

iGods

HOW TECHNOLOGY SHAPES OUR
SPIRITUAL AND SOCIAL LIVES

CRAIG DETWEILER



BrazosPress

a division of Baker Publishing Group
Grand Rapids, Michigan

Craig Detweiler, iGods

Brazos Press, a division of Baker Publishing Group, © 2013. Used by permission.

(Unpublished manuscript—copyright protected Baker Publishing Group)

© 2013 by Craig Detweiler

Published by Brazos Press
a division of Baker Publishing Group
P.O. Box 6287, Grand Rapids, MI 49516-6287
www.brazospress.com

Printed in the United States of America

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means—for example, electronic, photocopy, recording—without the prior written permission of the publisher. The only exception is brief quotations in printed reviews.

Library of Congress Cataloging-in-Publication Data

Detweiler, Craig, 1964–

iGods : how technology shapes our spiritual and social lives / Craig Detweiler.
pages cm

Includes bibliographical references and index.

ISBN 978-1-58743-344-3 (pbk.)

1. Technology—Religious aspects—Christianity. 2. Social networks. I. Title.

BR115.T42D48 2014

261.5'6—dc23

2013025133

Unless otherwise indicated, Scripture quotations are from the Holy Bible, New International Version®. NIV®. Copyright © 1973, 1978, 1984, 2011 by Biblica, Inc.™ Used by permission of Zondervan. All rights reserved worldwide. www.zondervan.com

Scripture quotations labeled KJV are from the King James Version of the Bible.

Scripture quotations labeled NKJV are from the New King James Version. Copyright © 1982 by Thomas Nelson, Inc. Used by permission. All rights reserved.

Scripture quotations labeled NLT are from the *Holy Bible*, New Living Translation, copyright © 1996, 2004, 2007 by Tyndale House Foundation. Used by permission of Tyndale House Publishers, Inc., Carol Stream, Illinois 60188. All rights reserved.

All illustrations are the work of Brandon Scheirman.

The image that appears in the illustration on page 44 was taken by Matthew Yohe (Matthew Yohe/Wikimedia Commons/cc=BY=3.0).

13 14 15 16 17 18 19 7 6 5 4 3 2 1



Craig Detweiler, iGods
Brazos Press, a division of Baker Publishing Group, © 2013. Used by permission.

(Unpublished manuscript—copyright protected Baker Publishing Group)

Contents

Acknowledgments vii

Introduction 1

iGods

1. Defining Technology 23

2. Apple 45

Aesthetics First

3. A Brief History of the Internet 73

4. Amazon 79

Personalized Abundance

5. Google 105

Algorithmic Authority

6. A Brief History of Social Networking 131

7. Facebook 137

Authentic Frenemies

8. YouTube, Twitter, Instagram 171

Audience Participation

Conclusion 199

The Telos of Technology

Notes 227

Index 243

Acknowledgments

While writing appears to be a solitary craft, it is built upon the work and words of others. Like research and technology, advances arise by merging previous ideas into new forms, shapes, and applications. Yes, there are moments of blinding insight, unexpected breakthroughs, and divine sparks. But they arise in an incubator formed through reading and studying, teaching and testing, reflection and prayer.

I am grateful to the communities that made this book possible. First and foremost, I am grateful for my wife-for-life, Caroline Cicero, and our children, Zoe and Theo, who endured far more of this book than they deserved to. Whatever romance they may have harbored about the glamour of the writer's life is long gone. But hopefully, in its place, they have seen there are no shortcuts when it comes to finishing a book. Despite technological advances, writing remains a long and winding road that proceeds at a snail's pace.

This book was road-tested on the Pepperdine University students in my Introduction to Media class. They are a vibrant, living laboratory, the heavy users and early adopters who helped me tailor this manuscript to their passions and needs. I am heartened by their enthusiastic response. They want to discuss these important issues and long to go deeper in their reflection and discipleship. Special thanks to Brandon Scheirman, a brilliant student and talented designer, who created all of the original illustrations for the book.

I am indebted to my editor, Bob Hosack, Lisa Ann Cockrel, and the team at Brazos/Baker Academic who embraced this concept and were remarkably patient. It is tough to finish a book about an industry that changes daily. I am attempting to craft a timely tale rooted in timeless truths. Thank you to my many partners on this endeavor.

So many books have been written on faith and science, but the relationship between theology and technology is a newer, burgeoning field. Marshall

McLuhan and Walter Ong were pioneering thinkers, way ahead of their time. Their robust Catholic faith informed their prophetic understanding of the shifts from oral to literary culture and the retribalizing effects of electronic culture. David Noble's *The Religion of Technology* offers an essential historical overview. Albert Borgmann approaches faith and technology from a philosophical point of view in the seminal *Technology and the Character of Contemporary Life*. Jacques Ellul and Ursula Franklin offered insightful critiques of the technological society, challenging the Christian community to resist the totalizing system. I am so indebted to these remarkable scholars for how they've influenced my efforts to forge a theology of technology.

I will not focus on how faith is disseminated via technology. Distinguished scholars analyzing religion on the internet include Brenda Brasher (*Give Me That Online Religion*), Heidi Campbell (*Digital Religion*), and Rachel Wagner (*GodWired*). Lynn Schofield Clark has studied the impact of digital technologies upon families (*The Parent App*). Those who have articulated how to shift church practices to coincide with technological shifts include John Dyer (*From the Garden to the City*), Jesse Rice (*The Church of Facebook*), Elizabeth Drescher (*Tweet if You Heart Jesus*), and Brandon Vogt (*The Church and New Media*). Dwight Friesen reframed our understanding of church for a networked world in *Thy Kingdom Connected*. Douglas Estes pressed forward the furthest with the implications for twenty-first-century ministry in *SimChurch*. Pastoral concerns and cautions have been articulated by Quentin Schultze (*Habits of the High-Tech Heart*), Shane Hipps (*Flickering Pixels*), and Tim Challies (*The Next Story*). Leonard Sweet recovers the early days of Christianity as a social movement in *Viral*. I am energized by the emerging scholarship of Brett T. Robinson found in *Appletopia*. Jesuit paleontologist Pierre Teilhard de Chardin's notion of the noosphere inspired Jennifer Cobb in her *CyberGrace*. She posits a world in which we evolve, thanks to technology, toward a higher consciousness, perhaps to a more Godlike calling. While this hopeful vision is attractive, it doesn't address how technology can also bewitch and blind us. Technology has given us the ability to improve our conditions but also the power to destroy ourselves via bombs or chemical warfare. We can enjoy the benefits of technology while still remaining skeptical of what happens when we become iGods of our making.

A similarly diverse spectrum—from caution to enthusiasm—is found among technologists. Nicholas Carr may bemoan *The Shallows*, our less-than-deep thinking thanks to the internet, while Clay Shirky celebrates the *Cognitive*

Surplus arising from our collective intelligence. Both messages have found broad audiences. I am intrigued by the words of warning coming from artificial intelligence researcher Jaron Lanier (*Who Owns the Future?*) and Eli Pariser of Upworthy.org (*The Filter Bubble*). They experienced the early, unchecked promise of the internet but now worry about the standardization that arises from a consolidation of power among a few techno-lords. MIT psychologist Sherry Turkle shifted from an enthusiastic embrace of *The Second Self* to a position of caution and concern in *Alone Together*. Whether coming from a specifically religious or avowedly sociological perspective, the debate about our technological shift is rampant. I appreciate both words of warning and practical advice on how to incorporate social media into church practices. But I find myself more interested in the theological questions of where technology is going. What is the *telos* of our commitment to faster, smaller, and more? How do we retain an embodied faith in a digital era?

The most advanced technologist and theologian leading this conversation is Kevin Kelly. From his work on the *Whole Earth Catalog* to his editing at *Wired*, Kelly has reported on each stage of our computing era. He suggests that the emerging question isn't where we are headed but *What Technology Wants*. I am fascinated (and frightened) by that notion. It sounds a long way from seeking the will of God or asking, "What Would Jesus Do?" Is technology a distinct entity, birthed from our need for comfort and calculation, now surpassing us in far more than chess games or Jeopardy? I vividly recall the cold, calculated horrors of HAL, the computer gone amok in *2001: A Space Odyssey*. And who wants to have their every keystroke or phone call monitored by advertisers or government agencies? Yet, I also must acknowledge how many magnificent breakthroughs in science and engineering have raised all our standards of living. Technology is increasingly shifting from something outside us to a partner and monitor inside us, an evolutionary upgrade. I am grateful that Kelly has gone before us, reassuring us that we need not fear the future, especially if theologians and ethicists work with technologists.

This book arises from ancient mysteries: Why did God give us a brain and why are we called to be fruitful and multiply? When we apply our talents to the task of planting, harvesting, and creating, we get more products, more ideas, more leisure. So are we slowly creating heaven on earth, fulfilling God's hopes for us? Or are we repeating the errors of Eden, making ourselves the center of our world in unhealthy and unsustainable ways? The short answer is "yes." The longer explanation follows.



Introduction

iGods

Nothing is permanent, but change!

—Heraclitus, 4th century BC

Resenting a new technology will not halt its progress.

—Marshall McLuhan, 1969¹

Technology is most effective when we fail to notice it, but our faith in technology is so pervasive it is often blind. Consider an average day: We expect our alarm to go off. We believe our lights will turn on. We expect the shower to run. We trust appliances to chill our milk, heat our coffee, toast our bread, and clean our dishes. We depend on trains to run, buses to roll, our car to start. We trust our radio to play and our GPS to guide us. The elevator will carry us to our floor. Our computer will retrieve our files, print our documents, and deliver our email. The microwave can cook our lunch or reheat our dinner. Our phone can order pizza to be delivered. Our thermostat makes sure we are warm in the winter and cool in the summer. We are comfortable. We feel self-sufficient. We did not need anyone's help to make this happen. At no time did we need to pause or even consider how these appliances worked. Conveniences once well beyond the reach of royalty are now standard fare. As dutiful servants, these technologies perform their services without acknowledgment. They are virtually invisible. Thank you technology for making our life so simple. Forgive us for taking you for granted.

Our faith in technology is impatient. It does not tolerate delays. If bad weather befalls O'Hare Airport, tempers flare. When the Apple map in the iPhone5 failed to deliver results, heads rolled within the company. If our cable service is cut off (or the power goes out during the Super Bowl), Comcast will hear from us! Our faith in technology allows little room for error. We often exclude the events in the natural world (such as weather) in our expectations of technology. As psychologist Rollo May noted, "Technology is the knack for so arranging the world that we do not experience it."² We may not realize how our faith in technology can blind us.

Our faith in technology connects us to long lost friends. It also enables us to avoid people we'd rather text with than talk to. It is our hiding place.

Our faith in technology is so widespread that we feel we must be always available, always connected. Technology demands our attention.

Our faith in technology is so complete that we place devices into our children's hands at earlier ages and stages. We train our kids to look down rather than up.

Our faith in technology is so passionate that we rarely question the wisdom of our embrace. We text now, worry later.

Our embrace of technology is so boundless that we have poured staggering riches on those who brought us these magic devices.

Futurist Arthur C. Clarke noted that any "sufficiently advanced technology is indistinguishable from magic."³ We marvel at the results without analyzing how the trick was accomplished. We may be tempted to bow down to the magic box, ascribing secret powers to the technology. We may also applaud the magician who performed the trick. When it comes to technology, we celebrate the icons of Silicon Valley as iGods worth emulating. We reward them for granting us superpowers. With a smartphone in our pocket, we can transcend the bodily limits of space and time. We can send and receive, buy and sell, upload and download with a swipe of our finger.

In this book, we will discuss the magic technologies that we may consider Godlike. We will also study the trails blazed by tech leaders like Steve Jobs—the original iGod. We will also consider the temptations offered by Google and Facebook and Twitter to build our digital brand, to become iGods of our making. An iGod can be a technology, a technologist, or the person bewitched by the power promised by the gadget. A healthy perspective on technology, unmasking the magic, may make us more appreciative of the craft involved. In examining how technology improves our lives, we may even come to a

deeper understanding of the glory of God. In other words, a better grasp of the iGods we fashion and follow can lead us toward the God of Abraham, Isaac, and Jacob.

Perhaps we should pause more often and thank God for the gift of technology. Before we pick up a fork, we could be grateful for the toolmakers who preceded us. We may marvel at Google's internet-connected glasses, but we can also appreciate any invention that clarifies our vision—from the reading glasses that accompanied my fortieth birthday to the sunglasses that keep us from developing cataracts. When we get a flu shot, the doctors have anticipated the future of disease so effectively that they can give it to us (and protect us!) ahead of time. We don't think about our artificial hip or pacemaker; we just incorporate them into our bodies and move on as satisfied semi-cyborgs. Technology at its finest is easy to adopt, quick to implement, and bound to be underappreciated.

Comedian Louis (Louie) C. K. jokes about our sense of entitlement regarding technology. He marvels that “everything is amazing right now and nobody is happy.” Louis mocks those who get impatient when they have to wait a few seconds to get a cell phone signal . . . FROM SPACE!⁴ The fruits of technology are often ingratitude and impatience. We don't want to be short-tempered and demanding, but we have come to expect technology to be at our beck and call. Could a deeper understanding of technology broaden our sense of appreciation? If we receive technology more as a God-given gift and privilege, could we grow in gratitude? How might stepping away from the conveniences of technology sharpen our perceptions and quicken our spirit?

This book is about how technologies entertain and enthrall us. We are tethered to our mobile devices. They comfort us when we're lonely, reassure us when we're lost, organize us when we're feeling out of control. They are an electronic security blanket, a way for families and friends to feel close despite the distances that may separate us. They offer an easy way to pass the time between things, when we are waiting for something to start or someone to show up. We can sink into our cell phone when we are bored, when we are scared, or when we are eager to share some great news. However, delight can devolve into devotion.

It is good to be connected to family and friends, but when we cannot resist the urge to check updates or upload a photo, we are veering toward idolatry. Idols serve our needs according to our schedule. When we call, they answer. They give us a false sense of being in control. But over time, the relationship reverses. We end up attending to their needs, centering our lives on their priorities

and agendas. Most idols begin as good things, from a modest improvement to a lofty goal or something we long to acquire. When we gaze on our idols, we see ourselves differently. We can picture ourselves driving the car, winning the award, taking the bow. Over time, we can become so attached to the image of ourselves being reflected back at us that we lose perspective.⁵ When we shift from thinking about something occasionally (a romantic relationship, a promotion, a possession, our family) to obsessing over it constantly, we are turning an idea into an idol. It becomes the thing we cling to, that gives our life purpose and meaning. Idols are anything we're so attached to that we can't imagine living without.⁶ Tim Keller challenges us to take stock. What would we hate to lose and feel lost without? Where do our thoughts wander in our free time? Who or what can we not wait to check in with?

The iMac begat the iPhone and the iPad, and each one starts with me—or rather “i.” They enhance our ability to connect and to serve, but they can also create an inflated sense of self, believing the entire world revolves around “me”: iVoice, iWant, iNeed. The ability to broadcast ourselves from anywhere to anyone at any time gives us an electric charge. In an age of status updates, personalized shopping, and lists of followers, we are experiencing the rush of becoming iGods of our own making. Updating our profiles can be exhausting. The pressure to perform can be demanding. Why are devices designed to broaden our reach and elevate our personal brands so enslaving?

When Moses descended from Sinai with the original tablets, the crowd was dancing around a golden calf. On the long journey toward freedom out of Egypt, they had forgotten who they were and whose they were. In the first commandment, God appropriately insisted, “You shall have no other gods before me.”⁷ The second commandment warned against worshiping graven images (no matter how sleek, cool, or trendy they may be). Biblical history reveals how quickly the Israelites bowed down to foreign idols, shifting allegiance toward the latest innovations introduced by conquerors and kings.⁸ Images of lines of people outside the Apple store awaiting the latest iPhone dance through my mind. The apostle John concluded his letter to the early church with the cautionary warning, “Dear children, keep yourselves from idols.”⁹ As parents, we put an iPad in our children's hands to get through road trips and plane rides. Kids can scroll before they even speak. John Calvin said, “Every one of us, even from his mother's womb, is a master-craftsman of idols.”¹⁰ As soon as we remove one, we elevate another in its place. Despite their lofty promises, idols can end up sucking the life out of us.

This book celebrates the wonders of technology and sings the praises of Apple, Amazon, Google, Facebook, YouTube, and Twitter. We will consider what important everyday problems these technologies solved and ask what is our proper relationship to these technologies. In examining why we place so much faith in their abilities, we may rediscover our original calling. We want to appreciate the gift of technology, but we also desire to put the iGods in their proper place.

Writing this book has forced me to measure my own technological devotion. We value speed and efficiency while the Bible upholds patience and kindness. When we start the day with electronic updates, we may forget how “great is his faithfulness; his mercies begin afresh each morning.”¹¹ Where shall we express our hopes and fears? If we post our concerns on Facebook, we may forget to cast our cares on the Lord, the one who sustains us in our sorrows.¹² Should we find our comfort in a gadget or in God? If our goal or calling in life is to glorify God and to enjoy him forever, should we fill each moment of boredom with an electronic input to keep us entertained? Almost all of Jesus’s most important teaching happened on the journey between destinations. After his disciples had experienced something, Jesus took the time before the next encounter to reflect on the meaning of what had just happened. He put things in context, revealed the bigger picture, and imparted eye-opening wisdom. The insights were so memorable and so deep that they were passed on via word of mouth with such clarity that they could still be gathered in the Gospels almost one hundred years later. When we go from experience to experience, from Gmail to Facebook to Tumblr to YouTube, we crowd out those moments where the Spirit may have something significant to convey. We replace God-given interludes of pause, rest, and reflection with the goat version of Taylor Swift’s “I Knew You Were Trouble” (look it up on YouTube). Nobody laughs harder at “Goats Screaming Like Humans” than I do. However, it is tough to build a life around viral videos and memes. They are a welcome respite—a celebration of the weird wonder of God’s creation and a quick laugh amid daunting days—but if we are going to go the distance, we need more enduring wisdom than “McKayla is not impressed” or “Charlie bit my finger.”

Hyperconnected and Distracted

As a college professor, I am amazed by how stressed and overscheduled my students appear. They never seem to have enough hours in the day to get

everything done. They arrive in class looking exhausted and bleary-eyed. They are often in the middle of a relational drama that is playing out in real time, either on Facebook or via instant messaging. It may be a fight with a roommate, the end of a romance, or a plea from a parent. The constant tug of electronic inputs keeps them from being focused. We are hyperconnected and easily distracted, always available and rarely present. When Jesus saw the crowds in ancient Israel, he had compassion on them, recognizing them as harassed and helpless, like sheep without a shepherd.¹³ I want to alleviate my students' stress.

In my media and communication classes, I insist that students close their laptops and turn off their phones. I want to capture that elusive and essential commodity: *attention*. We can't think, learn, or get in touch with our feelings unless we've focused our attention. The social contract is clear: *be here now*. I even try to teach in a manner that defies note taking. My class is a lived experience that cannot be replicated, captured, or reduced to any other medium (although numerous efforts are under way to deliver education online, including the 2013 TED Prize winner, Sugata Mitra's "School in the Cloud"). What happens among our community of learners at Pepperdine is designed to spark thought that will reverberate until the next class session.

However, when it is time for midterms or final exams, I encourage students to bring their laptops to class. My tests are open book, open notes, open computers. They are even welcome to text message their friends. In real-world scenarios, the challenge is assimilation: sorting through too much information as quickly and wisely as possible. A timed test, surrounded by information, approximates the kind of decision making we face every single moment. With too many sources, where should we turn for advice? Which authorities do we trust, and when do we stop gathering information and start crafting it into something uniquely our own? My classroom illustrates a key tension for every person and every family: When should we immerse in and when should we withdraw from the information torrent (or is that "tyrant")?

We love our iPhones, but we fear that they are distracting us. We want our searches answered instantaneously by Google, but we feel overwhelmed by too much information. We relish the chance to connect with friends via Facebook, but we wonder how much privacy we may sacrifice via public posts. Viewed from one angle, technology may seem like a savior to so many social ills. It lifts us out of ignorance. It provides access to all. It can unite us, it can heal us, and it can make us one. Plenty of us still worry about the

totalizing effects of technology. Does entrusting all our information to a few central databases and companies open up the possibility for new forms of domination? Those who have seen regimes attempt to consolidate power via disinformation worry whenever a few entities control the airwaves. We solved the problem of too much information by giving a few key companies too much of our information.

We have been swamped by a tsunami of new technologies, without pausing to consider whether they are good or bad, helpful or hurtful. Are they making us more thoughtful, more articulate, more loving? I see the benefits of technology when I can let my family know where I am or send a quick text message of support to a friend. But I also feel pulled away from them in order to check for updates and to respond to requests for information, simply because everything can happen so instantaneously. Our devices demand our attention. MIT psychologist Sherry Turkle notes how the current generation is “among the first to grow up with an expectation of continuous connection: always on, and always on them.”¹⁴ We have embraced this shift largely without considering the implications. Our basic philosophy has been summarized by William Powers: *It’s good to be connected, and it’s bad to be disconnected.*¹⁵ He describes us as “digital maximalists” operating under a basic maxim, “The more you connect, the better off you are.” Powers notes, “We never sat down and consciously decided that this was the code we would live by. There was no discussion, no referendum or show of hands. It just sort of happened, as if by tacit agreement or silent oath. *From now on, I will strive to be as connected as possible at all times.*”¹⁶ I write this book because I want to pause and question that aphorism. This is an effort to step back, slow down, and take a long view of where we’ve been and where we’re heading.

iGods

We may be tempted to eschew the electronic kingdom, skip the smartphone, and forgo Facebook. I am not a Luddite calling us to smash our machines. I love God, and I am attached to my iPhone. I believe Jesus was a techie and God calls us to count and to code. You can find me via Gmail and on Facebook, YouTube, and Twitter. I worked as a tutor in computer programming for the math department at Davidson College. I then went to film school at the University of Southern California and became a content creator rather than

a technologist. I've watched Silicon Valley usurp Hollywood as the primary storyteller and mythmaker for our generation. This is my respectful response.

The only computers I've ever owned have been Macs. I remember the giddy first day that Earthlink allowed me to get online. I recall the visceral thrill generated by the simple words, "you've got mail." I still have the pullout map of the world wide web provided inside an issue of *MacWorld*. It all seemed so strange and wild and wonderful. I remember the day CarsDirect.com moved into our Southern California neighborhood. While it became an immediate internet sensation, to those of us in Culver City, it became an annoyance. How did they squeeze so many people into such a small building? Employees had to park their cars on our suburban streets and walk to work—all in order to sell more cars. Friends of mine got rich working for GeoCities before Yahoo! bought it. I've watched those same friends drop out and move to Indonesia, leaving the tech scene altogether. While some cashed out, others have continued to cash in. When one internet start-up failed, they found new suitors to invest in another.

It has been a wild two decades of booms and busts and booms, of IPOs and overnight billionaires. We have elevated new American icons to rival previous captains of industry like Andrew Carnegie, John D. Rockefeller, Thomas Edison, and Leland Stanford. These captains laid the groundwork for our twentieth-century infrastructure of steel and railways and fuel. They invested in new technologies that increased efficiency, hastened delivery, and lit up our lives. The information era has been ruled by the iGods: Steve Jobs of Apple, Jeff Bezos of Amazon, Larry Page and Sergey Brin of Google, and Mark Zuckerberg of Facebook. They beam from magazine covers as the entrepreneurs who mastered technology and transformed our lives. The entertainment industry now tells the stories of these icons who have displaced Hollywood as California's most influential export and financial engine.

The iGods got rich by solving problems created by technology such as the complexity of the original computers, the unmanageability of the internet, and the sheer excess of information. The first computers primarily processed numbers. They were designed to make it easy to calculate complex formulas for firing missiles. Armed forces needed to know how to account for the angle of the gun, the weight of the bomb, the variables of temperature and wind. Such complex algorithmic equations took too much time in the heat of battle. Computers offered an ability to calculate fast—faster than the human brain, faster than a whole roomful of women plugging the numbers into formulas far

from their husbands on the front. Computers required specialized knowledge. They operated via arcane languages like Fortran. No matter how BASIC they labeled it, for the average person it was an unintelligible foreign tongue. How to make computers easy and natural, warm and humane?

Apple made computers approachable. The Macintosh even sounded like a friend, “Mac.” Jobs and Apple turned a generation on to the creative power of computers, shifting computers from number processors to word processors. They encouraged people to engage in desktop publishing. We could design our own newsletters, lay out our own fanzines, publish our own novels. Blogging would follow. We started making our own designs, touching up our photos, recording our garage bands. Final Cut and iMovie turned us all into filmmakers as we edited hours of home movies into cool music videos. Visualization via computers transformed architecture and design, spawning the maker movement and 3D printing. The DIY revolution resulted in a dizzying array of media, on our computers, on the web. How do we organize all the music in our collection? What do we do with all the movies we have made? Where do we find all the books and music we’d like to buy? The iGods of Apple and Amazon got rich by solving our problem of abundance. They made billions by helping us control our millions—millions of songs, photos, and books. In a world of too much, they allowed us to find what we wanted, to make sense of too much. Our gratitude is immense. Our faith in their abilities is almost blind.

The iGods of Google and Facebook made the internet manageable. Google gave us the answers we were looking for. Facebook allowed us to gather our friends. The iGods helped us organize our calendars and promote our events. We can instantly connect with anybody at any time from anywhere. Such superpowers can be dizzying. How much do we value such services? Century-old companies that made trains, planes, and automobiles were eclipsed by start-ups that transported us across uncharted territories. Apple gave us the tools to create. Google showed us where to find what we were seeking. Amazon made it easy to buy it. Facebook allowed us to tap into the wisdom of friends. The demigods of YouTube and Twitter and Instagram turned us all into broadcasters. Yet, the creators of YouTube, Twitter, and Instagram are not viewed as iGods because they didn’t solve a problem. They deepened our problems by creating even more information.

We are just beginning to grasp our ability to gather followers and attract subscribers, to find an audience via our mobile devices. Who or what is God in an era where we have acquired such reach? Sam Lessin, project manager at

Facebook, suggests, “We as a species in the last few decades have gotten three new superpowers. . . . We can literally remember anything, we can talk to anyone on earth instantly for free, and we can process huge amounts of data.”¹⁷ Will our view of God need to expand, rising above a mountain of data? Do we need a new understanding of omniscience comparable to the cloud and omnipresence rooted in “mobiquity,” the ubiquity of mobile devices?

I want us to consider what to do with these newly found superpowers. Like Harry Potter and Hermione Granger, we must learn how to wield the magic wand in our hand. The rise of superhero movies may correspond to our sense of expanding horizons. Google Earth allows us to fly like Superman, zeroing in on any location we desire. Spider-Man learns that with great power comes great responsibility. The students of Hogwarts have shown us how to resist evil—it is a question of character, of wisdom. Trying on technology will involve some awkward missteps, crashes even. The netiquette of social media is still being negotiated. We’ve never been so close to so many. We may embarrass ourselves on YouTube. Twitter forces us to think before we tweet. Facebook should cause us to consider what it means to be a neighbor. How do we love our friends and followers when there are hundreds of them?

I am not equating Jesus’s principles with business à la Bruce Barton who quipped, “Christ would be a national advertiser today, I am sure, as He was a great advertiser in His own day. He thought of His life as business.”¹⁸ However, I do want to discover what these tech and business entrepreneurs understood in order to grasp how people of faith might respond to our context with similar creativity. Christianity was a social movement rooted in powerful symbols, creative actions, and remarkable word of mouth. It was a global brand that spread without advertising. The integrity of what it offered, demonstrated by millions of transformed pagans, spoke volumes. Now, having been usurped by the cult of technology and its fervent evangelists, we must figure out how to regain our mojo, to tap into our strengths, to remember our first love.

A Theology of Technology

Technology is the realm of engineers. They crunch numbers to build bridges, make decisions, and create applications for our smartphones. Theology is seen as the province of the spiritual, a realm of intangible ideas and ultimate questions. I want to bring these two worlds together, to point out how spiritual

our designs can be and how material theological concerns should be. Kevin Kelly has noted “that many people who do not believe in God somehow believe in information.”¹⁹ Technologists play god in their research all the time. As a theologian, what might I learn from technologists? As a student at Fuller Theological Seminary, I blended the seemingly incompatible realms of faith and film. I’ve tried to understand how God can offer revelatory moments amid seemingly profane, pop cultural means. Teaching for Fuller’s Northern California campus and speaking at a Menlo Park Presbyterian Church retreat, I discovered the growing need for a theological understanding of the burgeoning tech industry. In turning toward technology, I will continue to examine our lived experiences as an expression of profound spiritual longing. Our posts on Facebook can be a form of prayer and praise. The device in our pocket can be a conduit to and from the divine. The same God who worked through ancient Babylonian and Persian kings can work through today’s tech titans. By forging a theology of technology, we may even discover why large sections of the Bible focus on numbers!

David Tracy encourages a shift from *theo*-logy to *theo*-logy, a shift from the study of God driven by reason, to the *experience* of God rooted in *revelation*.²⁰ To respond to the age of reason, theologians became much more rational. We could look at the rise of the iGods as the triumph of computation, algorithms as Authority. However, I want to suggest that the expansion of their digital kingdom is also about material abundance. It is a lived *experience* rooted in *revelation*. We need a poetic, God-centered *theo*-logy to address an age of acceleration. Our theology must affirm the physical world amid mental, rational, and numbering functions. We are more than a gadget, and our ethics must be found in far more than an algorithm. An embodied faith rooted in the real world will enable us to resist a gnostic ascent into virtual kingdoms.

God’s first command in the Bible was to be fruitful and multiply. We have been up to the task. Early church father Tertullian (AD 160–240) noted how “farms have replaced wastelands, cultivated land has subdued the forests, cattle have put to flight the wild beast, barren lands have become fertile, rocks have become soil, swamps have been drained, and the number of cities exceeds the number of poor huts found in former times. . . . Everywhere there are people, communities—everywhere there is human life!”²¹ He worried that “the world is full. The elements scarcely suffice us. Our needs press.”²² Two millennia later, we are equally overwhelmed by our fruitfulness. Our knowledge, our information, our playlists have multiplied. We have filled our brains with data,

but we don't know how to subdue it. Humanity gave names to all the animals in the garden of Eden, but we can no longer name everything in sight. The diversity of our world, the proximity of what's possible has overwhelmed us. Becoming like God has fried our brains. To use the metaphor of our era, our hard drives are full and threatening to crash.

Religion used to order our world. It was a way of numbering our days, making sense of the seasons. A church calendar told us what we should be thinking about. Changes in the color of the priests' vestments sent us signals: sacred times are ahead. In the wake of rampant acceleration, we have placed our faith in technology to inform us, organize us, and sustain us. We expect it to function so seamlessly that it can also entertain us at the same time. Silicon Valley is ruled by numerical efficiency that rewards faster, cheaper, smaller, and more. This techno-monarchy, mediated via electronic devices connected to the internet, has overwhelmed us with abundance.

Such abundance can be frustrating and even maddening. In Genesis 1, Father, Son, and Spirit brought order to chaos, separating light from darkness, land from sea. Having set the stage, God commanded us to be fruitful and multiply. Now, we are drowning in a sea of creativity. We have too many books, songs, shows, and stuff to choose from. We are distracted by our choices, burdened by too many friends, and overwhelmed by too many options to enjoy. So what was God's response to too much fruitfulness and creativity? Rest. He enjoyed the splendor. He spread it around. He invited us all to the party. Can we learn to admire our handiwork, to revel in all that the internet offers, to be grateful for another day, another click, another virtual connection?

Jean-Luc Marion writes in terms of excess—the overwhelming charity of God that infuses our life. He revels in the captivating presence of God that arrests our brain. Irish philosopher and storyteller Peter Rollins suggests that our sense of being overwhelmed by these challenges could be a good thing:

A revelation worthy of the name involves *epistemological incomprehension* . . . what we have encountered cannot be understood within our current intellectual structures. Second, there is *experiential bedazzlement* . . . a type of oversaturation in which our experience is overcome. One is overwhelmed by the incoming and short-circuited by it. Third, there is an *existential transformation*. When a revelation occurs, the person who is receiving it is never the same again.²³

This resonates with our experience of abundance, our sense that there is simply too much of everything to process. Rather than trying to control it, perhaps

we need to learn how to simply embrace or receive it. Revelation is God's download to us. Theology is our upload in appreciative response; neither may fit in a status update or a tweet.

We obeyed God's first command; we filled the earth, but we couldn't subdue it. Adam and Eve tried to possess all knowledge, but such presumption proved deadly. Their efforts to dominate the garden of Eden got them kicked out. We face a similar temptation today. Control seems to reside in our fingertips; access to all is packed into a digital device. The flood of resulting information feels more like a form of judgment, threatening to drown us. We needed a lifesaving ark. As Noah once rescued the animals, so Apple, Google, Amazon, Facebook, and Twitter became the lifelines to keep us afloat. They appear magical (even godlike) because they solved our abundance problems. They put a filter around the flood, making the flow more manageable. Apple's computers arrived like a rainbow, assuring us that all was safe. Google extended an olive branch that told us it was safe to search. We lionize their leaders as oracles who can foresee the future, programmers on high. These technological icons became entrepreneurial idols—the iGods we adore.

The primeval prologue in Genesis concludes with a cautionary tale about attempts to become like God. Noah's offspring included Nimrod, a mighty hunter whose kingdom began with Babel. They built a tower in Babel to reach heaven and make a name for themselves before God leveled such presumption. History has come to judge such self-seeking as Nimrod's folly. Today's tech leaders built platforms to elevate our status. Apple has given us the illusion of control—packing our friends, our followers, our schedules, and our diversions into one essential device—the iPhone. We poured riches upon these techno-lords in appreciation. The iGods of Amazon, Google, Facebook, and Twitter have responded to our praise by offering us a form of divination. We can extend our brand, broaden our reach, and spread our Klout by joining the digital parade. Yes, it can be exhausting to be an iGod. The electronic din can resemble the confusion that followed Nimrod's folly. At Babel, everyone was talking, but no one could understand. They were confused.²⁴ The iGods continue to insist that active participation in virtual technologies ensures a lasting impact. We will make a name for ourselves; our profiles will live on. Technologists have faith in the future and confidence in progress. They await the coming of the Singularity, when machines surpass humanity, our tweets become eternal, and world peace prevails. Technology is an alternative religion

where faith in progress is manifested in a faster, smarter, more efficient world. Such cyber-utopianism, reflected by rave reviews in *Wired*, seemingly knows no bounds.

The distribution of the abundance remains a problem; not everyone is plugged in. While the iGods have prospered, those outside the platforms have yet to be lifted up. Automation has decimated large segments of the former middle class.²⁵ The annual TED (Technology/Education/Design) conference is an admirable effort to promote “ideas worth spreading.” TEDsters are committed to solving hunger, combating poverty, eradicating disease. It is an ambitious and inspiring movement rooted in human potential. I hope it sparks far more lifesaving arks than misguided towers to the sky.

Jesus showed us there was more than enough to go around. He fed five thousand people with two fish and five loaves of bread. He blended crowdsourcing with communion. We have never been closer to one another before—more aware of strife and hunger, able to respond more quickly to need. We are still growing into our calling as stewards and shepherds and cultivators. Despite the pain in our past, we are heading toward a massive party, celebrating the mystic sweet communion of Jesus and his bride, the church. So we must plant and harvest toward the great banquet, preparing the bottomless cup of wine, baking the baskets of bread overflowing.

We need a theology of abundance to deal with the outcomes of our technology, the massive fruitfulness that the Creator God baked into us. We need a theology of abundance equal to the grace and generosity found in the blood of Jesus poured out for many. We need a theology of abundance commensurate with the superabundant presence of the Holy Spirit that can flood our senses, short-circuit our rationale. Unfortunately, our economics is built on a model of scarcity, and our theology feels equally impoverished.

We’ve argued about who’s in and who’s out, separating, while God called us to simply gather everybody, two by two. The confusion that pulled us apart at Babel has been reversed by the cohesion of the Spirit, speaking to and through every tongue and tribe and nation. We’ve been focused on what we don’t have while Jesus multiplies the two fish and five loaves he’s already provided. We’ve been hoarding when we should have been sharing. Our technology allows us fewer claims to ignorance. The age of accountability and metrics is here. We can study the numbers, but we must remember that each number is actually a person, created by God, worthy of our attention. You are not a number or an outcome. You are not a gadget. You are far more than your social profile.

While the algorithms offer pictures of our collective behavior, discipleship still comes down to a life on a life. We are children of God, called to love and serve God's children. Let's figure out how to live out our faith in tangible ways, each hyperaccelerated day.

Key Words

Key words like *access*, *aesthetics*, *abundance*, *algorithms*, *authority*, and *authenticity* will drive our discussion. The first big hurdle on the internet was *access*. Companies like AOL and Earthlink competed to dial us into the world wide web. Smartphones gave access to people and countries that never experienced a landline. Our machines offer us more access and more computing speed at more affordable prices every day. We are so busy texting that we rarely pause to question if access is always preferable. We exchange our privacy for access, and we may be losing our sense of agency in the process.

Another key word is *aesthetics*. Steve Jobs's commitment to aesthetics turned amateurs into professionals, and the Macintosh unleashed a torrent of creativity from desktop publishing to editing home videos. Users developed an eye for design, admiring the gadgets that hold our electronic information.

We'll also discuss *abundance*. If nothing else, today's technology can be described as abundant! Communication originated as a one-to-one, person-to-person, aural activity. Then the printing press made duplication scalable, and the electronic era allowed one radio station or television network to reach millions.²⁶ Next Apple made computers accessible to nontechnical people, and the iPhone transformed us all into broadcasters. Never have so many people been able to create and distribute so many words and images. We are uploading our videos and updating our statuses in dizzying ways. We are inundated by too much information (of our own making). We desperately need a theology of abundance to figure out how to respond to this strange, new problem.

To solve this information overload, we have turned to *algorithms*. The engineers at Google created algorithms that gave us the ability to comb through the thicket of the world wide web. They brought order to a chaotic environment. Complex mathematical equations now drive our decision making, from what to buy, to which route to take, to whom to date. Algorithms filter our news and answer our questions.

Our traditional sources of *authority* are shifting, from people to programs, from God to Google. Google knows where to find answers, but does it understand my individual quirks and taste? Who can we trust as an authority in a time of too many options? Amazon recommended what to read. Netflix told us what to watch. Thanks to Twitter, we learned to follow the crowd, but the signals are still mixed. Should we click on the most viewed, the most emailed, or the most liked?

Authenticity was a vexing problem on the internet until Facebook gave us the ability to gather all our favorite people, those we know and trust, in one convenient place. We also made new friends thanks to old friends' recommendations. Our networks expanded and Facebook didn't let us hide behind pseudonyms or avatars. We were challenged to put our history, our education, even our religious beliefs out in the open. Such authenticity felt exhilarating until Facebook started exploiting our friends' recommendations, turning our trust into commerce.

This book explores the problems generated by abundance, the promises offered by algorithms, and our ongoing search for authenticity. Social media is such a relatively new phenomenon that we've barely had time to consider how it is redefining community. We have plugged into our smartphones without a sense of how they affect our relationships to family, friends, and even the Almighty.

Who Should Read This Book?

We vacillate between feeling empowered by and powerless in the wake of the iGods' influence. Digital natives have all the tools in hand but may benefit from some perspective. Parents, teachers, and pastors wonder how to compete with the electronic distractions. The ease of access, the pace of acceleration, and the division of attention show no signs of abating. We are all rats who seem to have signed up for the same race—acquiring more bits and bytes than we can possibly process.

For those who already feel overwhelmed by too much information, this book will include tales from an accelerated culture. The mobiquity of smartphones (adopted by ever younger users) guarantees that the next generation will have more access to more information at earlier ages. In an era of too much information, the need for discernment and wisdom will be greater than ever.

Consider this book an active resistance to a thoughtless embrace. I want to awaken our senses, to make room for thought, for contemplation, for beauty, for God. How might Christians recover these ancient and timeless virtues in a wired era?

This book is for parents, teachers, and pastors. As a parent of two digital natives, I wrestle with questions of what is appropriate and when. We used to worry about the age of accountability. Now, we measure rites of passage according to when they get their first cell phone. And should it be just a phone? What about the ability to text? Is internet access a problem, making a phone too smart? Once the phone enters the teenager's (or child's) life, what are the times and limits? Should it be used only for emergencies? Pulled out of a backpack only during lunch and between classes? What about using the phone in a bedroom? Should it be turned off at night?

Educators too wrestle with how to teach children who enter their classroom with a phone in tow. Assignments and pedagogy must change to accommodate a generation that has all the basic answers at their fingertips. Innovators like Sal Khan aim to replace higher education altogether (or at least to make it affordable to all). As technology disrupted the newspaper business and the music industry, could the Khan Academy (an online library of educational lectures) undermine colleges and universities? We must figure out how to incorporate smartphones and tablets into our educational process. And, surprisingly, less may turn out to be more.

Finally, how should pastors respond to parishioners who make their primary connections via Facebook? Youth ministers are already engaged in online ministry. As virtual communities continue to flourish, faith communities are still figuring out how to respond. Surveys have found that the larger the church, the broader their embrace of new technologies. To organize a crowd, they turn to electronic mail and social networks. To underscore a pastor's sermon, they rely on video screens and stage lighting. Churches often buy the latest gear out of instinct rather than theology. This book is an effort to hit pause, to challenge us to consider how technology shapes worship, before we consider how our worship should shape a congregation. Hopefully, this book will answer such practical questions in a thoughtful and theological way.

While I acknowledge the pastoral and parental concerns, I am primarily interested in the theological shifts accompanying technological upheaval. I see most of us buying phones for our children without pausing to consider the changes that will happen in their thoughts and practices. Students are

awakened by their cell phones in the morning and say goodnight on Facebook and Twitter. While this book is informed by know-how, I want us to know *why*. It is primarily a theology of technology. We will consider the history and the philosophy of technology in light of spiritual implications. We will study wildly successful companies in an effort to uncover our enduring questions. I am hopeful that the results will be worthwhile for students and teachers, pastors and parents. Questions at the end of each chapter are designed to provoke face-to-face group discussions.

The Goal

British economist E. F. Schumacher wrote in his prescient 1973 book *Small Is Beautiful*, “Wisdom demands a new orientation of science and technology towards the organic, the gentle, the non-violent, the elegant and beautiful.”²⁷

Many books have been written about how millions of dollars were made (and lost) during the dot-com bubble. These books profile the people who rose so quickly from obscurity to infamy. Plenty of how-to manuals discuss launching a company and capitalizing on social media. This book will include some history, some descriptions, but mostly analysis—not just how these companies came to be but what these technologies are doing to us and through us. This book is an effort to grasp how technology alters our hearts and minds. We need to understand how Google works but also what Google does to our understanding of who we are and whose we are. I want us to consider what that smartphone in our pocket can and can’t accomplish. I hope readers will be challenged to move beyond data and information gathering toward understanding and wisdom. The goals of system analyzers and technologists mirror those of professors and priests. We want to shift people from data to wisdom.²⁸

The Bible holds up wisdom as a rare and precious goal. It is worth striving for, setting aside distractions for, doing everything we can to obtain. The Proverbs of Solomon are collected “for gaining wisdom and instruction; for understanding words of insight; for receiving instruction in prudent behavior; doing what is right and just and fair.”²⁹ Augustine called it faith seeking understanding. Yes, we have the information provided by the Bible. We have the knowledge to understand how it all fits together, to see the big picture of biblical history, but do we have the wisdom to apply ancient truths to today’s

situation? G. K. Chesterton famously declared theology as that part of religion that requires brains. It can feel ponderous or off-putting, an academic study of God, but that is not the whole of our calling. We must translate that theology into meaningful action. Wisdom involves acting on our convictions, applying the Word of God in a thoughtful and appropriate manner.

If science is an accurate description of how the world works, technology is putting fundamental truths of biology, chemistry, and physics into action. We may not grasp all scientific truths, but we welcome the results that bless our lives via better technologies. Theology can seem lofty, abstract, or remote. Like science, it can sound intimidating. Yet, our beliefs invariably drive our decision making. The goal is to turn our beliefs into practices. Our head, our heart, and our hands should be aligned in purposeful actions. If technology is applied science, then faith is applied theology. Karl Barth allegedly encouraged young theologians to live with the Bible in one hand and the newspaper in the other.³⁰ Both those texts are now gathered in a single device. We are challenged to unlock the Bible contained within our smartphone. This captivating device, tied to all of human knowledge, could lead us to folly or wisdom.

Technology has been largely a nerdy boys' world, full of pissing contests and monopolizing egos. The press cast Bill Gates and Microsoft as the techno-villain, trying to control all. Windows was painted as the evil, unimaginative operating system. Jobs and Apple got plenty of mileage playing the underdog. In countless Mac-vs.-PC ads, Apple juxtaposed the drab, boring bean counter in a suit with the hip, relaxed Apple user with his shirt-tail out. Under his wife Melinda's positive influence, Gates turned into the most generous, global-minded technologist of our era. Through the Giving Pledge, the Bill and Melinda Gates Foundation has dared fellow billionaires toward benevolence. Rather than following the single-minded empire building of Jobs, Mark Zuckerberg has joined the Gates Foundation by vowing to give away the billions generated by Facebook. It is interesting that wisdom is personified as a woman throughout the book of Proverbs: "Do not forsake wisdom, and she will protect you; love her, and she will watch over you."³¹ The entire tech world could benefit from more female influence. Executives like Marissa Meyer at Yahoo! and Sheryl Sandberg of Facebook are making headlines, challenging the next generation to lean in.³² The next wave of iGods may be remembered for their generous hearts and transformative practices—sustaining wisdom.

Next Steps

German philosopher Martin Heidegger defined technology as a “challenging revealing.” I am studying technology as a potential source of divine revelation. God was the first technologist who put a tool in our hands and challenged us to till the earth. We’ve been (re)producing ever since. In examining why particular companies have come to dominate our culture, I hope to uncover the deeper longings that they unlocked. The success of the iGods is intoxicating. The promises of technology are alluring. The temptation to become iGods of our own making is ever present. What can we learn from their best practices without being blinded by their wealth, fame, and utopian ideals?

A master craftsman is entirely at home with his medium, having full knowledge of its possibilities. The ancient Greeks associated *technē* with *episteme*, since both were forms of knowing. In an artist’s hands, a block of wood could be transformed into a shoe, a pipe, or a musical instrument. Michelangelo could see the sculpture contained in the marble, waiting to be revealed. Wind, water, and oil were ever present. But it took millennia before we recognized their energizing power. Technology reveals the potential contained in our physical world. What powers have today’s technologists tapped into and how might God be working through them?

Chapter 1 will attempt to define technology. Our relationship with technology alters our understanding of our world and of God. What we believe is shaped by the technologies that surround us. I want us to consider the nature of technology itself—is it a lifesaving gift a la Noah’s Ark or a form of folly like the tower of Babel? The short answer is “yes.”

Chapter 2 explores why Steve Jobs should be celebrated for creating (with Steve Wozniak) the revolutionary Macintosh computer. The press subsequently hyped each new rollout of an Apple product with rapturous headlines and cover stories. *Newsweek* declared, “iPod, therefore iAM.” *Gizmodo* (the gadget guide) announced, “The Jesus Phone is finally here.” For the iPad, Jobs climbed down from Cupertino to deliver tablets from on high. The glowing tributes that followed his death elevated him to a hallowed position reserved for few American entrepreneurs. He had become an iGod, both the creator and the redeemer within the cult of Mac.

Chapter 3 is a brief history of the internet, how the invention of the world wide web paved the way for ecommerce. Chapters 4 and 5 explain why the creators of Amazon and Google have also been celebrated for their ability

to spawn billion-dollar businesses. They tapped into algorithmic authority to simplify our shopping and solve our searches. I spell out what people of faith can learn from these inventors. And I also explore what aspects of their groundbreaking technology we would be wise to resist.

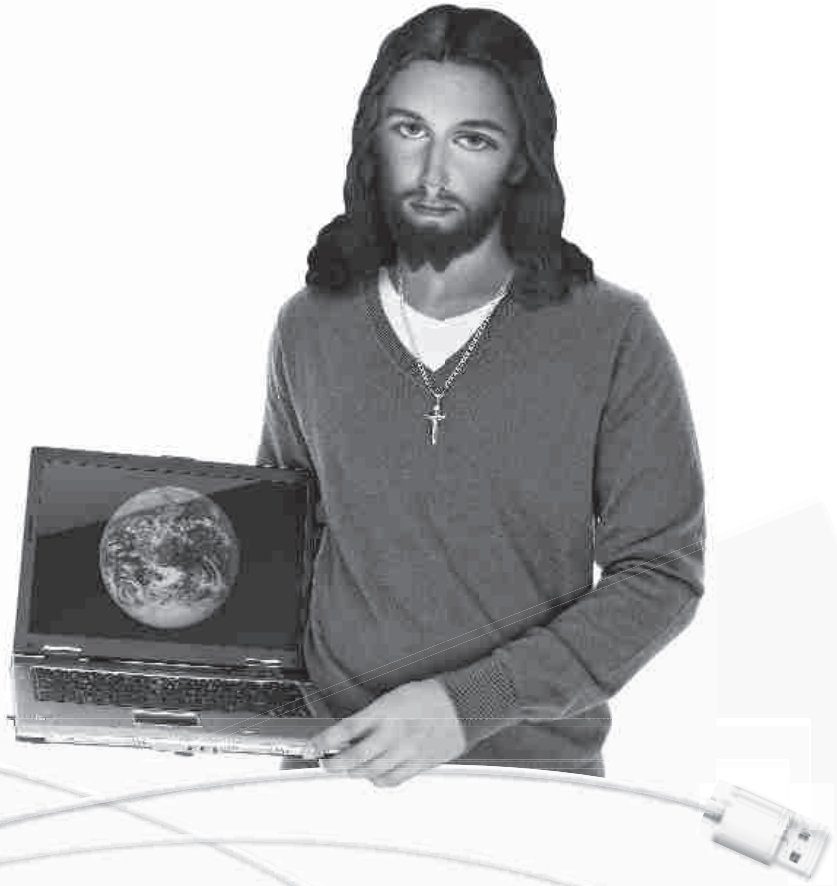
After a brief history of social networking in chapter 6, I delve into an examination of our favorite frenemy, Facebook. In chapter 7, I discuss why so many of us have surrendered personal information in order to connect with friends. I also consider the ways in which Facebook potentially undermines our friendships, making us lonely and jealous.

Chapter 8 will address the demigods, angling for the iGods' place. YouTube, Twitter, and Instagram have all captured a significant audience. These delivery systems invite us to participate by broadcasting our talents, our passions, and our whereabouts. Their primary attributes are convenience and speed. They allow us to communicate quickly, efficiently, and broadly.

Finally, my conclusion will consider the *telos* of technology—where is the drive for smaller, faster, and smarter gadgets taking us? Cyber-optimists have profound faith in technology's ability to solve global problems. While Christians turn to the book of Revelation to envision the future, technologists build their eschatology around the noosphere (a collective mind) and the Singularity (a technological superintelligence). We will consider where their faith is misplaced and suggest how we can adopt a proper perspective on technology to build God's vision of a heavenly city. We need an embodied, incarnational faith amidst a digitized era.

Discuss

1. What technologies are you grateful for? How have they improved or complicated your life?
2. In what ways are you tethered to technology? Is it serving you or enslaving you?



Craig Detweiler, iGods
Brazos Press, a division of Baker Publishing Group, © 2013. Used by permission.
(Unpublished manuscript—copyright protected Baker Publishing Group)

Defining Technology

We tend to see God reflected in nature, but my bet is that technology is the better mirror of God.

—Kevin Kelly, “Nerd Theology”¹

Jesus was more than a carpenter; he was a techie. The Greek word describing Jesus’s trade in the Gospel texts is *tektōn* (τέκτων).² Strong’s Greek lexicon defines a *tektōn* as a worker in wood, a carpenter, joiner, or builder. It may include a ship’s carpenter or any craftsman or workman. A *tektōn* may also refer to those accomplished in the art of poetry, a maker of songs, or an author. He may be a planner, a contriver, or a plotter.³ When the crowd refers to Jesus with the derogative question, “Isn’t this the *tektōn*?” or “Is not this the son of the *tektōn*?” most translations refer to Jesus as a carpenter’s son. It was intended as a cut-down, a way to mock Jesus’s presumption. How can an unskilled laborer presume to position himself as a prophet? My esteemed provost at Pepperdine University, Darryl Tippens, pointed out to me the potential double entendre embedded in the question, “Isn’t this the artisan, the maker of things?” It could also have been read after the fact as “Is not this the son of the Artisan, the Maker of (all) Things?”⁴

In his book *Pilgrim Heart*, Tippens calls Jesus the Great Artist, the model for how we are to respond to beauty. He writes,

If God is the Master Builder, then Christ is the supervising architect and agent of Creation: “for in him all things in heaven and on earth were created, things

visible and invisible . . . all things have been created through him and for him. He himself is before all things, and in him all things hold together” (Col. 1:15–17). Given this original cosmic assignment, it seems appropriate that in his earthly life in Nazareth, Jesus was a craftsman by trade. Having built the universe, it seems fitting that, as a human being, he would turn to building houses or furniture.⁵

In his effort to determine Jesus’s occupation, New Testament scholar Ken M. Campbell focuses on Jesus’s teaching. Campbell found that Jesus makes far more references to construction and finance than agricultural allusions. Israel is a land of ample stone but comparatively few trees. Perhaps it is wise to think of Jesus more as a mason than a carpenter. Campbell notes that Jesus makes almost no reference to the carpenter’s craft but does refer to the importance of selecting a cornerstone (Matt. 21:42–44) and the decoration of tombs (Matt. 23:27–28), the importance of building on a firm foundation (Matt. 7:24–27), and the need to conduct careful cost analysis prior to construction (Luke 14:28–30). Campbell surmises, “In light of all this knowledge of the building trade it is hard to resist the conclusion that Jesus was involved in construction.”⁶ He may have specialized, but given the technology of the time, it is easy to imagine Jesus being well acquainted with winepresses, millstones, olive press stones, tombstones, cisterns, farm terraces, vineyards, and watchtowers. We might call such a builder a tinkerer or a jack-of-all-trades.

We may call upon a *tektōn* to construct a mansion or to fix our roof. They may carry a wrench and be handy with a hammer. In the entertainment industry (and many churches), a *tektōn* is comparable to a techie. They may be involved in lighting or set construction. These stagehands may be called upon to fly in a set or place props between scenes. Techies are always equipped with a flashlight. They wear headsets, carry walkie-talkies, and are comfortable behind a board. Techies keep up with the latest gadgets and gear. They can assemble homemade computers from component parts (a Hackintosh!) that run on open source software like Linux. They dress in black so they can go about their business backstage so quietly and surreptitiously that we only focus on the show. If problems arise, they can usually patch it up with a piece of electrical gaffer’s tape. Techies are invariably overworked and underpaid. They may be derided as geeks or take pride in running with the nerd herd. Often, they are barely noticed. Was Jesus a carpenter, a builder, or a mason? Perhaps he was a techie, an artisan content to make others look good.

Technology Is an Art

While we like to think that our theology shapes our understanding of the world, our understanding of the world often shapes our theology. The central metaphors of an era will often shift our notions of God. When Benedictine monks introduced the mechanical clock, we became far more aware of time. As we studied the gears of the clock, it became much easier to imagine God as the great Watchmaker in the sky, setting the planets in motion. What if the earth revolved around the sun, rather than the planets encircling us? The Copernican revolution altered our theology. Church leaders viewed advances in astronomy brought about by Galileo and his telescope as a threat. Eventually, we spoke more about the heavens than heaven. Our defining technologies tend to define us (and our beliefs).

If we need a fresh understanding of Jesus's trade, perhaps we also need a broader definition of technology. We tend to think of technology as something shiny and new, what Alan Kay describes as "anything that was invented after you were born."⁷ The roots of technology, however, are ancient, embedded in the primeval prologue of the Bible. From the beginning, God was bringing order to chaos, trying to get things under control.

The word *technology* stems from the ancient Greek *technikon*, which belongs to the concept of *technē*. Philosopher Martin Heidegger describes *technē* as "the name not only for the activity and skills of the craftsman, but also for the arts of the mind and the fine arts."⁸ We tend to think of technology as more science than art, but we often use the term "state-of-the-art technology." It reminds us that technology is more art than science, or at least an applied science dependent on art. (Could this be a key for holding arts and sciences together?) Heidegger links *technē* to a bringing forth, to the notion of *poiesis*. It is something *poietic*, akin to the original understanding of poetry. At its best, technology is a creative act, merging thought with matter and time. Creation can be seen as God's poetry, the realization of word and image, ideas made manifest.

Can we see computer code as equally poetic and potentially beautiful? Technologist Kevin Kelly suggests, "If a thousand lines of letters in UNIX qualifies as a technology, . . . then a thousand lines of letters in English (*Hamlet*) must qualify as well. They both can change our behavior, alter the course of events, or enable future inventions. A Shakespeare sonnet and a Bach fugue, then, are in the same category as Google's search engine and

the iPod. They are something useful produced by a mind.”⁹ Perhaps we need to recover the art of technology.

Technology Is Not Neutral

Those who’ve felt the roar of a tank, breathed the gas in chemical warfare, or experienced the fallout from a nuclear meltdown find it difficult to call technology neutral. In the wrong hands, it appears deadly and malicious. Technology reflects human complexity, both our remarkable potential for beauty and our frightening power to destroy. We can bless our neighbors with lifesaving therapies or exact vengeance in a flash of blinding light. The same technologies that our National Security Agency uses to monitor our calls and online activities can intercept a terrorists’ plot or snoop on our private lives.

The brilliant Catholic Canadian media theorist Marshall McLuhan also insisted that technology is never neutral. In *The Gutenberg Galaxy* (1962), he pointed out that “any technology tends to create a new human environment. . . . Technological environments are not merely passive containers of people but are active processes that reshape people and other technologies alike.”¹⁰ He spoke in terms of media ecology, noting how technology alters our senses. His writing was an effort to describe the technology we were swimming in. McLuhan cut through the first flush of electronic media, giving us an initial handle on how to define technology before it redefined us. McLuhan invited us to step outside our electronic inputs long enough to gain some perspective, to consider the delivery systems as the shaping story. We may have faith in technology, but it should never be blind.

Technology as Applied Science

We enjoy the benefits of technology without understanding almost any of the science behind it. We rarely ask how an app works; we download it and go. In his 1984 study of technology and the character of contemporary life, philosopher Albert Borgmann draws important distinctions between science and technology. Science defines and explains how the world works. Technology involves a determination to act transformatively on these possibilities.¹¹ Science

uncovers real-world principles (like gravity). Technologists figure out how to apply or overcome them (with rocket ships). American schoolchildren may lag behind China in scientific test scores while still enthusiastically embracing each new update of the iPhone. We can be completely ignorant about how or why something works and yet still relish the results.

Scientist Ursula Franklin sees technology as a process, how something is done. As a metallurgist, she understands it as a way of doing things, a practice handed down.¹² The prehistoric bronze bells and urns contained in the Shanghai Museum reveal remarkable sophistication. The *Bronze Bo with Four Tigers* from 771 BC merges art and craft, science and technology to form an enduring musical instrument. The craftsmen may not have understood the chemistry behind why bronze could be molded when heated, but their artistic results speak volumes about their humanity. Franklin distinguishes between holistic processes (like the craft of sewing) and the prescriptive processes that arose in the industrial revolution. Production is a system formed by a mind-set. Standards like “bigger is better” elevate unchecked growth to the highest good. Technology transformed sewing from a handcrafted art into a machine-driven industry.

Technology Is More Than a Product

We rarely pause to consider the origins of the products or devices we hold (and that hold us). Borgmann derides the device paradigm that dissolves our old ways of approaching the world by how things work. In our electronic gadgets, the machinery is concealed; the circuit board is often beyond our understanding. The complexity of the device itself pushes us toward consumption rather than comprehension. We are cut off from context, both how it works and how it was made.¹³ Think about big-box stores like Best Buy, Walmart, and Costco. We have no idea how the goods are made or how they get there. Reports of suicidal workers assembling iPhones in China fall on deaf ears.¹⁴ We have no relationship to the people selling the goods either; it is all anonymous.

Since we don't know how things are made, we also don't know how to fix them. Borgmann remarks that “devices make things disposable. We don't know how microprocessors are made or how they are fixed. So we just toss out old phones. Care, repair, bodily engagement are removed from our understanding

of the device. So we can only consume it. We can't care for it, nurture it, repair it."¹⁵ Old recording and playback devices form a toxic trail behind us. DVRs replaced VCRs. The Walkman gave way to the iPod. The Blackberry was displaced by the iPhone. Today's technology will likely be tomorrow's landfill.

Technology Can Bring Us Together

Technology is the new tie that binds us, that brings us together. From chat rooms to social networks, we have formed countless virtual communities. For professionals, technology is how we get LinkedIn. Children congregate at Club Penguin. Teens prefer the self-destructing messages of Snapchat. Tech companies appoint evangelists to spread the word about their products. Newspapers and magazines position for the privilege to report on the new iWhatever. We line up outside the Apple store, hoping to catch a glimpse or even touch the hem of the iPhone's garment. We are so eager for connection that we willingly bind ourselves to long-term cell phone contracts. We set countless alerts and updates that interrupt our day. It is not unusual to abandon a task for a trip through Facebook's looking glass. Few things capture our attention more completely.

What is a person who wants to follow Jesus and Twitter supposed to do? Are we in a situation similar to the one that Jesus warned against: "No one can serve two masters"¹⁶ Would he insist that you cannot serve both God and Google? The former editor of *Wired*, Kevin Kelly, sees technology stepping into the gap formed by the decline of religion's influence. He suggests, "Because values and meaning are scarce today, technology will make our decisions for us. We'll listen to technology because our modern ears listen to little else. In the absence of other firm beliefs, we'll let technology steer. No other force is as powerful in shaping our destiny. By imagining what technology wants, we can imagine the course of our culture."¹⁷ As noted in the introduction, technology has become a new religion, a way to make sense of the world.

Technology Is Not a Panacea

In ancient Greece, Panacea was the goddess of universal remedies; we have faith in technologies to solve our problems. Jonas Salk saved millions of lives

with the polio vaccine that he gave away for free. I am grateful for the chemotherapies that healed my wife of Hodgkin's lymphoma. Simple technology like a mosquito net can guard against malaria. Efforts to distribute One Laptop Per Child were hailed as an educational breakthrough, yet four years after the program was launched in Peru, test scores in mathematics and science remain the same.¹⁸ The Global Alliance for Clean Cookstoves aimed to reduce respiratory ailments and enhance air quality in India. A study of 15,000 homes over five years determined that after the initial year, few of the stoves were maintained or still in use. Controversy continues to swirl around Monsanto's genetically modified corn. We often don't recognize the downside of new technologies until after they're introduced.

Our fastest growing churches are largely embracing electronic technology—but often without adequate theological reflection. A *Faith Communities Today* survey found that the embrace of technology corresponded to the size of the congregation. The bigger and wealthier the church, the more likely they were to incorporate technologies, from stage lights to podcasts. Congregations with major tech use (electronic instruments, projection screens) also demonstrate a greater clarity of vision and purpose and more active recruiting among its members. Pastors must not conclude that technology is a panacea for a dwindling congregation. Scott Thumma of the Hartford Institute for Religious Research insists, “It is not a matter of having a webpage, a Facebook account or projection screens, but of using these to enhance and expand the activities and communal life of the congregation.”¹⁹ We cannot place our faith in technology as the solution to our congregational ills. We need a robust theology of technology to precede our adoption of lights, cameras, and action. Bigger, louder, and faster don't necessarily create deeper disciples.

Technology Can Be a Temptation and a Tyrant

Before cell phones, we had pagers. They were given to traveling salesmen as a way to track their whereabouts. A pager offered a not-too-subtle way for the boss to insist, “Call me now.” When I was in film school, working for a commercial production company, I remember my manager referring to his pager as a digital leash. While the production staff and interns went away for the weekend, completely out of reach, the manager was on call, answerable to his boss and his clients. He experienced technology as a tyrant.

Now, we struggle to respond to the always-on demands of text and Twitter. We don't want to miss out on news or opportunities. So we are always available, ever reachable. The updates are so constant that we don't know how to turn them off, when to shut down. We wake up to email alerts and say goodnight on Facebook. We feel more fragmented and harried than ever. Technology designed to manage our schedules, our relationships, and our environment has left us feeling out of control.

Devices designed to organize our schedules have made us busier than ever. Families have fragmented along technological lines. Nights that used to be spent gathered around the fire gave way to the radio and television, before splintering into individualized screens. We inhabit the same space but follow our own feeds. We have an iPhone in our hand and buds in our ears. How can we hear God (or each other) amid the din?

Researchers at the Barna Group have found that Christians increasingly see technology as a temptation.²⁰ When asked what tempts us, many Americans list the ancient sins of gluttony (eating too much), avarice (spending too much money), envy (gossiping and jealousy), and lust (viewing pornography). Yet, 44 percent of people listed "spending too much time on media" as a gnawing temptation, and 11 percent tried to resist "going off on someone via text or email." It is easier to flame someone when they're not in front of us. Comments on Facebook and Twitter can be riddled with ridicule and scorn. We love our devices and loathe what they do to us.

Technology Is about Control

Borgmann defines technology as the systematic process of trying to get everything under control.²¹ From massive projects like paving a road or building a dam to smaller projects like cleaning our house or coordinating our calendars, we are forever attempting to control our environment. Perhaps we are merely following God, the original technologist. The first creative act was bringing order to chaos. In the beginning, the earth was formless and empty. In Genesis 1, God brought shalom to a volatile situation. *Elohim* separated light from darkness, day from night, earth from sky, land from sea. God set the stage for humanity, providing a space to inhabit and plants and animals to provide for our needs. The results were good, even very good.

God blesses humanity and issues instructions: “Be fruitful and increase in number; fill the earth and subdue it. Rule over the fish in the sea and the birds in the sky and over every living creature that moves on the ground.”²² Fruitfulness and filling sound like fun. The King James Version challenges us to “replenish the earth.” It implies we must pour into or even replace whatever we harvest. If we cut down a tree, we should plant a new one. However, problems arise from our understanding of subdue and rule—in Hebrew, *kvsh* and *rdh*. Subdue has echoes of a power move when we demand that others submit to our authority or serve as a subjugated peoples. Does God want us to strong-arm the earth? Lexicons translate the verb *rdh* as “have dominion, rule, dominate.”²³ Images of conquering armies or bulldozers spring to mind. Does Genesis sanction domination, treading on and trampling the earth? This could create biblical justification to kill as many animals, to knock down as many forests, to siphon as much ore and oil from the earth as can be found.

Lynn White traced “The Historical Roots of Our Ecological Crisis” back to Genesis 1:26–28. The study provided biblical justification from whence all manner of unsustainable technology sprang. White wrote, “Christianity, in absolute contrast to ancient paganism and Asia’s religions . . . not only established a dualism of man and nature but also insisted that it is God’s will that man exploit nature for his proper ends.”²⁴ The engines of the industrial revolution churn from these verses.

The results have been deadly and dangerous. Martin Heidegger suggested, “Contemporary man’s inveterate drive to master whatever confronts him is plain for all to see. Technology treats itself with ‘objectivity.’ The modern technologist is regularly expected, and expects himself, to be able to impose order on all data, to ‘process’ every sort of entity, nonhuman and human alike, and to devise solutions for every kind of problem. He is forever getting things under control.”²⁵ Why is technology such a driven business? Why do we desperately want to master nature and exert control? When we treat the earth as an object, we dehumanize ourselves.

Thankfully, theologians like Sallie McFague and faith-fueled activists like Bill McKibben have helped us see another side to Scripture. The Hebrew words *kvsh* and *rdh* can sanction conquering and control, but consider what kind of control God demonstrated. Creation arose from holding back chaos. In our calling to be like God, we are commanded to subdue the earth in similar ways. It is closer in spirit to beating down a path or forging a footpath.

Perhaps we should conjure images of keeping the weeds, the rodents, and the insects under control. What kind of rule are we supposed to enact? In Genesis 1, God modeled creativity and benevolence, pouring out blessings on humanity. Throughout the Bible, good kings are contrasted with evil rulers. Just leaders practice shalom, demonstrating particular concern for the poor and needy, the widows and the orphans.²⁶ Godly dominion is marked by care and concern for the least of these. It is rooted in interdependence rather than personal gain. What a far cry from greedy or tyrannical despots. McFague notes the contrast between these competing visions of our calling in Genesis: “The first model sees the planet as a corporation or syndicate, as a collection of human beings drawn together to benefit its members by optimal use of natural resources. The second model sees the planet more like an organism or community that survives and prospers through the interrelationship and interdependence of its many parts, both human and nonhuman.”²⁷ Genesis 1:28 is a call to responsible rule. While God rests from creating, our job is to keep chaos at bay.

Technology Should Be about Creating and Cultivating

In Genesis 2, we get a more detailed take on our calling. Man now has a name, “Adam,” and his first job is to name things, to make sense of all of God’s generative activity. Adam engages in sorting, filing, labeling. Maybe not according to genus and species but certainly a broad separation between birds, livestock, fish. Humanity is called to distinguish among living creatures, to pay attention to our surroundings, to notice the differences, to celebrate the diversity. This process of observing our world, assigning names, developing categories is at the root of our endless information gathering. Many, many centuries before Google, we were involved in organizing things, cataloging, giving each and every thing an identifiable (and eventually searchable) name. Like Adam, woman gets a particular name, Eve. Before hunting and gathering came labeling. We were born to organize.

God places humanity in the garden for a dual purpose: “to tend and to keep it.”²⁸ Tend is a translation of the Hebrew verb *abd*, which means “to work or serve.” How do we serve a garden? Some translations insert the agricultural terms “till” or “cultivate.” The King James Version opts for “dress.” It implies an active adornment, embellishment, or even improvement. When we tend a

garden, it should yield far more than when we started. “To keep,” from the Hebrew word *shmr*, means “to exercise great care over.” Adam and Eve are given a responsibility to watch over the garden like a loving caretaker. We are called to make something more out of what we’ve been given. Our calling is to care and to cultivate, to create culture in all its myriad forms—from agriculture to the arts.

It is our job to nurture the earth, to replant what we harvest, to protect the fish supply, to guard the rain forest. Technology can yield solar power, more robust crops, and longer life. Thanks to breakthroughs in science, we have eradicated so many life-threatening diseases. Technology has allowed us to thrive. It is a God-given blessing, making our world much more habitable.

We have two very different views of technology, of how we are to live in this world. Genesis 1 could be construed as all-consuming domination, but Genesis 2 is clearly about cultivation and caretaking. Perhaps these are the two competing poles of technology—to make us more efficient consumers or to make us more thoughtful creators. Technology can be used to exploit and devalue the earth or it can be a boon and blessing to all. How we define technology may determine what we do with it.

How Technologies Define Us

Technologies reflect our culture and our values. In his prescient 1999 book, *God and the Chip*, William Stahl observes how “it has become common to define our species as *Homo faber*, ‘man the tool-maker,’ and to identify cultures with their technology—neolithic, Stone Age, Bronze Age, Space Age. . . . We increasingly come to identify who we are by and through the machines we use.”²⁹ J. David Bolter studied “defining technologies” across history. Bolter points to the spindle and the potter’s wheel as the central, defining technologies in ancient Greece.³⁰ Their mythologies are recorded on gorgeous pots, celebrated by poet John Keats in his “Ode on a Grecian Urn.” Keats celebrates the timelessness captured in the beauty of the vase: “Thou foster-child of silence and slow time.” For Keats and the Greeks, the images encased in the pottery have a transcendent power and an eternal appeal.

We see why the apostle Paul standing in the Greek Areopagus would announce, “People of Athens! I see that in every way you are very religious. For as I walked around and looked carefully at your objects of worship, I

even found an altar with this inscription: TO AN UNKNOWN GOD.”³¹ He studied their art, their public space, their technology and then connected it to God’s creation of the world. Paul drew upon Greek poetry, “For in him we live and move and have our being,” incorporating it into his sermon. But after saluting their handiwork and praising their poets, he challenged them to move past idolatry: “Therefore since we are God’s offspring, we should not think that the divine being is like gold or silver or stone—an image made by human design and skill. In the past God overlooked such ignorance, but now he commands all people everywhere to repent.”³² Saint Paul respected the Greeks’ *technē* but challenged them not to be blinded or bound by it. He challenged the iGods of his era.

We often don’t realize the ways in which our technologies reflect and affect us. Medieval monks seeking to regulate their prayers and work invented the mechanical clock. Their theology (prayer is good, work is better than idleness) offered a rationale for technological advance. Historian Ernest Benz pointed out how frequently medieval iconography showed God as a master mason, measuring out the universe with a compass and a T square.³³ “God as the Architect of the Universe” steadies the universe with one hand while measuring it with a compass with the other.

In his *Summa Theologica*, Thomas Aquinas wrote, “God, Who is the first principle of all things, may be compared to things created as the architect is to things designed.”³⁴ While the Benedictines sought to define sacred time, they also inadvertently ushered in the ability to isolate and evaluate it. We began to view God as the ultimate watchmaker, setting the wheels of the universe in motion.

In studying the mechanics of winepresses in the Rhine Valley, Johannes Gutenberg eventually invented the printing press. He could not have anticipated the Protestant Reformation that followed. Yet, the ability to print and distribute Bibles and pamphlets and maps on a massive scale altered church history. Instead of people thinking more alike, gathered around a single text, it sparked the individualism and denominationalism that continue to divide the church into smaller and more personalized communities.³⁵ In the sixteenth century of Francis Bacon, “inventors and mechanics had increasingly invoked the image of God as craftsman and architect in order, by analogy, to lend prestige to their own activities: in their humble arts, they were imitating God and hence reflecting his glory.”³⁶ To be a technologist was to be like God, but we were beginning to shift the emphasis from the glory of God to the marvels of man.

Samuel F. B. Morse grasped the enormity of his invention, the telegraph. His first instantaneous message, sent from Washington to Baltimore in 1844, was taken from the Bible. Annie Ellsworth, the daughter of the United States Commissioner of Patents, suggested Numbers 23:23.³⁷ This is a defense of the people of Israel against a conspiring Moab. Morse transmitted, “What hath God wrought.” While Morse and his witnesses in Washington couldn’t have anticipated all the revolutionary changes that flowed from their collapsing of time and distance, the Bible verse suggests many did understand the enormity of the implications. They gave the creative credit to God, even as the postmaster general failed to authorize the purchase of the patent for a paltry \$100,000.³⁸ Not everybody recognizes the potential of what God hath wrought.

Combine the monks’ clocks with Gutenberg’s Bible and we get the Protestant work ethic. Notions of time equaling money culminated in industrial workers punching the clock. Frederick W. Taylor published the holy book for American industry, *Principles of Scientific Management*, in 1911. Taylor announced a significant shift: “In the past, the man has been first; in the future the system must be first.”³⁹ Taylor’s emphasis on efficiency placed technical calculation above human judgment, reason over feelings, objectivity over subjectivity, and scientific measurement as the rule.⁴⁰ As machines made us more productive, it was difficult for managers to trace the shifts in supply and demand. Captains of industry needed up-to-date calculations to make decisions about where to deliver goods and services. We needed smart machines to give us spreadsheets that spelled out the productivity of our physical machines. The success of the industrial era led to the rise of the information age. Now, machines do most of the thinking for us, and efficiency drives nearly all decision making today.

In the twentieth century, our aspirations grew bigger and smaller. Skyscrapers reached for the sky, and scientists split atoms. The triumph of World War II was tempered by the stark photos and harrowing clean-up that followed. How could the Nazis have been so evil to target an entire people for extermination? The barbarism of the Holocaust made us question the notion of human progress. Robert Oppenheimer had named his atomic bomb project Trinity. Upon the explosion of the first bomb, he quoted the *Bhagavad Gita*: “I am become death, destroyer of worlds.”⁴¹ Horrific images from Hiroshima and Nagasaki made us question our war machine. Public resistance and suspicion regarding technology followed. During the Cold War, we looked to the stars

with fear and wonder. The race to dominate space commenced, but an early techno-enthusiast like Lewis Mumford switched sides, writing *The Myth of the Machine: The Pentagon of Power* in 1970. Warnings of environmental disaster and nuclear nightmares included Rachel Carson's *Silent Spring* (1962), Barry Commoner's *Science and Survival* (1966), and Jonathan Schell's *The Fate of the Earth* (1982).⁴² Collectively, these eco-activists asked, "What hath man wrought?"

Theologians added to the introspection not just with a loss of faith but by asking, "Is God dead?" Perhaps the only thing that died was our faith in bureaucracy and institutions to save us. We saw what we were capable of—and our evil was frightening. Philosopher Jean-Luc Marion sees this as a positive development; the death of God is the end of our idolized concept of God, as something or someone controllable, containable, capable of serving our side.⁴³ Idolatry brings God near, putting power within our grasp. Life was revealed as far more fragile, volatile, and explosive than we imagined. But what if the death (or least the absence) of God in the face of nuclear holocaust was a withdrawal from our idolatry? Such a withdrawal could be a form of revelation. The absence of God could make room for renewed presence. Only when we start with what we don't know or cannot control, do we begin to approach wisdom.

From Counterculture to Computer Culture

Founded in 1968, the *Whole Earth Catalog* arose as an alternative to the system. The first issue promised "access to tools" and featured a photo of the earth taken by astronauts from space. The catalog encouraged responsibility for our fragile planet and aimed to reduce our dependence on corporations for agriculture, for oil, for entertainment. Stanford-educated biologist Stewart Brand offered a back-to-nature plan comparable to the Amish, which took people off the power and manufacturing grid.⁴⁴ Hippies in San Francisco formed a counterculture in opposition to the Vietnam war, racial injustice, and the overall technocratic society.⁴⁵ The seminal sixties film *Easy Rider* begins when Captain America removes his watch. He will tour the back roads with no concern for schedules, deadlines, or financial responsibilities. He dropped out of the system that the industrial revolution and the military industrial complex had created.⁴⁶

For the California counterculture, small was beautiful.⁴⁷ Individuals learned to live off the land. The *Whole Earth Catalog* allowed readers to swap recommendations of useful tools for gardening, carpentry, welding, and pottery. It was a *tektōn*'s dream. Writers like Wendell Berry challenged readers to "think little." Berry described the practical ethos: "A person who is growing a garden, if he is growing it organically, is improving a piece of the world. He is producing something to eat, which makes him somewhat independent of the grocery business, but he is also enlarging, for himself, the meaning of food and the pleasure of eating."⁴⁸ But instead of positioning themselves as new Adams and Eves trying to get back to the garden of Eden, the followers of the *Whole Earth Catalog* seemed content to farm on their own, beyond God-given parameters. The do-it-yourself attitude of the Whole Earth movement included a specific theological point of view. Brand wrote,

We are as gods and might as well get good at it. So far, remotely done power and glory—as via government, big business, formal education, church—has succeeded to the point where gross defects obscure actual gains. In response to this dilemma and to these gains a realm of intimate, personal power is developing—power of the individual to conduct his own education, find his own inspiration, shape his own environment, and share his adventure with whoever is interested. Tools that aid this process are sought and promoted by the WHOLE EARTH CATALOG.⁴⁹

Note the emphasis on personal power and the ability to shape our own environments. This sounds like humanity after the fall—cast out, but determined to forge a future. The emphasis falls on practical knowledge, useful tools, and technology. While Berry's ecological focus sprang from his abiding Christian faith, Brand placed his faith firmly in us. For the Whole Earth movement, we may be interdependent for information, but we consider our fate as residing in our hands, independent of divine guidance or blessing.

Brand's alma mater, Stanford University, unleashed the engineers that gave us the first personal computer. Bill Hewlett and Dave Packard founded their company in a Palo Alto garage. Hewlett-Packard released the world's first marketed and mass-produced personal computer in 1968. The Hewlett-Packard 9100A was called a "desktop calculator" but sold for the rather prohibitive price of \$5,000. The greatest technological achievement of our era may be the single chip microprocessor, first made commercially available

by Intel in 1971. It has made all of our increasingly complex and intelligent machines possible. A microprocessor is essentially a minicomputer most of us rarely see and barely understand. They make our gadgets smaller, faster, and smarter. The Intel 4004 crammed all the elements that make a computer think (input and output controls, memory, and a central processing unit) onto a single silicon chip. Microprocessors are the brains of the computer that allow data to be processed and delivered quickly. It simulates and stimulates quick thinking—the transmission of data and information at light-speeds. It could be pictures from our vacation or the purchase of a book on Amazon. Thanks to microprocessors, things are being delivered to us or broadcast by us almost instantaneously. Following the trajectory of Intel cofounder Gordon Moore’s Law (that the number of transistors on integrated circuits doubles every two years), microprocessors have gotten smaller and smarter and faster each and every year. Silicon Valley—founded on transistors, expanded by microprocessors, and enriched by personal computers—became the locus for our defining technologies. Advanced technology met counter-cultural idealism.

The *Whole Earth Catalog* was only published regularly for four years, but its back-to-nature, small-is-beautiful, do-it-yourself influence has been immense, especially in the information age. Brand explains the unique position occupied by his movement:

At a time when the New Left was calling for grassroots political (i.e., referred) power, Whole Earth eschewed politics and pushed grassroots direct power—tools and skills. At a time when New Age hippies were deploring the intellectual world of arid abstractions, Whole Earth pushed science, intellectual endeavor, and new technology as well as old. As a result, when the most empowering tool of the century came along—personal computers (resisted by the New Left and despised by the New Age)—Whole Earth was in the thick of the development from the beginning.⁵⁰

In 1985, the creative energy gathered around the catalog shifted to the internet with Brand and Larry Brilliant hosting one of the first virtual communities, the Whole Earth ’Lectronic Link, aka The WELL. It took the conversation regarding self-sufficiency and effective tools online. Kevin Kelly explains, “The hippies of the previous generation did not remain in their Amish-like mode because as satisfying and attractive as the work in those communities was, the siren call of choices was more attractive. The hippies left the farm for

the same reason the young have always left: The possibilities leveraged by technology beckon all night and day.”⁵¹ The internet facilitated the sharing of sustainable principles and alternative lifestyle tips far better than a magazine like the *Whole Earth Catalog* ever could. Brand reached out to the emerging generation of computer hackers who shared the same core values: access to computers should be unlimited, information should be free, authorities were not to be trusted, formal age and education doesn’t matter (just programming ability), and computers can create art and beauty and change lives for the better.⁵² This is the faith of technologists.

Today, the ethos of the Whole Earth community is infused across Silicon Valley. At Stanford University’s 2005 commencement, Steve Jobs called the catalog “one of the Bibles of my generation . . . like Google in paperback form.”⁵³ Consider the creativity it unleashed in the Bay Area. Steve Wozniak and Jobs brought a do-it-yourself attitude to their Apple II computer. George Lucas felt no need to settle in Southern California with his profits from *Star Wars*. His special effects house, Industrial Light & Magic, stayed closer to the burgeoning computer industry by settling in Marin County, California. When a young animator named John Lasseter felt rejected by the Walt Disney Company, he found like-minded people in the Bay Area. Pixar was started with backing from Lucas and expanded after the investment of Jobs. By merging computing power and compelling characters, Pixar usurped Disney’s hallowed tradition (and earned a \$7 billion purchase price). Lasseter became president of Disney Animation while guiding it from Pixar’s Northern California office. Stanford University alums have founded or cofounded Hewlett-Packard, Yahoo!, PayPal, Electronic Arts, Google, Firefox, LinkedIn, Netflix, and Instagram.⁵⁴

These Silicon Valley start-ups follow a similar trajectory: “eureka moment, simultaneity of invention, formation of a development team, acquisition of funding, acquisition of momentum, and transfer of management from inventor-entrepreneurs to management entrepreneurs.”⁵⁵ Silicon Valley companies are characterized by informality (like Jobs’s famous uniform of blue jeans and black turtleneck) and are committed to a flat hierarchy. The walls in Pixar’s Emeryville offices are glass, with animators free to design their own workspaces. Jobs famously insisted that the restrooms be placed in the middle of the building so that employees were more likely to interact with others on their way to the restroom. Casual, idea-laden exchanges may arise over cereal in the mornings or gourmet pizza at noon. Thomas Hunter

describes the organizational culture of Silicon Valley as “information sharing, collective in learning, informal in communication, fast moving, flexible in adjustments, entrepreneurial, start-up inclined, and thoroughly networked.”⁵⁶ This is almost a direct echo of the *Whole Earth Catalog*’s purpose statement. When the TED conference gathers around “Ideas Worth Sharing,” they transform the ethos of The WELL into videos shared enthusiastically around the world. They are evangelists disseminating their dreams of technological progress and the end of world hunger via the internet. It is an admirable, inspiring, alternative religion.

Our theology once shaped our understanding of technology, but now we wonder how technology may alter our theology. From each tech company profiled in this book, we can deduce a creation narrative. They follow a similar path, from humble beginnings, when the founders were seen as foolhardy, to the early test launch when a few more believers came on board (as additional investors). Many continue to scoff at a small band of outsiders taking on an established system (think of young entrepreneur Elon Musk’s chutzpah expressed in his move from PayPal to Tesla Motors or his SpaceX program). How could they dare to take on such hierarchy and dominance? The narrative shifts when the scoffers are ultimately defeated by those they previously dismissed (think Apple versus Microsoft). The scrappy outsiders become esteemed insiders, establishing a new standard. They liberate the public from a life of dull servitude into greater clarity, purpose, and practice. Whole Earthers that tried to drop out of the system now run the system, with so many of us directing our MacBooks toward Google’s searches and Facebook’s newsfeeds.

Some will recognize the similarities to the biblical narrative, where a creator God aligns with a marginalized people to take on established kingdoms and principalities. Jesus undercuts the established practices of his time with an upside-down ethic that supports the poor, the marginalized, and the oppressed. Such a countercultural power rearrangement was bound to create resistance, but despite the appearance of defeat, Jesus and his band of devoted followers rise and overturn the dominant people and paradigm. The outsiders become the insiders, the powerless are given access and authority. It becomes easy to see how faith in technology becomes an alternative religion, a way to reverse the curse of the fall, to provide comfort to hurting people, to offer us a glimpse of eternity. American optimism has morphed into faith in technology. The only problem—technology cannot save us.

Technology's Faith

While the Japanese invented the Walkman and Israelis created instant messaging, the computer age has essentially been an American revolution. Thomas Friedman and Michael Mandelbaum of the *New York Times* note, “The IT Revolution was started in the United States. The transistor, communications satellites, the personal computer, the cell phone, and the Internet, not to mention the PalmPilot, the iPad, the iPhone, and the Kindle were all invented in the United States and then were brought to the world market by American-based companies.”⁵⁷ Our innovations are fueled by American faith, optimism, and ingenuity. We have much to be proud of but plenty to be wary of. Our strengths can also be our weaknesses. I can agree with much of the Whole Earth ethos that encourages the sharing of resources, caring for the environment, and the practical benefits of technology.

Unfortunately, these countercultural values haven't always accompanied the rise of the information era. The massive wealth generated in Silicon Valley hasn't been shared. Despite the efforts of the TED conference, the tendency to hoard continues to vex us. Technology cannot free us from the grip of personal and collective sin. Theologian Marcus Borg insists, “The dominant values of American life—affluence, achievement, appearance, power, competition, consumption, individualism—are vastly different from anything recognizably Christian. As individuals and as a culture . . . our existence has become massively idolatrous.”⁵⁸ When we place efficiency before humanity, we can quickly lose perspective. The speed that accompanies smaller, faster, smarter can keep us from perceiving things clearly. Technologies meant to empower us can also blind us.

The computer has become our metaphorical truth.⁵⁹ Consider how we describe ourselves. When we're slow to recall a fact, we might talk about “having trouble retrieving that file.” A long conversation or an intense lecture or sermon might be called “a massive download.” After a particularly draining day at the office, we might say our hard drives are full. Throughout, we are likely to think of ourselves as information gatherers, struggling to process all the data we've picked up on a given day. Historian David Noble notes how the thinking machine “reflected a new form of divine worship, an exultation of the essential endowment of mankind, that unique faculty which man shared with God, because of its link to God, not to man. The thinking machine was not, then, an embodiment of what was specifically human, but of what was

specifically divine about humans—the immortal mind.”⁶⁰ The only problem with that thinking is that we are more than our minds. We have bodies that need to be fed, nurtured, cared for.

Technology can make us more efficient farmers, better laborers, more productive workers. It can save us time and money. It can give us more free time but still enslave us. As our devices have gotten smaller, our vices remain just as vexing. We still buy more than we need and waste as much as we consume. We get things more quickly, but our tempers and patience have grown shorter. We’re likely to blow up over tiny inconveniences. The same weapons that we claim keep the peace can also wipe out entire cities in a single blast. Hiroshima and Nagasaki show how deadly technology can be. Medicine may prolong our lives, but it cannot offer eternity.

In the information age, technology categorizes, itemizes, and atomizes. It maximizes profits with disregard for people. It bases decisions on data, and sometimes the facts can be quite cold. Much of the iGods’ dehumanizing power is hidden. We don’t know why our loan was rejected or our refund denied. We press “4” to erase or “7” to save, but the odds of speaking to an operator dwindle. Technology turns everything in its path to 1’s and 0’s, but we are more than pixels and bigger than our brains. For some reason, God gave us bodies and dared to walk among us. The incarnation of Jesus is an affront to technologists who view the body as “meatspace” and only cherish the brain. The earth is worth tilling and cultivating (as the Whole Earth Catalogers know), but why? The Christian community believes heaven is coming to earth, but we don’t need to build platforms to the sky. Jesus and the New Jerusalem are descending to us in an act of majesty and wonder.

We are just starting to grasp the theological implications of our technological shifts. When it comes to religion, Stahl suggested in 1999, “The One True Faith is technological mysticism: faith in the universal efficacy of technology. It is a system of beliefs uniting communists and capitalists, tycoons and unionists, the rich and those who would be rich. At the moment its most potent icon is the computer.”⁶¹ In the decade since, our all-in-one calculator and communicator and broadcaster—the smartphone—has usurped the computer. It is the magic box in our pocket, a computer on the go. Now, the symbol of power is an iPhone and the most valuable company on the planet (for the moment) is Apple. The products will evolve, and the most powerful companies may change (from IBM to Microsoft to Apple), but the central truth remains: our economy is fueled and our faith is renewed by technology. We will study the

leading technology companies as a means of determining what theological shifts are occurring. We will measure these general revelations against the special revelation of Scripture to figure out whether they need to be embraced and encouraged or resisted and reframed.

Discuss

1. How would you define technology? In what ways does technology define you?
2. How do you picture Jesus? What do you imagine his relationship to technology would be?

