

# NOTES

## Chapter 1: New Media and the Good News

1. *The Journal of John Wesley*, ed., Percy Livingstone Parker (Chicago: Moody Press, 1951), 74 (June 11, 1739).
2. Billy Graham, *Just as I Am: The Autobiography of Billy Graham* (Grand Rapids: Zondervan, 1997), 97.
3. *Ibid.*, 210.
4. Grant Wacker, *America's Pastor: Billy Graham and the Shaping of a Nation* (Cambridge, MA: The Belknap Press of Harvard University Press, 2014), 20.
5. *Idem.*, "The Legacy of Billy Graham," *First Things* (February 22, 2018), <https://www.firstthings.com/web-exclusives/2018/02/the-legacy-of-billy-graham>.
6. Walter P. Wilson, *The Internet Church: The Local Church Can't Be Just Local Any More* (Nashville: Word Publishing, 2000), xi.
7. Interview with Jeff Gowler (CEO of Global Media Outreach), conducted by Jonathan J. Armstrong on April 22, 2020.
8. "The Bible App," *YouVersion*, <https://www.youversion.com/the-bible-app/>.
9. "The Bible App for Kids," *YouVersion*, <https://www.youversion.com/the-bible-app-for-kids/>.
10. Interview with Sean Dunn (Founder and President of Groundwire), conducted by Jonathan J. Armstrong on April 23, 2020.
11. Interview with Ken Cochrum (Vice President of Global Digital Strategies at Cru), conducted by Jonathan J. Armstrong on April 21, 2020.
12. Wilson, *The Internet Church*, 13. See also Tom Wheeler, *From Gutenberg to Google: The History of Our Future* (Washington, DC: Brookings Institution Press, 2019), 148–52.
13. Wilson, *The Internet Church*, 13.
14. Tom Goodwin, "The Battle Is for the Customer Interface," *TechCrunch*, March 3, 2015, <https://techcrunch.com/2015/03/03/in-the-age-of-disintermediation-the-battle-is-all-for-the-customer-interface/>.
15. Stephen D. O'Leary, "Cyberspace as Sacred Space: Communicating Religion on Computer Networks," *Journal of the American Academy of Religion* 64 (1996): 787.
16. For example, Klaus Schwab writes: "The spindle (the hallmark of the first industrial revolution) took almost 120 years to spread outside of Europe. By contrast, the internet permeated across the globe in less than

- a decade" (*The Fourth Industrial Revolution* [New York: World Economic Forum, 2016], 8).
17. "World Internet Users and 2020 Population Stats," Internet World Stats: Usage and Population Statistics, <https://internetworldstats.com/stats.htm>.
  18. See Erik Brynjolfsson and Andrew McAfee, *The Second Machine Age* (New York: W. W. Norton, 2014), 14–20.
  19. IBM, "IBM Watson: Final Jeopardy! and the Future of Watson," February 16, 2011, [https://www.youtube.com/watch?v=II-M7O\\_bRNq](https://www.youtube.com/watch?v=II-M7O_bRNq).
  20. Paul Mozur, "Google's AlphaGo Defeats Chinese Go in Win for A.I." *The New York Times*, May 23, 2017, <https://www.nytimes.com/2017/05/23/business/google-deepmind-alphago-go-champion-defeat.html>.
  21. Christof Koch, "How the Computer Beat the Go Master," *Scientific American*, March 19, 2016, <https://www.scientificamerican.com/article/how-the-computer-beat-the-go-master/>.
  22. "Now comes the second machine age. Computers and other digital advances are doing for mental power—the ability to use our brains to understand and shape our environments—what the steam engine and its descendants did for muscle power" (Brynjolfsson and McAfee, *The Second Machine Age*, 7–8).
  23. Schwab writes, "The premise of this book is that technology and digitization will revolutionize everything, making the overused and often ill-used adage, 'this time is different' apt. Simply put, major technological innovations are on the brink of fueling momentous change throughout the world—inevitably so" (*The Fourth Industrial Revolution*, 9).
  24. See Thomas L. Friedman, *Thank You for Being Late: An Optimist's Guide to Thriving in the Age of Accelerations* (New York: Farrar, Straus and Giroux, 2016), 93–95.
  25. *Ibid.*, 44–52. See also Wheeler, *From Gutenberg to Google*, 187–88.
  26. Jack Dongarra and Piotr Luszczek, "Anatomy of a Globally Recursive Embedded LINPACK Benchmark," paper presented in September 2012 at the IEEE Conference on High Performance Extreme Computing. Brynjolfsson and McAfee also note that the ACSI Red, which was the world's fastest supercomputer in 1996, achieved a top speed of 1.8 teraflops, which is the same peak performance benchmark as Sony's PlayStation 3, which was released in 2006 (*The Second Machine Age*, 49–50).
  27. James Vincent, "The World's Fastest Supercomputer Will Be Built by AMD and Cray for US Government," *The Verge*, May 7, 2019, <https://www.theverge.com/2019/5/7/18535078/worlds-fastest-exascale-supercomputer-frontier-amd-cray-doe-oak-ridge-national-laboratory>.
  28. Jeremy Bailenson, *Experience on Demand: What Virtual Reality Is, How It Works, and What It Can Do* (New York: W. W. Norton, 2018), 174.
  29. Joel Stein, "The Surprising Joy of Virtual Reality: And Why It's about to Change the World," *Time*, August 17, 2015, <https://time.com/3987059/>

- in-the-latest-issue-41/. Stein can summarize: “Virtual reality has been promised for decades, but . . . never before have so much money and talent bet on its imminent arrival.”
30. Jeremy Hsu, “Virtual Reality Pioneer Looks beyond Entertainment,” *Spectrum*, April 30, 2015, <https://spectrum.ieee.org/tech-talk/consumer-electronics/portable-devices/virtual-reality-pioneer-looks-beyond-entertainment>.
  31. See Jaron Lanier, *The Dawn of the New Everything: Encounters with Reality and Virtual Reality* (New York: Henry Holt, 2017).
  32. Katelyn Beaty, “Geek Theologian,” *Christianity Today*, July 15, 2011, <https://www.christianitytoday.com/ct/2011/julyweb-only/geektheologian.html>.
  33. Kelly continues: “At its most fundamental level this machine copies every action, every character, every thought we make while we ride upon it” (*The Inevitable: Understanding the 12 Technological Forces That Will Shape Our Future* [New York: Viking, 2016], 61).
  34. Caitlin Dewey, “If You Could Print Out the Whole Internet, How Many Pages Would It Be?” *The Washington Post* (May 28, 2015), <https://www.washingtonpost.com/news/the-intersect/wp/2015/05/18/if-you-could-print-out-the-whole-internet-how-many-pages-would-it-be/>.
  35. Interview with Heidi Campbell (Professor of Communication at Texas A&M University), conducted by Jonathan J. Armstrong on December 11, 2018. See also Heidi A. Campbell and Stephen Garner, “New Media Theory 101: Understanding New Media and the Network Society,” in *Networked Theology: Negotiating Faith in Digital Culture* (Grand Rapids: Baker Academic, 2016), 39–59. In a statement titled, “The Church Must Learn to Cope with the Computer Culture,” which he delivered in connection with World Communications Day on May 27, 1989, Pope John Paul II noted: “Today, for example, one no longer thinks or speaks of social communications as mere instruments or technologies. Rather they are now seen as part of a still unfolding culture whose full implications are as yet imperfectly understood and whose potentialities remain for the moment only partially exploited.”
  36. McLuhan refined and furthered his thinking in these matters in his 1964 book, *Understanding Media: The Extensions of Man*.
  37. “The Future of Man in the Electric Age,” <https://web.archive.org/web/20200129141024/http://www.marshallmcluhanspeaks.com/interview/1965-the-future-of-man-in-the-electric-age/>.
  38. In a 1966 interview with Robert Fulford broadcast on the Canadian Broadcasting Corporation, McLuhan states, “Instead of going out to buy a book that has had five thousand copies printed, you will go to the telephone and describe your interests, your needs and your problems. You might say that you are working on a history of Egyptian arithmetic. You know a bit of Sanscrit. You are qualified in German and you are a good mathematician. In reply you will be told that what you need will

- be right over. Then, with the help of computers from the libraries of the world, all the latest material is xeroxed just for you personally—not as something to be put out on a bookshelf. Instead, the package is sent to you as a direct personal service. This is where we are heading under electronic information conditions. Products are increasingly becoming services,” “Predicting Interactive Communication via the Internet,” Marshall McLuhan Speaks Special Collection, 1966 (<https://web.archive.org/web/20201106035001/http://www.marshallmcluhanspeaks.com/prophesies/1966-communication-via-the-internet/index.html>).
39. “The global village is not created by the motorcar or even by the airplane; it is created by instant electronic information movement,” “This Is Marshall McLuhan: The Medium Is the Message,” Marshall McLuhan Speaks Special Collection, 1967 (<https://web.archive.org/web/20200116125911/http://www.marshallmcluhanspeaks.com/sayings/1967-global-village/index.html>).
  40. Neil Postman, *Technopoly: The Surrender of Culture to Technology* (New York: Vintage, 1992), 18.
  41. “Neil Postman Talk in LA 1993/7/28 (VRI-0131),” YouTube, April 19, 2016, [https://www.youtube.com/watch?v=QqxcCoHv\\_aE&t=5707s](https://www.youtube.com/watch?v=QqxcCoHv_aE&t=5707s).
  42. Wheeler, *From Gutenberg to Google*, 41.
  43. Plato, *Euthyphro, Apology, Crito, Phaedo, Phaedrus*, trans. Harold North Fowler, in *Loeb Classical Library*, 36 (Cambridge: Harvard University Press, 1914), 563. See also Neil Postman, *Technopoly*, 3–4.
  44. “Barth in Retirement,” *Time* (Friday, May 31, 1963), 63.
  45. In 1975, Pope Paul VI declared in the encyclical *Evangelii Nuntiandi* (“On the New Evangelization”): “Our century is characterized by the mass media or means of social communication. . . . When they are put at the service of the Gospel, they are capable of increasing almost indefinitely the area in which the Word of God is heard; they enable the Good News to reach millions of people. The Church would feel guilty before the Lord if she did not utilize these powerful means that human skill is daily rendering more perfect. It is through them that she proclaims ‘from the housetops’ the message of which she is the depository. In them she finds a modern and effective version of the pulpit. Thanks to them she succeeds in speaking to the multitudes” (“Evangelii Nuntiandi: Apostolic Exhortation of His Holiness Pope Paul VI,” December 8, 1975, [http://www.vatican.va/content/paul-vi/en/apost\\_exhortations/documents/hf\\_p-vi\\_exh\\_19751208\\_evangelii-nuntiandi.html](http://www.vatican.va/content/paul-vi/en/apost_exhortations/documents/hf_p-vi_exh_19751208_evangelii-nuntiandi.html)).
  46. For information on those who have never heard the gospel, see [https://joshuaproject.net/people\\_groups/statistics](https://joshuaproject.net/people_groups/statistics).
  47. Ash Turner, “How Many Smartphones Are in the World?,” BankMyCell, <https://www.bankmycell.com/blog/how-many-phones-are-in-the-world>.
  48. Some of these predictions simply misidentified the operating principles of future technology (“Have you ever renewed your driver’s license at a cash machine?” or “[Have you ever] carried your medical history in your

- wallet?”). Some of these commercials predicted inventions that are still in development and that are not sufficiently reliable to be serviceable as consumer products in 2020 (“Have you ever opened doors with the sound of your voice?” or “[Have you ever] conducted business in a language you don’t understand?”). And some of these commercials were correct in part of their prediction but incorrectly framed how the technology would actually be applied (the commercials correctly anticipated video calling but presumed that video calling would be conducted from phone booths). “AT&T ‘You Will’ Commercials (High Quality),” YouTube, April 22, 2016, <https://www.youtube.com/watch?v=a2EgfkhC1eo>.
49. Wilson, *The Internet Church*, 19.

## Chapter 2: The Only Constant Is Change

1. “Measures to Promote Revivals,” in *Revivals of Religion* (New York: Revell, 1960), 311.
2. Wheeler, *From Gutenberg to Google*, 232.
3. “What a Revival of Religion Is,” in *Revivals of Religion* (New York: Revell, 1960), 5.
4. Benjamin B. Warfield, *Perfectionism* (Philadelphia: Presbyterian and Reformed Publishing Company, 1958), 193; quoted in James E. Johnson, “Charles G. Finney and a Theology of Revivalism,” *Church History* 38 (1969), 351.
5. “Measures to Promote Revivals,” 284.
6. *Ibid.*, 284–85.
7. *Ibid.*, 306.
8. In 1920, only 35 percent of Americans had electricity in their homes. By 1930, this number had increased to 70 percent, leaving only those in rural areas without electricity.
9. Christopher H. Sterling and John Michael Kittross, *Stay Tuned: A History of American Broadcasting*, third edition (Mahwah: Lawrence Erlbaum, 2002), 66.
10. Spencer Miller Jr., “Radio and Religion,” *The Annals of the American Academy of Political and Social Science* 177 (1935): 135.
11. *Ibid.*, 135–36.
12. *Ibid.*, 66–67.
13. Quentin J. Schultze, “Evangelical Radio and the Rise of the Electronic Church, 1921–1948,” *Journal of Broadcasting and Electronic Media* 32 (1988): 291.
14. Mark Rogers, “End Times Innovator: Paul Rader and Evangelical Missions,” *International Bulletin of Missionary Research* 37 (2013): 18.
15. Quoted in Lois Neely, *Come Up to This Mountain: The Miracle of Clarence W. Jones and HCJB* (Wheaton, IL: Tyndale House, 1980), 80.
16. Ralph L. Power, “Angelus Temple Is Unique Among Broadcasters,” *Radio in the Home* (January 1925): 44. In the days when religious broadcasting was new and Aimee was a starlet celebrity, Power writes: “This,

- friends, is the story of a radio station with a soul. . . . This is a personal narrative of a church that not only brings the people to it by the thousands but it also goes to the people by the hundreds of thousands in their homes" (ibid., 24).
17. Daniel Mark Epstein, *Sister Aimee: The Life of Aimee Semple McPherson* (New York: Harcourt Brace Jovanovich, 1993), 74.
  18. Edith L. Blumhofer, *Aimee Semple McPherson: Everybody's Sister* (Grand Rapids: Eerdmans, 1993), 268–69.
  19. Quoted in Tona J. Hangen, *Redeeming the Dial: Radio, Religion, and Popular Culture in America* (Chapel Hill: The University of North Carolina Press, 2002), 21. Schultze observes: "Evangelicals were far more optimistic about radio than were their mainline Protestant counterparts. Even the liberal rector of the Calvary Church, which sponsored the legendary first religious broadcast on KDKA in January 1921, later expressed publicly his misgivings about religious radio, comparing the temptation to air religious programs with King Jeroboam's desire to lord over the early nation of Israel by making sacred calves for the people to worship" ("Evangelical Radio and the Rise of the Electronic Church, 1921–1948," 290).
  20. Miller, "Radio and Religion," 140.
  21. Billy Graham recalled his first encounter with television at the New York World's Fair: "My first excursion north was when I finished Bible school in 1939. I was invited to hold some meetings in York, Pennsylvania. After that I went to the New York World's Fair for a few days. We didn't have enough money to stay very long. . . . That's when I first heard of television. They had a camera and you could walk in front of it and see your picture a few yards away. They said this was going to come to the whole country. Of course, nobody believed it. It was too impossible to think about" ("This Date in History – The 75th Anniversary of Television," Billy Graham Library, April 20, 2014, <https://billygrahamlibrary.org/this-date-in-history-the-75th-anniversary-of-television/>).
  22. "First Television Broadcast of Easter Services," *The Gazette and Daily* (York, Pennsylvania, March 25, 1940), 5. The midnight Mass celebrated in Notre Dame Cathedral in Paris on Christmas of 1948 is also celebrated as an early televised church service and reached far greater numbers of viewers than Sheen's 1940 broadcast.
  23. Ben Armstrong, *The Electric Church* (Nashville: Thomas Nelson, 1979), 87.
  24. Oral Roberts, *My Story* (Tulsa: Summit, 1961), 161. See also David Edwin Harrell Jr., *Oral Roberts: An American Life* (Bloomington, IN: Indiana University Press, 1985), 129–30.
  25. J. Thomas Bisset, "Religious Broadcasting: Assessing the State of the Art," *Christianity Today*, December 12, 1980, 29.
  26. William F. Fore could ask: "Has the electronic church become captive to commercial broadcasting?" ("Beyond the Electronic Church," *The Christian Century* 98 [January 7–14, 1981], 29).

27. See William Hendricks, "The Theology of the Electronic Church," *Review and Expositor* 81 (1984): 59–75. Several of the articles in this special issue are dedicated to researching the "Electric Church."
28. See Jeffrey K. Hadden and Charles E. Swann, *Prime Time Preachers: The Rising Power of Televangelism* (Reading, PA: Addison-Wesley, 1981), 159–74. Hadden and Swann argue that the claimed reach of the Moral Majority, as well as the claimed audiences of most televangelistic ministries, was greatly inflated.
29. Quentin J. Schultze, "Electronic Church," in *Dictionary of Christianity in America* (Downers Grove, IL: InterVarsity Press, 1990), 386.
30. See idem., "Redeeming the Electronic Church," in *Televangelism and American Culture: The Business of Popular Religion* (Grand Rapids: Baker, 1991), 225–48; Mark Ward, Sr., *Air of Salvation: The Story of Christian Broadcasting* (Grand Rapids: Baker, 1994).
31. Roberts, *My Story*, 158.
32. See Peter Malone, *Screen Jesus: Portrayals of Christ in Television and Film* (Plymouth: Scarecrow Press, 2012).
33. Franklin Foer, "Baptism by Celluloid," *New York Times* (February 8, 2004), <https://www.nytimes.com/2004/02/08/movies/baptism-by-celluloid.html>. See also Bill Bright's introduction to Paul Eshleman, *I Just Saw Jesus* (San Bernardino: Campus Crusade for Christ, 1991).
34. Eleanor Blau, "A Movie Translation of Entire Bible Begun to Transmit Faith to Today's Nonreaders," *New York Times* (January 26, 1976), 25.
35. Ibid.
36. "The History of Jesus Film Project," Jesus Film Project, <https://www.jesusfilm.org/about/history.html>.
37. Masterworks, "Jesus Film Project: Measuring Global Impact" (January 2017), 59; <https://www.jesusfilm.org/content/dam/jesusfilm/pdf/Masterworks-Jesus-Film-Final-Presentation.pdf>.
38. <https://www.jesusfilm.org/watch/jesus.html/english.html>.
39. Interview with Irv Klaschus (producer at The Jesus Film Project), conducted by Jonathan J. Armstrong on April 20, 2020.
40. Power, "Angelus Temple Is Unique Among Broadcasters," 44.
41. As it appears in print, the quote reads: "Tradition is the living faith of the dead, traditionalism is the dead faith of the living. And, I suppose I should add, it is traditionalism that gives tradition such a bad name" (*The Vindication of Tradition: The 1983 Jefferson Lecture in the Humanities* [New Haven: Yale University Press, 1984], 65).
42. See George M. Marsden, *Jonathan Edwards: A Life* (New Haven: Yale University Press, 2003), 54–55.

### Chapter 3: The Church Steps into Virtual Reality

1. Tim Hutchings, *Creating Church Online: Ritual, Community and New Media* (London: Routledge, 2017), 244.

2. Rhoda Thomas Tripp, *The International Thesaurus of Quotations* (New York: T. Y. Crowell, 1970), 280.
3. See Randall J. Stephens, *The Devil's Music: How Christians Inspired, Condemned, and Embraced Rock 'N' Roll* (Cambridge: Harvard University Press, 2018).
4. See Andrew R. Chow, "'Come As You Are in the Family Car.' Drive-in Church Services Are Taking off During the Coronavirus Pandemic," *Time Magazine* (March 28, 2020), <https://time.com/5811387/drive-in-church-coronavirus/>.
5. Caitlin Dewey, "A Complete History of the Rise and Fall—and Reincarnation!—of the Beloved '90s Chatroom," *The Washington Post*, October 30, 2014, <https://www.washingtonpost.com/news/the-intersect/wp/2014/10/30/a-complete-history-of-the-rise-and-fall-and-reincarnation-of-the-beloved-90s-chatroom/>.
6. "Cyberspace as Sacred Space," 794. O'Leary was raised a Roman Catholic and died prior to the outbreak of the coronavirus crisis on February 4, 2020.
7. See Heidi Campbell's account of "The Great Anglican Online Listmeet" in *Exploring Religious Community Online: We Are One in the Network* (New York: Peter Lang, 2005), xi–xii. Campbell discusses the use of email in religious networks extensively in this monograph.
8. Erik Davis, "Technopagans: May the Astral Plane Be Reborn in Cyberspace," *Wired*, July 1995, 126–33, 174–81.
9. Joshua Cooper Ramo, "Finding God on the Web: Across the Internet, Believers Are Re-Examining Their Ideas of Faith, Religion and Spirituality," *Time*, December 16, 1996, <http://content.time.com/time/magazine/article/0,9171,985700,00.html>. Some things have clearly changed since 1996, such as when the author of the article expresses surprise and amazement that even sacred Scripture is being rendered into hypertext. The article exults, "Just as the first illuminated manuscripts exposed readers to early theological debates, these hypertexts open up thousands of interpretations of God's words to anyone curious enough to click a mouse."
10. The Barna Group determined that, by 2000, still only 34 percent of Protestant churches had websites; by 2005, this number had jumped up to 57 percent ("New Research Describes Use of Technology in Churches," [April 28, 2008], <https://www.barna.com/research/new-research-describes-use-of-technology-in-churches/>). By 2010, email had become more or less ubiquitous, with about 90 percent of Christians having email addresses (Scott Thumma, "Virtually Religious: Technology and Internet Use in American Congregations" [Hartford: Hartford Institute for Religious Research, 2012]: 2). See Walt Wilson's account of a church staff learning to use email for the first time (*The Internet Church*, 94–95).
11. Nina Flourney, "Welcome to Worship: Click Here," *The Dallas Morning News* (May 20, 2000), <https://www.godweb.org/dallas.htm>.



12. Interview with Douglas Estes (Associate Professor of New Testament and Practical Theology at South University – Columbia), conducted by Jonathan J. Armstrong on October 4, 2019.
13. Douglas Estes, *SimChurch: Being the Church in the Virtual World* (Grand Rapids: Zondervan, 2009), 94.
14. *Ibid.*, 96.
15. Patrick Dixon, *Cyberchurch: Christianity and the Internet* (Eastbourne: Kingsway, 1997).
16. *Ibid.*, 55–56.
17. *Ibid.*, 86.
18. *Ibid.*, 177.
19. *Ibid.*, 39.
20. *Ibid.*, 94.
21. Dixon writes, “We might conclude then that while the Internet can fulfill the condition of two or three gathering together in prayer, it is unlikely to fulfill the conditions for an assembly. But are we being too rigid here? If Jesus is present with two believers talking to each other and praying on the telephone, and therefore in the midst of an Internet voice call or video link for similar purposes, and also in an Internet Relay Chat prayer link, then what is the situation with a larger electronic gathering?” (*ibid.*, 91).
22. *Ibid.*, 153. Dixon notes that Paul, too, faced the possibility of miscommunication in the application of technology: “The technology he used, pen and ink, was not universally understood, for many were illiterate. It was state-of-the-art in his day.”
23. Barna Research Group, “The Cyberchurch Is Coming: National Survey of Teenagers Shows Expectation of Substituting Internet for Corner Church,” April 20, 1998.
24. *Ibid.*
25. The conclusions Barna reached indeed seem puzzling when one reviews the actual data cited. For example, Barna reported that only 12 percent of the adult population of the US used the internet each month for religious purposes, stating, “The most common of those purposes is to interact with others via chat rooms or e-mail about religious ideas, beliefs or experiences.” Further, only 9 percent of teenagers reported using the internet every day, and only 4 percent of teenagers reported using the internet to pursue religious or spiritual experiences. Barna’s conclusions seem not to have been based on current practice but rather based on what those who participated in the study reported as their expectation for the future: “One out of six teens (16%) said that within the next five years they expect to use the Internet as a substitute for their current church-based religious experience” (*ibid.*).
26. “But in the case of internet, web and net, a change in our house style was necessary to put into perspective what the internet is: another medium for delivering and receiving information. That it transformed

- human communication is beyond dispute. But no more so than moveable type did in its day. Or the radio. Or television” (Tony Long, “It’s Just the ‘internet’ Now,” *Wired*, August 16, 2004, <https://www.wired.com/2004/08/its-just-the-internet-now>).
27. Interview with Tim Hutchings (Assistant Professor of Religious Ethics at the University of Nottingham), conducted by Jonathan J. Armstrong on October 1, 2019.
  28. The Archbishop’s Council on Mission and Public Affairs, *Mission-Shaped Church: Church Planting and Fresh Expressions of Church in a Changing Context* (London: Church House Publishing, 2004), 7.
  29. *Ibid.*, vii.
  30. In the official report issued following the initial launch of the church, i-church (<https://www.i-church.org/gatehouse/>) is described as “an on-line Christian Community” and “a Christian community of the Church of England based in the Diocese of Oxford.” The report states: “The original vision was to use the internet to create a new spiritual community; a network church for people who do not wish, or are not able, to join a local church. It was also hoped that it would be available as ‘added value’ to existing church members who travel or who are otherwise unable to be part of their local church” (Angie Paterson, “Cutting Edge Ministries: The Journey: 2002–2008” [Diocese of Oxford, 2008], 26). See also Pam Smith, *Online Mission and Ministry: A Theological and Practical Guide* (London: SPCK Publishing, 2015), 96–97; Mark Howe, *Online Church? First Steps Towards Virtual Incarnation* (Cambridge: Ridley Hall, 2007), 3.
  31. Rebecca Paveley, “Click Your Way to Church,” *Church Times* (August 12, 2009), <https://www.churchtimes.co.uk/articles/2009/14-august/features/click-your-way-to-church>.
  32. “First Web-Pastor Appointed,” BBC News, last updated May 11, 2004, [http://news.bbc.co.uk/2/hi/uk\\_news/magazine/3704205.stm](http://news.bbc.co.uk/2/hi/uk_news/magazine/3704205.stm).
  33. Smith, *Online Mission and Ministry*, 1.
  34. *Ibid.*, 2.
  35. *Ibid.*, 56–57.
  36. *Ibid.*, 57.
  37. Blog post by Matt Rees titled “Still at the Cutting Edge” at the Diocese of Oxford’s website: <https://www.oxford.anglican.org/tag/i-church/>
  38. Personal email from Pam Smith to Jonathan J. Armstrong on January 22, 2020.
  39. Hutchings, *Creating Church Online*, 67.
  40. Barnaby J. Feder, “The First Church of Cyberspace: Services Tomorrow,” *The New York Times* (May 15, 2004). See also the report by Giles Wilson, the BBC journalist, who experienced and reported on one of these services: “In Cyberspace, Can Anyone Hear You Pray?,” [http://news.bbc.co.uk/2/hi/uk\\_news/magazine/3706897.stm](http://news.bbc.co.uk/2/hi/uk_news/magazine/3706897.stm).

41. Simon Jenkins, "Rituals and Pixels: Experiments in Online Church," *Heidelberg Journal of Religions on the Internet* (2008): 95. Jenkins gives a detailed account of the technical and psychological aspects of the project.
42. Interview with Simon Jenkins (founder of the Church of Fools), conducted by Jonathan J. Armstrong on April 22, 2020.
43. Jenkins published print editions of the magazine until 1983, when the project was discontinued. "The project died, partly because I got a good job and I needed to focus," Jenkins explained. He worked with the Scripture Union in London and then Lion Publishing, where he served as Commissioning Editor, finally transitioning to work as a freelance editor from 1988 until the present. "But I always missed it," Jenkins recalls: "It was a lovely project." Jenkins explained that he did not have internet access until 1997: "In '97 I finally got on the internet. I had a year when I couldn't get on the internet because the cable of my computer wouldn't reach the plug in the wall. But eventually in '97 I got on the internet, and as soon as I did I realized, talking to Steve [Goddard], that 'Ship of Fools' would be much better on the internet than it ever could have been in print."
44. Jenkins, "Rituals and Pixels," 100.
45. *Ibid.*, 101.
46. *Ibid.*, 108.
47. *Ibid.*
48. Howe, *Online Church?*, 19.
49. *Ibid.*, 20.
50. "Hundreds Rely Entirely on Online Church for Christian Contact," *Christian Today*, October 20, 2007, <https://christiantoday.com/article/hundreds.rely.entirely.on.online.church.for.christian.contact/14082.htm>.
51. Interview with Simon Jenkins (founder of the Church of Fools), conducted by Jonathan J. Armstrong on April 22, 2020.
52. Jenkins, "Rituals and Pixels," 109. Tim Hutchings noted that the Anglican liturgy transferred well to the online environment: "It was a style of worship that worked pretty effectively in the technology available in chatrooms. A text-based chatroom is a fantastic place for a traditional call-and-response liturgy" (interview conducted by Jonathan J. Armstrong on October 1, 2019).
53. "History," The Anglican Cathedral of Second Life, <https://slangcath.wordpress.com/about/history/>.
54. "What Is The Robloxian Christians?," The Robloxian Christians Online Church, <https://www.therobloxianchristians.org/about>.
55. See J. Clement, "Hours of Video Uploaded to YouTube Every Minute as of May 2019," Statista, August 25, 2020, <https://www.statista.com/statistics/259477/hours-of-video-uploaded-to-youtube-every-minute/>.
56. BEME News, "Is Virtual Religion the New VR?," YouTube, May 7, 2018, <https://www.youtube.com/watch?v=N0IIImB0gItI&feature=youtu.be>.

## VIRTUAL REALITY CHURCH

57. Jessica Chou, "This Pastor Is Putting His Faith in a Virtual Reality Church," *Wired*, February 2, 2018, <https://www.wired.com/story/virtual-reality-church/>.
58. Interview with D. J. Soto (founder of VR Church), conducted by Jonathan J. Armstrong on July 24, 2019.
59. Personal email with D. J. Soto, January 23, 2020.
60. Interview with D. J. Soto (founder of VR Church), conducted by Jonathan J. Armstrong on July 24, 2019.
61. 100 Huntley Street, "VR Church / DJ Soto", YouTube, October 28, 2019, <https://www.youtube.com/watch?v=pdGC-xzIGEA&feature=youtu.be>.
62. KPIX CBS SF Bay Area, "VR Church: Bay Area Pastor Gives Services a High Tech Twist, Delivering Using VR Technology," YouTube, September 2, 2018, [https://www.youtube.com/watch?v=F6\\_dv-OUr1A&feature=youtu.be](https://www.youtube.com/watch?v=F6_dv-OUr1A&feature=youtu.be).
63. Interview with D. J. Soto (founder of VR Church), conducted by Jonathan J. Armstrong on July 24, 2019.
64. Chou, "This Pastor Is Putting His Faith in a Virtual Reality Church," <https://www.wired.com/story/virtual-reality-church/>.
65. Frank Newport, "Religion and the COVID-19 Virus in the U.S.," Gallup, April 6, 2020, <https://news.gallup.com/opinion/polling/matters/307619/religion-covid-virus.aspx>.
66. Interview with Tim Hutchings (Assistant Professor of Religious Ethics at the University of Nottingham), conducted by Jonathan J. Armstrong on October 1, 2019.

### Chapter 4: The Nature of Virtuality

1. T. S. Eliot, *The Complete Poems and Plays: 1909–1950* (New York: Harcourt, Brace & World, 1962), 96.
2. Freeman J. Dyson, *Infinite in All Directions* (New York: Perennial, 2004), 270.
3. Cline writes, "I wrote a science fiction novel about virtual reality because I was fascinated by the concept and wanted to imagine its vast potential and limitless application. Where is this technology that I've been promised for decades? And what will it look like, if and when it actually becomes a reality?" (Blake J. Harris, foreword by Ernest Cline, *The History of the Future: Oculus, Facebook, and the Revolution that Swept Virtual Reality* [New York: HarperCollins, 2019], xv). Harris concurs: "Really, the only 'limit' to the limitless possibilities of VR was the computing power. The faster computers got, the better the graphics would be and the more real virtual worlds could feel" (11). Harris paraphrases the conclusion of Palmer Luckey, the inventor of Oculus: "If technology existed that could allow *anyone* to be *anywhere* at *any time*, then not even the sky was the limit" (12).

4. Jacques Barzun, *From Dawn to Decadence: 1500 to the Present: 500 Years of Western Cultural Life* (New York: HarperCollins, 2000), 539.
5. For this observation, we are indebted to Jeremy Bailenson, who gained this insight through years of research as founding director of the Virtual Human Interaction Lab at Stanford University (see *Experience on Demand: What Virtual Reality Is, How It Works, and What It Can Do* [New York: W. W. Norton, 2018], 253).
6. In fact, the history of early VR intersects with the history of the flight simulator (Bailenson, *Experience on Demand*, 23–25).
7. TED, “Chris Milk: How Virtual Reality Can Create the Ultimate Empathy Machine,” YouTube, April 22, 2015, <https://www.youtube.com/watch?v=iXHil1TPxvA>.
8. Bailenson, *Experience on Demand*, 215.
9. Interview with John Dyer (Dean of Enrollment Services and Distance Education at Dallas Theological Seminary), conducted by Jonathan J. Armstrong on July 22, 2019.
10. Tim Hutchings, *Creating Church Online: Ritual, Community and New Media* (London: Routledge, 2017), 1.
11. See “On the Apparel of Women,” trans. S. Thelwall, in *Ante-Nicene Fathers*, eds., Alexander Roberts and James Donaldson (Peabody, MA: Hendrickson, 1995), 4:14–25.
12. Andrew Tarantola, “‘Fortnite’ Made a Historic 1.8 Billion in 2019,” Engadget, January 4, 2020, <https://www.engadget.com/2020-01-04-fortnite-made-historic-1-8-billion-in-2019.html>.
13. Pam Smith, *Online Mission and Ministry: A Theological and Practical Guide* (London: Society for Promoting Christian Knowledge, 2015), 80–86.
14. Issie Lapowsky, “Mark Zuckerberg Answers to Congress for Facebook’s Troubles,” *Wired*, April 10, 2018, <https://www.wired.com/story/mark-zuckerberg-congress-facebook-troubles/>.
15. “Urbana 15 ‘Hackathon’ Inspires Opportunities for Missions,” CBN News, December 28, 2015, <https://www1.cbn.com/cbnnews/us/2015/December/Urbana-15-Hackathon-Inspires-Opportunities-for-Missions>.
16. Sherry Turkle, *Reclaiming Conversation: The Power of Talk in a Digital Age* (New York: Penguin, 2015), 307.
17. Shane Hipps, *Flickering Pixels: How Technology Shapes Your Faith* (Grand Rapids: Zondervan, 2009), 36–38.
18. “Virtual Reality Church - John Crist,” YouTube, December 11, 2018, [https://www.youtube.com/watch?v=R\\_bkNkrWdz8&t=1s](https://www.youtube.com/watch?v=R_bkNkrWdz8&t=1s).
19. Jeremy Bailenson writes, “But focusing on all the spectacular solo experiences that VR makes possible obscures what I believe is the truly groundbreaking promise of the technology. It’s right there in the first literary journey through virtual reality, in William Gibson’s 1984 cyberpunk thriller *Neuromancer*. . . . Gibson’s virtual reality—what he calls ‘cyberspace’ and ‘the matrix’—is defined in the novel as ‘a consensual

- hallucination’ (my emphasis). What Gibson suggests is that it won’t be the graphics or photorealistic avatars that will make these virtual worlds feel real—it will be the community of people interacting within them, bringing the world alive through their mutual acknowledgement of its reality” (*Experience on Demand*, 174).
20. See Gary Wilson, *Your Brain on Porn: Internet Pornography and the Emerging Science of Addiction* (Kent, UK: Commonwealth Publishing, 2015).
  21. See Barna Group and Josh McDowell, “The Porn Phenomenon: The Impact of Pornography in the Digital Age” (2016).
  22. “Seize the Net,” Ship of Fools, [http://www.ship-of-fools.com/features/2008/seize\\_net.html](http://www.ship-of-fools.com/features/2008/seize_net.html).
  23. “The Internet places in the grasp of young people at an unusually early age an immense capacity for doing good and doing harm, to themselves and others. It can enrich their lives beyond the dreams of earlier generations and empower them to enrich others’ lives in turn. It also can plunge them into consumerism, pornographic and violent fantasy, and pathological isolation” (John P. Foley, “The Church and Internet” [Rome: Pontifical Council for Social Communications, 2002], paragraph 11).
  24. Interview with Alan Noble (Assistant Professor of English at Oklahoma Baptist University), conducted by Jonathan J. Armstrong on April 29, 2019.
  25. Interview with Craig Detweiler (President of the Wedgewood Circle), conducted by Jonathan J. Armstrong on December 18, 2019.
  26. Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (New York: PublicAffairs, 2019). See also George Gilder, *Life after Google: The Fall of Big Data and the Rise of the Blockchain Economy* (Washington DC: Regnery Publishing, 2018).
  27. Wheeler, *From Gutenberg to Google*, 192.
  28. J. Clement, “Social Media - Statistics & Facts,” Statista, May 18, 2020, <https://www.statista.com/topics/1164/social-networks/>.
  29. “Seize the Net,” Ship of Fools, [http://www.ship-of-fools.com/features/2008/seize\\_net.html](http://www.ship-of-fools.com/features/2008/seize_net.html).

## Chapter 5: God, Creation, and New Creation

1. David G. Benner, *Opening to God: Lectio Divina and Life as Prayer* (Downers Grove: InterVarsity Press, 2010), 34; Benner attributes this insight to his reading of Thomas Merton’s *New Seeds of Contemplation* (New York: New Directions, 1961).
2. Arthur F. Holmes, *All Truth Is God’s Truth* (Grand Rapids: Eerdmans, 1977), 8.
3. A perennial research theme in her career, Sherry Turkle touches on these ideas in the introduction to her first book: “Technology catalyzes

- change not only in what we do but in how we think. It changes people's awareness of themselves, of one another, of their relationship with the world. The new machine that stands behind the flashing digital signal, unlike the clock, the telescope, or the train, is a machine that 'thinks.' It challenges our notions not only of time and distance, but of mind" (*The Second Self: Computers and the Human Spirit*, twentieth anniversary edition [Cambridge: MIT Press, 2005], 19).
4. "The argument for the simulation [theory], I think, is quite strong. . . . If you assume any rate of improvement at all, then games will be indistinguishable from reality, or civilization will end, one of those two things will occur, although we are most likely in a simulation, because we exist." "Joe Rogan Experience #1169 Elon Musk (w/transcript)," YouTube, September 9, 2018, <https://www.youtube.com/watch?v=VelasZ6WbxA>.
  5. Anglican Church in North America, *The Book of Common Prayer* (Huntington Beach, CA: Anglican Liturgy Press, 2019), 109.
  6. "Hence we may infer, that the human mind is, so to speak, a perpetual forge of idols" (John Calvin, *Institutes of the Christian Religion*, trans. Henry Beveridge [Peabody, MA: Hendrickson, 2008], 55 [I.11.8]).
  7. Justin Martyr, *The First and Second Apologies*, trans. Leslie William Bernard (New York: Paulist Press, 1997), 84 [*Second Apology*, 13].
  8. Augustine, *Teaching Christianity*, trans. Edmund Hill (Hyde Park, NY: New City Press, 1996), 144 [2.18].
  9. Crouch concludes: "So how do we make sense of the world? The two senses turn out to be more intertwined than we might have thought. We *make sense* of the world by *making something* of the world. . . . Meaning and making go together—culture, you could say, is the activity of making meaning" (*Culture Making: Recovering our Creative Calling* [Downers Grove, IL: InterVarsity Press, 2008], 24).
  10. See *The God Who Is There*, in *The Complete Works of Francis A. Schaeffer: A Christian Worldview*, 1–202 (Wheaton, IL: Crossway, 1982), 54.
  11. For an introduction to the topic, see Jacob Shatzer, *Transhumanism and the Image of God: Today's Technology and the Future of Christian Discipleship* (Downers Grove, IL: IVP Academic, 2019). See also Jason Thacker, "Future: What's Coming Next?" in *The Age of AI* (Grand Rapids: Zondervan, 2020), 167–182.
  12. Julian Huxley, "Transhumanism," in *New Bottles for New Wine* (London: Chatto and Windus, 1957), 13–17. Julian was the brother of Aldous Huxley, author of *Brave New World* (1932).
  13. Brynjolfsson and McAfee, "Moore's Law and the Second Half of the Chessboard," in *The Second Machine Age*, 39–56. See also Friedman, *Thank You for Being Late*, 26.
  14. Ray Kurzweil, *The Singularity Is Near: When Humans Transcend Biology* (London: Duckworth, 2005). Many of the same themes trace back to Hans Moravec's *Mind Children: The Future of Robot and Human Intelligence* (Cambridge, MA: Harvard University Press, 1988).

15. This is the concluding line of the documentary “Transcendent Man,” directed by Barry Ptolemy, and released in the US in 2011.
16. Ray Kurzweil, “The Law of Accelerating Returns,” KurzweilAI.net, March 7, 2001, <https://www.kurzweilai.net/the-law-of-accelerating-returns>.
17. Kurzweil, *The Singularity Is Near*, 70. Kurzweil then estimates the capability of the human brain to be equivalent to the computing power of ten-to-the-sixteenth power calculations per second (ibid., 124).
18. “U.S. Department of Energy and Cray to Deliver Record-Setting Frontier Supercomputer at ORNL,” Department of Energy, May 7, 2019, <https://www.energy.gov/articles/us-department-energy-and-cray-deliver-record-setting-frontier-supercomputer-ornl>.
19. Kurzweil, *The Singularity Is Near*, 124. He concludes: “For these reasons, it is reasonable to expect human brain capacity, at least in terms of hardware computational capacity, for one thousand dollars by around 2020” (ibid., 126).
20. Ibid., 136. Kurzweil’s final estimate in terms of chronology is that, by the year 2080, a personal computer that costs \$1,000 will be able to “perform the equivalent of all human thought over the last ten thousand years (assumed at ten billion human brains for ten thousand years) in ten microseconds” (ibid., 135).
21. Malcolm MacIver, “The Geek Rapture and Other Musings of William Gibson,” *Discover*, October 17, 2011, <https://www.discovermagazine.com/mind/the-geek-rapture-and-other-musings-of-william-gibson>.
22. Amy Webb, *The Big Nine: How the Tech Titans and Their Thinking Machines Could Warp Humanity* (New York: PublicAffairs, 2019), 50.
23. Max Tegmark writes: “Freed from its genetic shackles, humanity’s combined knowledge has kept growing at an accelerating pace as each breakthrough enabled the next: language, writing, the printing press, modern science, computers, the internet, etc. This ever-faster cultural evolution of our shared software has emerged as the dominant force shaping our human future, rendering our glacially slow biological evolution almost irrelevant” (*Life 3.0: Being Human in the Age of Artificial Intelligence* [New York: Alfred A. Knopf, 2017], 28–29).
24. Yuval Noah Harari, *Homo Deus: A Brief History of Tomorrow* (New York: HarperCollins, 2017), 386–87.
25. <https://www.wired.com/story/god-is-a-bot-and-anthony-levandowski-is-his-messenger/>.
26. Max Tegmark does a commendable job in explaining his position of how this could be possible with the theory of “substrate independence” (see *Life 3.0: Being Human in the Age of Artificial Intelligence*, 49–81).
27. Tegmark, *Life 3.0*, 67.
28. Thacker, *The Age of AI*, 177.
29. Quentin J. Schultze, *Habits of the High-Tech Heart: Living Virtuously in the Information Age* (Grand Rapids: Baker Academic, 2002), 17.
30. Ibid., 19.



31. “We are succumbing to *informationism*: a non-discerning, vacuous faith in the collection and dissemination of information as a route to social progress and personal happiness” (ibid., 26).

### Chapter 6: The Incarnation and Pentecost

1. Athanasius, *On the Incarnation* (Yonkers, NY: St Vladimir’s Seminary Press, 2002), 44 [3.16].
2. Jay Y. Kim, *Analogue Church: Why We Need Real People, Places, and Things in the Digital Age* (Downers Grove, IL: InterVarsity Press, 2020), 2.
3. Athanasius, *On the Incarnation*, 34 [2.8].
4. Anselm of Canterbury, *The Major Works*, ed. Brian Davies and G. R. Evans, in *Oxford World’s Classics* (Oxford: University Press, 2008), 260–356.
5. Ibid., 352 [2.19].
6. Anglican Church in North America, *The Book of Common Prayer* (Huntington Beach, CA: Anglican Liturgy Press, 2019), 109.
7. This conclusion was adopted from the Council of Ephesus in AD 431. See “The Epistle of Cyril to Nestorius,” trans. H. R. Percival, in *Nicene and Post-Nicene Fathers*, second series (Peabody: Hendrickson, 1995), 14:197–198.
8. “The Cost of Sequencing a Human Genome,” National Human Genome Research Institute, August 25, 2020, <https://www.genome.gov/about-genomics/fact-sheets/Sequencing-Human-Genome-cost>.
9. C. S. Lewis, *The Weight of Glory and Other Addresses* (Grand Rapids: Eerdmans, 1965), 23–24.
10. Some have asked whether the very concept of a VR church is out of tune with the Bible’s presuppositions about ultimate reality, perhaps even intrinsically Gnostic. One author remarks that some interpretations of VR do sound “reminiscent of the ancient heresy of Gnosticism, which taught that the material world was evil and salvation is achieved by transcending beyond the material to the spiritual” (C. T. Casberg, “The Surprising Theological Possibilities of Virtual Reality,” *Christianity Today*, November 11, 2016, <https://www.christianitytoday.com/ct/2016/november-web-only/surprising-theological-possibilities-of-virtual-reality.html>); see also the blog post by Roger E. Olson on January 11, 2018, “How Much Change in Church Life Is Too Much?” (<https://www.patheos.com/blogs/rogereolson/2018/01/much-change-church-life-much/>). The Gnostics were a group of heretics in the early church who held the physical order in such contempt that they concluded that the god who created matter must be evil and not the true God. The Gnostics then proffered a knowledge (*gnosis*) of the true God, whom they claimed could not be known through creation or a common reading of the Bible. Certainly, wearing a VR headset does not prevent one from espousing a heretical worldview, but as a medium, VR technology no

- more inclines one to a Gnostic worldview than does listening to music by CD player.
11. Dana Cowley, “Siren at FMX 2018: Crossing the Uncanny Valley in Real Time,” *Unreal Engine*, April 18, 2018, <https://www.unrealengine.com/en-US/events/siren-at-fmx-2018-crossing-the-uncanny-valley-in-real-time>.
  12. Samantha Masunaga, “Here Are Some of the Tweets That Got Microsoft’s AI Tay in Trouble,” *Los Angeles Times*, March 25, 2020, <https://www.latimes.com/business/technology/la-fi-tn-microsoft-tay-tweets-20160325-htmstory.html>.
  13. Anglican Church in North America, *The Book of Common Prayer*, 109.
  14. John Ortberg, *God Is Closer Than You Think* (Grand Rapids: Zondervan, 2005), 15.
  15. See John P. Foley, “The Church and the Internet” (Rome: Pontifical Council for Social Communication, 2002), paragraph 2.
  16. See Augustine, *Teaching Christianity*, trans. Edmund Hill (Hyde Park, NY: New City Press, 1996), 18 [1.27.28].
  17. Interview with Craig Detweiler (President of the Wedgewood Circle), conducted by Jonathan J. Armstrong on December 18, 2019.
  18. Interview with Sean Dunn (Founder and President of Groundwire), conducted by Jonathan J. Armstrong on April 23, 2020.
  19. In a paragraph titled “Cyberchurch is no substitute for real-life membership,” Dixon argues: “After all, a fundamental command from Jesus to his disciples was that they must love each other. He told them that their love for each other would be a sign of the kingdom, an unmistakable demonstration that they were his followers (John 13:34–35). But love requires involvement. Jesus was not talking of sentimental love but of family *agape* love. To all who believed on his name, he gave the right to become children of God (John 1:12). We are brothers and sisters to each other, in close relationship, with eternal bonds of mutual commitment and self-sacrifice. The biblical picture of a church is of a gathered community, a royal priesthood, a holy nation, a people called by God out of darkness into his marvelous light (1 Peter 2:9). None of this can be fulfilled merely by virtual reality friendships, where people can unplug the modem every time they feel like giving up on people” (*Cyberchurch*, 94).

### Chapter 7: The New People of God and Visible Signs of Invisible Grace

1. Rowan Williams, foreword to *Mission-Shaped Church: Church Planting and Fresh Expressions of Church in a Changing Context* (London: Church House Publishing, 2004), vii.
2. <https://www.thegospelcoalition.org/article/cant-livestream-church/>.
3. The use of the word “church” to refer to a local congregation of believers is also the customary usage in Acts. In one instance (Acts 8:3), we see that the church in one location is comprised of a network of houses. In several instances, the church is referred to as an intercity or regional

- network (for example, Acts 14:23; 1 Cor. 16:1; 2 Cor. 8:1; Gal. 1:22; 1 Thess. 2:14). Sometimes the term is used to refer to a gathering in a particular house (Rom. 16:5; Col. 4:15; Phil. 1:2).
4. For example, “I commend to you our sister Phoebe, a servant of the church at Cenchreae” (Rom. 16:1 esv; see also Col. 4:16). This is the way the word functions in every instance in Acts as well as the majority of instances in the Epistles.
  5. See Eph. 1:22; 3:10; Col. 1:18. This includes references where Paul speaks of persecuting the church (see 1 Cor. 15:9; Gal. 1:13). When referring to the universal church, Paul generally uses the singular of the term “church,” whereas when referring to networks of churches he almost always employs the plural (see, for example, 2 Cor. 11:28).
  6. See Liddell, Scott, and Jones, *A Greek-English Lexicon* (Oxford: Clarendon Press, 1996).
  7. C. S. Lewis, *The Four Loves: An Exploration of the Nature of Love* (New York: Mariner Books, 2012), 61.
  8. Interview with Douglas Estes, conducted by Jonathan J. Armstrong on October 4, 2019.
  9. Wilson, *The Internet Church*, 22.
  10. Interview with Simon Jenkins (founder of the Church of Fools), conducted by Jonathan J. Armstrong on April 22, 2020.
  11. Patrick Dixon, *Cyberchurch: Christianity and the Internet* (Eastbourne: Kingsway, 1997), 157.
  12. Interview with Jay Kranda (Online Campus Pastor at Saddleback Church), conducted by Jonathan J. Armstrong on February 24, 2020.
  13. *Ibid.*
  14. Clyde Taber concurs. Although virtual participation is not the “end game” for Christian ministry, Taber affirms: “But if that’s the starting point for people who can find faith, find relationships, find community, find nurturing, I’m all for it” (interview with Clyde Taber [Director of Visual Story Network], conducted by Jonathan J. Armstrong on July 24, 2019).
  15. Nona Jones, *From Social Media to Social Ministry: A Guide to Digital Discipleship* (Grand Rapids: Zondervan, 2020), 32.
  16. Mark Howe, *Online Church?*, 22.
  17. See John Dyer’s helpful analysis in “Digital Communion: History, Theology, and Practices” (March 23, 2020), <https://j.hn/digital-communion-summary-of-theology-practices/>.
  18. “What Is the Sacrament of the Altar?,” in *Luther’s Small Catechism with Explanation* (St. Louis: Concordia Publishing House, 2017), 28.
  19. *Ibid.*, 323.
  20. John Calvin, *Institutes of the Christian Religion*, 4.14.1; see Augustine, *Explanations of the Psalms*, 99.8.
  21. Calvin, *Institutes of the Christian Religion*, 4.14.3.

22. Arielle Pardes, “Amid Coronavirus Fears, Startups Rethink the Virtual Conference,” *Wired* (March 9, 2020), <https://www.wired.com/story/amid-coronavirus-fears-startups-rethink-virtual-conference/>. When it was announced on February 11, 2020, that the Mobil World Congress would be cancelled—the event, scheduled for the end of February and which sought to bring some 100,000 people at Barcelona—many gained their first glimpses of the crisis that would unfold. A whole series of high-profile tech conventions were then cancelled, like dominoes falling one after another.
23. *Catechism of the Catholic Church*, second edition (New York: Doubleday, 1995), 368 [1324]; see also *Lumen Gentium*, 11; *Ecclesia de Eucharistia*, 1.
24. “Take Communion Online with Us,” Saddleback Church, January 24, 2014, <https://saddleback.com/archive/blog/internet-campus/2014/01/24/take-communion-online-with-us>.
25. See the June 6, 1938, article in *Time*, <http://content.time.com/time/magazine/article/0,9171,771109,00.html>.
26. Simon Jenkins, “Can Online Communion Be Real?,” *Church Times*, August 25, 2020, <https://www.churchtimes.co.uk/articles/2010/27-august/comment/can-online-communion-be-real>.
27. Heather Hahn, “Moratorium, Study Urged on Online Communion,” *UM News*, October 4, 2013, <https://www.umnews.org/en/news/moratorium-study-urged-on-online-communion>.
28. Sam Hodges, “Both Green Light, Red Light for Online Communion,” *UM News*, April 30, 2020, <https://www.umnews.org/en/news/both-green-light-red-light-for-online-communion-2>.
29. “Advisory Opinion - Communion in an Emergency/Pandemic,” PCUSA, edited March 24, 2020, [https://www.pcusa.org/site\\_media/media/uploads/oga/pdf/advisory\\_opinion\\_communion\\_in\\_an\\_emergency\\_or\\_pandemic.pdf](https://www.pcusa.org/site_media/media/uploads/oga/pdf/advisory_opinion_communion_in_an_emergency_or_pandemic.pdf).
30. Justin Martyr’s *First Apology* [65], dating to about the middle of the second century, contains the earliest reference to the tradition of carrying the consecrated elements to members of the church who had been absent for services.
31. Chris Ridgeway, “Online Communion Can Still Be Sacramental,” *Christianity Today*, March 27, 2020, <https://www.christianitytoday.com/ct/2020/march-web-only/online-communion-can-still-be-sacramental.html>.
32. Scott Swain, “Should We Live Stream the Lord’s Supper?,” *Reformed Blogmatics*, March 30, 2020, <https://www.scottswain.com/2020/03/30/should-we-live-stream-the-lords-supper/>.
33. *Catechism of the Catholic Church*, 384 [1376].
34. John P. Foley, “The Church and the Internet” (Rome: Pontifical Council for Social Communication, 2002), paragraph 9.

35. CNA Daily News, "Pope Francis Offers This Spiritual Communion Prayer during Coronavirus Pandemic," Catholic World Report, March 21, 2020, <https://www.catholicworldreport.com/2020/03/21/pope-francis-offers-this-spiritual-communion-prayer-during-coronavirus-pandemic/>.
36. Antonio Spadaro, *Cybertheology: Thinking Christianity in the Era of the Internet*, trans. Maria Way (New York: Fordham University Press, 2014), 72–73.
37. Almost no one proposes that avatars should partake in sacramental life, as though people should participate in the life of Christ vicariously through an avatar. This proposal is not completely unattested, however. In June 2009, Paul Fiddes, Professor of Theology at the University of Oxford, contributed a paper to a theology symposium titled "Sacraments in a Virtual World?" This paper proposes that avatars can participate in sacraments performed within a virtual world. Fiddes writes, "The key theological question is whether the triune God is present, and whether Christ is incarnate (in some form, including the church) within the virtual world. If the answer is yes, then one can conceive of the mediation of grace through the materials of that world, i.e., through digital representations." We would argue, on the contrary, that the virtual world in this sense is not a space at all. God's grace is present in the physical space from which real people access VR worlds, but VR is no more a space that God's grace inhabits than is an optical illusion.
38. See Justin Murff, and Ashley Staggs-Kay, eds., "A Primer on Digital Ecclesiology," The Institute of Digital Ecclesiology, 2020.
39. See "New Tools for World Evangelism," special issue of *World Vision Magazine* (October 1966).
40. "Computers for Christ," *Christianity Today*, October 14, 1966, 51; see also Edward R. Dayton, "Computerize Evangelism?," *World Vision Magazine* (March 1966): 4–5.

## Epilogue

1. Interview with Simon Jenkins (founder of the Church of Fools), conducted by Jonathan J. Armstrong on April 22, 2020.
2. Kevin Kelly, *The Inevitable: Understanding the 12 Technological Forces That Will Shape Our Future* (New York: Viking, 2016), 11.
3. One set of global broadcast events hosted by Pastor Nick Hall (Pulse Ministries) over the Easter 2020 weekend is reported to have totaled 1.7 million viewers on YouTube and Facebook in 43 languages with over 100 nations represented. Over 117,000 people responded to the gospel invitation. Some online commentators referred to this event as "The Great Quarantine Revival," <https://www.westernjournal.com/great-quarantine-revival-117000-new-confessions-faith-reported-one-ministry/>.