

Sin and Grace

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INTRODUCTION

We close this volume with a reflection on sin and grace, in hopes of leaving the reader with a practical, edifying, and durable perspective on the implications of artificial intelligence. Whatever unforeseeable challenges and opportunities AI brings in the years to come, the fundamental question will remain unchanged: How then shall we live, with wisdom, to fulfill our calling as bearers of the image of God beholden to the creation mandate?

The theological lens of sin and grace gives a broader and deeper viewpoint than mere ethics. Ethical analysis is of course useful and necessary, but ethics alone is not enough. Ethics apart from a robust, holistic understanding of humans as persons-in-communion will remain mired in reductionist thinking about human dignity and morality. Therefore, this final chapter addresses the ethical issues of AI through the lens of sin and grace.

Sin and grace are inextricably linked. As Martin Luther says, “The more you minimize sin, the more grace declines in value.”⁴³³ The triune God reveals the redeeming, unstoppable power of grace in the free gift of Jesus Christ, who bears the sins of the world: “When he bears it, even the greatest of sins cannot damn.”⁴³⁴ In these next few pages, we will examine the routes by which sin enters into our engagement with AI, and we shall see also how God’s redeeming grace prevails. The aim of this chapter is to find guiding theological principles that can serve as a foundation for wise engagement with AI.

A MODERN-DAY PARABLE

To begin, I offer a story by way of illustration. The AIs with the greatest impact on our lives are probably those we think about least. Such is the irony of our tech-infused culture. Artificial intelligence rushes into daily life in an irreversible steady stream, flowing from the heights of cutting-edge inventions to the taken-for-granted commonplaces of daily life. This is as true of the benefits of technology as it is of the moral hazards carried along with the current as it flows downstream with gathering force.

Consider the mundane act of ordering a ride. A few taps on the phone, or a simple spoken command, “Get me a ride to my appointment!” summons a car. The car arrives shortly. The rider climbs in knowing the fare, travel time, driver’s name, and quantified customer ratings of the driver’s service record. Similarly, the driver knows the name of the rider, the most efficient route, and information about the rider’s appointment, ride history, and preferences. Passenger and driver might strike up a conversation, but it is unnecessary. The app handles all the logistical details seamlessly, so there is no need for any human action, other than for the driver to drive the car. (In a few short years, the driver’s job will disappear, of course. Human drivers are merely a transitory mode in the business model of the ride company, soon to be eliminated by a fleet of self-driving cars.)

This story is boringly ordinary. Of course, we might wonder what work the driver may be able to find next, and we can raise questions about the treatment of employees in the gig economy. But for the moment, we see that the driver has a job that provides enough incremental income to make it worth doing, apparently. On the surface, it looks like everyone wins. The rider receives cost-effective service, the driver has employment, and the company makes a profit. The whole system is run by the ride-hail company’s AI, which delivers benefits to all concerned. But there’s more to the story. . . .

By the time the passenger gets in the car, AIs have already calculated the potential value her itinerary might bring to third-party marketers and data brokers whose AIs are bidding to acquire the data stream generated by her trip. Other AIs have also figured out whom she is meeting, and have a good guess as to the purpose of the meeting, what kind of mood she will be in when she departs, and where she might want to go next. This data also may be of value to third parties. Meanwhile, another AI is running an A/B experiment on the driver’s behavior in response to messages that might or might not persuade him to go immediately to another part of town. The goal of this experiment, of which the driver is unaware, is to move multiple drivers into in a neighborhood where the company can optimize profits by surge-pricing rides for inebriated customers that may be spilling out on to the street in the next twenty minutes or so. Another fact of which no one is aware is that AI has figured out route planning that will shave a second or two off the average time it takes to reposition drivers by routing them through residential neighborhoods, where they typically drive faster than the posted speed limits. This particular driver has been in the car long enough to need a break, but that does not enter into the AI’s calculations. Each of these AIs is continually learning how to improve as they feed on an ever-growing volume of data, reaching further into the personal lives of the people involved. The driver-management AI, for example, keeps improving by gathering more data about the driver’s habits and by monitoring the activities of his family members. Meanwhile, the passenger in

the backseat is engaged with multiple AIs as she scrolls through messages on social media from friends, bots, advertisers, and the social media platform. It is quite possible that these AIs will sufficiently absorb her attention such that she will not speak with the driver and have no awareness of what is happening on the streets along the way. That is, unless the AIs decide to draw her attention to anything along the route that might induce her to spend money. All of these AIs are becoming better at their jobs as they grow in perceptivity of emotional states, fed as they are by increasingly massive streams of data from microscopic video cameras and sensors capable of discerning eye movement, skin temperature, respiration, pulse, body language, and other metabolic indicators.⁴³⁵

Is there anything wrong with this picture? Ethical arguments in defense of AI come easily. After all, at every step of the way the actions and motivations of the people involved in this scenario, as well as the intentions of the AIs deployed by the ride-hail company, can be justified in terms of convenience and efficiency. That is, if we ignore the absence of concerns about environmental and justice issues that never find their way into the justifications of the benefits delivered by the AIs involved in the business models described in our story. The function of the AIs can be defended as merely standard business practice and good faith attempts to improve customer experience and grow revenue. Furthermore, the argument can be made that there is nothing immoral going on here, because the individuals involved—the passenger and the driver—have free will and bear personal responsibility for their own choices and behavior.

These are the sorts of arguments commonly used to claim AI (and technology in general) is devoid of moral implications. In our secular age, the most common means of evaluating the trade-offs involved in the deployment of AI and other technologies is to analyze the pros and cons in terms of cost-benefit analysis. Any attempt to evaluate the morality of the actions and intentions of this scenario is likely to devolve rapidly into a discussion of utilitarian value propositions and perhaps the need for transparency or privacy protections. These concerns will not ever arrive at an understanding of core, transcendent values such as human dignity, righteousness, holiness, and shalom. Utilitarian ethical analysis is important, of course, but without a solid theological foundation, it will fall short of the mark.

To see beyond the merely utilitarian calculation of trade-offs that emerge in our engagement with AI (or any other technology) we must view the issues through the lens of a coherent, theological understanding of human life. Religious faith provides a context in which to make sense of the impact AI has upon spiritual reality, and to hold as central the ineffable worth of human life and relationships. This is why we have to look beyond merely ethical categories in order to see the deeper significance of AI. We need spiritual wisdom to see how our engagement with AI changes us. We need theological understanding to discern whether we are using AI wisely, that is, to walk in paths of righteousness, in step with divine reality, and to not be distracted and led astray. These are theological issues. They provide a foundation for ethics and inform ethical deliberation, but theological insight exceeds the grasp of reductionist ethical categories of thought. Hence, the value of seeing the issues through the lens of sin and grace.

DOES AI OPEN A NEW DOOR ONTO SIN?

Is there really anything remarkably different about AI as compared to other technologies that increases its propensity for sin? At a very basic level, all technologies are similar in that they can be used for either good or evil. Our contention here in this chapter is this: Even though the fundamental characteristics and risks of technology have always been part and parcel of human culture, there is something new and worthy of fresh consideration in the types of challenges posed by AI.

There is something mesmerizing about the power technology puts in human hands. Until the advent of computers in the mid-twentieth century, this power was essentially physical; technology magnified strength, work, and skills requiring dexterity and speed. In the information age, technology magnified human powers of observation and calculation. Today we are on the cusp of a new era in which AI magnifies mental power. Artificial intelligence can augment, mimic, and even replace human thought. Whether AI can truly be said to match humans in terms of understanding, semantic reasoning, and moral discernment is a question for metaphysics and theological philosophy. The practical reality is that AI has more power over human attention and decision-making than anything in human history. It is incumbent on people of faith, therefore, to seek understanding in the ways that AI might engender channels for sin that other technologies have not. This is the more pointed question that will occupy our attention in the remainder of this chapter.

WHAT IS SIN?

To put it simply, sin is movement away from God. This can take many forms. Sin can be deliberate or unintentional, individual or communal, chaotic or systemic. The Bible shows sin arising in many different forms—disobedience, rebellion, corruption, unrighteousness, pride, folly, and hubris, to name a few. The most fundamental sin in the Old Testament tradition is the wandering astray of Israel, God's people, from covenantal relationship with God. Similarly in the Synoptic Gospels, the fundamental sin is to miss the mark by failing to recognize the promise of God's grace and relationship in the person of Jesus Christ.⁴³⁶

The Old Testament uses several different Hebrew words to connote sin, the most frequent being: *aa* (), “deviate or miss the

mark” (e.g., Exod 20:20; Lev 4:13–14; Hos 13:2); *pša* (), “rebel, or transgress against God, Torah, covenant, or others” (e.g., 1 Kgs 12:19; Isa 1:2); *wn* (), “iniquity, or deliberate wrong doing” (e.g., Gen 44:16; Jer 2:22; Isa 59:2–7; Dan 9:5); *rašaa* (), “to be wicked or to reject God” (e.g., Exod 9:27; 1 Sam 24:14; Isa 13:11).⁴³⁷ The most common New Testament verb is *hamartan* () and its noun cognate, *hamartma* (). This is the word most often used in the Septuagint to translate *aa*, and it carries the core meaning of “to deviate or miss the mark,”⁴³⁸ miss the target, or take a wrong road.⁴³⁹ This is the common New Testament term for sin as concrete wrongdoing, moral guilt, conscious opposition to God, and the violation of God’s law (John 8:46; Jas 1:15; 1 John 1:8).⁴⁴⁰ In Romans 5–8, Paul uses this word to speak of sin as a personal force of evil and wrongdoing (cf. Rom 5:12; 6:12, 14; 7:17, 20; 8:2).⁴⁴¹ Each of these various words from both the Old and New Testament conveys a sense of wrongdoing, so it might seem like common sense to equate sin with moral wrongdoing. This leads to a seriously mistaken understanding of sin, however. Sin and ethics (understood as discerning right vs. wrong action) are not the same thing. Sin is not reducible to a set of ethical principles, the fundamental reason being that ethical principles and moral deliberation do not convey the mind of God.

Cornelius Plantinga reminds us that “sin is a religious concept, not just a moral one.”⁴⁴² Sin is not an ethical diagnosis, but rather a theological statement. Mark Biddle amplifies this important point: “Sin is not the violation of some moral code, but the inability or unwillingness to recognize the presence of God.”⁴⁴³ As Robert Jenson says, “The only possible definition of sin is that it is what God does not want done.”⁴⁴⁴ Thus, there exists no free-standing set of biblical rules—neither the Ten Commandments nor the Mosaic law, nor any other discrete biblical injunctions—capable of answering the never-ending stream of ethical questions that arise from the adoption of new technology.

SIN IMPLICIT IN TECHNOLOGICAL CULTURE

To discern the presence and potential for sin, it helps to reflect on the question, “What is happening here that might go against God’s desire?” God desires that people live in shalom⁴⁴⁵ and righteousness. God desires justice. Sin shows up in the corruption of shalom, which occurs when unrighteousness leads to injustice. These are outwardly visible signs of the effects of sin. Reflecting on the scenario above, we ask if there is any injustice being done to the driver by coercive or unfair treatment. Is shalom being damaged by intrusion of the AI into personal relationships? Is the AI coercive in ways that do not take into consideration the best interests of the people being manipulated?

Technology falls prey to sin when used to fulfill goals that run counter to God’s desires. As with other technologies, AIs suffer from the unavoidable presence of sin implicit in the pursuit of goals that suboptimize against the overarching priority of shalom. This problem persists despite even the best intentions of technologists. Good motives are an insufficient shield against the infiltration of sin because the technology itself requires quantifiable objectives, and such constraints are reductionist. The biblical concepts of righteousness, justice, and shalom are irreducible.

Anna Wiener sums up the problem inherent in the goal-seeking technology of platform companies: “The endgame was the same for everyone: growth at any cost. Scale above all. Disrupt, then dominate.”⁴⁴⁶ Plantinga explains the effect theologically as “the turning of loyalty, energy, and desire away from God and God’s project in the world: it is the diversion of construction materials for the city of God to side projects of our own, often accompanied by jerry-built ideologies that seek to justify the diversion.”⁴⁴⁷

As mentioned above, the common moral argument in defense of AI-empowered platforms is to say that technology is morally neutral, that is, neither moral nor immoral. It simply exists. Like a hammer, wheel, or gun, the technology is not the source of sin, but rather the person is. At a superficial level, this argument seems logical. Certainly it is correct to say that moral responsibility resides in the person using the tool. However, AI is different than simple tools in that it is automated and is put in control of systems that exercise power on a large scale. This autonomous power comes with moral hazards and the potential to be employed in the outworking of sin. The argument of the moral neutrality of technology is problematic because the creation, development, and usage of technology is bound up with human agents that are sinful, and therefore sin gets embedded in that creation, development, and usage.

The moral hazards embedded in the autonomous systems controlled by AI are often subtle and easily ignored, especially because the benefits are so clear: success in vaccine development and medical diagnosis, solutions to energy efficiency and traffic jams, improved delivery of social services, and of course cost-saving efficiency in any number of jobs. The valuable benefits of technologies do not however erase the impact of sin. The easiest way to lose sight of the moral and spiritual issues related to AI is to presume that technology is morally neutral and to ignore the influence of sin in our relationship with it.

Injustice and corruption of shalom are visible and tangible outcomes of sin. The deep roots of sin, however, are hidden matters of the heart. The story of Adam and Eve of course serves as the archetype. Their sin originates in the heart and leads to alienation—from God, from each other, and even from the land. Alienation turns out to be the deep-seated, fundamental effect of sin.

ALIENATION

In the scenario depicted above, alienation is a recurring theme. Perhaps in the best case, alienation might be avoided, or at least mitigated, by the goodwill, wisdom, and spiritual awareness of the people in the story. Nonetheless, their engagement with AI puts them in position to be manipulated by systems that do not take their human dignity into consideration. The driver's awareness and behavior present a target of opportunity for the AI that optimizes logistics for the company. Other AIs are aimed at manipulating the passenger's awareness and behavior. The AIs engage with the people as if they were data sets. There is no personal, human interaction or empathy in the system. Grace does not enter into the calculations of the AIs. There is only the mechanization of monetization schemes. Alienation works to the advantage of the AI-based systems. People can be more easily influenced by motivational nudges when they are paying more attention to AI-initiated apps and less attention to God, others, and self. Alienation forms the root of sin. As Donald Bloesch says, sin is "estrangement or alienation from the ground of our being."⁴⁴⁸

This would seem to be the pattern of sin ever since Eve and Adam ate the forbidden fruit. To turn away from God was the first sinful impulse of humanity (Gen 3:8). Paul points to this separation as the root of sin (Rom 1:21–22) and describes both personal and corporate sin in terms of alienation (Eph 2:12, 4:18; Col 1:21). Paul Tillich lends a modern voice to this understanding of sin as alienation: "Our basic human condition is a state of estrangement of man and his world from God."⁴⁴⁹ For Tillich, alienation is "our act of turning away from participation in the divine Ground from which we come and to which we go [and] the turning towards ourselves . . . making ourselves the center of our world and of ourselves."⁴⁵⁰

The themes of alienation and estrangement are fitting in the context of the relational turn in theology and philosophy during the twentieth century.⁴⁵¹ Trinitarian theology constructs a doctrine of *imago Dei* in terms of the human person's participation in, with, and through the life of the relational God. Karl Barth represents this relational turn in theology, pointing to relationship with God as the source of identity and existence. This relationship is not "merely one of many determinations of our being, derivative and mutable, but the basic determination, original and immutable."⁴⁵²

To turn inward on oneself and put the creative self at the center of meaning is an act of alienation, a turning away from divine reality (God) and a turn inward to put oneself at the center as maker of the world and definer of reality.⁴⁵³ This inward turning movement is spoken of as *homo incurvatus in se*—humanity curved in on itself. Martin Luther built on this idea and developed the theme of *homo incurvatus in se* systematically in his commentary on Romans.⁴⁵⁴ Matt Jenson traces this sense sin back to Augustine, who understands it as "the willful re-direction of attention and love from God to the human self apart from God which results in alienation from God and the fracturing of human society."⁴⁵⁵

The link between AI and these sorts of alienation is indirect. The technology itself does not induce alienation; rather, the way that the technology is used is the source of the problem. Alienation becomes an issue when AI is used to isolate and insulate individuals from relationships and from their own moral agency. Reinhold Niebuhr's emphasis on "will to power" as the fundamental source of sin is helpful in tracing the connection between the power of technology and the practical effects of alienation:

The will to power is the inclination of the human creature to try to subjugate its environment (including other persons) . . . to place itself at the center of its existence and, in so doing, to arrogate to its personal reality the false status of ultimate reality.⁴⁵⁶

Eberhard Jüngel similarly picks up on the theme of alienation, calling sin "the urge towards relationlessness and dissociation."⁴⁵⁷ The sinner is so alienated that they become cut off from all relationships, even from God and oneself.⁴⁵⁸ For Jüngel, sin is directly linked with the modern psychological ideal of self-realization as the epitome of ego-strength and psychological well-being.⁴⁵⁹

Alienation takes different forms. A person can deliberately turn away from God in an act of defiance, or wander aimlessly away through ignorance or indifference, which is the sin of acedia. In either case, the effect is the same: estrangement increases with distance from God. This is because, in the absence of a healthy relationship with God, the soul, which continues to hunger for connection with transcendence and divinity, will fill the void of its longing by turning inward. Thus, the self becomes the center of all being. Ironically, this form of estrangement develops through a growing separation from God and ends up in the collapse of distinction between God and self-as-god. This is the sin of desiring to be "more than human"—to become equal to God, which in essence merges one's personality into the Godhead without drawing any distinction. This is another aspect of the original sin of desiring the knowledge of good and evil, and thus to be like God (Gen 3:5). Albert Borgmann describes this mechanism of sin as "collapsing dimensions of reality."⁴⁶⁰ To collapse the dimension of one's relationship with God, and of participation in the divine purposes God has for the world and for oneself results in a singularity of equivalence between self and God.

Artificial intelligence can enable the process of such a collapse to the extent that it feeds the myth of human capabilities as the ultimate good. As AI becomes better at augmenting human thought, becomes increasingly adept at reading interior moods and

discerning how to please, and offers unprecedented control over one's interactions and environment, it has the potential to feed the desire to be "more than human" and to be the master of one's life.

The unprecedented power and potential of AI to augment human reality opens enticing opportunities to take control of reality and life itself. Fanciful as it is, we might even imagine Satan holding up the futuristic prospects of super-AI as a sort of fruit, saying, "eat of this fruit and you can escape your human mortality and live forever." Just as it was with the forbidden fruit in the Garden, this is a blatant lie that elides the fact that AI has nothing to offer when it comes to the living reality of human consciousness, let alone the promise of eternal life.

Preposterous as their ideas might be, some enthusiasts tout AI as a technological route to a godless salvation. Some futurists look forward to the day when AI will surpass humanlike general intelligence and achieve cybernetic immortality. This is the basis for transhumanist theories of evolution, in which intelligent computers supplant the human species.⁴⁶¹ The most "evangelical" transhumanists make the claim that these future intelligent machines will be sophisticated enough that humans will be able to upload their consciousnesses into them.⁴⁶² Tom Stonier, for example, predicts, "the cosmic function of Humanity is to act as the evolutionary interface between Life and Intelligence."⁴⁶³

This is the epitome of *homo incurvatus in se*. At this point humanity will have so completely curved in on itself that the self will have resurrected itself into eternal life. This represents a singularity in sinfulness. At this point, the self would be the source of eternal life, and at the same time the self would become creator, creation, and redeemer all in one. It is utter idolatry, and (*pace* Barth) utter stupidity.⁴⁶⁴ "To replace relationship with God with relationship with our own artifacts, in the form of computers, is the clearest form of idolatry."⁴⁶⁵

To the extent that popular culture leans into this understanding of the prospects unleashed by future developments in AI, idolatry will take root and grow, and the concept of sin will become irrelevant in the face of technological progress. Along the way, this worldview will begin to disparage the meaningfulness of the human body and the finite limitations of human persons. As Noreen Herzfeld points out, this worldview will be appealing to some futurists because it provides "a way to maintain belief in a reductionistic materialism without giving up the hope of immortality."⁴⁶⁶ The concept of cybernetic immortality is based on false assumption that "thoughts, memories, feelings, and actions define the human person."⁴⁶⁷

The limitless potential of AI to mimic human thought and behavior, and to vastly exceed human skills of information processing, may be compared to the limitless height of the Tower of Babel—a story we will examine below. Again, it is important to remember that technology itself is not the problem, but rather the moral and spiritual value that is invested in the outsize goals of human imagination to use technology.

SIN AS A PARASITE

Sin is a parasite, an uninvited guest that keeps tapping its host for sustenance. Nothing about sin is its own; all its power, persistence, and possibility are stolen goods. Sin is not really an entity but a spoiler of entities.⁴⁶⁸

The scenario described at the beginning of this chapter illustrates how sin can creep in and become a parasitic presence that feeds off the good energy present in the problem-solving prowess of AI. The sinful, parasitic activity that emerges from the AIs in this scenario take the form of manipulation of both the passenger and the driver. AIs manipulate them in ways that serve the economic engines of the corporate entities—the ride-hail company, the social media platforms, and their third-party partners. Sin works parasitically to divert the attention and/or distort the behavior of these persons. The AIs become disembodied agents not treating the persons affected as bearers of the image of God, but rather as objects to be manipulated. Wiener describes the disorienting, disintegrating effect social media programming had on her: "The algorithm told me what my aesthetic was: the same as everyone else I knew. . . . My brain had become a trash vortex."⁴⁶⁹ These influences, if unchecked, lead to disintegration of the person. This is a form of alienation because personal relationships with God and with one another have been distorted or overwritten by other demands upon attention. This is a corruption of shalom, as Plantinga says.

These parasitic effects are especially pernicious in that they are prone to arise even in the absence of any identifiable, discrete sinful choice. The parasitic effect is systemic; that is, it arises in social constructs and draws its energy from the relationships upon which it feeds. The system, as a whole, becomes the host for the parasite.

Again, it is worth pointing out that this evaluation of the influences of sin upon our engagement with AI goes beyond business ethics, stakeholder analysis, utilitarian calculations, or any other philosophical means of weighing costs and benefits in the balance. What we are discussing here has to do with the profound, inherent dignity of human beings and the fulfillment of their dignity by moving in the direction of communion with God and others. To consider the influence of sin upon our AI-mediated interactions and relationships is to open our eyes to the unfortunate, perhaps even unavoidable and unpredictable, ways in which these interactions can go "against God and nature."

One way sin corrupts this inherent goodness in nature is by putting a person in the frame of mind to lose sight of the greater

good of holiness, that is, of integral attention to the divine. Sin succeeds by persuading a person to exchange the truth for a lie—the lie in this case being a form of idolatry or false worship, for example, of efficiency, productivity, success, financial gain, or human admiration. McCall identifies this as “the pervasive sense of sin given in Scripture . . . is that it is *opposed to God’s good purposes in creation*.”⁴⁷⁰

Satan is wily. Sin has no life of its own, but rather it must steal life and energy from that which is good; thus it behaves as a parasite. C. S. Lewis explains, “Goodness is, so to speak, itself: badness is only spoiled goodness. And there must be something good first before it can be spoiled.”⁴⁷¹ Similarly, sin could not subsist without distorting reason and persuading human actors to go against their own self-interest and against reason. Luther says in his commentary on Romans 11 that sinners are those who have their eyes “darkened”; they “do not look to grace, which is from above,” but rather “their eyes have become blurred, . . . they remain curved in on their own understanding (*curvi in sensum suum*).”⁴⁷²

Because sin embarks on an unsustainable course—going against reason as it goes against God and nature—sin is ultimately futile, irrational, and simply “stupid,”⁴⁷³ to use Barth’s term for it. Sin thus needs to rely upon a certain amount of self-deception in order to propagate.⁴⁷⁴ Plantinga points this out: “Because it is futile, because it is vain, because it is unrealistic, because it spoils good things, sin is a prime form of folly.”⁴⁷⁵ Here is another ripe opportunity for sin to grab a foothold in our engagement with AI. People instinctively regard themselves as reasonable and moral actors. It goes against human nature to think of oneself as somehow lacking morality or rational behavior. The same goes for our perception of our involvement with AI. Developers of AI will presume that they are developing something good and providing something beneficial to humanity. Users and customers engaging with AI will naturally presume that they are making rational choices and in control of their actions. This protective instinct regarding one’s personal sense of integrity is both good and bad. On the one hand, it can provide confidence to stand up for what is right. On the other hand, it can devolve into a form of self-deception, such as by obscuring the sinful outcomes that may result from the manipulative influences of AI.

Think of the software engineer, for example, who developed the AI for driver management in the scenario above. The driver might presumably have confidence that the AI is merely optimizing business goals and presenting drivers with choices, which they are free to accept or decline in accordance with their free will and best judgment. It seems unfair somehow to find fault with the developer for falling victim to the self-deception of failing to recognize the moral hazards that the AI invites as it learns, acquiring and filtering personal data regarding individual drivers and using that information to manipulate them. Similarly, it seems unfair to find fault with the passenger in our scenario who is oblivious to both the injustices that might befall the driver, as well as the ways in which the social media platform she is using may be manipulating her attention.

Are these large, glaring, capital sins? No, probably not. Nonetheless, these examples show the parasitic effects of sin; it is always at the threshold, awaiting an opening to come in and infect whatever system it can. This is a good lesson to keep in mind, because AI-empowered systems have significant influence on human behavior, decision-making, and relationships, and the very power of AI to make decisions without human oversight means that it is easy to ignore the subtlety with which sin can creep in and infect the network. The “network effect” can magnify the sin before the humans in control notice how large the problem has become. Take, for example, the chatbot experiment that Microsoft had to shut down when it became infected by foul language and racial taunts it picked up from humans on the network.⁴⁷⁶ Perhaps the most glaring example of the parasitic effects of sin is the ongoing trend toward divisiveness and conflict fueled by social network AIs. Facebook and Twitter function as “echo chambers” in this way, as Abhijit Banerjee and Esther Duflo explain:

Such behavior leads to accidental and probably largely unconscious segregation. . . . We end up with multiple closed groups with contrasting opinions and very little capacity for communicating respectfully with each other. Cass Sunstein, a law professor at Harvard and a member of the Obama administration, describes these as “echo chambers,” where like-minded people whip themselves into a frenzy by listening only to each other. One result of this is extreme polarization on what should be more or less objective facts.⁴⁷⁷

It turns out in the case of these social networks that the AIs can monetize users most efficiently by distracting people from noticing the effects of sin. The Proverbs are rife with evidence of the clear connection between sin and the distracted self. Those who delude themselves with folly “set an ambush for their own lives” (Prov 1:18), are “held fast in the cords of [their] sin,” injure themselves (8:36), and so on (cf. 11:5–6; 13:13; 14:32; 28:10; 29:6).

UNINTENTIONAL SIN

As seen in the examples above, sin often arises from unintentional and even unnoticed choices and behaviors. It may well be true that the most impactful occasions of sin related to AI may be of this unintentional variety. After all, there are laws and social mechanisms in place to identify and deal with the most egregious sins. But unintentional sin can go unnoticed for some time and do serious damage before the problems are recognized and dealt with.

The Old Testament makes a clear distinction between intentional and unintentional sin. Leviticus 4 and 5 and Numbers 15 treat unintentional sins as a separate category of sin and specify different consequences and sacrifices for atonement of unintentional sins. These passages also make clear that either individuals or an entire community can commit unintentional sins.⁴⁷⁸

Unintentional sin is to be expected in the development and deployment of AI. How many developers and business analysts practice the discipline of worshipful attention to shalom and grace as they plan, design, and build technology platforms? Some do, of course, and they are salt and light in the industry. They are atypical, however. Wiener describes the normal situation when she tells of her own experience inside a big technology company:

It was perhaps a symptom of my myopia, my sense of security, that I was not thinking about data collection as one of the moral quandaries of our time. For all the industry's talk about skill, and changing the world, I was not thinking about the broader implications. I was hardly thinking about the world at all.⁴⁷⁹

Like corrosion that slowly and invisibly eats away at the foundation of a house until it collapses, unintentional sin can do significant damage in society and individual lives. This is a problem shared by all humanity. David expresses the dilemma common to human nature, shared by all, when he prays, "Who can discern his errors? Declare me innocent from hidden faults" (Ps 19:12). This prayer reveals the incipient risk of sin that pervades human existence—that even in hindsight, even with a searching heart and a spirit of repentance, we are not able to discern fully the extent of our sins. There will always be unforeseen ramifications resulting from unintentional sins.

Artificial intelligence promises to bring such a wealth of benefits and opportunities to improve life that it can be easy to overlook these unforeseen ramifications. The story of the Tower of Babel helps to illustrate how admirable intentions with respect to new technology can move society in sinful directions.

TOWER OF BABEL

Now the whole earth had one language and the same words. And as people migrated from the east, they found a plain in the land of Shinar and settled there. And they said to one another, "Come, let us make bricks, and burn them thoroughly." And they had brick for stone, and bitumen for mortar. Then they said, "Come, let us build ourselves a city and a tower with its top in the heavens, and let us make a name for ourselves, lest we be dispersed over the face of the whole earth." And the Lord came down to see the city and the tower, which the children of man had built. And the Lord said, "Behold, they are one people, and they have all one language, and this is only the beginning of what they will do. And nothing that they propose to do will now be impossible for them. Come, let us go down and there confuse their language, so that they may not understand one another's speech." So the Lord dispersed them from there over the face of all the earth, and they left off building the city. Therefore its name was called Babel, because there the Lord confused the language of all the earth. And from there the Lord dispersed them over the face of all the earth. (Gen 11:1–9 ESV)

The story is full of mystery and open to interpretation. Technology plays a central role in the events, as represented in brick-making, construction techniques capable of building a tower to the sky, and the complexity of the city itself.⁴⁸⁰ It would be a mistake however to read the story as a condemnation of technology. The text makes no particular comment on the morality of technology per se, which is consistent with the tone of Scripture as a whole. References to technology are scattered throughout the Old Testament. The Bible expresses God's judgment upon weapons—"Beat your swords into plowshares" (Joel 3:10; cf. Isa 2:4; Mic 4:3)—but otherwise offers scant moral judgment upon technology.

Sometimes technology is explicitly used for good purposes ordained by God, as with musical instruments for worship (Exod 31:1–11), and tools of bronze and iron for cultivating the land (Gen 4:21–22). Even spears, arrows, and chariots are occasionally called into action in keeping with God's will. Each of these references treats technology as a realistic, even necessary component of human culture, without pronouncing explicit moral judgment.

Thus, it seems technology is not the problem in the story of the Tower of Babel. Rather, it is the more complex and mysterious

effects of the state of people's relationship with God and each other that emerges as the crisis. The problem arises from the inclination of people to use their technology in ways that separate them from God and go against God in some indistinct, unspecified manner. Again, alienation is the telltale sign of sin in the story. It is not clear from the text whether the people's sin is intentional or not. That is a question open to interpretation, but it would seem to make no difference with respect to the ramifications of sin and God's action to foil their ambition.

God's severe judgment of the tower's builders rankles. There seems something admirable in their ingenuity and ambition. God's condemnation of their project comes as a surprise, because we have come to regard technology and progress as essential goods. Why does God foil their diligent efforts? These challenging questions serve as warnings to humans in every era to question their motives and seek God's will in the application of technology.

Perhaps the tower housed a temple of idolatrous worship, but that is speculative. The story does not mention it. Although the text is silent on the exact nature of the people's sin, it is clear that they have transgressed some God-given limit or limits. The story is a cautionary tale, therefore, for technologists in every age; anytime we embark on a journey of building new societal structures enabled by new technologies applied on a large scale, we should be mindful to hold up the prospects to the divine light of God's will.

So, although technology is implicated in the transgression, the story does not read as an injunction against technology itself. God does not condemn the people for being inventive, or industrious, or imaginative in their technological prowess. Rather, God condemns the desire of the people to "make a name for ourselves" (v. 4). The sin in this case, whether intentional or not, would seem to be willful separation from God. The story catches the people of Babel in the act of either rejecting or ignoring dependence upon God for their identity, security, and livelihood.

Although the story does not mention sin explicitly, sin operates on several levels. First and perhaps most salient is the point that the people desire to attain the power and majesty of God.⁴⁸¹ In the story, the tower with its tops in the heavens represents the overweening pride of this aspiration. This ambition echoes the age-old sin of desiring to be equal to God. Second, the tower itself can be viewed as an object of false worship, since the people will focus all their attention on building it. The very plan to build it requires all language—in other words, all ethnic and cultural diversity—to be subsumed within a single, universal, common language. Third, there is the sin of rebelling against God's divine will. Fourth, there is the sin of broken relationship, because the people do not consider God in their plans. They neither seek after God's will nor ask God's blessing on the endeavor.

The exciting, uncharted territories of AI offer myriad opportunities to construct new "Towers of Babel" and to "make a name for ourselves." One way this shows up is in the vision of many AI-intensive tech companies to "grow to the sky." The network effect says that the value of an information network grows exponentially with the size of the network. This explains why social media platforms, online retail platforms, and other business platforms strive to dominate their market spaces by offering services "for free." The result is a constant and growing pressure to monetize whatever user experience they can through manipulative methods.

It is worth noting that this is not a new problem in political economy. Dominant market power, like any other power, can corrupt. Trust-busting legislation in the United States dates back to the late nineteenth century. What's new in the case of AI-driven businesses is the scale and scope of information processing power to manipulate behavior, both individual and communal.

The spiritual ramifications of AI today are essentially the same as for the builders of the Tower of Babel—distancing ourselves from God by placing inordinate attention, devotion, and trust in our technology and the work of our hands. Biddle rightly names the problem common to all technological visions:

Strip away all the technology and gadgetry and one finds that the users are the same human beings who thought to ascend to heaven via a tower made of bricks with pitch for mortar. Christianity does not offer a utopian vision of perfected human society; it issues a call to the kingdom of God.⁴⁸²

Bricks and AI are both technologies of construction. The essential difference is that bricks are concrete, visible, and inert, while AI is hidden, intangible, and animated. Artificial intelligence grows with overwhelming complexity to scale new heights of cognition, make discoveries, discern patterns, intervene in personal relationships, and make decisions that are often inexplicable, unpredicted, and unmanaged. All the while, the machinations of AI remain invisible to the people impacted.

Another risk to spiritual health is the illusion that technological progress is capable of perfecting self and society. This faith in progress is "perhaps the most endemic form of rebellion in post-Enlightenment Western culture."⁴⁸³ The risk of idealism is prevalent in technology companies, and all the more so in those companies working with AI. There is a streak of techno-utopian idealism that pervades the culture of AI development and this idealism is most likely to lead to ethical breakdowns when it ignores the reality of sin.⁴⁸⁴ Mark Zuckerberg and Facebook show the problems of idealistic thinking. In testimony before Congress, Zuckerberg assured legislators that AI would solve fake news and other dire problems engendered by the algorithms driving his social media platform. This is a false hope. Artificial intelligence will not cure problems rooted in sin. Recognition of the self-serving idealism that idolizes technological prowess will help protect against unintentional and institutional sins.

The overwhelming power of AI tempts those who wield this power to manipulate and control the world according to their personal desires. Again, this inclination might seem admirable, but only in a superficial way. The root of the problem is alienation as we lose sight of our identity as fallen creatures dependent upon God for life and every blessing.

Perhaps the most egregious sin of alienation that follows from a utopian view of technology would be the outright rejection of God. The Tower of Babel symbolizes the desire of the builders to rise above their dependence on God and become masters of their own destiny. The seemingly unlimited prospects of AI can fuel this desire. This utopian worldview has gained momentum from authors who seize upon the emergent properties of AI as evidence that humankind will soon gain the power to transcend human limitations and claim divinity for itself. Yuval Harari, for example, argues as much in his book *Homo Deus*. Harari sees the eschatological goal of humanity as a technological project in which we will upgrade ourselves into new and improved versions. “Having raised humanity above the beastly level of survival struggles, we will now aim to upgrade humans into gods, and turn *Homo sapiens* into *Homo deus*.”⁴⁸⁵ The idea that humans could make themselves into gods would be the ultimate fulfillment of the desire of the builders of Babel to “make a name for ourselves.” This is the epitome of alienation from God.

Spiritual health demands the rejection of such delusions of grandeur. Therefore confession—that is, acknowledgment of our inability to save ourselves from our sins—is essential for spiritual health. Neither AI nor any other technology will enable humankind to become perfect and redeemed from sin; rather, we rely upon the saving grace of Jesus Christ, and him alone, for that.

We can expect this tension in our relationship with AI to persist for generations to come. For whatever existential or practical question lurks in the heart of human beings, there will be AIs offering to solve them. There will be AIs developed to provide spiritual counseling, to provide emotional companionship, to optimize lifestyle, habits, and interpersonal relationships. There will be AI personal agents to conduct business and intercede in conflicts. There will be AIs deployed to make any and all sorts of decisions, including decisions bearing significant moral freight.

In each case, there is a way to develop and deploy these technologies with wisdom, while staying aware of the dangers of alienating sin. There is another route that ignores or denies sin, and this route leads to death. The challenge set before the faithful, as always, is to choose life (Deut 30:19).

INSTITUTIONAL SIN

The sin of hubris might be most glaringly apparent in egoistic and individualistic efforts to become “more than human,” but the most dangerous variety of sin is institutional and systemic. In the scenario above, for example, the AIs not only influence the drivers and riders, but they also have a system-wide impact on traffic in neighborhoods and a host of other outcomes built into the business models of institutional partners of the ride-sharing platform. The sinfulness of these AI-controlled platforms is not premeditated. It comes about through the unmitigated and unsupervised operation of the stakeholding organizations. This is typical of institutional sin; it targets no specific individual, but yet it emerges as small, incremental sins flow undetected through channels of institutional power and gain momentum.

Like tiny weeds pushing their way through cracks in the sidewalk, sin creeps into institutions through the small unnoticed fissures in covenantal relationships. Sin needs very little purchase to start growing because it has a motive force, like an animal lust, in the language of Genesis 4:7. When this lust is given an opening to infiltrate human social relations, as it was with Cain and Abel, “everything is exploitation which has taken on a power of its own.”⁴⁸⁶ As Plantinga says:

Sin is not only personal but also interpersonal and even suprapersonal. Sin is more than the sum of what sinners do. Sin acquires the powerful and elusive form of a spirit—the spirit of an age or a company or a nation or political movement. Sin burrows into the bowels of institutions and traditions, making a home there and taking them over.⁴⁸⁷

Not only does sin pervert the function of institutions, but it also corrupts the norms and habits that comprise interpersonal communications and relationships. Institutional sin diverts awareness and intentions away from shalom, in rebellion against “God’s design for creation and redemption.”⁴⁸⁸ The self-propagating mechanisms of organizations make them conduits and distilleries for corruption and wrong-doing. Social scientists recognize this phenomenon even without referencing the theological significance of sin:

Although the beliefs that undergird the ideologies can be used by an individual in isolation, they become far more potent when institutionalized in the collective—when they are a shared resource that all can draw on and mutually affirm. . . . When the corruption is ongoing, these idiosyncratic social constructions tend to become woven into a self-sealing belief system that routinely neutralizes the potential stigma of corruption.⁴⁸⁹

Institutional sin corrupts relationships at every level—personal, interpersonal, familial, organizational, and societal. Plantinga

describes this damaging effect of sin as the “vandalism of shalom.”⁴⁹⁰

Gamification is one mode by which AI can become implicit in systemic sin. Although an AI may be intended to pursue an admirable outcome, if the humans involved are objectified and treated as components to be manipulated, the door is open to injustice and dehumanization. Referring back to our ride-hail example, Uber uses notifications and triggers to influence drivers’ decisions to stay on the clock in search of additional fares even when conditions lean in the direction that will suboptimize the driver’s pay in order to increase incremental profit. Yes, of course, we can argue that the driver has free will to make a decision in these cases. The point remains however that the AI learns to be deceptively good at timing messages and inducements in ways that do not necessarily work to the driver’s advantage.

As another example of institutional sin, consider the way in which AI contributes to political divisiveness, bigotry, and conspiracy theories on social media platforms. Even though no particular individual has intentionally mobilized the platform as an agent to corrupt shalom, that is nonetheless what the system ends up doing. The machine-learning algorithms of various AIs resident on the platform learn to feed parasitically on the emotional energy and fear of individuals, and the harm is magnified by the system. We see the problem vividly in the divisiveness which has been magnified in political campaigns. Divisiveness based in manipulation of people’s access to objective information and open-minded analysis is maximized by efforts to promulgate fake news and conspiracy theories. It is well documented that conspiracy theories are the most potent and toxic form of click-bait ever designed as manipulative ploys to grab attention and sway people by using spurious arguments and falsehoods.

Other examples of institutional sin include racial profiling in marketing, social services, health care, and the legal system in general. Injustice results when AI applications are not carefully screened and monitored for harmful bias. Ruha Benjamin has documented many examples of the ways in which racist policies propagate through technology.⁴⁹¹

GRACE

In the foregoing pages, we have surveyed paths by which sin parasitically infects AI and harnesses its power to cause alienation—from others, from nature, from God, and from self. The good news is that sin does not get the last word.

Gerald Manley Hopkins captures the inextricable link between sin, grace, and technology in the closing lines of his poem, “God’s Grandeur” (1877):

And all is seared with trade; bleared, smeared with toil;

And wears man’s smudge and shares man’s smell: the soil

Is bare now, nor can foot feel, being shod.

And for all this, nature is never spent;

There lives the dearest freshness deep down things;

And though the last lights off the black West went

Oh, morning, at the brown brink eastward, springs —

Because the Holy Ghost over the bent

World broods with warm breast and with ah! bright wings.⁴⁹²

The poem lands on solid theological footing with its closing image of grace: “And for all this, nature is never spent. There lives the dearest freshness deep down things.”

The smudge is unavoidable; we fallen humans are dependent upon the grace of God. All have sinned and fallen short of the glory of God (Rom 3:23; cf. Eccl 7:20). Everything we touch, every tool we build, and every economic gain we pursue bears, in some fashion, the stain of sin: “And all is seared with trade; bleared, smeared with toil.” As Kathryn Tanner says, our creations are, in and of themselves, penultimate, not ultimate goods. Only God’s grace can set things right:

Everything we do, even in the pursuit of penultimate created goods, is done in the wrong way, because done without one thing necessary for every good in life, a gift of God’s own goodness through Word and Spirit.⁴⁹³

Therefore, we rely upon God's redeeming grace to embrace our creativity and bless the work of our hands. In faith, we carry on in spite of the inescapable reality of sin. There is no other way for humankind to live, prosper, and fulfill the creation mandate to be fruitful and multiply (Gen 1:28). John of Damascus speaks of divine grace as "the care that God takes over existing things."⁴⁹⁴ We do not have a God who leaves us alone to fall into temptation and get lost in what the Psalmists calls the "pit of destruction" (Pss 40:2; 55:23; 103:4).

Humans are a technological race, endowed with the gifts and propensity to devise and use technology, and charged from the beginning with stewardship of God's creation. Despite the stain of sin, AI applications show the capacity of technology to leverage human strength and ingenuity to solve problems and contribute to human flourishing. The potential is so far-reaching as to be unimaginable.

The doctrine of common grace applies here: "Nature, cursed as it is by itself, can endure only by the action of common grace."⁴⁹⁵ In other words, God's preemptive and continuous grace sustains all nature and life, saving everything from death. God's grace is implicitly present everywhere, all the time. "Having created, God does not abandon that good creation or leave it to itself."⁴⁹⁶ Thus, the turning point in Hopkins's poem expresses the doctrine of common grace: "There lives the dearest freshness deep down things." Why? Because God's grace covers everything. Common grace means that in every moment and every breath of life, there is a connection to God's original act of creation, which brought all matter and life into existence. Thus, "in common grace there is never anything new, never anything but what can be explained from the original creation."⁴⁹⁷ In faith, we trust the faithful God to be at work in our work.

It is exceedingly important to remember that sin and grace go hand in hand. No doctrine of sin is coherent apart from the doctrine of grace, which supersedes and subsumes the doctrine of sin and places it within the holistic context of God's gracious providence. Remarkably, sin is also part and parcel of the act in which God bestows grace. We may as well say that grace is the condition in which sin inevitably sprouts, growing in the direction of any errant inclination of human souls, which, although rooted in the life-giving soil of God's abundant grace, go awry. As Walter Brueggemann points out, this is evident from the very beginning in Genesis 3: "the grace of God is the very premise for sin."⁴⁹⁸ Conversely, we may say that sin is the condition in which grace becomes known as grace. It seems that the human person has no other context in which to understand grace other than sin.

Grace overpowers sin. The good news is that "where sin increased, grace abounded all the more" (Rom 5:20). God has intervened to redeem the whole world (John 1:29; Rom 5:18; 1 John 2:2). The link between sin and grace is grounded in the good news that Jesus Christ came to destroy evil and save us from our sins (Mark 10:45; Rom 4:25; Gal 1:4; 1 John 2:2; 3:8; 4:10). Therefore, theological reflection on sin leads not into despair, but rather into hope, for God has intervened to redeem our lives and save us from sin. It is the covenantal promise of God to be "for us"⁴⁹⁹ that makes it possible for a reflection on sin to be an edifying exercise.

As we take courage and find hope in God's covenant, we also take responsibility to play our role in mitigating the implications of sin wherever and however we can, by the grace of God. As the old saw goes, "Pray as if God can do all things, and work as if the outcome is in your hands." The unconditional covenant of grace puts humankind in the role of responding in righteousness to fulfill God's commandments.⁵⁰⁰ The final word of grace is not a release from responsibility, but rather an invitation and call to join God in the work of righteousness. In closing, therefore, we offer some thoughts on practicing righteousness in light of what we have learned about the implications of sin in relation to AI.

The first and most obvious activities are prayer and attentiveness. "Pray without ceasing," Paul says (1 Thess 5:17; cf. Rom 12:12 and Eph 6:18). The epilogue of this book offers a litany as a guide to regular, disciplined prayer around the issues pertaining to our engagement with AI. Prayer in essence is a focusing of the mind to pay attention. We should therefore strive to attune our awareness to the potentialities of sin to infect institutions, corrupt shalom, and sow alienation. The mere act of paying attention, of being mindful of the ever-present danger of sin crouching at the threshold (Gen 4:7), enables us to work intentionally to avoid, mitigate, and prevail over sin. This attitude causes our work to be worshipful as we trust in God's grace to prevail.

It is important to remember that AIs are goal-driven, and that the goals programmed into them are invariably suboptimal with respect to human flourishing. There is a built-in tendency toward suboptimization when we allow machine learning programs to run freely without oversight. Like an unbridled horse set loose in the field, it is no longer under the control of the rider. We can fool ourselves into believing that we have established fair-minded, just goals for our AI systems. But without continual reflection and faithful accountability directed toward the higher aims of faith embodied in acts of *agape* love, we may intentionally or unintentionally collapse the dimension between our self-serving instincts and self-sacrificial concern for others who may experience injustice as a result of our technological systems. Weeding out injustices due to biases related to race, gender, nationality, age, and other personal characteristics will require intentional oversight, aided by awareness of the reality of sin.

Some practical guidelines for wise, faithful engagement with AI come to mind. Devotions and spiritual disciplines are a good start, to help keep our attention focused on making the main thing the main thing: our identity and rootedness in relationship with the triune God of grace. Whatever personal rituals help one spend time with and pay attention to spiritual truth are to be commended.

These disciplines help put barriers up against the inroads of sin that we have considered.

As users and consumers of AI-driven products and services, we must evaluate our engagement with AI in terms of its impacts on our relationships and most deeply held moral values. This requires reflective thought. Using the scenario above as an example, the passenger might deliberately disable or turn off notifications for a short period of time, and intentionally engage the driver in conversation. The passenger does well to remain curious about the goals programmed into the ride-share AI, as well as the other AIs engaging her attention. Similarly, the driver does well to reflect on the goals of the driver management AI, and the effects its gamification may have on his relationships at home if he plays along.

Those involved in the development and programming of AI software and platforms have a special responsibility to pay attention to the risks of unintentional and institutional sin. Best practices include ethical audits, making a priority of including diverse voices among developers and managers, and ensuring that humans provide oversight of AI systems to identify moral hazards before they do harm.

Finally, the surest path to wise engagement with AI is to remain vigilant to the corrupting, alienating effects of sin, and to live in the hope that God's grace is decisive. Hope comes from realizing that "something can be done for this malady. Something *has* been done for it."⁵⁰¹ It is because the wrath of God is the "*wrath of the Lamb*, the wrath of redeeming love," as T. F. Torrance reminds, that "the very wrath of God is a sign of hope, not a better destruction."⁵⁰² Martin Luther King Jr. describes this truth as "the beauty of the Christian faith, that it says that in the midst of man's tragic predicament, in the midst of his awful inclination toward sin, God has come into the picture and has done something about it."⁵⁰³

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433. See Kolb, "Martin Luther," 217.

434. Barth, *Church Dogmatics* IV/1, 405.

435. This is a purely hypothetical scenario; however, it is based on well-documented practices in the tech industry. See Zuboff, *Age of Surveillance Capitalism*, and Rosenblat, *Uberland*. Rosenblat reports: "Uber uses its intermediary position as a shady middleman to algorithmically or technologically squeeze out extra dollars and cents, and this often looks like wage theft. In other cases, algorithmic managers may simply mislead drivers about the prospects for pay premiums through inaccurate reflections or predictions about search pricing" (114).

436. Biddle, *Missing the Mark*, 44.

437. McCall, *Against God and Nature*, 34–37; Milne and Muller, "Sin," 1105.

438. McCall, *Against God and Nature*, 38.

439. Milne and Muller, "Sin," 1105.

440. Kittel et al., *Theological Dictionary of the New Testament*, 48.

441. Kittel et al., *Theological Dictionary of the New Testament*, 48.

442. Plantinga, *Not the Way*, 12.

443. Biddle, *Missing the Mark*, 44.

444. Quoted in McCall, *Against God and Nature*, 341.

445. Shalom is a Hebrew word from the Old Testament that indicates a state of peace, wholeness, and contentment. It implies a sense of flourishing for all people and the rest of creation, and can be said to be what God intends.

446. Wiener, *Uncanny Valley*, 136.

447. Plantinga, *Not the Way*, 40.

448. Bloesch, *Jesus Christ*, 37.

449. Tillich, *Systematic Theology*, 2:27.

450. Tillich, *Systematic Theology*, 2:46.

451. Jenson surveys the convergence in philosophy and theology of an ontological view of the human person as being "fundamentally constituted by its relationships." Jenson, *Gravity of Sin*, 1. See also Stiver, *Theology after Ricoeur*, 160.

452. Barth, *Church Dogmatics* III/2, 136.

453. Biddle, *Missing the Mark*, 19.

454. Jenson, *Gravity of Sin*, 6–7.

455. Jenson, *Gravity of Sin*, 7.

456. Niebuhr, *Moral Man and Immoral Society*, 11–12. For a similar assessment of Niebuhr's theology of sin, see King, "Reinhold Niebuhr's Ethical Dualism."

457. Jüngel, *Justification*, 113.

458. Jüngel, "World as Possibility," 107.

459. Webster, "Justification," 114.

460. Borgmann, "Lure of Technology."
461. See Moravec, *Mind Children*; Kurzweil, *The Singularity*; Hanson, *Age of Em*.
462. Geraci, *Apocalyptic AI*, 85–87.
463. Stonier, *Beyond Information*, 214.
464. Barth, *Church Dogmatics* IV/2, 412–13.
465. Herzfeld, *In Our Image*, 83.
466. Herzfeld, *In Our Image*, 73.
467. Herzfeld, *In Our Image*, 70.
468. Plantinga, *Not the Way*, 89.
469. Wiener, *Uncanny Valley*, 187–88.
470. McCall, *Against God and Nature*, 232.
471. Lewis, *Mere Christianity*, 35.
472. Jenson, *Gravity of Sin*, 72.
473. Barth, *Church Dogmatics* IV/2, 412–13.
474. McCall, *Against God and Nature*, 236.
475. Plantinga, *Not the Way*, 126.
476. Schwartz, "Microsoft's Racist Chatbot."
477. Banerjee and Duflo, *Good Economics*, 126.
478. McCall, *Against God and Nature*, 248.
479. Wiener, *Uncanny Valley*, 128.
480. Ellul, *Meaning of the City*, 8–13.
481. Paulus et al., "Framework for Digital Wisdom," 48.
482. Biddle, *Missing the Mark*, 46.
483. Biddle, *Missing the Mark*, 45.
484. See Baker, "Sin and the Hacker Ethic."
485. Harari, *Homo Deus*, 21.
486. Brueggemann, *Genesis*, 58.
487. Plantinga, *Not the Way*, 75.
488. Plantinga, *Not the Way*, 13.
489. Ashforth and Anand, "Normalization of Corruption," 16.
490. Plantinga, *Not the Way*, 7.
491. Benjamin, *Race After Technology*.
492. Hopkins, *Major Works*, 128.
493. Tanner, *Christ the Key*, 63.
494. Quoted in McCall, *Against God and Nature*, 339.
495. Kuyper, "Common Grace," 174.
496. McCall, *Against God and Nature*, 339.
497. Kuyper, "Common Grace," 174.
498. Brueggemann, *Genesis*, 20.
499. Barth, *Church Dogmatics* II/2, 493.
500. Torrance, "On Deriving 'Ought' from 'Is,'" 172.
501. Plantinga, *Not the Way*, xii.
502. Torrance, *Incarnation*, 249.

503. King, "Man's Sin and God's Grace," 387.