

God as Ultimate Game Master

(How Game Theory and Computer Simulations
changed my understanding of God)

By Harry Briley

Abstract

For millennia, humans devised models of the supernatural to account for unexplainable events in nature. For the last 500 years, two strains of Christian thought have battled over the interactive aspects of a specific creator God. Induced by a sub-genre of computer science, I offer game theory and computer simulation as an alternative understanding of how God interacts with our willful species. This paper follows a traditional Judeo-Christian understanding of God as the guiding measure of the proposed simulation model. All other religious interpretations may require a wholly different model.

Caveat

Unknown to me, Randy Alcorn published his even-handed book “*hand in Hand*” the year before my paper. He compared Calvinist and Arminian understandings of an inscrutable God. One of his analogies is similar to the paper in which passengers on a ship freely move on board but only the captain affects the direction of the ship.

My paper is uniquely contributory given the described computer design concepts were not experientially known 50 years ago, much less during the Reformation era. Most theologians cannot explain on-demand parallel processing or object-oriented embedded event-driven behavioral logic. I thus care less about the eternal machinations of how God maneuvers us to become believers than I do about as many as possible being believers.

Reviewers

Programmer Michael Kirby and science fiction aficionado enhanced my theory. I credited his insights in specific places. Lifelong missionary Hilary Lynch prompted me to explain technical jargon, tighten up many ambiguous theological statements, and conclude how the Game Master concept benefits the reader.

My History with Game Theory

This theological paper is influenced by my secular degrees (BS in Computer Science and an MSBA in Quantitative Business Methods), my brief foray into early entertainment software, and my database design career working with nuclear weapons scientists.

I worked on naval fleet simulations as a co-op honors sophomore. Adult staff provided the Gaussian formulas and equations of state, but this introduced me to game theory long before video games existed. Students then played with mechanical pinball machines.

Eventually, I collected the mathematics for stochastics (statistical processes having many random variables which depend upon a time variable), probability theory, combinatoric analysis (the study of countable discrete structures to solve problems about the possibility of constructing arrangements of objects which satisfy specified conditions), software simplification through fuzzy logic (computing based on "degrees of truth" rather than the usual "true or false" logic), and the early concepts of structured coding.

I wrote a program to count all the move combinations of any teacher-provided chessboard set-up, which a few years later turned into a rule-based artificial intelligent chess-playing program against human opponents. Since I did not cheat with a moves database, I learned how to build a game based upon probability, cause-and-effect logic, and valuation among numerous equivalent moves. However, it was not without some software mayhem. Can you discover the problem with the snapshot in Figure 1?

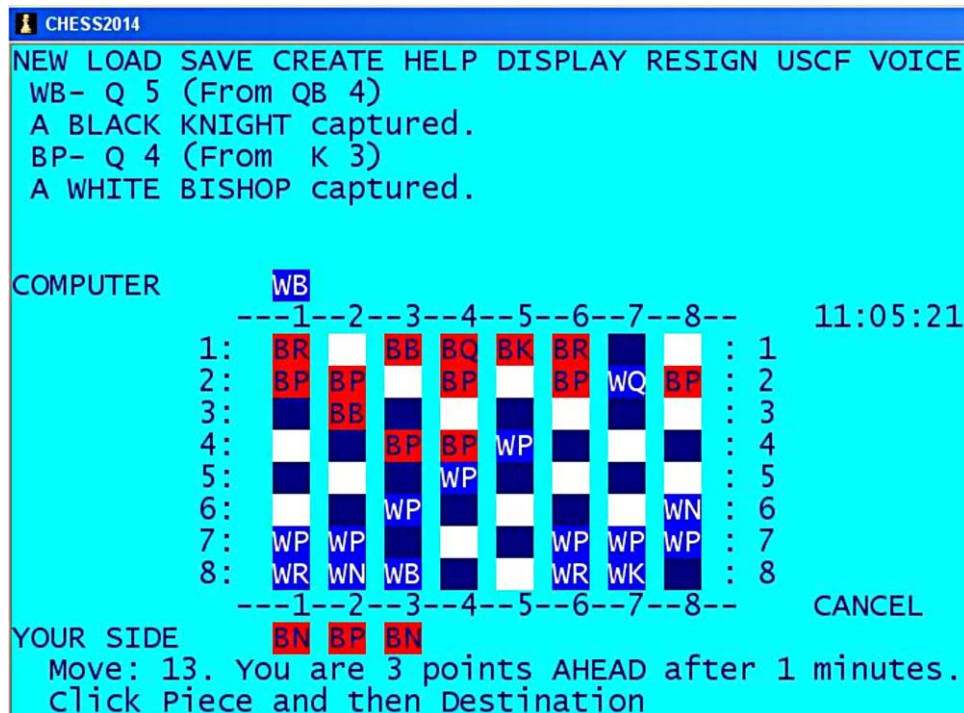


Figure 1- Chess (H. Briley 1974, 1981, 2014)

My Computer Science degree program introduced me to Operations Research making load management of earthmovers in open pit mines profitable. I attended a geology and petroleum engineering university where a miscalculation could be costly indeed.

As a co-op student working for the US Navy, I eventually tired of writing subroutines for flexing of helicopter blades in nuclear wind shear and moved into the business side of computer software.

This led to a Master of Science as essentially an Operations Research degree. I toyed with waiting line theory ('queueing' for the British) in grocery stores and bank teller lines, GPSS Simulation modeling of barge traffic down the Mississippi River, and a side career of bottleneck analysis in process flows of business activity at the research laboratory where I worked.

I briefly wrote non-repetitive logic for consumer games on the newly available home microcomputers, four years before the IBM PC was invented. Memory for these early machines costs hundreds of dollars and most homes had usually 16K (16,000 bytes) and a few wealthy hobbyists had machines holding 32K. Fancy graphics were rare since a **single** photograph on average used 350K (ten times the available memory!)

As a result, I learned to build the excitement of these games upon the unpredictable actions (or so the consumer thought) and hundreds of end-game scenarios. No two games (much like chess) in even the simplest of games yielded the same mid-game play or the same means of reaching the end game.

Most other game authors created puzzles which had a single solution. Once solved, the puzzles in the game played identically thereafter beginning to end. These puzzle-solver games were entertaining (often visual) and let the player choose among a set of puzzles. However, they did not present the breadth of game theory that a simulation offered.

The first truly unpredictable game came out with the IBM PC called *Flight Simulator*. It modeled the real world with true-to-life physics of flying various aircraft using real-life controls in the cockpit. The player did not solve static puzzles but had to learn to fly.

That simulator introduced hazards, shifting winds, and other variables that affect flying. The usual goal was to fly a figure-8 pylon course or fly from one city to another. While I always managed to crash upon landing, the wide variability in the program impressed upon me the concept of creating a "real world" within software.

Cardboard Simulations

Some *Monopoly*-type paper board genres preceded the introduction of computers for commercial video games. These board game series included *Strategic Simulations* (SSI) and *Dungeons and Dragons* (D&D).

College students often played SSI war games on fold-out paper boards. A person could do a complete re-engagement of the *Battle of the Bulge* to affect a different outcome of that battle. Each player managed a different army (British, American, French, and German) and dice defined the success of forward movement, firepower, resistance capability, and number of dead and wounded. Randomly drawn cards would define the weather, severity of mud, and other environmental factors.

The SSI games went far beyond the Milton Bradley *Risk* game which many of us played in high school. Real history and real military materials governed the game play. A half-track personnel carrier could travel only so fast over a muddy terrain and carry so many soldiers on a micro-level game. Within a macro level game, an entire division could move only as fast as their historical counterparts did in World War II.

Other students played D&D fantasy war games, except the dice were 8 or 12 sided and random cards drawn would add or subtract attributes of strength, charisma, wealth, or whatever else the player had been assigned. Each player acted as a single individual. They fought a battle to the finish between trolls and other nefarious mythical creatures.

The Dungeon Master sat off to the side of the game board. This “god” of each specific cardboard game did with paper and a folding game board what I did inside my computer simulations. His job (usually only boys played this game) included mapping out the unseen dungeon (to be exposed through player exploration), planting treasures to be located, casting of “spells” to impede/enhance a player's character, defining the kinds of mythical creatures and their individual parametric variables, and injection of unseen hazards during the game.

Simulation Author as “god”

Creating a similar “world” inside a computer put the programmer in a god-like external role. Programmer Michael Kirby affirmed that authors often place testing logic into their computerized games to get past early hurdles to reach later aspects of the game. One such “cheat” is called “God mode” in which the tester has infinite life and infinite power/strength to overcome the various obstacles built into the game.

Early Computer Simulations

With microcomputers, I designed a bounded “world”. I could change the map of every game, and create differing strength and skill attributes for the player, create characters of various attributes for the player to encounter (barter, fight, capture, or be captured), introduce treasures or useful tools, and define how the game ended.

My early attempts building this kind of game came with help from a co-worker at the research laboratory where I worked. He built the underlying map and character interaction engine. I added the layers that fleshed it out for a human player. One game included sailing the Atlantic facing off pirate ships. Another using the same game engine followed a fur trapper in the Rocky Mountains in search of three rare Indian artifacts.

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BROADSIDE:
  3 = A sitting duck
  10 = Government issued cannons
  18 = Man-of-War artillery

MORALE:
  3 = Mutiny On The Bounty
  10 = A good crew
  18 = A Captain's Dream

NAVIGTIONAL:
  3 = A literal barge
  10 = An average Frigate
  18 = Able to come about on a pence

HOLD CAPACITY:
  Water:      18 Barrels
  Provisions: 50 Days or so
  Quarters:   Sleeping Berths for 18 Crewmen

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Figure 2 - Attribute Levels from High Seas! (Briley Software 1979)

You might wonder why nearly all attribute values shown in Figure 2 ranged from 3 to 18. We held to a cardboard game mindset in those early home computer days. A roll of three dice always gave a minimum of 3. All die showing six yielded a high value of 18.

Each attribute would decrease over long times at sea, in battles, or illness. The levels could increase upon arrival at a port of call, time to repair sails, and successful battle.

While the overall game play followed a common theme (find and retain the treasures), the actual individual steps each time the game started were fresh with many thousands of combinations. My limitations were 16K of memory and a fixed historic boundary of a mountain range or an ocean for the highly changeable map.

Like the D&D games, the player exposed the randomized map only upon exploration. Uncharted islands, steep cliffs, wolves, and pirate ships started at random locations.

Ships and beasts if physically possible meandered randomly from those starting locations. The human player likewise had free will to travel anywhere desired if physically possible according to the rules and given the strengths as allocated to the player.

I likewise wrote variants of a detective game which blatantly parodied the Parker Brothers *Clue* game. The player exposed the thief of a rare object in a mansion (or a museum, or the Pentagon). The thief stole a random treasure from a random room with many likely suspects wandering through the building over a 12-hour period (arriving and leaving at random times). The player had to determine the name of the thief and the hour of the theft in the shortest number of questions.

While the human detective did not move through this “bounded world”, all the suspects started in random rooms and moved to adjacent rooms wherever a door existed.

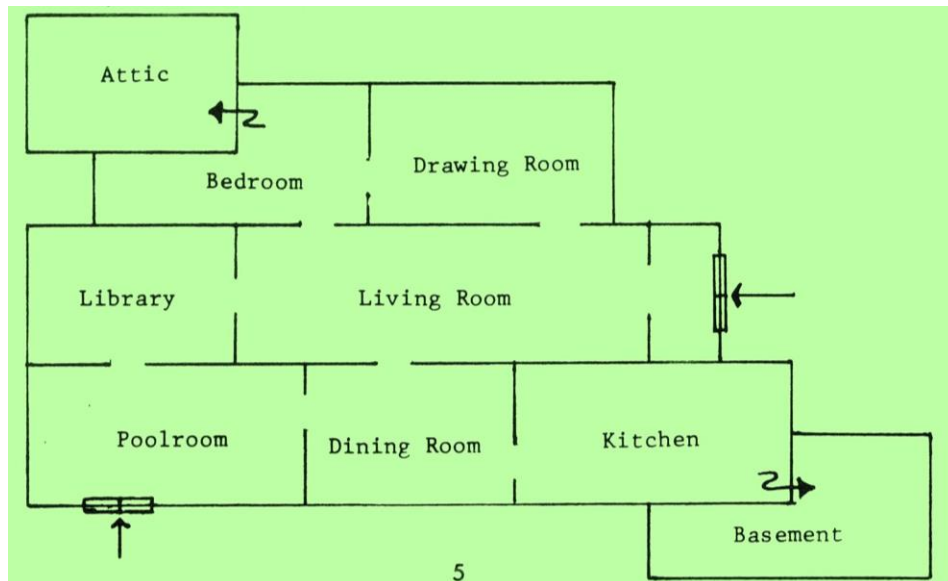


Figure 3 - Mansion! (Briley Software 1979)

An inquiry of Mr. Green as to his whereabouts at 4pm could yield clues about whom he was with and whom he saw through open doorways. However, Mr. Green could just as truthfully respond, “*I was not here at that time.*” The suspects could be forgetful and say, “*I do not remember.*” The suspects did not lie on purpose. It was tough enough to solve this puzzle with them telling the truth.

Overall, the game play had a predictable feel but not a single character followed a preordained fixed path or schedule. Mr. Green had full volition to traverse the given region without the Game Master’s foreknowledge and predictive control. The Game Master purposefully allowed Mr. Green to choose to remain in a given room for an extra hour and it would not harm the outcome of the game whatsoever.

Conflicting Images of God

I became an active Christian in high school at age 16. I did not grow up in the church. Everything I had read in the Bible was brand new to me. I read it as an adult as opposed to the isolated out-of-context heroic stories as commonly taught to children.

Over the years, I wrestled with the sovereignty of God, being all knowing (omniscient), all-powerful (omnipotent), and unbounded by time and space (omnipresent). We tended to be taught that God, knowing all things, past and future, specifically and overtly controlled (ordained) every single individual human minutia without simultaneously overruling their sense of freedom of choice (usual the choice to do evil and not the choice to do good). These premises seemed contradictory.

The opposing theological camp emphasized that humans could implore God to alter yet-future events (e.g. Moses, Hezekiah) and instantly heal contrary to the pre-ordained laws of nature. In both camps, God was not a watchmaker or an absentee landlord. However, the camp of strict sovereignty nearly held humans in a fatalist agenda with a single string of action with no tolerated variance. God in eternity past defined everything down to every action made by every human (and creature) throughout all time and history.

Something did not square with the Bible record of how people actually behaved (usually badly). If God was sovereign, even though he takes responsibility for evil and indeed caused calamities as punishments, it still made him out to being evil himself. On the other hand, the unlimited Free-Will version was lacking (Randy Alcorn named this ‘Open Theism’). It implied that God was out of control of the future and could not know how we humans would act. This idea fails when compared to an all-knowing timeless God.

Eternal Security argument misses the point

One 500-year old problem with such discussions is the too-frequent case of a person rejecting faith. Within the Eternal Security (“Once saved, always saved”) debate, the two competing models use much scripture despite opposing interpretations of the same.

The competing models cannot both be true. For a specific case, the Calvinist says that the person who rejected faith was never saved initially, and thus has a destiny of hell. The Wesleyan grants that the person made a sincere confession of faith (even if misinformed), but has chosen a destiny of hell. In the end, the specific person winds up in hell for the identical reason, by rejecting the eternal rescue offered by God (through Jesus’ death on the cross for our sins and rising on the third day to validate that offer).

When we tell such a person “*You probably were never really saved.*” it builds a wall against God. The poor schlep walks the aisle again hoping to get it right “this time.” My game model calls for a positive response despite a person’s current disillusionment.

God as a Chess Master

When I started writing my simulations, pieces started falling into place that greatly expanded my view of God from the antiseptic one-dimensional God of eternally-focused sovereignty and bounded my other observations that Open Theists made God out to be always on the brink of losing control of the planet.

I first revised my thinking of God to originally act as a master chess player. The various combinations of moves of the chess pieces are nearly infinite (or enough so to count as infinite for human purposes).

The chessboard is bounded by 64 squares. Each chess piece must follow specific kinds of moves. God has a general will for the pieces to move according to pre-ordained rules, but he does not ordain when, where, and how often they moved according to those rules. He set the bounds of the board. The pieces could not exceed the edges of his creation.

The game needs a worthy opponent. Regardless of how we postulate how Satan reigned and/or fell, the Bible claims him as contrary to everything that God marks as holy. According to scripture, he is highly motivated not merely to be a weak foil of God, but to earnestly beat him at the game. According to The Revelation of John (with all his quotes from the Older Testament prophets), the battle between God and Satan heats up considerably over time to what we call in chess as “the end game”.

During early history, this cosmic game moved at a snail’s pace while the players positioned pieces to their advantage and prodded each other’s strengths and weakness. In the middle game, various checks and counter checks have occurred. For a Chess Master, none of these setbacks and flourishes of victory are unsettling. The game has a theme that both players understand. Nothing that Satan moves comes as a surprise to God. Nothing about the chessboard is hidden in heaven. Everything is exposed in plain view. God can see everything and has multiple plans to counter every attack made by the devil.

What is hidden from each player is the exact choice of moves, the sequence of those moves, and the sacrifices each player may make to advance forward progress. I imagine that God willingly yielded his foreknowledge for the purposes of a ‘fair’ game. Paul reflects in Philippians 2 that Jesus gave up his omnipresence and omnipotence. Under my model, he gave up long-term omniscience for the game and became time bounded.

Eventually, the game must end after numerous skirmishes. Thrusts and parries flash across the board at dizzying speed (for chess that is) and one player manages to force the final check, yielding a checkmate of the opposing king. Regardless of how The Revelation and the quotes from the Older Testament prophets are interpreted, God has ordained that he will indeed win this chess game.

Satan treats that as a boasting claim and appears to disagree completely. He will push to the end, based largely upon his numerous successful checks forcing sacrifices from God during the middle game of history. He lost some key pieces at the resurrection of Jesus, but his powerful position on the board is not something we should minimize. God on the other hand had no ruffled feathers or betrayed no sense of losses catching him off guard.

Kirby noted that the lesser player while testing the game often gloats at finding an error or ‘bug’ (as Satan did in testing righteous Job), only to discover that the weakness was a designed feature of the given move. A master of any strategic game can manipulate a lesser player by offering up “weaknesses” or “sacrifices” that tempt a lesser player.

In particular, Kirby proposed that:

When God put Jesus on the board; it was too tempting of a piece for Satan to ignore. Consequently, Satan attacked and destroyed the piece, taking it off the board. At the resolution of the gambit when the dust cleared, the board was suddenly reconfigured in God’s favor. This set up [the struggle for] the endgame.

During the game, from our finite human perspective, this fits both the sovereign God who knows he will win (absolutely) but it opens up the concept that he wills specifically to grant the game to flow randomly according to his rules. His willfully allows variability.

Comprehensible Rules

God binds himself to his own rules of the game. Like chess, there are thousands of possible paths to the end game. He appears to have authorized Satan to upset creation within limited parameters over time (the deception of Eve, the testing of Job, promotion of counterfeit religions, the death of Jesus, etc.). However, God has a dozen move options open to him at any future move in the game.

Of course, since he sees the end of time, one can argue that he knew every specific move of every sub-stage of the game. Such a one-dimensional God is never in the “now” but always in the “eternal future”. However, the messiness of the planet implies a scenario more akin to his willful self-restraints and fully interacting with humans in the “now”.

As a corollary to the sensibility of rule-based interactions, we readily acknowledge that God cannot create a rock that he cannot lift, or act in ways that beg sanity (e.g. make a circle with four corners). We humans create items (cars, houses) which we cannot lift but God is not likewise limited. Therefore, the hypothesis of God creating a rock that he cannot lift fails as an anthropomorphism to understand God in human terms. We must admit that God, if there is a God, is not absurdly self-contradictory. Besides having no value according to his holy character to experiment in creating absurdities, he likewise appears to establish comprehensible rules that he himself follows.

God as a Simulation Author

A decade passed before I made direct comparisons to simulation games. Though still like chess, simulations add more complexity to near-infinite combinations of moves.

I noticed that when God interacts with certain individuals, he told them to make a choice. To Abraham, he said, wherever his foot landed, that would be the property in the region deeded to him. Through Joshua, he asks the people to choose which God or gods they would follow. This aspect of choice comes up frequently and God does not intervene for the bad choices until decades or centuries later with national punishment.

Even David’s sin of a census for his army yielded a choice of three punishments. We surmise, as in chess, that God had an unmovable will in general regardless of David’s choice. Whatever David’s choice, God would carry it out not because he did not know the future, but because he bound himself to let David make a choice. Regardless, his will in general remained undeterred since people died to decrease David’s army.

I noticed that as a Game Master, he made things complicated. He not only created bounds and rules of variability, but he injected himself into the game by introducing previously unknown hazards (the flood), exiles (Egypt, Assyrian, Babylonian), and most importantly through the incarnation and resurrection of Jesus.



Figure 4 - For Better or For Worse (Lynn Johnston, 01/09/2016)

A Simulation Author creates not only the game world, but exists outside of his creation. He creates the kinds of variables and the limits of each object within his creation. We call such a creation “a system”.

Like any good programmer of a long-running simulation, the programmer can interrupt the system to introduce new objects or remove old objects. He can tweak the attributes of any object in real time, such as miraculous recovery of health or a rapid death. His general intentions remain immutable in that the game follows a general theme and rules (“natural laws”) unless circumvented by supra-natural miracles.

God with Massively Parallel Multiple-CPU Functions

The concepts presented thus far presume a single-threaded computational “brain” as the central processing unit (CPU). In the early computer days, one CPU was very expensive to build and to support with a suitable equally expensive motherboard.

A program is a specific application (app) requested by the computer’s user. Example apps are a word processor, a spreadsheet, e-mail, a media player, an e-book, and a financial tool operating ‘all at once’. A computer could execute multiple programs in tandem, but in reality only shared the CPU itself in slices of time. Only one program executed during its allocated slice of time.

Government laboratories linked together 128 (or more) microcomputers together to introduce parallel processing for complex physics designs. Each microcomputer handled a portion of the simulation and passed its results onto another microcomputer to complete the larger modeling experiment. Most scientists originally still thought in terms of a sequential program of logical steps. Object oriented programming introduced the idea of multiple activities occurring in parallel and operating independently.

For consumers, manufacturers added a CPU to graphics cards to handle the rendering of images to the monitor screen, releasing the main CPU to focus upon more computational activity. It was a poor-man’s national laboratory on a desk.

Intel Corporation then introduced two and four CPUs on one chip for multi-threaded activity, in which the computer truly ran many programs at the same time in parallel. The operating system assigned the next requested program to the next available CPU. If more than four programs executed at the same time, then the older method of time slicing shared the CPUs among programs competing for those four CPUs. For the first time, consumers began to comprehend the impossible of one computer with four “brains”.

The Christian concept of the Triune God is not at all like a 3-CPU chip in a single package, although it is sorely tempting to make that analogy. After all, each CPU is 100% identical to each other, all three share the identical mounting chassis, and all three operate independently. The analogy breaks down because the multi-CPU chip is really nothing more than distinctly separate identical CPUs “glued” together. It is true that one CPU acts as the “father” to handle traffic distribution of tasks among each CPU.

I often wondered how God can hear and respond to millions of humans engaging him with praise, petitions, worship, and confession. I could not fathom exactly how God listened specifically in my bedroom while he handled morning prayers several time zones away. My finite mind still boxed God into a severely limited single-threaded CPU.

Instead, imagine our solitary Lord with massively parallel processing power at his disposal. He would not have merely 128 CPUs, but an infinite array of sensors with each tunable to a specific person's prayer. Therefore, quite literally he directly listens to our specific prayers and engages us individually in activities of faith within our local space and time. Our national massively parallel super computers tentatively expose this hidden "impossible" aspect of his capability to interact with numerous humans.

The Universe as a Simulation

For programming an artificial universe to model the Biblical record, I would:

- Set up the game room of a single universe with stars and planets already in place (like setting up the chessboard).
- Randomly place many delightful objects for future astronomers to find. Programmers call these yet-to-discover objects as "Easter Eggs". Finding an "Easter Egg" is purely for a player's enjoyment and rarely affects game play.
- Make all objects in the game room reliably function autonomously. After all, these are not merely blinking lights punched through a backdrop of a Grade "B" television movie.
- Create a specific game board of a planet whose rules permit viable objects to live. This is an earth-centric theology. Since Earth is the only planet that the Bible follows, it will be the only life-sustaining planet on my simulation board.

Create Objects for the game

Much of creating objects will cause evolutionists to misidentify as arbitrary accidental arrangements of molecules. These "natural creation" aspects might include:

- Make some objects as living, some self-propelled and some that are rooted.
- Define range of how long those members in each object class (humans, trees) live.
- Enable objects to replicate and each replication to include the object class rules.
- Define range of frequency and population growth of each object class. Set up the environmental variables as rules ("Natural law") that affects these ranges.
- Add attributes to non-static objects for energy collection, usage, and storage (whether living objects or machinery)
- Define movement type (bipedal, flight, swim), distance, and speed for self-propelled objects.
- Set natural laws of physics for non-living objects (rocks, rivers)

All good artificial intelligence objects have nearly a hundred or more attributes, each with a probability of use and a strength factor applied to each attribute.

For example, an attribute of an object might be truth telling. The character may have a probability of 90% of telling the truth with a variance of 5% under “normal circumstances”. A strength factor may control how quickly that degrades (or improves) under stress (or rewarding) conditions.

We could easily add thousands of similar rules to the computer model. These are simple attributes for specific individual objects in an object class and the defined variation permitted within the object class as a whole. Simulation authors already create such objects and object attribute databases for their simulated world. The *SimCity* series of software games is an example.

Create object interaction rules

Once we have a database of object classes and can randomly populate a starting set of replicating objects on our game board, we need to define the interaction rules among the objects. Much later, we need to create rules that affect how the objects interact (if at all) with the Game Master.

Like *SimCity*, objects interact within the same object class (humans with humans) and between classes (animals with plants). These cross-object rules include living and non-living objects (humans with rocks) and non-living alone (rocks with water (in volume)).

Create hazards rules

Once we have a system of interacting objects, we can wait things out until equilibrium occurs in the population size and locations. The program can enact some hazards by the very interaction between objects as natural consequences of the interaction. If human objects clear-cut the forest object, the subsequent rapid erosion of regional topsoil in the next cyclical rain is a natural consequence. Kirby noted there are hazards beyond an immediate natural consequence and can be an injected hazard. For example, use of a fixed-quantity resource may result in shortages between discoveries of additional banked deposits hidden on the board.

Alternatively, we can inject hazards that follow natural cycles too long for the objects to adequately predict or that follow interruptive behavior rules. An interruptive rule is a hazard that is usually object-behavior based. It occurs outside of natural rules, such as unchecked evil (the flood, the Babylonian exile) or retribution for deception (forbidden war booty in Joshua, Ananias/Sapphira in Acts).

Some religions (Islam, Greek mythology) treat God as capricious who might force a hazard just out of spite. While many programmers relish building such “bolt out of the blue” hazards into their games, this kind of game play forces the human player to wonder if it was a freak one-time “clocked” event, a cyclical event, or a “for cause” event. I perceive God as the ultimate gentleman (inscrutable, yes, but not capricious). To the

observer, this may seem to be a blurred point, but given enough time to run the simulation, we can observe repeating events and detect probable causes.

I will not attempt to resolve theodicy (problem of evil) except to say that the Game Master hides the rules underlying the hazards from the impacted objects. We all understand natural consequences. We rarely understand the “why” of most other losses. He causes the rain to fall (or not) on both the just and the unjust (an application of the atmospheric rain cycle rule over a geographic region).

Kirby described this issue as myopic application of baseline motivations. He proposed a motivation parameter for the human object called “Stay alive” which require gathering water (or food) as a variable satisfier. The entire collection of human objects does so. When that resource becomes scarce, this motivation becomes “good” when working with other objects to find new sources of water; “bad” when hoarding water; or “evil” if stealing water from others. An amoral motivation can thus render a range of morality.

When Jesus discoursed about the tower of Siloam (Luke 13) that fell and killed 18 people, he cautioned that it was not necessarily that they were worse sinners. Some thought that every calamity had a sin-cause. Certainly, bad intentions of shoddy construction (or good intentions of improperly conserving building materials) would be the sin that caused the tower to collapse. It was a hazard that followed a natural cause rule. Jesus did not claim it as a divinely ordained judgment. He could have said so if it was the case, but he did not. He left the cause purposefully vague. Therefore, a volcanic eruption could be a simple natural interaction between objects (rocks against rocks) or a presumed divine judgment (possibly for Heruculeum and Pompeii) or both.

There are no obligations on the game board to limit a hazard to a single cause. The same hazard could be “clocked” (single one-time event), cyclical, predicative upon object interactions, or injected “for cause”. The Game Master may choose to communicate to the players a reason for a hazard but is not obligated to do so (refer to Book of Job, Older Testament prophets to Judah and Israel).

Define probability rules

Natural events (and/or hazards) may occur under different mathematical rules. An event might occur depending upon whether it has occurred or not previously. An example is the card game of Blackjack. A card (perhaps an Ace) might occur with a higher probability if it has not occurred previously. The Game Master might ordain a “used lives” concept for some objects and the probability of death might increase based upon the number of “near misses”.

An object might merely have a “lives” counter (cats = 9) but more likely this is enacted by a reduction of the “bounce back factor” applied to a “strength” attribute. An object

(spaceship, human, animal) might have a limit of 800 vitality points. If it undergoes a medium-impact injury, the object instantly loses 200 vitality points. We simulate repairs or healing by a bounce-back factor of 50 points per month. After the first injury, a sub-penalty of 10 points per injury or a similar interplay of parameters may hinder the bounce-back factor (50 points for first, only 40 points per month after second injury, etc.)

However, the usual mathematical model in a real-world simulation “resets” the probability when an event occurs. A tree falls in the forest with a given probability; say at a .01% rate per year. The probability of another tree falling in the same forest is identical to the first. Sometimes in flipping a coin, three heads show up in a row. There is no guarantee of binary oscillation for the coin from flip to flip. Each flip is “reset” as if the coin had never been flipped previously.

Whether an event is “reset” or not, it would be a boring planet to have a fixed probability whenever an event could potentially occur. Flipping a coin infinite times yield a normal 50% chance of heads or tails. Stochastically, the probability for any particular flip (choice, decision, et al), is a uniform distribution with a mean of .5 and a variance range. Each rule that needs variability has such a “bell curve” probability for any particular event (flip, choice, decision). An event might occur 20% of the time as the norm, but we program the event to occur 18% or 24% percent of the time for a specific occurrence.

Impart a soul to human objects

Up to now, this mathematically derived model somewhat resembles reality on the planet as we can readily observe it. Atheist Sam Harris claims that all objects in the model respond to their environment and triggers when encountering other objects. Yet, unlike puppets, each object in my simulation indeed has a range of options to freely choose. Even an animal demonstrates free choice when offered viable options without strings.

Atheist Stephen Hawking said in *Black Holes and Baby Universes*:

Even people who claim everything is predetermined and that we can do nothing to change it, look before they cross the road. [aarp.org/bulletin v57n1 2016]

Harris counters that we evaluate options and choose the one bearing the highest value to us, thus making our choice an illusion. All things being equal with normal hunger needs to be sated, and given a choice between a dry bone and a fresh steak, a dog (or human) will choose the steak. It is still somewhat deterministic like my chess game program evaluating all immediate next moves by several criteria and choosing the best one.

Lack of long-term vision, noted Kirby, naturally limits the “best” options. A human on a path may come to a fork in the road and choose the downward sloping path that is shaded and pleasant, as opposed to the upward sloping path of rock and dirt. He is unaware that the upward “bad” path leads to an oasis and the downward path to a lion’s den.

John Bunyan addressed this forked path concept in his book *Pilgrims Progress* following his central character Christian, who winds up in numerous traps and unhelpful bypaths.

To represent true human freedom, we need to represent a human soul within the model. We call such objects artificial intelligence bots (but clearly not statically driven robots!) In current videogames, even simulated animals have this kind of function. Therefore, what makes the human soul truly unique from merely reacting within parametric bounds as Harris maintains? This is the “holy grail” of artificial intelligence researchers.

Establish Rules for Interaction with Game Master

Unlike a video game focused mostly on overcoming hazards, a simulation that accurately reflects God must include interaction rules with the Game Master. To account for prayers answered in the positive, I would introduce events perceived as blessings tied to the same clock when the human objects offered a prayer.

Since my simulation reflects my Christian worldview, this simulation of prayer must be based upon surveys of those people self-identifying as believers and the reported claims of prayers answered in the positive.

To approximate the human population that actively prays, I would assign the “Prayer Strength” attribute to a range of 1 to 10 to the human objects. A random variable by continental region would define how many humans would turn positive to a Judeo-Christian concept of a personal interactive God. The age at which the human object would be responsive would be another random variable. Table 1 shows a rough unscientific example of these interacting variables.

Continent	% positive	Age of response	% prayer	Prayer Strength
North America	20	20+/-10	50	3
South America	30	15+/-10	30	5
Africa	40	25+/-10	50	7
Europe	20	25+/-10	30	2
Asia	10	30+/-10	60	4
Australia/Antarctica	20	25+/-10	30	2
Middle-East	10	30+/-10	70	5

Table 1 - Regional Responsiveness Variability

For example: In North America in our era, 80% of the population claims to believe in a “god”, but only 20% identify with a specific church congregation. Of that 20%, only 10% (roughly half) actively attend said church. Our prayers tend to be strongly on praise and anemic (or selfish) on petition. The simulation does not mean that the Game Master needs us to work ourselves up “to have enough faith in faith”. Rather, the prayer strength reflects how much each geographic region appears to report positive answers to prayer.

The minority of human objects thus engage the interaction rules with the Game Master. The results could be in the form of increased levels of strength variables (quickness of healing, wisdom, fruits of the Spirit) or outright injection by the Game Master of a “blessing” (natural or supernatural) immediately following the date of the prayer.

The Game Master limits the kind of blessings that match his character and purposes. A request for a gold-plated luxury car to appear out of thin air would reflect selfishness and outright magic. Neither of these negative attributes reflects the character of God.

Seven Causes of Doubt in Seminary Literature

Over the years, I developed a list of the topmost reasons for denial of any interaction with the Game Master, especially in terms of miracles. Hostile doubters believe God is truly absent (per the Atheists) or not continuously engaged (per the Deists). Such lack of an ongoing engagement undermines my simulation analogy. Clearly, I disagree with the premises of an absent or dispassionate god. I argue for a highly engaged Creator God.

Detractors in theological literature appear to fit one of the following criteria.

- Internal willfulness (unwilling to be exposed as answerable to God)
- Watchmaker God (Dualist/Deist)
- Disbelief in the Supernatural
- No ancient society technically superior to ours
- No ancient society wealthier than us nor had access to more natural resources
- Lack of knowledge of 1920-1990s Archeology (Bias still stuck in 1850s)
- Lack of knowledge of cultures and buildings within ancient societies

The apologist of the World War II era, C.S. Lewis of Oxford University, aptly responds in three (if not all) of his non-fiction books. I speak specifically about his books: *Mere Christianity*, *Miracles*, and *The Problem of Pain*. See the Bibliography for specific pages of each of these three books that speaks to my thesis.

Conclusion

The musings in this paper reflect my life-long observation that God is personal and deeply interested in our response to what we know about him. The entire Older Testament tells of God who wants us to go straight and fly right. It reports that humans did not want to do this. The common theme was the tension in that clash of wills.

In theory, someone could create a simulation game as described here. However, the number of individualized objects exceeds the capabilities of our current super computers.

I would be tempted to reduce the time scale to quickly run various scenarios (one game minute equals one earth month). That time compression would require a sampling methodology that might disturb the sensitivity of choices made in earth time. I suspect that “playing god” might be satisfying to some. However, I think if the game were correctly set up, it would feel too much like real life causing player frustration.

In my interpretation of history, only God appears to have the bandwidth to handle such multi-threaded processing without devolving into a tyrant. Humans, setting up the parameters as a god, have historically shown themselves unable to handle so many simultaneous variables. Such governments formed to do so have indeed become despotic. We have examples from petty chiefdoms in the early Fertile Crescent to our current experience with social experiments, numerous dictators, and oligarchic economic controls. That is, only God could have (and did) set the parameters in the best balance to allow us to make a breadth of true choices that are not forced or overly restricted. Any human endeavor at the same game by definition would be sub-optimal in comparison.

In my opinion, the concept of God as the only reliable and suitable Game Master makes the recorded Biblical images of God more understandable to technically-minded readers. I am not saying that it makes the recorded actions more palatable to the skeptic. Instead, it presents a model that I have never seen presented in publication with the hopes of causing people to re-examine their current understanding of the nature of God.

Dr. John Lennox, Oxford University professor of mathematics, correctly asked in 2015 whether God is indeed, as the New Atheists since 9/11/2001 maintain, merely a “god of the gaps”. They imply that just like we now understand lightening, we no longer need the old explanations of Zeus and Thor. More explanations of the mechanics remove the need to define fanciful gods for our remaining gaps in understanding. Lennox argues that confusing mechanics with causal agents has been a tremendous disservice to thinking people discussing the nature of God. Yes, according to Lennox, we have gaps, but ours is not a trust absent of evidence and reason. Instead, God is over the whole, as the explicit agent of the physical laws that we scientifically observe, what remains to be observed, and those aspects of real life unsuitable for science to offer even a whimpering comment.

For traditional believers, Jewish and Christian, I hope that the unsatisfying “either-or” discussions about God vis-à-vis our actual experiential observations might be more helpfully understood under this different model. I not claiming the proposal as the correct model, but I want to open the discussion. Certainly, I claim that it is far more satisfying than thinking of God being on the brink of chaos or a God who (or as Harris states, our Environment) manipulates us such that our choices are illusionary.

Bibliography

Do We Really Have Free Will? Free Choice, Determinism, and G-d's Knowledge -

Moishe New - This 75 minute video gives a Hassidic Jewish perspective (Jewish rabbis as well as Christians hotly argue this issue). He responded to a 2012 book by Sam Harris and spent 35 minutes defining the question and the impossible paradox offered in the Torah, where God is ultimately (and constantly) the creator. Our choices by Torah are exclusively in the realm of morality, choosing right and wrong. We clearly have no choice in our birth circumstances or environment. Source:

www.chabad.org/multimedia/media_cdo/aid/1994469/jewish/Do-We-Really-Have-Free-Will.htm

Free Will – Sam Harris, 2012 - A belief in free will touches nearly everything that human beings value. It is difficult to think about law, politics, religion, public policy, intimate relationships, morality—as well as feelings of remorse or personal achievement—without first imagining that every person is the true source of his or her thoughts and actions. Free choice is an illusion and that we are hard-wired to respond to environment and triggers. Even though Harris is a current “light” among secularists, even atheists take issue with his thesis as follows.

Atheist James Taylor on 3/9/2012 countered saying:

*Sam Harris is a master of the polemic. He has written very eloquently and convincingly concerning atheism in his books, **The End of Faith**, and **Letter to a Christian Nation**.*

Full disclosure: My wife, Mary Taylor, and I are atheists and she has a website and video lectures on atheism, as well as being assistant organizer and lecturer of an atheist Meetup. She has contributed significantly to this essay. Mr. Harris is an important force for secularism in the United States.

*But his latest offering, **Free Will**, a scant 66 page essay in book format (with some 7 pages of notes,) is lacking in many essential ways, particularly in the matter of evidence for his claims. Harris states there is no free will, that it is an illusion, but offers no proof for his assertion. In fact, on Pages 13, 38, 39, and 40, he states that the sources of our intentions, desires, actions, and wants are unknown, a mystery, inscrutable or obscure. He seems to be asserting that because we do not know the sources for our thoughts and actions, it necessarily follows that we do not have free will. Such a flimsy connection is not proof. He cites some well-known experiments, such as the Libet, all of which are inconclusive, and does not provide the reader with strong scientific evidence to back up his assertions.*

*Mr. Harris critiques compatibilism by too often, for such a short essay, emphasizing the differences between himself and Daniel Dennett, the philosopher who has written **Elbow Room** and **Freedom Evolves**. In fact, Dennett makes a*

very cogent case for the compatibilism and coexistence of determinism and free will in human beings. One of Mr. Harris's breezy dismissals of compatibilism on Page 16 is that the "free will compatibilists defend is not the free will most people feel they have." Such a statement seems to imply that Mr. Harris sets aside the fine and scholarly work of many philosophers such as Dennett, because it does not accord with some popular misconception of free will. Populism would appear to trump scholarship in this book.

On Pages 10 and 24, Harris apparently infers that if we had exceptional machines and brain scanners to monitor our action sequences and choices, we would be astounded to discover that we were not in control of them. However, we do not yet have experiments that might be conclusive. To state that one knows the outcome of future experiments is nonsense. Neuroscience is at the beginning of a long voyage of discovery about the brain, the mind and consciousness.

*Another difficulty with **Free Will** is the author's shift to prescription rather than description. Such a segue is yet another example of the philosopher David Hume's famous and much discussed Is/Ought problem concerning Ethics. Harris suddenly advocates what the justice system should do. On Page 54, he writes: "Our system of justice should reflect an understanding that any of us could have been dealt a different hand in life. In fact, it seems immoral not to recognize just how much luck is involved with morality itself." Why should any of us assume, given Mr. Harris's assertion that choices are not in our control, that most citizens will agree about changes to our justice system? Many people, if not in conscious control of their belief and ethical systems, may reach opposite conclusions. Mr. Harris is not the only champion of determinism who seems to dismiss reason as a motivating factor, and then to advocate change based on conscious reasoning.*

*My opinion, after reading this small book, is that Sam Harris has done very little to advance understanding or forward the argument in the contentious and knotty issue of free will and determinism. With all due respect, I regretfully cannot recommend his **Free Will** to readers.*

*The problem of free will vis-à-vis determinism reaches back to Ancient Greece and Israel, and is not quickly or easily perused. Galen Strawson, Saul Smilansky, Peter Strawson, Manuel Vargas, Robert Kane and Daniel Wegner are excellent sources. Robert Kane has edited the **Oxford Handbook of Free Will**, with superb essays on both sides of the divide. Professor Shaun Nichols, from the University of Arizona, offers an excellent DVD course from the Teaching Company on **Free Will and Determinism** that is very balanced, thorough and essential for the appraisal and understanding of the multitudinous opinions and experiments concerning free will and determinism.*

Michael Kirby likewise countered Harris saying:

If our environment controls our decisions, we have no free will. Therefore, a justice system where the innocent jury stands in judgment of the guilty has no “moral” authority. If in the same situation you would do the same thing, you are no more innocent than the guilty and they no more guilty than the innocent. They cannot be held responsible. (The person did not commit suicide; it was the conspiracy of ground and gravity that caused the death.)

The Immortal Game (A History of Chess) – David Shenk, 2006 (Random House Audio) – The earliest traces of Chess come from India about 500AD. He talks through an historic game for avid players (minimal interest) woven through chapters on history (high interest) about how different cultures and ages used this brain-enhancing virus.

Mere Christianity (The Case for Christianity) – C.S.Lewis, 1943 – This book is a collection of radio broadcast talks. The main interest to this paper is the Preface, Book 1 “The Law of Right and Wrong”, and Book 2 “What Christians Believe”.

Read especially:

- Standards of Fair Play p.17
- Two points p.21
- Bypasses instinct, social convention, or education p.22-24
- People explain away law of R&W by circular logic p.29
- Life-Force Note p.35

Miracles (How God intervenes in Nature and Human Affairs) – C.S. Lewis, 1947 – Called a “Preliminary Study”, this book directly applies to this paper. A thorough reading of “Miracles” addresses concerns raised by Atheists and Rationalist Christians.

Read especially:

- Emotions - Naturalist and Super-Naturalist p.5
- Thinking/ Knowing p.17-19
- Experience/Expectations/Inference p.21
- Statistics p.46
- Red herring 1 – Birth of Jesus not scientific p.45, 48
- Red Herring 2- Ancient s unaware of universe p.49, 51, 53
- Pivot point p.100, 107

The Problem of Pain – C.S. Lewis, 1940 – Lewis attempts to explain how evil and suffering co-exists with a loving good God. The term for this is Theodicy. We credit St. Augustine with this quote, “*If there is no God, why is there so much good in the world? If there is a God, why is there evil and suffering?*”

Read especially:

- Atheist p.11-13
- Quotes: p.23 p.25 p.49 p.79

hand in HAND – Randy Alcorn (2014) – A thoughtful author tries to harmonize disparate understandings of the eternal dynamics of how God engages human proclivity to do their own thing vis-à-vis God’s sovereign control. The author spent years in both Arminian and Calvinist camps. He presents scriptural understandings of both sides, misrepresentations made by each side, and gives some outlier positions among well-educated, deeply faith-bearing believers. He did not mine any Jewish (nor atheist) literature for their compelling dialogues about responsible human choice.

Appendix A: Sample Simulation Games

The simulation games mentioned in this paper are defined here by date introduced:

- 1949 - **Clue** * Parker Brothers – Devised by Anthony Pratt in 1944 from England
- 1959 - **Risk** * Parker Brothers - Invented by Albert Lamorisse in 1957 in France
- 1965 - **Battle of the Bulge** (Board game) * Avalon Hill –Historic battle in World War II Europe allowing the players to exercise different strategies.
- 1974 - **Dungeons and Dragons** (Board game) *Tactical Studies Rules (TSR) - Gary Gygax and Dave Arneson designed this fantasy role-playing game (RPG)
- 1974 - **Chess** (Computer) ** Harry Briley, Updated 1981 and 2014 – The software used rule-based behavior and avoided a database of all possible moves.
- 1979 - **High Seas/Fur Trapper** ** Briley Software for Commodore PCs – User explores a bounded world which is randomly platted for each use.
- 1979 - **Mansion/Museum/Pentagon** ** Briley Software for Commodore PCs – Variant parodies of **Clue** introducing time of day and guest movement.
- 1981 - **Battle of the Bulge** (Computer) * Strategic Simulations Inc. (SSI)
- 1982 - **Flight Simulator** * Microsoft – Developed by Bruce Artwick in 1977 - Microsoft licensed it as the “definitive game” to highlight the new IBM PC
- 1991 - **SimCity** series * Maxis - In 1987 Will Wright and Jeff Braun privately published SimCity for the Commodore 64 since other publishers felt it was not a traditional "win" or "lose" game. It became wildly popular for the IBM PC.

Source: * Wikipedia; ** Author

Appendix B: Sample Computer Technology Advancements

The computer technologies mentioned in this paper are defined here by date introduced.

- **General Purpose Simulation System (GPSS)** - Geoffrey Gordon **1972** created this simulation language with a simulated clock advancing in discrete steps. A transaction entered and passed from one service bloc to another. GPSS is less flexible than other languages but easier to understand and more popular.
- **Object-Oriented database (1980s)** – The database contains behavioral operations about an object (executable code that occur when a trigger situation occurs) beyond the object’s physical characteristics. [These behaviors were formally called procedures or functions.]
- **Multi-Threaded Processing (1990s)** – Dividing operations within a single application into individual threads lets the operating system route these segments of logic which do not depend upon each other to different CPUs. This lets one application to use multiple CPUs to increase the overall processing speed. This does not leave a CPU idle if any next assignable thread of the application is ready to run. Originally the domain of super-computers, multi-threading became possible with microcomputers in the 2000’s.
- **GeoForce Graphics Card CPUs** – NVIDIA in **1999** introduced visualization controls that operated independently by triggers sent from the motherboard CPU.
- **Multi-CPU system** – Any microcomputer with multiple CPUs in the early **2000s** that routed the next requested application (E-Mail, Spreadsheet, etc.) to the next available CPU. This multi-tasking assigned each application to a single CPU for one time slice. Only applications designed to be multi-threaded could share multiple CPUs at the same time (thus, truly running in parallel with itself).
- **Multi-CPU module** – Intel Corporation in **2006** created a quad-CPU as two dies, each containing two CPUs, packaged into a single multi-chip module.
- **Massively Parallel Processor (MPP)** - A single computer with far more than 100 CPUs uses specialized interconnect networks. Each CPU has its own memory and copy of the operating system and application. [Blue Gene/L at my workplace ranked as the world’s fifth fastest supercomputer in June **2009.**]

Source: All from Wikipedia (edited for brevity) except text offset by brackets.

Appendix C: Non-Religious Metaphysical Models

Some might argue that I offered a futurist dystopia or a science fiction environment. Instead, I presented a reasoned model of ordinary human daily life albeit with unusual analogs (games, computers, and heuristics). It speaks to how a singular Creator God created and interacts with an open system using understandable rules of simulations.

This Christian metaphysical philosophy differs significantly from leading secular philosophies (as defined below). The common thread of these non-religious models is a closed system without external intervention.

- **Materialism**** The only thing that can be truly proven to exist is physical matter. [C.S. Lewis called this philosophy as Naturalism in his book *Miracles*.]
- **Idealism**** Ideas or thoughts make up fundamental reality. The only thing knowable is consciousness. We never can be sure that anything in the outside world exists. Physical things exist only in the sense that they are perceived. Rene Descartes first claimed that all we know is what is in our consciousness. The whole external world is merely an idea or picture in our minds. It is possible to doubt the external world as consisting of real objects. Descartes said “*I think, therefore I am*” is the sole assertion that cannot be doubted.
- **Existentialism*** (Jean Paul Sarte): Individuals exist within an unfathomable universe. Individuals assume ultimate responsibility for acts of free will without certain knowledge of what is right, wrong, good, or bad. [C.S. Lewis refuted this using the “Law of Right and Wrong” in his book *Mere Christianity*.]
- **Nihilism*** (from Nihil, Latin for "Nothing"): Traditional values and beliefs are unfounded. Existence is senseless and useless. There is no objective ground of truth and especially of moral truths.
- **Solipsism*** The self can know nothing but its own modifications. The self is the only existent thing. See *also*: extreme egocentrism [or adolescent].
- **Postmodernism*** Many people radically reappraise modern assumptions about culture, identity, history, or language. [This tends to be individualized. What I believe is true for me. You can believe the polar opposite as true for you. This illogically accepts co-existing mutually exclusive assertions as equally true.]

The starting premises for each secular model are grim and the logical outcome(s) is equally disheartening. Each posits that humans exist through accidental chains of macro-evolution. Their life has no transcendent meaning besides survival. Laws and morals are temporally defined by those in power. Efforts at being altruistic appear vain and perhaps delusional. There is nothing beyond a pitiful death.

Source: * Merriam-Webster; ** philosophybasics.com; except text offset by brackets.