Between the late 18th century and the early 19th century, Western Civilization underwent the First Industrial Revolution. It was marked by a transition from manual production to mechanical production. The era became known for the development of steam and water power as well as mechanized tools such as the printing press, cotton ginning, and milling machines.

The Second Industrial Revolution, also called the Technological Revolution, began in the late 19th century. In it, innovators laid extensive networks of railroads and telegraph wires, while generating electric power to proliferate ideas faster than ever, over increasing distances. Innovations such as the mass manufacture of steel and automobiles marked this revolution.

The Third Industrial Revolution, also known as the Digital Revolution, occurred in the late 20th century. Facilitated by binary code, computers, information delivery over satellites, and manned space travel, defined this era of innovation.

Some contemporary technological innovators, analysts, and pundits assert that our globalized civilization is quickly changing and entering a Fourth Industrial Revolution that might be referred to as Industrial Revolution 4.0. An accelerated movement towards automation, robotics, and artificial intelligence characterizes this so-called ongoing fourth revolution.

These radical technological shifts not only reshape society but change our perception of humanity, and what it means to be human. We interact with digital technology almost every moment of the day. Artificial Intelligence has become pervasive as commonplace, being used in education, online shopping, social media feeds, search engines, and self-driving cars.

Christians need to carefully consider, understand, and appreciate the benefits and dangers that accompany these rapidly evolving technological advances. This class explores how to live during what I will call "Industrial Revolution 4.0" with Godly wisdom and virtue. The premise

of this lesson is that technology is amoral but our use of it is never morally neutral.[1] Our use of all things, including technology, is either Godly or ungodly. In light of this responsibility, we need to accurately use theology to distinguish true technological advances from actual degradations or outright occasions for sin.

My purpose in this study is to help us exercise restraint and take some time to consider our adoption, consumption, and use of technology. First, we will define what we mean by technology and explore the Biblical Foundation of technology. Then, we will consider an ideology that intersects our humanity with technology called Transhumanism. Finally, we will make some practical applications concerning our view and use of technology.

I. Biblical Foundations of Technology.

A theology of technology must begin with a theology of humanity; so, before I define "technology," I will define "human." God said in Genesis 1:26, "*Let us make man in our image, after our likeness. And let them have dominion…*28 *Be fruitful and multiply and fill the earth and subdue it…*" Our identity as God's image bearers radically determines how we think of ourselves and our world. Image bearing defines what it means to be human: A human is a unique and irreplaceable moral being with distinct, embodied DNA and an immortal soul, divinely made to relate to God, represent His image, and rule His creation.

Furthermore, image bearing has implications for our view of technology. First, no technological improvement can ever change our fundamental status as image bearers or eliminate our accountability to God. Next, humans do not fashion themselves; they are not their own and are not in control of their futures, despite what technology may promise. Finally, God calls his

---

[1] "Amoral" means neither moral nor immoral.

image bearers to steward technology in a way that glorifies Him and expresses love for our neighbor.

We bear the likeness of our Creator, and, as God created, so his image bearers create. Technology is what human beings are able to manifest as God's image bearers. So, what is technology? Technology is the application of our creativity and knowledge to conceptualize, create, and use our God-given ingenuity to innovate tools to achieve practical aims of human flourishing.[2] What does the Bible teach us about technology?[3]

First, technology is a gift from God. God commissions humanity to be fruitful and multiply, to fill and subdue the earth, and to exercise dominion over creation for his glory. Genesis 2:15 says, "*The Lord God took the man and put him in the garden of Eden to work it and keep it.*" We use our abilities to design and invent technology to perform our God-given tasks to "work" and "keep."

When I say "*technology*," your mind may immediately picture some digital technology, such as a smartphone. But every age has had its so-called technology, if but farming hoes, plows, hammers, weapons, woven baskets, or eyeglasses. Today, there are electrical, nuclear, solar, wind, mechanical, biomechanical, medical, laser, radiologic, and nanotechnologies. But remember, the wheel and the paperclip are also spectacular technological innovations! Human beings distinguish themselves from all other living creatures by imagining and innovating technological advancements. For instance, even apex predators, such as lions, have never developed new weaponry to hunt prey.

---

[2] Either man trusts and submits to God's defined aims and what it means to flourish or man, in his rebellion, devises his own aims and definitions.

[3] To avoid the potential for sin in a thing, it is essential that we understand it, and technology is no exception.

Second, our technology is subject to the curse. God curses Adam in Genesis 3:17-19 saying, "*cursed is the ground because of you; in pain you shall eat of it all the days of your life…*" Adam and Eve disobeyed God and alienated humanity from Him, each other, and their environment. The mandate to multiply and create remained, but the curse made it significantly more challenging. We now create primarily to survive and ease the burdens of the curse. (medical advances to address the curse of our bodies; weaponry as a substitute for peace; and herbicides to address the accursed land's which no longer easily yields an abundance).

God cursed the ground man works *and the man* who works the ground. Sin corrupted human nature just as it did mother nature. Instead of representing God and filling the world with his glory, we typically glorify ourselves and attempt to bend creation to our twisted will.

This curse has two implications for our subject matter: we now deliberately invent idols, and some of our innovations turn into idols. Paul taught about this in Romans 1:25, "*they exchanged the truth about God for a lie and worshiped and served the creature rather than the Creator…*" Technology can give us the illusion of control, but, when technology takes the place of God, it controls us and becomes a new golden calf. In Exodus, the people lost heart, became distrustful, and grew impatient with Moses; absence. In their petulance, they made for themselves a false god in the form of a golden calf as a substitute for the One True and Living God. We create idols that give us the illusion of control. Ironically, the things we invent to assist us in overcoming the curse can cause us to experience the curse's effects more because they draw our hearts away from depending on the goodness of God.

Third, technology is amoral but not morally neutral. In other words, technology "*in itself*" is not good or evil, but the human application of technology is always good or evil. Technology loses its neutrality as soon as moral agents put it to use. How? First, we image-

bearers use technology in morally charged ways to honor or dishonor God and love or hate our neighbor. Jesus said that the two greatest commands are to love God with total devotion and love our neighbor as ourselves. We learn from these commands that God designed human beings as "lovers," and every thought, attitude, word, action, habit, and aspect of one's character is to be harnessed as an expression of love appropriately toward God or improperly toward creation.

Consider Cain and Abel. Abel's shepherd staff is amoral by itself. Abel used it to shepherd sheep and honored God's call to exercise proper dominion. But, if Cain seized the staff and used it as a club to murder Abel, he dishonored God and impeded God's will and purpose of filling the earth by murdering an image bearer. In our sin, we use technology to rely on our abilities instead of God's. When our love is disordered, we either worship technology as an idol or technology enables idolatry. Therefore, we never to use technology amorally.[4]

Second, technology changes us when we use it. We make technology, but technology also remakes us. The object of our love reflexively forms us into its image. We experience changes in our attitudes and thinking in the course of using technology.

For example, advertisers pay to advertise to us on social media platforms (such as Twitter, Facebook, Instagram, LinkedIn, Google, Chrome, et cetera.). The social media companies sell analysts and advertisers not only exposure to their customers, but predictive certainty of their activity. Social Media companies track, monitor, and record everything we do on their platform, what we look at and for how long, to learn what products we like, values we entertain, political positions we hold to make better predictions about what ads we might peruse.

---

[4] Mediums of communication matter. The medium of the message has a message too, or at least effects the message. Consider a husband who apologizes to his wife by writing an email or a text message that states, "I am sorry, please forgive me. Love, Your Adoring Husband" verses sending flowers with the same message on a card (or saying it humbly in person).

Marketeers use the data collected by our choices to build models that predict the likelihood of our future actions. By their continual collection of data, they design and refine algorithms to capture our attention and ultimately influence our individual decisions. This information is sold, often without our permission. *We, those who use the internet at practically no cost* are not the ultimate beneficiaries of these internet services, but its most valuable product.

Our cost is payment with our privacy and security. And the social media companies profit handsomely by the sale of our data to advertisers, political, and government entities, who use it to further influence, control, and direct how we think, act, and even vote. Technology of this sort is not morally neutral because it influences and changes us and our society. We express ordered or disordered love under its influence each time we engage with it; and it, in turn uses us.

Technology is an inescapably broad topic as wide as the human imagination that has massively changed our lives and the world we live in. And it is inevitable that we consider and discuss our use of technology in the light of our faith as opposed to the foolishness of ignorance. If we do not take the time to properly frame technology in that light, our vision will be overtaken by the lust of our flesh, the lust of our eyes, and the pride of life.

Technology is a gift from God, subject to the curse, and is not morally neutral in human hands. However, we must not (indeed, we cannot) avoid it. Instead, we must evaluate it, employ it wisely, and ensure we have the right motives and goals for its use. Technology can further your love for God and neighbor or supply power to the idol factory in your heart. Ask, yourself, do you own your technology, or does your technology own you?

II. Technology and Transhumanism.

When sunlight darkens, black clouds form, and the atmosphere cools, you know a storm is coming. I speak of societal and ideological storms that represent philosophies, policies, and

worldviews that contradict and seek to cancel the laws of nature and nature's God. The ideologies behind abortion, unnatural sexuality, and transgenderism are storms that have already broken over Western society. But a new storm gathers on the distant horizon and it is on a collision course with humanity: Transhumanism: the "*futuristic tower of Babel*."[5]

What is Transhumanism? Julian Huxley, brother of the famous writer Aldous Huxley, is known as the father of Transhumanism. He wrote, "*The human species, can, if it wishes, transcend itself.*"[6] It's an audacious vision of humanity's future in relation to technology. According to Transhumanist philosopher Max Moore, "*Transhumanism is a class of philosophies of life that seek the continuation and acceleration of the evolution of intelligent life beyond its currently human form and human limitations by means of science and technology, guided by life-promoting principles and values.*"[7]

The evolutionary worldview drives the Transhumanist worldview. It spurs humanity to take "*control of its evolutionary destiny,*" overcome its material limitations through its technological control of nature, and transform themselves into something "*posthuman.*"[8] Yuval Harari summarizes transhumanistic ambitions well when he says: "*Success breeds ambition, and our recent achievements are now pushing humankind to set itself even more daring goals….immortality, happiness, and divinity.*"[9]

---

[5] Ian Harber and Patrick Miller.

[6] https://www.britishcouncil.ru/en/en/events/new-now-transhumanism

[7] https://whatistranshumanism.org

[8] https://medium.com/@justaham/transhumanism-morphological-freedom-is-individual-liberty-b51ea31de129

[9] Yuval Harari, Homo Deus; A Brief history of Tomorrow, 21.

Dr. Jacob Shatzer wrote a helpful book on this subject called: *Transhumanism and the Image of God*. I recommend that you read the book to understand his perspective. He notes that we can follow Transhumanism's philosophy in three steps.

The first step of Transhumanism's philosophy is **Morphological Freedom**, defined as "*the freedom to take advantage of any technology to change yourself in any way you desire.*" This "change" means human enhancement—actions to add to or change human nature (distinct from reparative surgery, eyeglasses, braces, etc.). These changes include **reproductive enhancements** (such as embryo selection, genetic engineering), **physical enhancements** (such as plastic surgery, performance-enhancing drugs, powered exoskeletons, space colonization), and **mental enhancements** (such as the use of technology and microchips to enhance cognitive functioning and creating super-intelligent machines).

Transhumanists believe humans achieve happiness through self-determinization and self-construction. So, they consider human enhancement an *inherent* moral good and an individual's *inherent* right. A prominent example of this ethical framework is transgender treatments and surgeries, but other subtler examples exist. For instance, virtual worlds, like *Second Life*, facilitates a person's choices of new looks and identities.

Augmented Reality is the second step in Transhumanism's philosophy. In this step, man *merges* with his machine, and technology mediates his experience of reality. For example, Google Glass and Pokemon Go facilitate augmented reality. These technologies erase the distinction between online and offline and integrate them into one experience.

Transhumanist believe we can digitally reconstruct what it means to be human and what it means to live in this world. Even now, scientists are studying the effect of embedded microchips in monkeys' brains. The chip enables them to move a robotic arm with their

thoughts.[10] The interface between the biological and mechanical technology would drastically alter how we think about human nature and the reality around us. This type of development sounds far off, but remember that wearable technology such as watches and glasses already opens the door to merging augmented reality with everyday life.

Step three in Transhumanism's philosophy resembles a Science Fiction movie more than it does reality: Mind Uploading. Mind Uploading means moving human consciousness and memory to a computer. I only mention this step because some transhumanists consider "Mind Uploading" as their version of "immortality." Christians know that this is impossible. Consciousness comes from and resides in God "*in whom we live and move and have our being*," according to Acts 17:18. The essence of life is God's, alone, to give and take away. The Preacher of Ecclesiastes says, "*As you do not know the way the spirit comes to the bones in the womb of a woman with child, so you do not know the work of God who makes everything*." (Ecclesiastes 11:5). Before you write this step off as impossible or irrelevant, consider how much data about ourselves we already upload to the internet or our computers. In some ways, our social media platform and software programs are a lower-grade version of our "*mind clone*."

Transhumanist philosophers believe that developing Artificial Intelligence will lead to the achievement of their vision. Artificial Intelligence is "*nonbiological intelligence where a machine is programmed to accomplish complex goals by applying knowledge to the task at hand*."[11] Artificially Intelligent [AI] systems are now becoming convincingly pervasive in

---

[10] Andy Clark, *The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future*, 118.

[11] Jason Thacker, *The Age of AI*, 23-24.

everyday life, but Google Home, Amazon's Alexa, Apple's SIRI, and OpenAI's ChatGPT are tangible and famous examples of this rapidly emerging technology.

Science Fiction movies, like The Terminator and Matrix, sought to provoke us to fear AI, but some worries are more mythical than possible. For instance, AI will never become "conscious" or anything more than **ARTIFICIAL [FAKE, or COUNTERFEIT]**. Machines can never have the understanding or love, let alone transcendent spiritual life which was breathed into Adam as an immortal soul by God, fundamental to conscious human existence.[12] Nor will ARTIFICIAL Intelligence "turn evil" (at least as the Bible defines evil) since **ARTIFICIAL Intelligence** does not represent an embodied moral agent accountable to God.[13]

Even so, it seems important to state that the AI developers, users, evil beings, and even the AI, itself, may pursue misaligned goals that diminish human flourishing instead of enhancing it.[14] Many rightly fear AI's exponential capabilities to supersede human intelligence because

---

[12] Understanding means grasping what a thing is, how it has come to be, and what it is like, knowing it through personal experience by participation or repudiation, and enjoying it properly. Love is the source, sum, and unity of all virtue, eternally originating from the Being of the Triune God, perfectly demonstrated to humankind in the incarnate person and redeeming work of Jesus Christ, and intelligibly known through the Word of truth, the gospel. Love is the unconditional, sacrificial, and never-ending commitment that *delights* supremely in God, *joyfully* serves the highest good of others, and is accompanied with *affection* appropriate to the relationship and the Christlike disposition suitable to the situation.

[13] My people have committed **two evils**: *they have forsaken me*, the fountain of living waters, and *hewed out cisterns for themselves*, broken cisterns that can hold no water (Jeremiah 2:13).

[14] https://www.nytimes.com/2023/05/01/technology/ai-google-chatbot-engineer-quits-hinton.html The "Godfather of AI" resigned from Goggle to sound the alarm over unregulated AI development. The article notes, "his immediate concern is that the internet will be flooded with false photos, videos and text, and the average person will "not be able to know what is true anymore…He is also worried that A.I. technologies will in time upend the job market. Today, chatbots like ChatGPT tend to complement human workers, but they could replace paralegals, personal assistants, translators and others who handle rote tasks. "It takes away the drudge work," he said. "It might take away more than that…Down the road, he is worried that future versions of the technology pose a threat to humanity because they often learn unexpected behavior from the vast amounts of data they analyze. This becomes an issue, he said, as individuals and companies allow A.I. systems not only to generate their own computer code but actually run that code on their own. And he fears a day when truly autonomous weapons — those killer robots — become reality.. The idea that this stuff could actually get smarter than people — a few people believed that," he said. "But most people thought it was way off. And I thought it was way off. I thought it was 30 to 50 years or even longer away. Obviously, I no longer think that."

intelligence enables control. For example, by being smarter, we control animals much larger and stronger than ourselves in a zoo. We create and utilize AI to seize greater control of the world and our lives. But technology can subtly reverse the positions of dominance to control us.

The Transhumanist ideology, where adopted, amounts to a rejection of *human nature itself*. Transhumanism promotes the belief that human nature and the limitations of the natural world can and should be overcome. Deion Kathawa writes, "*Nature comes to be viewed as inert matter devoid of any inner purpose and structure, to be manipulated according to the whims of the powerful, in particular technocrats*."[15]

How do Christians answer the fundamental philosophical questions raised by Transhumanism? **First, Christians identify precisely 'what is real' and what is not real!** Jesus, in his incarnation, entered our material world and took on a human body. God in Christ assumed humanity to redeem humanity. He does not intend to release us from our embodied existence but to redeem it. The redemption he accomplished includes a redeemed and resurrected body. The incarnation and our redemption affirm embodiment and our physical presence in a physical world. One author wrote, "*Alienation from our bodies is a form of alienation from God.*"[16] The desire to escape our bodies and the natural world entirely is a product of the Fall.

Second, Christians identify precisely 'where is real' and where is not real! God made creation a home for humanity. Having bodies means God intended our presence to be local and particular. Christians do not reject the reality of creation but anticipate its actual renewal.

Furthermore, being in the church means physically gathering in a physical place: "*For WHERE* (temporal/spatial word) *two or three are gathered in my name, there am I among them*"

---

[15] https://www.thepublicdiscourse.com/2022/01/80102/

[16] Tara Owens, *Embracing the Body*, 54.

(Matthew 18:20). Live streaming is not a substitute for gathering, and we must resist the commodification of the church gathering by treating it like a Netflix series. In other words, we must not change the church from something we participate in into something we watch.[17]

   Third, Christians identify precisely 'who is real' and who is not real! Christians believe that true happiness is found in God, not in self-creation, redefinition, or submission to false deities such as Artificial Intelligence or new religions such as Transhumanism. Christians understand identity as a gift that God, alone, gives one, either as an image bearer or, to individual Christians, as children of God. As Paul writes, *put on the new self, which is being renewed in knowledge after the image of its Creator*" (Colossians 3:10). Our new self is a new spiritual life.

---

[17] See the statistics according to the Office of the U.S. Surgeon General that graphs our national trends for social connection. From 2003 to 2020, there is a twenty-four-hour increase in time spent in social isolation per month, a five-hour decrease in household social engagement, a reduction of fourteen hours per month spent in social companionship, and a decline of twenty hours per month in socially engaging with friends. https://www.hhs.gov/sites/default/files/sg-social-connection-graphic-trends.pdf

III. Practical Applications (as a third point and/or as a handout).

    A.   Exercise dominion over the Technology you use.

        1.   It is wise, generally speaking, for spouses to share **program passwords** to avoid creating hiding places and share mutual accountability.

        2.   It is wise, generally, for **Parents to have total access to their children's technology**.

        3.   It is wise to buy and assiduously use **filtering devices** and accountability software.

        4.   **Delay giving children smartphones and social media accounts until later in their teenage years**. Rates of juvenile depression, anxiety, and suicide have climbed steadily since 2010, especially in the case of girls, about the time when social media and smartphones began to be ubiquitous; social media is also a common denominator in the spread of transgender ideology).[18]

    B.   Show up Physically and Converse with others

        1.   **A lack of physical presence can often mean a deprivation or lack of love**. It may be experienced as a loss of hope.

            Hebrews 10:23-25 states, "*Let us hold fast the confession of our hope without wavering, for he who promised is faithful. And let us consider how to stir up one another to love and good works, not neglecting to meet together, as is the habit of some, but encouraging one another, and all the more as you see the Day drawing near.*"

        2.   **Consider making breakfast, lunch, dinner, and car time opportunities to have meaningful talks with young persons in your life**. Deuteronomy 6:7 states: "*And thou shalt teach them diligently unto thy children, and shalt talk of them when thou sittest in thine house, and when thou walkest by the way, and when thou liest down, and when thou risest up.*"

        3.   **Consider using a paper Bible**; Studies indicate that Bible applications and software tend not to result in deep knowledge, understanding, and responsiveness to Scripture, its doctrines, precepts, and practical applications. For example, one researcher administered a "Bible comprehension assessment" to one group of evangelicals with digital bibles and another with paper. Comprehension was noticeably lower among participants in the digital group. Moreover, Dyer observes that "the screen appears to induce a mood

---

[18] https://jonathanhaidt.substack.com/p/why-some-researchers-think-im-wrong

that is more confused [and] less spiritually nourished" than that induced by print Bibles.[19]

C. "Talk" to your technology meaningfully.
  1. **Think twice** before you make a statement or an accusation that could ruin a person's reputation or impede their spiritual progress**.** A good name is to be chosen rather than great riches, and favor is better than silver or gold (Proverbs 22:1).

  2. **Ask Questions and Make Demands** of the technology you use
    i. What are the benefits/opportunities and costs/risks?
    ii. What is the message in *the medium*?
    iii. How will it create a different world?
    iv. Who does it shift power to?
    v. How does it potentially remake us?

If the technology that you use does not meet your demands, it is likely unwise and certainly unproductive to use it. In such a case, the technology is definitively using you.

Book Recommendations

Tech-Wise Family, Andy Crouch

12 Ways Your Phone is Changing You, Tony Reinke

The Age of AI, Jason Thacker

Transhumanism and the Image of God, Jacob Shatzer

God, Technology, and the Christian Life, Tony Reinke

---

[19] https://www.thegospelcoalition.org/reviews/people-screen-dyer/