’s *Shaping the Day*,” *Time & Society* 26, no. 3 (2017): 313-14.

property relations, in work relations. The mechanical clock was not merely a neutral tool but one that encouraged and made possible certain ways of viewing and experiencing the world.

In reality, our experience of time does not rely solely on clock time. Our experience of time is a complex web of clock, natural, religious, and other measurements of time.¹⁴ However, clock time did disrupt this web, and timekeeping technologies have shaped human experience. For example, scholars have noted the split that we can typically see between a rural natural time (which is slow and simple) and an urban clock time (quick, unsentimental, etc.).¹⁵ Another difference between natural time and clock time is the public nature of clock time. These types of time overlap and influence one another, and the growing precision of clock technology affects this web of how humans experience time. In a way, humans make what time it is, because we invent and improve timekeeping. But in another sense, the way that we tell time turns around and makes us as well. It affects the way we think about a community, our work, and the passing of our lives. Our time devices shape us in certain ways, teaching us to value certain things and showing us reality in different lights.

There is an ambiguity here in “human making.” We can read that with humans as either the subject or the object of the making. Human making can mean humans as the ones doing the making. We could also read it as humans being made. Humans as the maker or the made, as in “humans making technologies” or as “technologies making humans.” “Human making: what technology we create” and “human making: what technology does to us.” This ambiguity is our reality.

Now, I’m not promoting a slippery-slope argument here, trying to scare you by saying technology use will inevitably lead to catastrophic outcomes, no matter what. The argument isn’t “Technology shapes us, so avoid technology.” We can’t do that anyway. At the same time, we must avoid the slippery slope of “Tools can’t tell us what to do, therefore we don’t need to think about how they shape us; we just need to use them wisely.” Rather,

¹⁴Allen, *Republic in Time*, 10.

¹⁵This example is from the work of Raymond William, noted in Glennie and Thrift, *Shaping the Day*, 24.

part of responsible, wise, faithful use of tools is analyzing the ways that certain tools shape us to see the world in certain ways, and then to ask whether those ways are consistent with the life of a disciple of Christ. If they aren't, then the answer could be to reject certain tools. Or it could be to limit tools in a certain way or to commit to other forms of life that can strengthen us in our resolve to pursue holiness in light of the many ways our world tempts us off that path.

To make this more concrete, I'll jump to two specific examples. We've all heard the line, "When you have a hammer, everything looks like a nail." There is wisdom in that; when we wield a certain tool, it affects the way we see the world, looking for ways to use the tool. But we also all recognize that part of the wisdom in the line is that we can be holding a hammer, we can slow down, and we can think, "Now, is that really a nail? Should I really hit it?" Another specific example could be the way having smartphones in our pockets affects how we interpret, process, and experience our daily lives. Maybe the line could be "When you've got a smartphone with a camera and the ability to post something online, everything looks like a status update." We see the parallel here: just like the hammer makes everything look like a nail, having a smartphone might encourage us to think more about what we can project into the world than perhaps we should. In both cases, we could imagine ourselves stopping and evaluating the situation: Is that really a nail I should hit with this hammer? Is this really a moment I should post rather than simply enjoy privately?

To add some technical language to these two examples, each tool pushes us toward the goal that the tool is best made for. The hammer pushes us, even a little bit, toward hammering. The smartphone, toward actions such as posting. We have to be aware of this, unless we think that our goals in life will always align with the goals that tools were made for. Here is where we can introduce a helpful and important distinction between these two examples. One of them is much more momentous because we engage with this tool much more often, on much more intimate matters, and in more immersive ways.

Of course, I'm not talking about the hammer (unless you're in a building trade). I'm talking about the smartphone. It is much more effective in the

ways that it pulls us toward the goals it was made for. It is much more seductive in co-opting us into its story about what we need. Just as we can stop and put the hammer down, we can stop and put the phone down and deliberate. But it becomes harder and harder to do so. Harder and harder to *want* to do so as we become more and more formed by the types of actions and goals that smartphones are best at achieving. Tools aren't neutral; rather, they encourage us and shape us toward certain goals, and they often do so in hidden ways.¹⁶ If we have different goals—and disciples of Christ most certainly do—then we must not take for granted the power that tools have, especially immersive tools, in redirecting which goals we are really devoting ourselves to.

Technology doesn't determine our future, but it also isn't silent; technology is far from neutral. As Thomas Allen summarizes the insight of Bruno Latour, "The meaning of a technology is neither contained within the technology itself nor determined by the human being making use of that technology, but emerges out of the interaction between the two. . . . Human beings and machines each possess unique capacities for action that produce new possibilities when combined." He continues, "Obviously only human actors possess the will to make decisions, to initiate action, but the possession of a particular device can shape what a human being wants to do."¹⁷ We must understand this shaping better, because it will happen whether we recognize it or not. In fact, in his recent controversial and conversation-generating book, *The Benedict Option*, Rod Dreher identifies the issue of technology as one of the two most important challenges that Christians must learn to address.¹⁸ In fact, after the book's publication he lamented that so few people take the technology chapter seriously.¹⁹ Technologies are shaping us. And shaping people, after all, is just another way of talking about discipleship.

¹⁶Richard R. Gaillardetz, *Transforming Our Days: Spirituality, Community, and Liturgy in a Technological Culture* (New York: Crossroad, 2000), 18.

¹⁷Allen, *Republic in Time*, 13-14.

¹⁸See Rod Dreher, *The Benedict Option: A Strategy for Christians in a Post-Christian Nation* (New York: Sentinel, 2017), chap. 10.

¹⁹Rod Dreher, "Smartphones Are Our Soma," *The American Conservative*, August 3, 2017, www.theamericanconservative.com/dreher/smartphones-are-our-soma/?print=1.

Recently, philosopher Shannon Vallor has recognized this idea from a secular perspective. She uses the virtue tradition in philosophical ethics to engage these topics. Her *Technology and the Virtues: A Philosophical Guide to a Future Worth Wanting* provides three helpful concepts for us at this stage. First, while it is difficult to know what tomorrow's technology will look like, it is even more difficult to predict what people will be like as a result. In fact, "A futurist's true aim is not to envision the technological future but our *technosocial* future—a future defined not by which gadgets we invent, but by how our evolving technological powers become embedded in co-evolving social practices, values, and institutions."²⁰ Christian thinkers have recognized this need as well. According to Alan Jacobs, Christians must train people in contemplative practices so that they can properly reflect on technology.²¹

Next, Vallor names our blindness to the way technology forms us. As she puts it, "Our growing *technosocial* blindness, a condition that I will call *acute technosocial opacity*, makes it increasingly difficult to identify, seek, and secure the ultimate goal of ethics—a life worth choosing; a life lived *well*."²² While Christian theology leads us to nuance the ultimate goal, we can stand to heed Vallor's warning here: it is very, very difficult to see what we need to see in order to make good decisions in relation to technology and our shared future.

Finally, Vallor argues that we need "technomoral virtues" to help us see and choose a "future worth wanting." While her specifics do not concern us here, this basic stance helps us define our need and our path in this book. Technology isn't simply about tools, and if we are going to pursue the difficult task of imagining our future with technology, we must draw on the right resources to develop wisdom in the face of technology that shapes us.

Already people are choosing to opt out of the formation they feel from technology and instead choosing a future worth wanting. For example, journalist Andrew Sullivan realized how the frenetic pace of online life was

²⁰Shannon Vallor, *Technology and the Virtues: A Philosophical Guide to a Future Worth Wanting* (New York: Oxford, 2016), 5.

²¹Alan Jacobs, "Habits of Mind in an Age of Distraction," *Comment Magazine*, June 1, 2016, www.cardus.ca/comment/article/4868/habits-of-mind-in-an-age-of-distraction/.

²²Vallor, *Technology and the Virtues*, 6.

diminishing his well-being: “I either lived as a voice online or I lived as a human being in the world that humans had lived in since the beginning of time. And so I decided, after 15 years, to live in reality.”²³ A Christian journalist reflects in a similar way:

I have slowly become more withdrawn and introverted. I have noticed this for the past couple of years, and figured it was just part of getting older. I used to be fairly extroverted, but now when I take tests like the Myers-Briggs, I am marked as an introvert. I find public events more stressful than ever. I am most comfortable mediating my interactions with people through a screen.²⁴

Now, you might think that I’m beginning to exaggerate here. Surely online journalists have to consider how much they use the internet, but not you! That may be the case, but consider the overall state of our culture, as represented statistically. Nicholas Carr explains,

So you bought that new iPhone. If you are like the typical owner, you’ll be pulling your phone out and using it some 80 times a day, according to data Apple collects. That means you’ll be consulting the glossy little rectangle nearly 30,000 times over the coming year. Your new phone, like your old one, will become your constant companion and trusty factotum—your teacher, secretary, confessor, guru. The two of you will be inseparable.²⁵

In fact, legal theorists are beginning to grapple with whether a smartphone contains so much personal data and information that it merits protections similar to your private thoughts.²⁶

So where does this interaction between the two—between technology itself and the human being—lead us? How is it shaping us? I argue that much of modern technology tends toward a transhuman future—a future created by the next stage of evolution (the posthuman), moving beyond what it currently means to be human. This argument might initially startle you: most people would not say they want to become posthuman, or to have

²³Andrew Sullivan, “I Used to Be a Human Being,” *New York Magazine*, September 18, 2016, <http://nymag.com/selectall/2016/09/andrew-sullivan-my-distraction-sickness-and-yours.html>.

²⁴Dreher, “Smartphones Are Our Soma.”

²⁵Nicholas Carr, “How Smartphones Hijack Our Minds,” *Wall Street Journal*, October 7, 2017, Cl.

²⁶Karina Vold, “Are ‘You’ Just Inside Your Skin or Is Your Smartphone Part of You?,” *Aeon*, February 26, 2018, <https://aeon.co/ideas/are-you-just-inside-your-skin-or-is-your-smartphone-part-of-you>.

their brains uploaded to a computer, or some other sci-fi scenario. Yet technology disciplines us. And if we look closely, we can see that uncritical use of technology can shape us to be more attracted to transhumanism than we might think we are—or want to be.

Futurists recognize this fact. As one puts it, “We’re not evolving, we’re upgrading; just like software.”²⁷ In his work on how humans will “upgrade” themselves, Yuval Noah Harari says,

This will not happen in a day, or in a year. Indeed, it is already happening right now, through innumerable mundane actions. Every day millions of people decide to grant their smartphone a bit more control over their lives or try a new and more effective antidepressant drug. In pursuit of health, happiness, and power, humans will gradually change first one of their features and then another, and another, until they will no longer be human.²⁸

Our everyday technology use shapes us into this train of thought.

To put it less bluntly: we have to pay attention to our technology use, and we should be careful not to adopt categories for evaluation that will simply reaffirm our existing patterns. As journalist Michael Harris argues, “Every technology will alienate you from some part of your life. That is its job. *Your* job is to notice. First notice the difference. And then, every time, choose.”²⁹ In short, I argue that Christians must engage today’s technology creatively and critically in order to counter the ways these technologies tend toward a transhuman future. If we ignore this need, pretending instead that technology is neutral and that we can easily bend it in the way that we choose, we will be caught up in tendencies that will not benefit us because they aren’t truly human tendencies. Human making is happening, and technology is a powerful part of that making, sneaking its values into us at almost every turn.

²⁷Peter Nowak, *Humans 3.0: The Upgrading of the Species* (Guilford, CT: Rowman & Littlefield, 2015), 14.

²⁸Yuval Noah Harari, *Homo Deus: A Brief History of Tomorrow* (London: Penguin Random House, 2016), 49.

²⁹Michael Harris, *The End of Absence: Reclaiming What We’ve Lost in a World of Constant Connection* (New York: Penguin, 2014), 206.

OUR PATH FORWARD

How can we understand human making: both in the sense of the tools that humans make but also in the sense of the ways those tools shape and “make” humans? I want to answer this question by exploring the world of transhumanism. Transhumanism and posthumanism are two related philosophical movements tied closely to the promises of technology. Posthumanism argues that there is a next stage in human evolution. In this stage, humans will become posthuman because of our interaction with and connection to technology. Transhumanism, on the other hand, promotes values that contribute to this change. Transhumanism aims at posthumanism, and both are based to a large degree on the potential offered by technology. In a way, transhumanism provides the thinking and method for moving toward posthumanism. Transhumanism leads to posthumanism. They share a common value system, and in this book I will refer primarily to transhumanism but also occasionally to posthumanism because of this connection. Understanding the values of transhumanism is not an end in itself. Rather, I want to consider how our current use of technology might prepare us for such a future—whether we currently like it or not.

Chapter one braids three issues together. First, it defines technology and provides some background on thinking about it and its pervasiveness. Second, it introduces transhumanism and its vision for the future. Third, it draws on some key theological insights for framing these issues. I argue that our practices of technology use—like any practices—carry us toward certain understandings of what it means to be flourishing human beings—we’ll talk about these “liturgies” throughout the book. Proper assessment of any technology must identify and evaluate these connections between technologies and the ways they might shape us.

The next several chapters of the book define transhumanism and then examine four specific aspects of transhumanism that relate to particular technologies and bring up certain ways of asking questions of technology. Our goal here is to understand transhumanism and to come to grips with the way certain technologies tend toward transhumanist anthropology, or a transhumanist vision for human flourishing. In these chapters, the goal will be to introduce the concept, explain how it advances a posthumanist

agenda, engage it critically, and then turn to current technologies that advance this type of an agenda. After defining transhumanism in general, I develop three chapters related to changing human biology, connecting human biology to technology, and “leaving” biology for nonbiological substances. The logic of this progression moves further and further from the physically human, and it parallels the options proposed by works such as Harari’s *Homo Deus: A Brief History of Tomorrow*.³⁰ Chapter two introduces transhumanism in general, chapter three explores morphological freedom, chapter four explains augmented reality, and chapter five turns to artificial intelligence and mind uploading.

The final chapters focus on particular questions related to how various technologies shape people to become more accepting of the transhuman future. Each chapter includes an illustration from particular technologies of the past and how they have shaped humans. We also treat the question of each chapter and relate it to transhumanism. Finally, we finish each chapter with biblical themes, counterpractices, and an image to orient the way we live with technology. These help us counteract the negative formative influences of some technologies without simply rejecting the particular technology.

Chapter six begins with medical technology and how it affects our view of the patient and the role of the doctor. We will then focus on technologies surrounding virtual reality, especially popular versions such as those using smartphones. These technologies shift notions of experience in ways that make people more amenable to the sort of existence proposed by posthumanism. We conclude the chapter by explaining practices and concepts that can guide Christians to continue to value physical, in-the-flesh interactions and experiences. In this account we draw on the image of the storyteller.

Chapter seven begins with mapping technologies and how they have shaped human experience of places. We then focus on technologies that promote a sense of cosmopolitanism, along with elements of global capitalism, that downplays the importance of local place; this downplay is an important aspect of formation for a posthuman future. We conclude the chapter by looking at place as a theological notion and argue for the

³⁰Harari, *Homo Deus*, 43.

importance of face-to-face Christian worship (as opposed to virtual worship, televised worship, or remote preachers). In this portion we draw on the image of the neighbor to reorient the way we live in places.

We begin chapter eight with robotic technology and how it is changing human relationships. Then we focus on technologies that shift our notion of what it means to be in a relationship with people, including various social media, as well as virtual reality, again, with a focus on relationships as opposed to experiences. The chapter concludes by turning to Albert Borgmann's argument about the centrality of the table for maintaining strong, face-to-face relationships. In this section we turn to the image of the friend to guide and ground the way we consider relationships.

The ninth chapter begins with communications technology and the way it changes human experience of thought. Our focus then turns to technologies used for the construction and presentation of the self. This focus demonstrates how these technologies not only serve as tools for identity projection but also shape the way we think about ourselves and who we are. We explore the way that people often feel an implicit pressure to share socially any experience—almost as if it did not happen if it does not make it onto a Facebook page.

Chapter ten concludes the book by turning again to the practices developed in previous chapters to show that learning to focus on receiving others, rather than building one's self-image, is a more reliable route to a strong sense of self. We attempt to combine these practices into a practice of sharing meals together, in which we draw together notions of ecclesiology, the other, and table fellowship to give a substantive account of the good and how that account shapes the self. Here the images of storyteller, neighbor, and friend also come together.

If we are going to understand human making so that we can use tools well, make good things, and be shaped in faithful ways, we have to dive right into a fuller understanding of technology. What is it, exactly? What *isn't* it? It's time to search for answers to these questions.

1

TECHNOLOGY AND MORAL FORMATION



What is technology? We use this word in multiple ways. On one hand, *technology* refers to tools that humans create so they can achieve some sort of goal. A hammer, for instance, is technology. Eyeglasses, technology.¹ On the other hand, when we use the word *technology* today, we most often refer to digital technology. If your friend says that she’s really into technology, she means digital gadgets, not garden tools. And as microchips become smaller and smaller and cheaper and cheaper, more “old” tools are becoming, to some degree, digital. You can get an app to control your lights, your sprinklers, and your robot vacuum. This “internet of things” is made up of networked thermostats and other devices that can now be controlled by smartphones—or your voice. We use the word *technology* in both ways, but we also must realize this shift in terminology that prioritizes digital technologies as simply “technology.” As I mentioned in the introduction, all of these tools are technology, but digital technologies invite an immersion that affects our formation in a more persistent way than hammers, for instance. But how do these technologies form us? Are they tempting us with a particular vision of human flourishing?

¹For an accessible history of technology, see Daniel Headrick, *Technology: A World History* (New York: Oxford, 2009). For a more thorough treatment, especially related to technology’s connection to science, see James McClellan and Harold Dorn, *Science and Technology in World History: An Introduction* (Baltimore: Johns Hopkins University Press, 2015). There is also significant overlap between transhumanism and the discussions and debates related to human enhancement. For a broad-ranging treatment of these issues, see Julia Savulescu and Nick Bostrom, eds., *Human Enhancement* (New York: Oxford, 2009).

I'll repeat my description of transhumanism from the introduction. Transhumanism and posthumanism are two related philosophical movements tied closely to the promises of technology. Posthumanism argues that there is a next stage in human evolution. In this stage, humans will become posthuman because of our interaction with and connection to technology. Transhumanism, on the other hand, promotes values that contribute to this change. Transhumanism aims at posthumanism, and both are based to a large degree on the potential offered by technology. In a way, transhumanism provides the thinking and method for moving toward posthumanism. Transhumanism is the process, posthumanism the goal. They share a common value system, and in this book I will primarily refer to transhumanism but also to posthumanism.

Technology promises seemingly limitless possibilities, and transhumanism and posthumanism trumpet this potential. Some of the possibilities sound far-fetched, and many people hesitate to adopt them. Few today would volunteer for the opportunity to upload their consciousness into a computer, for instance. Whether they recognize something less than human about this type of "consciousness" or simply react emotionally against it, their hesitancy remains.

But can this stance last? While some people will change their minds based on careful research and thought—including theologians of various religious perspectives—others will gradually change in less dramatic senses because the way we use tools today changes us for tomorrow.² Our use of the tools that humans make in turn shapes us as humans; these tools can make us into something else through our interaction with them. This change is because tools come with a governing logic, and that logic projects a certain type of future.³ Some technologists even speak as though technology itself "wants" something that it is pursuing.⁴ Created things come with projects instilled in them by their creator, so tools we make carry these projects with them.⁵ And

²Some theologians connect transhumanism and posthumanism very explicitly to notions of salvation and eschatology. For example, see Calvin Mercer and Tracy J. Trothen, eds., *Religion and Transhumanism: The Unknown Future of Human Enhancement* (Santa Barbara, CA: Praeger, 2015).

³Michael Hanby, "A More Perfect Absolutism," *First Things*, October 2016, www.firstthings.com/article/2016/10/a-more-perfect-absolutism.

⁴Kevin Kelly, *What Technology Wants* (New York: Viking, 2010).

⁵Hanby, "More Perfect Absolutism."

these projects, this governing logic, shape us. This idea disturbs us, as Harari puts well: “We like the idea of shaping stone knives, but we don’t like the idea of being stone knives ourselves.”⁶ Our tools draw us toward one thing and away from another; “Just as every technology is an invitation to enhance some part of our lives, it’s also, necessarily, an invitation to be drawn away from something else.”⁷ We make them; they make us.

Considering this issue more deeply, we can turn to some helpful definitions and distinctions. First, we are circling the discipline of media ecology, “which studies how technology operates within cultures and how it changes them over time.”⁸ We will be concerned with the impact of technology on Christian culture, especially how Christians consider what it means to be human and how to live a flourishing human life. Second, we must recognize that this happens on many levels. Theologian Craig Gay draws on Jacques Ellul to speak about waves, currents, and depths: just as the ocean has surface waves, currents beneath those, and depths below all of that, our treatment of technology and moral formation must take into account these various levels and their connections.⁹ Another theologian identifies four “layers” of technology: technology as hardware, as manufacturing, as methodology, and as social usage.¹⁰ While some might still insist that our technology questions are only about balance, not good or bad, we must reckon not only with good and evil in the present but with good and evil in regards to who we are becoming.¹¹

Another writer refers to the difference between technology and technological people. As he puts it,

There is nothing wrong with technology per se. But there is something wrong with technological people. The difference between the two is that “technology” is merely a tool used to pursue substantial human ends, whereas

⁶Yuval Noah Harari, *21 Lessons for the 21st Century* (New York: Spiegel & Grau, 2018), 254.

⁷Michael Harris, *The End of Absence: Reclaiming What We’ve Lost in a World of Constant Connection* (New York: Penguin, 2014), 21.

⁸John Dyer, *From the Garden to the City: The Redeeming and Corrupting Power of Technology* (Grand Rapids: Kregel, 2011), 16.

⁹Craig Gay, *Modern Technology and the Human Future: A Christian Appraisal* (Downers Grove, IL: InterVarsity Press, 2018).

¹⁰Dyer, *From the Garden to the City*, 60-65.

¹¹Mary Aiken, *The Cyber Effect: One of the World’s Experts in Cyberpsychology Explains How Technology Is Shaping the Development of Our Children, Our Behavior, Our Values, and Our Perception of the World—and What We Can Do About It* (New York: Spiegel & Grau, 2016), 13.

technological people abandon human ends in favor of exclusively technological ones. The former view is classical, the latter that of Silicon Valley dataists and transhumanists for whom human beings are themselves merely “obsolete algorithms” soon to be replaced by synthetic ones far superior to them in every way.¹²

The difficulty of employing technology without being shaped into “technological people” is clear.

Bioethicist Erik Parens refers to this phenomenon—the way we shape our tools and they shape us—with the term *binocularity*. Focusing on human enhancement, Parens notes that we can view ourselves as self-shaping subjects (the creativity stance) or as objects, thankful recipients of someone else’s shaping (the gratitude stance). We shouldn’t choose between these two but rather oscillate between them, developing a binocularity that gives us a fuller vision of—in Parens’s case—issues of bioethical enhancement.¹³ Now, we have to acknowledge that it is difficult to look through both of these lenses at once. But this binocularity can help us remember that we cannot view technology only as something that we use as active subjects; it also works on us and shapes us. Our current engagement with technology is not a neutral practice but one that continues to shape us to think about—and to love—technology in certain ways.

We’re not talking about the way technologies themselves can become idols, but how our use of technology can change us in deep ways, making us think and feel in ways that we may not expect.¹⁴ Any adequate response to technology must ask more than, “Should we use this technology right now?” Even as we acknowledge that our (and our parents’ and grandparents’, friends’ and neighbors’) engagement with previous technology shapes our current use of technology, we must look carefully at our current

¹²Ron Strigley, “Whose University Is It, Anyway?,” *Los Angeles Review of Books*, February 22, 2018, <https://lareviewofbooks.org/article/whose-university-is-it-anyway>.

¹³Erik Parens, *Shaping Our Selves: On Technology, Flourishing, and a Habit of Thinking* (New York: Oxford, 2015), 37.

¹⁴For an idol-related approach, see the excellent work in Craig Detweiler, *iGods: How Technology Shapes Our Spiritual and Social Lives* (Grand Rapids: Brazos, 2013). For various arguments related to particular technologies and practices from a more secular perspective, see Mark Bauerlein, ed., *The Digital Divide: Arguments for and Against Facebook, Google, Texting, and the Age of Social Networking* (New York: Penguin, 2011).

practices and how they might shape our, our children's, and our grandchildren's engagement with technology in the future. For example, how do our personal technologies change our ability to pay attention? Alan Jacobs refers to our "interruption technologies" to highlight the problem this poses.¹⁵ And, as we'll consider below, attention is more than simple focus. These considerations matter. Our current use of technology forms us morally. What sorts of practices today can help us retain the best of what it means to be human in the future? We should not think about technology use today without considering who we will turn into tomorrow as a result.

But isn't this simply the approach we have always had to take toward our tools? Why the alarm and the connections to transhumanism? In order to see how our choices about digital technology relate to other sorts of tools, we need to take a brief detour into the fields of neurology and cyberpsychology.

CHANGING OUR MINDS

A burgeoning field of scholars document and describe the impact of digital technology on humans. In particular, our use of technology seems to be changing our brains and thereby our behavior.¹⁶ The most visible—and memorable—early treatment of this issue was Nicholas Carr's aptly titled "Is Google Making Us Stupid?," published by the *Atlantic* in 2008.¹⁷ Carr followed this with a book-length treatment in *The Shallows*.¹⁸ Others have drawn similar conclusions. At the most basic level, studies are beginning to show that our technology use is changing us on a neurological level: our brains are changing.¹⁹

¹⁵Alan Jacobs, "Habits of Mind in an Age of Distraction," *Comment Magazine*, June 1, 2016, www.cardus.ca/comment/article/4868/habits-of-mind-in-an-age-of-distraction/.

¹⁶Jaron Lanier, *Ten Arguments for Deleting Your Social Media Accounts Right Now* (New York: Henry Holy, 2018), 10-12.

¹⁷Nicholas Carr, "Is Google Making Us Stupid? What the Internet Is Doing to Our Brains," *The Atlantic*, July/August 2008, www.theatlantic.com/magazine/archive/2008/07/is-google-making-us-stupid/306868/.

¹⁸Nicholas Carr, *The Shallows: What the Internet Is Doing to Our Brains* (New York: Norton, 2010).

¹⁹Susan Greenfield, *Mind Change: How Digital Technologies Are Leaving Their Marks on Our Brains* (New York: Random House, 2015), 54; Rod Dreher, *The Benedict Option: A Strategy for Christians in a Post-Christian Nation* (New York: Sentinel, 2017), 225.

Cyberpsychologist Mary Aiken has analyzed these changes not only on the level of the ability to think but also on specific behaviors. This varies from person to person, depending on their tendencies and temptations. As Aiken explains, “Whenever technology comes in contact with an underlying predisposition, or tendency for a certain behavior, it can result in behavioral amplification or escalation.”²⁰ Later she elaborates, “The cyberpsychological reality: One can easily stumble upon a behavior online and immerse oneself in new worlds and new communities, and become cyber-socialized to accept activities that would have been unacceptable just a decade ago. The previously unimaginable is now at your fingertips—just waiting to be searched.”²¹ In other words, our use of digital technology not only changes our ability to concentrate and focus—one of Carr’s main points. It also introduces us to and socializes us toward behaviors that we may not have encountered otherwise.

Taking the issue even broader, neuroscientist Susan Greenfield has written her appropriately titled book *Mind Change: How Digital Technologies Are Leaving Their Mark on Our Brains*. She named the book *Mind Change* because she sees parallels between what she’s observing and climate change: “Both are global, controversial, unprecedented, and multifaceted.”²² Our brains are changing, because the brain “will adapt to whatever environment in which it is placed. The cyberworld of the twenty-first century is offering a new type of environment. Therefore, the brain could be changing in parallel, in correspondingly new ways.” Furthermore, “To the extent that we can begin to understand and anticipate these changes, positive or negative, we will be better able to navigate this new world.”²³ She identifies three main realms: social networking (identity and relationships), gaming (attention, addiction, and aggression), and search engines (learning and memory).²⁴ Each of these areas leads not only to changes in behavior, as Aiken points out, but also to real neurological changes in the brain.

Though studies are beginning to make these issues clear, some might still wonder whether this is all an overreaction to a new technology. Before we

²⁰Aiken, *Cyber Effect*, 22.

²¹Aiken, *Cyber Effect*, 45.

²²Greenfield, *Mind Change*, xvii.

²³Greenfield, *Mind Change*, 14.

²⁴Greenfield, *Mind Change*, 35.

discuss why I think the game has changed, we have to realize that part of the issue is that the sorts of changes scholars are beginning to notice will take years and years to understand better. As Aiken puts it, especially in reference to technology's impact on children, "If you find yourself questioning the dangers of early digital activity and insist on hard evidence backed by science, then you'll have to wait for another ten or twenty years, when comprehensive studies—the kind that track an individual's development over time—are completed."²⁵ But if these technologies have the formative power that they seem to, we do not have the luxury to simply wait and wonder. Forming is happening now. But isn't this always the case: that our tools are forming us?

WHY THE GAME HAS CHANGED

The short answer is yes. But I still think that we're dealing with a very different game when we're talking about digital technology. I have three primary reasons. First, the type of access that we have to digital technology is different from previous tools. Second, studies on addiction demonstrate that digital technology is a game changer. And third, I'm convinced that technology does an excellent job of recruiting disciples into its way of viewing the world. Or, as we discussed above, technology makes "technological people" very effectively. Let's deal with each of these in turn and flesh them out.

First, digital technology is different from previous technology because of the speed of access and the immersion many experience in the technology. As one scholar explains, "The instant, uninterrupted, and unlimited accessibility of both activity and content that i-tech provides is significantly changing the big picture, not only isolated frames."²⁶ The sheer amount of time that we spend with screens makes this different from other issues of technology.²⁷ Not only is the amount of time different, but the volume of content that people take in is a new issue as well.²⁸

²⁵Aiken, *Cyber Effect*, 123.

²⁶Mari K. Swingle, *i-Minds: How Cell Phones, Computers, Gaming, and Social Media Are Changing Our Brains, Our Behavior, and the Evolution of Our Species* (Gabriola Island, BC: New Society, 2015), 36.

²⁷Greenfield, *Mind Change*, 17.

²⁸Andrew Sullivan, "I Used to Be a Human Being," *New York Magazine*, September 18, 2016, <http://nymag.com/selectall/2016/09/andrew-sullivan-my-distraction-sickness-and-yours.html>.

The ease of access to digital technology enflames existing problems. For instance, bullying is a constant issue with children as they grow up and learn to negotiate social spaces. But trends in recent years have been alarming, as more and more cases lead to suicide. One reason for this is the 24/7 nature of technology, which means that kids can't really get away from their bullies. They might make it home, but the constant access to technology can mean a constant connection to the bullying.²⁹ The ease of access, the speed of access, and the immersion in technology changes the game.

The business world has certainly recognized that accessibility makes digital technology lucrative. In his book *Hooked: How to Build Habit-Forming Products*, Nir Eyal argues, "The fact that we have greater access to the web through our various connected devices—smartphones and tablets, televisions, game consoles, and wearable technology—gives companies far greater ability to affect our behavior."³⁰ He later refers to the "trinity" of access, data, and speed, which present "unprecedented" opportunities for developing habits.³¹ A more recent treatment of the same topic relates how the issue of access and time has changed in fewer than ten years: "In 2008, adults spent an average of eighteen minutes on their phones per day; in 2015, they were spending two hours and forty-eight minutes per day. This shift to mobile devices is dangerous, because a device that travels with you is always a better vehicle for addiction."³² And so we not only note that is digital tech a bit different because of the access we have to it, but also we see that this ease of access leads to another issue.

Second, studies on digital technology show that its habit-forming powers—its addictive characteristics—are on a different scale from other technologies (and even many other addictive substances). As technologist

²⁹Mark Abadi, "7 Adults Went Undercover as High-School Students and Found Cell Phones Pose a Much Bigger Problem than Adults Can Imagine," *Business Insider*, January 11, 2018, www.businessinsider.com/undercover-high-teenagers-lives-2018-2.

³⁰Nir Eyal, *Hooked: How to Build Habit-Forming Products* (New York: Penguin, 2014), 10-11.

³¹Eyal, *Hooked*, 12.

³²Adam Alter, *Irresistible: The Rise of Addictive Technology and the Business of Keeping Us Hooked* (New York: Penguin, 2017), 28.

Jaron Lanier notes in his *Ten Arguments for Deleting Your Social Media Accounts Right Now*, “Something entirely new is happening in the world. Just in the last five or ten years, nearly everyone started to carry a little device called a smartphone on their person all the time that’s suitable for algorithmic behavior modification.”³³

But what are people addicted to when it comes to digital technology? The easy answer might be to our smartphones. Just observe how quickly and often people turn to these devices. Maybe it is the devices themselves—manufactured to be beautiful and pleasing to use—that are addictive.

According to some, we are addicted to information.³⁴ We want to be “in the know,” and we enjoy the stimulation of more and more information. While this is also true of the 24/7 cable news cycle, digital technology such as our smartphones gives us access to information on an unprecedented level. People are addicted, and this fact is being recognized and confronted by everyone from cyberpsychologists to education theorists.³⁵

Others insist that it isn’t the devices or the information that we’re addicted to. As Alan Jacobs insists, “We are *not* addicted to any of our machines. Those are just contraptions made up of silicon chips, plastic, metal, glass. None of these, even when combined into complex and sometimes beautiful devices, are things that human beings can become addicted to.”³⁶ Rather, it is something that we think we’re getting through the devices and from the information: people.

These addictions aren’t even relegated to the personal, private choices of individuals. As one parent observes about the role of technology in education of her children: “Their school is by no means evangelical about technology, but I nonetheless feel like it is playing the role of pusher, and I’m watching my children get hooked.”³⁷ And this addiction is serious business,

³³Lanier, *Ten Arguments*, 5.

³⁴Sullivan, “I Used to Be a Human Being.”

³⁵Aiken, *Cyber Effect*, 59; Ivelin Sardamov, *Mental Penguins: The Neverending Education Crisis and the False Promise of the Information Age* (Washington, DC: Iff Books, 2017), 54.

³⁶Jacobs, “Habits of Mind in an Age of Distraction.”

³⁷Eliane Glaser, “Children Are Tech Addicts—and Schools Are the Pushers,” *The Guardian*, January 26, 2018, www.theguardian.com/commentisfree/2018/jan/26/children-tech-addicts-schools.

with rehab centers serving the specific needs of those who have become addicted to the internet.³⁸

But, again, is this any different from earlier tools or addictive substances? What about drugs and alcohol? Now, this is where studies are showing surprising results due to how common access is to these digital devices. As one writer puts it, “Addictive tech is part of the mainstream in a way that addictive substances never will be. Abstinence isn’t an option, but there are other alternatives. You can confine addictive experiences to one corner of your life, while courting good habits that promote healthy behaviors.”³⁹ Those who recognize that they are prone to addiction to certain drugs or alcohol can pursue the path of abstinence. Digital technology, however, has so proliferated modern life that it can be difficult to function in the world without it. Many jobs require email, for instance. Abstinence might technically still be an option, but the mainstream use of technology makes it that much harder to make that choice.

Third, technology does an excellent job of making “technological people.” This trend is what we’ve traced above: the easy access to digital technology has led to addiction and changes in behavior. We even see how deep the technological ideology goes, because we think the best solution to technical problems is to purchase technological solutions.⁴⁰ When this happens it becomes clear that technology’s way of framing reality has crowded out other ways. As one scholar puts it, “Digital technology has the potential to become the end rather than the means, a lifestyle all on its own. Even though many will use the Internet to read, play music, and learn as part of their lives in three dimensions, the digital world offers the possibility, even the temptation of becoming a world unto itself.”⁴¹ Or, as another says, smartphones are our soma.⁴²

³⁸Joanna Walters, “Inside the Rehab Saving Young Men from Their Internet Addiction,” *The Guardian*, June 16, 2017, www.theguardian.com/technology/2017/jun/16/internet-addiction-gaming-restart-therapy-washington.

³⁹Alter, *Irresistible*, 9.

⁴⁰Jacobs, “Habits of Mind in an Age of Distraction.”

⁴¹Greenfield, *Mind Change*, 18.

⁴²Rod Dreher, “Smartphones Are Our Soma,” *The American Conservative*, August 3, 2017, www.theamericanconservative.com/dreher/smartphones-are-our-soma/?print=1. “Soma” here is a reference to a drug in Aldous Huxley’s *Brave New World*. Soma created happiness.

At this point, we see that we are in the realm of discipleship, and theology comes into play. Christian theology seeks to speak humbly about God as he has revealed himself through the Scriptures and through his church. It especially revolves around Jesus' greatest commandment: love God and love your neighbor. This is such a simple command; yet it is so difficult to apply and to carry out, especially with technology in view. What does it mean to love God and love our neighbors as we use technology?

But why do we have to worry about how our devices might form us? What is it about humans that makes us "formable"? Two theologians provide a helpful framework for us as we begin this journey. James K. A. Smith develops a view of humans as lovers, with the proper object of love being God. Smith's work helps us consider the loves that technology encourages, the way it forms us morally. A. J. Conyers works with themes related to community and what it means to love God and neighbor in light of the challenges of modern society. These two theologians provide a framework that will prove useful as we consider technology and transhumanism. Combining their work enables us to see how technologies promote a "liturgy of control" that shapes us and our communities in important ways.

SECULAR LITURGIES

In his *Cultural Liturgies* trilogy, philosopher James K. A. Smith argues that human beings are primarily lovers, not merely thinkers.⁴³ This position goes at least as far back as Augustine in the late fourth and early fifth centuries. Smith sees four important elements to this view of what it means to be human: (1) humans are intentional creatures whose fundamental way of intending is love or desire; (2) this love (which is often unconscious and noncognitive) is always aimed at some particular version of the good life; (3) sets of habits and dispositions prime us to act in certain ways; and

⁴³James K. A. Smith, *Desiring the Kingdom: Worship, Worldview, and Cultural Formation* (Grand Rapids: Baker, 2009); Smith, *Imagining the Kingdom: How Worship Works* (Grand Rapids: Baker, 2013); and Smith, *Awaiting the King: Reforming Public Theology* (Grand Rapids, Baker, 2017). Parts of this section are drawn from an earlier article I wrote. See Jacob Shatzer, "Posthuman Liturgy? Virtual Worlds, Robotics, and Human Flourishing," *The New Bioethics* 19, no. 1 (2013): 46-53.

(4) affective, bodily means such as bodily practices, routines, and rituals grab hold of our hearts through the imagination and form us to love, desire, and worship certain things.⁴⁴ *Imagination* here doesn't mean "made-up" but the way that "we construe the world on a precognitive level, on a register that is fundamentally *aesthetic* precisely because it is so closely tied to the *body*."⁴⁵ And what we love is what we worship.

Smith argues that being human isn't only about what we think but about what we love. And we arrive at what we love (and worship) not only—or even primarily—through what we stop and think about but through our habits. So, who we are depends on what we love, not simply what we think. Smith's model shifts identity formation from primarily an issue of cognition (what do I think or believe?) to also one of affection (what or whom do I love?). Loving rightly requires practice, and practice often happens in mundane ways, ways we don't expect to have major consequences. There are two types of habits: "thin" habits (activities such as flossing that seemingly do not touch love or desire) and "thick" habits (meaning-full activities that significantly shape our identity and loves).⁴⁶ Yet, no practice—thick or thin—is neutral, because they are all affecting the development of our loves. Thin practices can serve thick ends. Every *polis* (that is, body of citizens), for instance, is shaped and formed by habits and practices.⁴⁷ For example, exercising can serve the end of wanting to spend many years with one's family or the end of becoming more attractive in order to leave one's spouse and start a new life with someone else. Thick, formative practices are "meaning-laden, identity-forming practices that subtly shape us precisely because they grab hold of our love—they are automating our desire and action without our conscious recognition."⁴⁸

For Smith, liturgy serves as a lens for analyzing and evaluating practices. He defines liturgies as "ritual practices that function as pedagogies of ultimate desire."⁴⁹ While this obviously applies to religious practices, it extends

⁴⁴Smith, *Desiring the Kingdom*, 62-63.

⁴⁵Smith, *Imagining the Kingdom*, 17.

⁴⁶Smith, *Desiring the Kingdom*, 82.

⁴⁷Smith, *Awaiting the King*, 9.

⁴⁸Smith, *Desiring the Kingdom*, 83.

⁴⁹Smith, *Desiring the Kingdom*, 87.

to other activities as well, and it is this extension that makes the term *liturgy* so useful and important. We tend to think of certain practices as really important and others as pretty close to meaningless. But these so-called meaningless activities, when done regularly, can mold and shape us toward the goals and ends that the practices fit within most easily. These secular liturgies help us to understand how humans are being shaped in fundamental ways by cultural institutions and practices that are often left unanalyzed. By calling them liturgies, we remind ourselves that they are just as formative—and just as worthy of careful reflection—as more “serious” practices.

Smith highlights three examples, showing that his theory helps us make sense of vital aspects of our day-to-day existence. His lens of liturgies helps us see formative powers that we might otherwise miss. First, the mall reflects what matters and shapes what matters. It serves as a temple of consumerism, orienting people’s practices and desires to feel that consumption is the solution to our problems. The key aspect here is not only that the mall provides a place for consumption to happen but that it guides us into ways of seeing the world and occupying our lives that adopt consumerist values. Even if we *think* one thing about consumerism, the liturgy of the mall shapes our hearts in significant ways that might end up shifting or challenging our thinking. The ads in the mall, for instance, not only draw us to specific products but point to a hope for the future, rooted in happiness from consumption.

Second, the military-entertainment complex seeks to orient allegiance solely to the state. For instance, displays of nationalism at sporting events draw us more closely into the narrative that the state—and the state alone—deserves our allegiance. We have recently seen how powerful such events are in the controversy surrounding certain football players choosing to kneel during the national anthem. Whatever you think about the line between patriotism and nationalism, we can agree that these simple practices—standing, reciting, singing—work to make us take our allegiance for granted. Leaving aside whether that is a good thing or a bad thing for Christians, we can agree that it works.

Third, for Smith the university is not primarily about information but about shaping imagination and desire so that students will pursue a

particular vision of the good life. In most cases, this vision of the good life is one influenced by secularism and consumerism. This can be true even in Christian universities, which can be criticized for helping students pursue the American dream of consumerism with a Jesus bumper sticker on their SUV.

All of these practices project a version of what is broken in the human condition, what true flourishing looks like (what should be loved or desired), and how to act in order to achieve success. Simple practices are not innocent, for they form the heart to buy into these visions. Being Christian isn't simply about shaping our thinking in a certain way; if we're going to love the right things, we have to take what we do seriously, because it shapes our loves over time.

Theologians aren't the only ones highlighting the power that habits have in forming people. Businesses certainly recognize the power of technology to form habits. And these habits can be lucrative. As Nir Eyal explains, "Companies increasingly find that their economic value is a function of the strength of the habits they create."⁵⁰ Books such as Eyal's analyze the habit-forming power of technology in order to help people design addictive games and other apps. If businesses are using the power of technology to hook people into consumption, we must admit that this is at play in the way technologies operate because those creating them are making them that way. Our habits, which shape what we love, are up for grabs.

If we view humans as "lovers" and understand that secular liturgies shape these loves, then modern technology use becomes about more than just the present moment. Certainly, straightforward but more outlandish questions can be asked: What kind of person do I become when I regularly enjoy killing digital avatars online? Do robotic caregivers harm patients physically or emotionally? However, the concept of secular liturgies opens up another horizon that we must take just as seriously: How do modern technologies form us morally by shaping what we love? To what extent could they serve as transhuman liturgies? If we keep Smith's notion of

⁵⁰Eyal, *Hooked*, 12.

liturgy to remind ourselves how formative and powerful seemingly basic practices in fact are, we will be ready to look for the right clues as we try to evaluate technology. And while Smith's liturgy lens helps us see the formative power of practices, theologian A. J. Conyers's treatment of the modern world will give us some clues to the type of formation that might be going on.

HEARING GOD'S CALL RATHER THAN GRASPING CONTROL

In *The Listening Heart*, A. J. Conyers sees societies that have lost their connection to any sense of the transcendent and any sense of calling. Instead, they focus on the modern celebration of unlimited human will.⁵¹ While his book does not address technology at all, the themes that Conyers develops around vocation, attention, and community provide a helpful perspective that can help us assess technology and virtual communities.

Conyers laments that modern society has lost a sense of vocation, a sense that was vital for the formation of strong societies in premodern times. "The term 'vocation' stands for all of those experiences and insights that our lives are guided by Another, that we are responding not to inert nature that bends to our will, but to another Will, with whom we might live in covenant relationship, and to Whom we will be ultimately accountable." This sentiment of divine call gives a society a character that is very nonmodern.⁵²

Four points explain this idea of divine call. First, a call implies a caller, one doing the calling. People are given freedom to respond to a summons; freedom is not an inner-directed impulse but the use of the will to respond. There is a difference between a society that incorporates some sense of vocation and one that explains behavior in other ways. Second, oftentimes the call is to something the person hearing the call doesn't want.⁵³ This stance contrasts with post-Enlightenment thought, which often emphasizes reason

⁵¹A. J. Conyers, *The Listening Heart: Vocation and the Crisis of Modern Culture* (Dallas, TX: Spence, 2006). Conyers has also done significant work regarding the Christian view of history, specifically in relation to the work of Jürgen Moltmann. See my *A Spreading and Abiding Hope: A Vision for Evangelical Theopolitics* (Eugene, OR: Cascade, 2015).

⁵²Conyers, *Listening Heart*, 112, 13.

⁵³Conyers, *Listening Heart*, 13.

as a replacement for the idea of being called by another.⁵⁴ We think about and choose our own way; we don't respond to Someone Else. If we want to be spiritual, then we might dress up our own desires with language of "calling." This is very different from the true meaning of vocation. Third, callings almost always lead to hardships that the person has to work through in order to obey. Jeremiah, Ezekiel, Jesus, and Paul all confronted the threat of death by their communities. Calling is not easy. Fourth, the greatest danger is being distracted from the goal.⁵⁵ Often we act like making the wrong choice is the biggest problem. If we are responding to God's call, the biggest danger is that we become distracted from that call by focusing on something else.

Our society is very different from one shaped by this notion of calling, because we prioritize power and control. We don't want to respond to a Caller. We seek knowledge so that we can control rather than participate in a larger community. In fact, "Power has become the centerpiece of a new kind of harmony, one based no longer on the 'right relation of things' in a world that both begins and ends in mystery, but it is a harmony that comes from control." Control diminishes relationship; the will of one alone is expressed, and conversation and communion are lost.⁵⁶ A loss of vocation that emphasizes the individual will and promotes the desire to control prevents the propagation of genuine community.

Others have noticed that control is at the heart of what many are after in our modern lives, even in mundane ways. In analyzing smartphone use, Tony Reinke writes, "Aimlessly flicking through feeds and images for hours, we feel that we are in control of our devices, when we are really puppets being controlled by a lucrative industry."⁵⁷ We love this feeling of control, even if it is an illusion as our feeling and thinking are being manipulated by corporations and individuals who develop our technology. And what is at stake is more than being taken advantage of economically. Our desire for control might not mean we don't believe in a God who controls all things—

⁵⁴So one makes reasoned choices rather than depending on guidance from another. Conyers, *Listening Heart*, 14.

⁵⁵Conyers, *Listening Heart*, 15.

⁵⁶Conyers, *Listening Heart*, 57-60, 79, 92.

⁵⁷Tony Reinke, *12 Ways Your Phone Is Changing You* (Wheaton, IL: Crossway, 2017), 193.

it doesn't make us atheists—but it often does mean we push God further and further into the margins of our lives.

This desire for control manifests itself in more than mundane ways. In questions about what it means to be human, “being in control” is often held up as a defining factor of being fully human. As ethicist Michael Hauskeller explains,

So it seems that a better human being is one that has more control about things: what they feel, what they remember, when they die (it is argued that if immortality begins to get burdensome we can always kill ourselves). So enhancement basically means more *control*. Control is a good thing: the best, short of the happiness it will ensure. But again, is that really so? Is control always good? It seems not, because at least sometimes the attempt to gain control over a thing is self-defeating. It cannot work because of the nature of what we seek to control.⁵⁸

This feeling is such a dominant feature of being human in a technological world that it comes to define what counts as truth. As Dreher explains, “To Technological Man, ‘truth’ is what works to extend his dominion over nature and make that stuff into things he finds useful or pleasurable, thereby fulfilling his sense of what it means to exist. To regard the world technologically, then, is to see it as material over which to extend one’s dominion, limited only by one’s imagination.”⁵⁹ The illusion of control that technology provides us nurtures a circle: we think to be human is to be in control, so if technology gives control, it makes us more human. This gives us a great desire for control. The logic of technology encourages us into this vision of control.

So how should we respond, if grasping after power and control is not the answer? Attention is the appropriate response to vocation. Now, here I don’t simply mean attention as “whatever we’re paying attention to.” If we think “technology” and “attention,” we might think, “Well, we sure pay a lot of attention to our devices. I guess we’re good at paying attention!” First of all, more and more people are noticing that we aren’t so good at paying

⁵⁸Michael Hauskeller, *Better Humans? Understanding the Enhancement Project* (Durham, UK: Acumen, 2013), 11.

⁵⁹Dreher, *Benedict Option*, 220-21.

attention. And second, that isn't quite the idea of attention that Conyers is after anyway. Let's deal with these in turn.

First, more studies and other observations demonstrate that we are getting worse at paying attention. Microsoft researcher Linda Stone has coined the term "continuous partial attention" to refer to the fact that we don't sustain focus very frequently.⁶⁰ Much of this change is due to the fact that we have so much vying for our attention. As one writer notes, "Online technology, in its various forms, is a phenomenon that by its very nature fragments and scatters our attention like nothing else, radically compromising our ability to make sense of the world, physiologically rewiring our brains and rendering us increasingly helpless against our impulses."⁶¹ The impact lines up with what we've already discussed about changes in our brains: "The result of this is a gradual inability to pay attention, to focus, and to think deeply. Study after study has confirmed the common experience many have reported in the internet age: that using the Web makes it infinitely easier to find information but much harder to devote the kind of sustained focus it takes to know things."⁶² And finding ways to capture people's attention is a big business.⁶³ Even if we seem to be paying attention to digital devices, those devices are actually scattering our attention and diminishing our ability to think deeply.

Second, that notion of attention isn't quite what Conyers is after anyway. His idea of attention is much fuller than the simple concept of "focus." It is rooted in *attending to* that which is most significant and central to true human flourishing. Attention "means the overthrowing of 'vain imaginations,' the disposal of a self-centered view of existence." It is important to Christian thought and practice, because prayer consists in attention. As Conyers explains, "The purpose and end of attention is a transformation in which reality awakens within us, pushing aside the unreal and selfish dreams which had kept us subdued in unwakefulness." This stance is contrary to today's world. Vocation—and attention—are the opposite of "a

⁶⁰Jacobs, "Habits of Mind in an Age of Distraction." See also Sardamov, *Mental Penguins*, 55.

⁶¹Dreher, *Benedict Option*, 219.

⁶²Dreher, "Smartphones Are Our Soma."

⁶³Tim Wu, *The Attention Merchants: The Epic Scramble to Get Inside Our Heads* (New York: Knopf, 2016).

life simply chosen, from among differing alternatives, or among numberless innocuous choices, whether we call these ‘lifestyles,’ or ‘alternate realities,’ then it involves facing and accepting both the limits and the painfulness of that for which we are chosen.”⁶⁴ Living a life in response to the call of God is not the same as grasping control at all costs.

The opposite of attention is distraction. Like with attention, I don’t mean simply the ability to concentrate or not. Rather, distraction means the inability to order our attention and life around what God has called us to care for. Instead we are drawn to something related but not central.⁶⁵ To follow Conyers’s example, consider making furniture. To pay attention to furniture making is to pursue excellence and beauty for the sake of calling. To be distracted is to focus instead primarily on making a profit, to focus on money as a means of power. Now, making money is properly connected to good furniture making, but it isn’t where the attention should be. In our culture we are so often distracted because we’re focusing on subordinate aspects of our existence rather than attending to what is truly central.

We justify this life of distraction, which tries to pull apart what belongs together in the eyes of faith. The modern human is distracted from knowing in order to participate and instead seeks to know in order to master, which brings separation. We don’t want to know things in order to take our rightful place within God’s creation but to master concepts for the sake of our own control and use. We replace the central aspects of our being and doing with things that are meant to be secondary, and we scurry after those secondary things. We so often want to master—to take control—in order to guide everything in the way we see fit. The problem is one of our affections; we have failed to love properly.⁶⁶ Conyers’s analysis dovetails nicely with Smith here, since both help us see that our affections are central.

The modern era provides frequent opportunities for distraction.⁶⁷ As one scholar puts it, the “promise of mastery is flawed. It threatens to banish our appreciation of life as a gift, and to leave us with nothing to affirm or

⁶⁴Conyers, *Listening Heart*, 119, 121, 127.

⁶⁵Conyers, *Listening Heart*, 55.

⁶⁶Conyers, *Listening Heart*, 55.

⁶⁷For another angle on this issue of distraction, see Alan Jacobs, *The Pleasures of Reading in an Age of Distraction* (New York: Oxford, 2011).

behold outside our own will.”⁶⁸ We think we want control, and certain liturgies form us to desire this control as well. But really these desires are a new and more accessible form of common human temptations. As Reinke reminds us,

[Pascal’s] warnings about the distractions of untimely amusements only mimic the urgency of the biblical warnings on distractions, which further broaden the categories until “distraction” covers all of the immediately pressing details of our daily lives, relationships, and apparent duties, and even our pursuits of money and possessions—anything that preoccupies our attention on this world and life. A distraction can come in many forms: a new amusement, a persistent worry, or a vain aspiration. It is something that diverts our minds and hearts from what is most significant; anything “which monopolizes the heart’s concerns.”⁶⁹

Distraction isn’t a mere inconvenience; it is a spiritual issue. It has always been a spiritual issue, but digital technology’s speed and accessibility, combined with its power to change deep parts of us, makes this issue particularly problematic.

All of these issues come together in the concept of community, which is in danger in the modern setting, according to Conyers. Communities are meant “to provide space and give nourishment to the human spirit,” and they are “nourished and informed by virtue of their rootedness, oriented toward their destiny, and open in love toward one another.” True community is promoted when the members refuse to seek power and control and instead attempt to hear and follow God, living a life that is faithful to God and open to one another. They attend to what is true and resist the distractions provided by secondary issues such as money and power, easy abstractions that draw us away from true flourishing. Cultures that promote individualism and control contribute to the dissolution of community; they “imitate the form of community but deny its substance.”⁷⁰ This is certainly the case with online practices, which scatter us. As

⁶⁸Michael J. Sandel, “The Case Against Perfection: What’s Wrong with Designer Children, Bionic Athletes, and Genetic Engineering,” in Savulescu and Bostrom, *Human Enhancement*, 89.

⁶⁹Reinke, *12 Ways*, 47.

⁷⁰Conyers, *Listening Heart*, 94, 113.

journalist Tony Reinke reflects, “Online attention proves to be an incapable substitute for true intimacy, and the addiction to a crafted online image renders true intimacy impossible.”⁷¹ We’ll get into more details around crafting an online image later in the book, but for now we must simply raise the issue that there are imitators of community that aren’t truly community. Community is only truly defined by the ultimate goal that it serves to point people toward.

If we want technology to serve the community, then, it must be useful to move people toward an ultimate good not defined by technology itself. This stance is the one Amish and Mennonite communities take toward technology. While often viewed as antitechnology, these communities are serious about refusing the overall logic of technology and instead putting technology in its rightful place. For instance, John Rhodes was part of a communitarian business that used technology carefully. When the business first introduced email, employees found that it led to greater misunderstandings because people did not spend as much time communicating face-to-face. The technology didn’t serve the overall needs of the community, even if it did help with “efficiency.” As Rhodes puts it, “Technology has found its rightful place, then, when it enables people to work well with all faculties of their being, and to work well with one another.”⁷² True flourishing is not found in a technological worldview but in subordinating our tools to truly human ends.

Scientific studies are beginning to show us some additional evidence of the ways technology—smartphones in particular—affects human relationships. A UK study with 142 participants showed strong downsides to people having a conversation with a smartphone even in the room. Half of the participants had a conversation with a smartphone in the room, and the other had conversations without the phone there. The study showed that the presence of the phone correlated with a loss of empathy and trust.⁷³ Notice, no one was using the phone; rather, the mere presence of the

⁷¹Reinke, *12 Ways*, 69.

⁷²John Rhodes, “Anabaptist Technology: Lessons from a Communitarian Business,” *Plough Quarterly* (Winter 2018): 53.

⁷³Nicholas Carr, “How Smartphones Hijack Our Minds,” *Wall Street Journal*, October 7, 2017, Cl.

phone seemed to make a difference. Imagine how much worse it is when “conversations” occur with one person fiddling with sending a message on their smartphone!

Smith and Conyers help form a theological perspective from which to attempt to understand technology and its ethical implications, especially for communities. I find them helpful not because they’re perfect but because they provide two insightful—and I think true—pieces for analyzing technology. Smith’s liturgies guide us to take seriously the ways that everyday practices and things shape our desires and our being. Conyers’s work on attention, distraction, and control prepares us to see something particularly alluring in the modern world: control as an unmitigated good. Smith and Conyers save us from glossing over aspects of our modern lives that are in fact shaping us in profound ways to adopt the world’s way of being and doing rather than our Savior’s way. This shaping is true for more than just technology, but it helps us prepare to take our engagement with everyday technology more seriously.

For both of these theologians, humans are essentially lovers, and we learn love by what we do, what we practice. The themes of vocation and attention drive true community flourishing in ways that reject the quest for power and control that the modern world has in many cases promoted. And they help us control distraction, too. These pieces prepare us to analyze technological liturgies in order to understand how they shape human affections. As Dreher puts it, “To use technology is to participate in a cultural liturgy that, if we aren’t mindful, trains us to accept the core truth claim of modernity: that the only meaning there is in the world is what we choose to assign it in our endless quest to master nature.”⁷⁴ Combining insights from Smith and Conyers prepares us to look out for liturgies of control—ways that technology use shapes us to view the world in certain ways and to pursue certain goals. But we’re beginning to get ahead of ourselves.

⁷⁴Dreher, *Benedict Option*, 219.

TOWARD A THEOLOGICAL FRAMEWORK FOR HUMAN FLOURISHING

Before we move further, I want to set up a small framework for considering human flourishing, which will give a sense of what to watch for as we begin to consider technology and transhumanism. Two passages equip us to look for the right things.

First, Genesis 1–2 gives us a sense of what humans are placed on earth to do. Often referred to as the cultural mandate, we see in these chapters that humans are meant to fill, subdue, and rule the earth. Some scholars argue that this task carries with it the sense of coregency, of ruling with God or as God’s representative.⁷⁵ The task of humans was to fill, subdue, and rule the earth in a way that points to its ultimate and true ruler, God alone. Even before the fall into sin, human activity was primarily oriented not around selfish gain but around God’s glory.

Second, this God-oriented view of human flourishing comes into view in Jesus’ great commandment as well. In Matthew 22:36–40, Jesus is asked what the greatest commandment is. He explains that it is to love God, and the second is to love the neighbor as oneself. According to him, all of the law and the prophets hang on these two commands. Human flourishing, then, is not oriented around the self but around God and the neighbor.

This brief section is obviously not a full-fledged theological anthropology. But it does give us two aspects of a biblical framework of human flourishing. Humans were created to represent God’s rule and to point to his glory, and human living should be oriented around others and, ultimately, God himself. Humans cannot flourish heading in any other direction, no matter what other powers are amplified by our tools.



Humans make tools, but tools also make humans. As one Anabaptist thinker explains, “The technologies we use always have an effect on us, and that effect is both burden and blessing. Importantly, the outcome of a given

⁷⁵See for instance G. K. Beale, *The Temple and the Church’s Mission: A Biblical Theology of the Dwelling Place of God*, New Studies in Biblical Theology (Downers Grove, IL: InterVarsity Press, 2004).

form of technology depends less on our intent than on the structure of that technology. Once introduced, it plays its hand. Our task is to keep our eyes open and understand what is happening.”⁷⁶ Or, as Michael Harris puts it and as we noted in the introduction, “Every technology will alienate you from some part of your life. That is its job. *Your* job is to notice. First notice the difference. And then, every time, choose.”⁷⁷ And while every technology does this, digital technology is particularly challenging because of how deeply immersed we become.

Digital technology pulls us into itself to such a degree that the forming power of technology becomes magnified. It can teach us to love power and control in inappropriate ways. This formation is important, because Christians are called to follow Christ, to love God, to love neighbor. But what might we lose if we buy into technology’s logic? In the realm of education, one scholar argues that our brains have changed so much that we’ve become mental penguins: we’ve lost the ability to “fly” and might never be able to get it back.⁷⁸ Some things remain the same, but small differences should give us pause as we consider the impact of this technology on who we are becoming. As cyberpsychologist Mary Aiken sees it, “Teens still obsess about appearance. Children are still playing together. But they are all alone—looking at their devices rather than one another. How will this shape the people they will become? And how, in turn, will they come to shape society?”⁷⁹

What sort of people are we becoming? As those seeking to become like Christ, this is a particularly challenging question for Christians. With our next chapter we’re taking a jump into the advanced logic of a technological world. What if technology is actually shaping us to pursue transhumanism? Or at least be more interested in doing so?

⁷⁶Rhodes, “Anabaptist Technology,” 51.

⁷⁷Harris, *End of Absence*, 206.

⁷⁸Sardamov, *Mental Penguins*, 169, 176.

⁷⁹Aiken, *Cyber Effect*, 303.