Christian Sociology Explored: Structure, Agency, and Contingency

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Abstract

This exploratory paper argues that Christian sociology must account for the interplay between structure, agency, and contingency. The discussion is first grounded in a brief overview of both the development of sociology as a discipline in general and its inception in U.S. contexts in particular. In general, sociology tends to emphasize the role of social structures more so than individual agency. However, what has been largely missing is an analysis of the role of contingency that is necessary for sociology, and essential for Christian sociology, though not necessarily sufficient. The article concludes by returning to the roots of sociology and suggesting new frontiers concerning structure, agency, and contingency via complexity science and its respective components.

Key Words: Christian sociology, contingency, social networks, complexity science

A few years ago I accepted an invitation to explicate "Christian sociology" and elaborate various connections between sociology and theology for a graduate level theological seminar. Given these seemingly disparate disciplines, I tried my best to provide an academic nexus that was replete with anecdotes. At one point I paraphrased: "sociology without theology is powerless, and theology without sociology is blind." Toward the end of the session one of the students opined that she had always assumed that Christians could not be sociologists; I was the first Christian sociologist she had ever met in her life. This student perceived Christianity and sociology to be mutually exclusive categories.

Over the past two decades, I have taught sociology courses that incorporated social and cultural exegesis at a public university, a leading evangelical seminary, and the evangelical liberal arts college where I have been for the past ten years. Although I found this particular student's comments to be rather extreme, they were not entirely shocking to me. I have continually been asked "What is sociology?" and "What do sociologists do?" What is even rarer is to encounter people who have an accurate understanding of the discipline's emergence. I wonder if these questions are due to an unawareness of this discipline's emergence,¹ or perhaps an awareness that results in a "hermeneutics of suspicion."² Although sociology as a formal discipline has roots in the rise of modernity,³ its praxis in America emerged ironically from Christian influences. So what is Christian sociology? After briefly delineating some of this discipline's origins and development in the United States, I will argue that Christian sociology is essentially about the interplay between structure, agency, and contingency (SAC). The first concept emphasizes the formal and informal networks that are created by social relationships, the second emphasizes individual and/or group choices, and the third draws attention to the "Christian" aspect of sociology. Although "contingency" is an essential element of the Christian faith as well as the development of the discipline of sociology it has not been incorporated (well) in Christian sociology very well, and thus will be the primary emphasis here.

A Contextualization of the Origins of Sociology and Its Development in America⁴

I repeatedly tell my students (just I as I was told by former professors) that seeing problems without solutions fosters nihilism, and how we define a problem precedes the solutions. These mantras also cohered with the methods and goals of sociology in general and with one sociological linchpin in particular, Karl Marx (1818-1883). For example, Marx was convinced that social problems were inherently due to private property, as he modified Hegel's dialectic with matter⁵ and class conflict. The problem was simply private property – capitalism. The solution was simply no private property – communism.⁶ Adopting the solution would actualize "species being," and alleviate alienation and false consciousness.⁷

Modernity impacted Marx and other European social theorists such as Auguste Comte (1798-1857) who coined the phrase "sociology;" Harriet Martineau (1802-1876); Charles

¹ For an introduction to sociology's emergence, see Turner et al. (2012). For an overview of the "big three" founders, Karl Marx, Max Weber, and Emile Durkheim, and the contexts of modernity, see Royce (2015).

² One of my daughters used to refer to me as a "social allergy."

³ In this paper, modernity will refer to a general framework that entails a self-enclosed world without Divine intervention. Thus empiricism and reason trump religion regarding ontological and epistemological truth claims. The Creator-creation distinction is blurred, the noetic effects of sin are negated, and knowledge is equated with social progress.

⁴ For further readings on the burgeoning of sociology as a discipline in general and its academic developments in U.S. contexts, see Calhoun (2007). For how SAC developed within the discipline – the omission of one of the first American sociologists – see Morris (2015). Sociology was obviously not the only mode of social inquiry that tried to encompass Christian principles. The social sciences in general "developed from the eighteenth to the early twentieth centuries partly in sympathetic relation to Christian belief" (Beed and Beed 2004:21).

⁵ After all, Marx posited that Aristotle, not Plato, was "the greatest thinker of antiquity" (1978 [1852]:406). The former stated that reality existed in matter, the latter in ideas.

⁶ Marx' analysis was a product of modernity. Accordingly, it is interesting to read his works as a foil, and peruse Acts 2:42-47; apparently Marx' "history" obviated "His-story."

⁷ This problem-solution algorithm is a simplistic presentation of Marx.

Darwin (1809-1882); Herbert Spencer (1820-1903); Émile Durkheim (1858-1917); and Max Weber (1864-1920). All of these persons were associated with the establishment and burgeoning of sociology in Europe as the 20th century emerged. Whereas sociology emerged in Europe with a theistic (or perhaps deistic) exclusion (Lyon 1975:15 and 86), it developed in the U.S. with theological underpinnings. Heddendorf and Vos (2010:36) claimed that of the six most influential persons concerning the inception of American sociology (William Graham Sumner (1840-1910), Lester Frank Ward (1841-1913), Albion Small (1854-1926), Franklin Giddings (1855-1931), Charles Horton Cooley (1864-1929), and Edward Alsworth Ross (1866-1951)) Cooley was "the only important pioneer without some significant Christian influence in his background." One of the earliest proponents of sociology in the U.S. was Shailer Mathews (1863-1941), who wrote in the very first issue of the American Journal of Sociology that sociology must incorporate the teachings of Jesus (Mathews 1895).8 And Mathews' sentiments were not an isolated case. In fact, the first person in the U.S. to write a sociology textbook, create the first academic department of sociology, and help launch the inaugural issue of AJS, wrote: "To many possible readers the most important question about the conduct of the JOURNAL will be with reference to its attitude toward 'Christian Sociology'" (Small 1895:15).

Sociology was envisioned as a Christian tool to "understand the social world" and "create a better world for people" (Fraser and Campolo 1992:xii; cf. Heddendorf and Vos 2010:35; Pickering 1980:61; Talbott 1915:166). The nexus between sociology and Christianity was deemed to be "natural." Indeed, of the 298 persons teaching sociology in America by 1900, almost a third "had received some theological training" (Fraser and Campolo 1992:21). Although a fusion occurred between sociology and theology in the mid-1800s as a corrective against societal ills, a fissure occurred in the mid-1900s (Vidich and Lyman 1985:1 and 22).

Whether this fissure is attributable to a distrust between sociologists and theologians (Mills 1980:1), the rise of modernity, the embrace of evolution and the Scopes Trial, secularization (Lyon 1975:233), post-WASP immigration, the world wars, the repeal of Prohibition, or some other reason, the original association of sociology and theology was broken. The increasing withdrawal of Christians from the public sphere between 1910 and 1940 would later be labelled "The Great Reversal" (Moberg 1977:30 and 11 and cf. Marsden 1991:61). An intellectual breach would remain until the 1970s, when "biblical studies discovered sociology" (Brewer 2007:8 and cf. Coleman 1999:3; Elliott 1993:18; Gill 1975:3) and a renewed hybridity emerged. For example, John Elliot (1986:1) claimed that he coined the term "sociological exegesis" in 1979. Why this unexpected turn in the 1970s? David Horrell (1999:7-8; cf. deSilva 2004:119) posited that two factors fostered the interplay between social-

⁸ This publication continues to be a flagship sociology journal today. David Lyon noted that "Eyebrows sometimes rise at the revelation that the most important question for readers of the inaugural issue of the American Journal of Sociology was said to be its attitude to 'Christian Sociology,' or that, in England, a journal claiming to 'Christian Sociology' [Christendom: A Journal of Christian Sociology] was published for over twenty years" (1983:227).

scientific and NT studies: the Society of Biblical Literature (SBL) and the works of Gerd Theissen.⁹ Accordingly, questions of how biblical studies should interact with the social sciences was also placed in a framework regarding sociology and theology.

Is There a Nexus between Sociology and Theology?

What is the connection between sociology and theology? Some points of contact may be philosophy (Hudson 1980:101; Mathews 1912:312), history (Wallis 1907:636-7), and/or even mathematics. I would argue that these are means to connect modes of inquiry and that an instrumental nexus is not unique to the intersection of sociology and theology. Further, regardless of how one fosters an "integration," there is the perennial issue of balance between the two (Gill 1977:134). How much sociology or theology is "too much," "too little," or "just right?" The points along this continuum have resulted in catchphrases such as "sociologizing theology" or "theologizing sociology." Thus there are at least two basic issues with respect to connecting these two disciplines: 1) how theologians (religionists) should employ sociology (social sciences) in their work, and conversely 2) how sociologists should employ theology (religion) (Buri and Hardwick 1972:304). As a Christian sociologist, I posit that there is an interplay between structure, agency, and contingency. Although few published titles explicitly employ all three words (cf. Callinicos 2004; Lansing et al. 2006), the intersection of these concepts is nonetheless implicit in sociology in general and in Christian sociology in particular.

Structure: The Emphasis of Sociology

When most people depict "sociology," they refer to "systems," "institutions," and/or "structures." An extreme position conceptualizes them to be "godless social constructions." Depending on the nuances, these associations with sociology may or may not be correct. If one depicts sociology via abstract forces which *make* people act or think in certain manners, it becomes erroneously reductionistic, fatalistic, and devoid of human agency. Marx ([1852] 1978:595) has famously noted that "Men [and women] make their own history, but they do not make it just as they please; they do not make it under circumstances chosen by themselves, but under circumstances directly found, given and transmitted from the past." A simple bifurcation reveals that both choices and conditions of choosing impact outcomes. Whereas microeconomics, psychology, and rational choice theory emphasize individual (or group) choices, sociology highlights the conditions of choosing. Further, the conditions of choosing impact and

⁹ Lyon (1983) argued that sociology as an academic discipline in the U.S. re-emerged in the 1940s after the Social Gospel Movement via secular institutions, and notes some pivotal Christian sociologists who made their respective contributions in the 1970s and 1980s.

are impacted by human relationships (Coleman 1959). 10 Accordingly, sociology highlights how "structure" is created rather than focusing on what is created ("culture"); "structure trumps culture" (Wilson 2009:4).

Sociology thus investigates how and why the conditions of choosing impact choices. Interestingly, Comte (1867; cf. Urry 2004:1; Watts 2003) had conceptualized "sociology" as "social physics" and Georg Simmel (1950:6, 128, and 135) famously differentiated between two- and three-nodal relationships. And similar to Comte, Simmel (1950:6; 1937:43; cf. Buchanan 2007; Pentland 2015) also depicted these individual interactions as analogous to atoms, noting how "actors" by their interactions and connections create a "unit," or social systems. From its inception, sociology was not merely concerned about static abstractions (traditional statistics) but social relationships in contexts (social network analysis and complexity science). 11 In fact, Simmel introduced the pre-elements of social network analysis (SNA) by differentiating dyads and triads and noting how social structures change the dynamics of human action and cognition. Therefore, structure trumps culture, or as other disciplines postulate, ontology predicates epistemology, the "r" value impacts the outcome in a logistic bifurcation chart, 12 initial rules precede the fractal shape (Mandelbrot 1977; 2012), coding predicates algorithm (Page et al. 1999), and DNA predicates organism. Nevertheless, although sociologists emphasize the formative power of social structure, they also acknowledge human choice.13

Agency

Though sociology does not emphasize it, agency is important within a SAC framework, precisely because sociology is neither fatalistic nor reductionistic. Just as the author had a choice in whether to write this article, so too the viewer had a choice in whether to read it. And even from a Christian perspective, it is doubtful that "the devil made me do it." 14 Rather than abstracting choices as if each person were disconnected from others, choices must be

¹⁰ Without playing the "chicken or the egg game," this is a positive feedback loop which is known in sociological circles (no pun intended) as a "Bergerian dialectic" or "The Matthew Effect." That is, structure shapes culture, which then increasingly impacts structure.

¹¹ It is generally assumed, and has been shown theoretically, that statistics do not capture social relations as well as social network analysis, which is a subset of complexity science. However, I have yet to find a study that compares both methods with the same set of data.

¹² The logistic bifurcation chart will be discussed in further detail later in this paper.

¹³ A few micro-level sociologists who emphasize agency, though their concept of the actor's level of cognition varies, include George Herbert Mead (1863-1931), Herbert Blumer (1900-1987), Harold Garfinkel (1917-2011), and Erving Goffman (1922-1982).

¹⁴ The nuances of *peirazw* (πειραζω), which can be interpreted as "test," must be acknowledged (Bauer et al. 1979:640). It may be "in a good sense of God or Christ, who put men to the test" (John 6:6 and Hebrews 11:17) or "in a bad sense also of enticement to sin, tempt" (James 1:13a and 1:14). This word is also used in II Corinthians 10:13 and Matthew 4:1. The same word is used to depict God's testing to prove one's character or to succumb to a trial.

contextualized via relationships. There is no such thing as a choice that is devoid of contexts, hence the usefulness of phrases such as "bounded rationality," "cascades and herding," "behavioral economics" (Kahneman 2011; Thaler 2015; Thaler and Sunstein 2008), and "heterodox economics" (Chang 2003; 2008; and cf. Stiglitz 2012). Much like moral responsibility falls along a continuum between hubris, when one claims to act by knowing "everything," and nihilism, when one does not act because epistemology obviates certitude, there is always a meso-level engagement between structure and agency. The actor may not know everything, but he or she does know something. Actors always know enough to act in faith as a responsible moral agent. 15 But which is primary, structure or agency? An example demonstrates how people tend to emphasize structure (S) or agency (A), rather than utilizing an interplay of both.

People with privileged social markers¹⁶ tend to emphasize individual opportunity and choice, whereas people without privilege and/or power¹⁷ tend to emphasize societal barriers and constraint. Have you ever won a game, over and over again? You won right? Of course you did; hard work, talent, and perhaps some luck go a long way in a meritocratic society. Have you ever lost a game, over and over again? Of course you did; regardless of hard work, talent, and luck the game was not played on a level playing field. So, why do some groups keep "winning" or "losing" disproportionately? Imagine that there are four groups, A, B, C, and D, and their overall composite averages regarding bachelor's and advanced degrees are 32.5% and 12%, respectively. Now imagine that the particular group rates for attaining a bachelor's and advanced degrees are: A (36.2% and 13.5%), B (22.5% and 13.5%), C (53.9% and 21.4%), and D (15.5% and 4.7%). And what if we compared these groups on being incarcerated via state or federal institutions as a proportion of all incarcerations by sex? The rates for males and females respectively are: A (32% and 49%), B (37% and 22%), and D (22% and 17%). What happened to group C? Their proportions were so low that they had to be added with three other groups to make a new group, C¹ (four groups combined, 8% and 11%). A chart makes this scenario clearer.

Group	BA (avg. = 32.5%)	BA+ (avg. = 12%)	M Incarceration	F Incarceration
A ¹⁸	36.2%	13.5%	32%	49%
В	22.5%	13.5%	37%	22%
С	53.9%	21.4%	C ¹ = 8%	C ¹ = 11%
D	15.5%	4.7%	22%	17%

¹⁵ See James 4:13-17 and Matthew 25:14-30.

¹⁶ The three traditional social markers that are studied by sociologists are race, class, and gender. The intersection of these markers have historically accorded persons opportunity and or constraint.

¹⁷ Power, in Weberian conception, is the ability to make someone do something against her or his will, or the ability to act despite oppositional forces.

¹⁸ For group A, 36.2% and 13.5% have a BA and BA+, respectively. Of all the male and female incarcerations, group A represents 32% and 49%, respectively. The chart depicts groups B, C, and D accordingly.

Based on educational attainment and incarceration rates, it would appear that certain groups are "winning" or "losing." And if these were repeated patterns, one could infer that some groups are winning or losing repeatedly. Group A may appear to be doing well regarding educational attainment, but not so well regarding women's incarceration rates. Group B is not doing well (except for BA+), and group D is doing miserably. Group C appears to be winning at exceptional rates, and their incarceration rates are so minuscule they were enumerated with three other groups. Perhaps not surprisingly, these data reflect real persons who are made in the image of God. The educational data is from a recent U.S. Census report and the incarceration data is from the U.S. Department of Justice (DOJ). The groups are non-Hispanic White alone (A), Black alone (B), Asian alone (C), and Hispanic of any race (D). Asians were so underrepresented in the DOJ report that they had to be included with Native Americans, Hawaiians and Pacific Islanders, and persons of two or more races. This new group then made up 8% and 11% of those incarcerated for men and women respectively. Although it may appear that white women are disproportionately incarcerated (49%), the proportion of white women of all women in the U.S. is 76%. So why does it seem that some groups "keep 'winning' or 'losing' disproportionately?"

If one answers this question by emphasizing agency, then these outcomes are attributed to an individual's hard work and proper values, or lack thereof. Extending this type of thinking leads to the specious juxtaposition between the "Model Minority Thesis" and the "Culture of Poverty" (Kim 2014:43). However, fluctuating between only human structure and agency assumes a self-contained socially constructed world; God is absent. By incorporating contingency (SAC) one may potentially approximate and appropriate Christian sociology.

Contingency

Although it is impossible to have a form of Christian sociology without contingency, the interplay of structure, agency, and contingency is not necessarily sufficient for Christian sociology. Contingency is defined here as something that was not planned nor expected, yet becomes embedded as part of social reality, for "better" or "worse" (Merton 1936a:1; 1936b). 19 Sociology must acknowledge the role of contingency²⁰ in everyday life. But the ultimate acceptance of "random" events can be attributed either to "dumb luck" or to the Triune God; one cannot hold both to be true.

A barrage of questions may make this clearer. Why did VHS movie rentals become ubiquitous when it was an inferior technology to Betamax (Arthur 1990:262; cf. Liebowitz and Margolis 1995:11)? Why do people continue to use the "QWERTY" keyboard when it was

¹⁹ This does not employ contingency in a purely linear fashion as 1 => 2 =>3 etc., but rather 1 => 2a or 2b => 3a or 3b etc., whereby the selection of 2a or 2b is presented and or chosen in a random manner with increasing returns along the path. And this contingency is in fact part of the process of "path dependence" and non-linearity. ²⁰ For discussions of contingency and double contingency, see Luhmann (1995).

intentionally created to type more slowly, not faster (David 1985)? How did a robbery, vandalism instead of assassination, and the media make the Mona Lisa one of the most famous and invaluable paintings in the world (Sassoon 2001)? How did Windows 95 and Internet Explorer capture, at one point, 90% and 95% of its respective market share (Edstrom and Eller 1998)? These two Microsoft successes are even more remarkable considering that they both encountered opposition from Bill Gates. How did IBM use computing technology to facilitate the Nazi persecution of Jews, which impacted one particular Jew to flee and eventually immigrate to America and create fractal geometry at IBM (Black 2001; Mandelbrot 2012)? How did the use of fractals allow cell phones to obviate external antennas (Cohen 1997)? How were fractals utilized in movies like Star Trek and Star Wars (NOVA 2011)? Why were Asian Americans considered "the yellow peril" in the first half of the 20th century and then viewed as "the model minority" during the second half (Kim 2014)? Why are there so many medical discoveries that the assumption "necessity is the mother of invention" was flipped to "invention is the mother of necessity" (Meyers 2007)? Why does heat transfer from hot to cold and not the other way (Rovelli 2016:52-54)? (According to Rovelli, Boltzmann's explanation of "sheer chance" regarding the movement of heat was considered so outlandish by the scientific community that he hung himself in 1906.) All of these seemingly-random questions can be answered with "contingency" (Ball 2004; Taleb 2001; 2007).

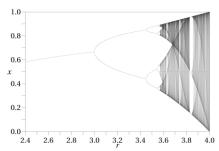
As Nassim Taleb (2007:135) noted: "When I ask people to name three recently implemented technologies that most impact our world today, they usually propose the computer, the Internet, and the laser. All three were unplanned, unpredicted, and unappreciated upon their discovery, and remained unappreciated well after their initial use." As Christians, contingency understood as Providence or Sovereignty rather than "dumb luck" explains how the only book of the Bible (Esther) that does not have the name "God" - perhaps because "God" is "absent" - evinces God's presence through "random" events.

Randomness is an important part of ontology, innovative paradigm shifts, and social change. One of the co-founders of the term "self-organized criticality" has claimed that "historical events depend on freak accidents" (Bak 1996:8). These "freak accidents" lead to cascading events – a premise of chaos; small changes precipitate large outcomes. Events where outputs become inputs, in a positive or negative feedback loop regarding social relationships are known as "the Matthew effect" (Merton 1968; Rigney 2010) or a feedback "dialectic" (Berger 1967:4; cf. Casti et al. 2011). Nassim Taleb (2007:xxiv), who criticized the Black-Scholes model's ability to predict the inimical effects of subprime loans, posited that "Almost everything in social life is produced by rare but consequential shocks and jumps; all the while almost everything studied about social life focuses on the 'normal,' particularly with 'bell curve' methods of inference that tell you close to nothing." This is one of the challenges in sociology as a social science because "where contingency is pervasive, detailed long-term prediction becomes impossible" (Bak 1996:8). Science does not merely describe the past, it also allows

one to predict or make inferences to future events, keeping in mind the caution to avoid the extremes of hubris and nihilism.

For example, Taleb (2007:203) who made upwards of tens of millions of dollars by "predicting" that subprime mortgages would collapse, posited that "knowing that you cannot predict does not mean that you cannot benefit from unpredictability." Interestingly, Dan Ariely (2008) wrote a New York Time's best-seller demonstrating that people's irrationality is a better predictor of behavior than the supposed abstracted rational choice theory. Daniel Kahneman is perhaps the only Nobel Laurette recipient in economics to have never taken an economics course. He won the prize, in part, by showing that people think they think rationally, but act irrationally. Given that people may or may not act "rational," Buchanan (2001:238; cf. Gaddis 2002) noted: "Looking back at history, you would find a fascinating pattern that had structure and randomness." Contexts of choosing must account for contingency regarding how people may or may not act (Groysberg 2010). This is why sometimes following the crowd may be beneficial – "the wisdom of crowds" (Surowiecki 2005:166) – or it may be disastrous – "groupthink" (Janis 1972). The SAC interplay clearly exists in both the social world as well as in some closed worlds. A famous experiment of dropping one grain of sand at a time found that "sandpiles exhibit their own punctuated equilibria" (Bak 1996:117; cf. Eldredge 1985:88). And though social networks appear to have a given structure or relationships among the actors, physicist Mark Buchanan (2001:22 and 233; cf. Eldridge 1985) noted that all types of networks "have a marked tendency to organize themselves along similar lines."

Perhaps one of the most fascinating illustrations of SAC (in a closed system!) is the following logistic bifurcation equation, f(x) = rx(1-x), 0 < r < 1, and 0 < x < 4, and the respective chart:

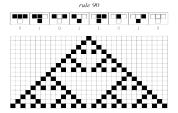


By selecting any given r and x value accordingly, and iterating the equation numerous times, only three outcomes are possible: a fixed point, bifurcation(s), and fluctuations within a chaotic region. The aesthetically beautiful chart illustrates how a simple rule fosters complexity. Even in this apparent disorder, there is a beautifully hidden order, known as the Feigenbaum constant.²¹ This equation shows that even if one knows the exact starting conditions – by choosing the r value – one may generally know some of the outcomes but not necessarily in a

²¹ I will never forget the joy I experienced as I worked my way through problem sets on chaos and fractals, and "discovered" the Feigenbaum's constant, 4.66920160... (Feldman 2012:120). These exercises strengthened my faith in the Triune God.

"punctiliar" manner. That is, one may hypothesize bounded regions for some r values, but may not be able to determine with certainty an exact point, as in a fixed point for the lower r values. In this case, by knowing the result one may be able to delimit a starting point (r value). But there are also instances in closed systems where knowing the end result does not guarantee knowledge of the process of how one got there.²²

One of my favorite images is the Sierpinski Triangle.²³



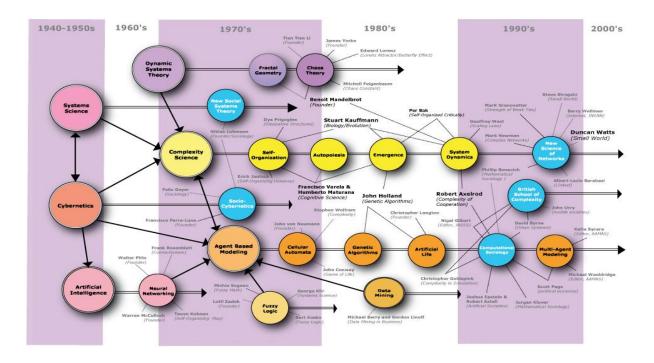
This fractal can be created by at least three entirely different processes. One method is beginning with an equilateral triangle and cutting an equilateral triangle in the center, repeatedly. Steven Wolfram's (2002:25) cellular automata Rule 90 is a second way.²⁴ The third way is to assign an evenly distributed number for each corner of the triangle (example, 1-2, 3-4, and 5-6). Then, pick a starting point inside any point of the triangle, roll a single die, and move half-way to the assigned corner based on the roll and mark the equidistance (midpoint) with a dot. If done countless times, a Sierpinski Triangle will be created. Both of these simple mathematical exercises, the bifurcation chart and Sierpinski Triangle, elucidate SAC within a closed system. In the first, given the rules (S) and the option to pick the r value (A), there are still variegated outcomes (C). The second exercise demonstrates that even with a known result, there are "random" ways to get to the same ending, again evincing SAC or how "structure trumps culture." Regarding the three ways to create a Sierpinski Triangle, perhaps the first one highlights S the most, and the third one C, within contexts of SAC.

The elements of SNA, positive feedback loops of nonlinearity, chaos and fractals, are all subsets of a field known as complexity science. Small changes – often random – can lead to large and unpredictable outcomes. It is a way to formalize "unintended consequences" or "unpredictable outcomes." Castellani and Hafferty (2009:16-17) articulated a "short laundry list of the things most sociologists lack or cannot do." This list included agent-based networking, SNA, cellular automata, fractal geometry, chaos, and data-mining. Below is chart regarding the historical progression and various aspects of complexity science (Castellani and Hafferty 2009, xi).

²² Think of any fractal number which measures roughness, but can be any infinite number of "shapes."

²³ These two diagrams, the Greek and Hebrew alphabet chart, and a diachronic progression of complexity science in sociology have hung on my wall for years, as they serve to articulate Christian sociology.

²⁴ It was humbling to realize that Rules 18, 22, 26, 82, 146, 154, 210, and 217 gave the exact same outcome. In fact, figuring out how the 256 different rules worked, based on a simple progression of "white" or "black" box per algorithm also brought me closer to The Creator.



Non-Christians Only?

Is SAC, as a subset of complexity science, for non-Christians only? I have been unable to identify a single institution within the Council for Christian Colleges and Universities (CCCU) that teaches a course on social network analysis with the requisite metrics and software. I became more intrigued when I read Mark Buchanan's The Social Atom, wherein he implied that Christians will resist his type of logic because we are "natural enemies" (2007:200). I disagree with Buchanan. In fact, I teach one of his main SAC points as a Christian sociologist: "The ability of individuals to have great influence depends more on the special organization of social systems than on anything else. ...this is probably true not only of the actions of individuals, but of many other quirky accidents as well" (Buchanan 2001:226). Rovelli (2016:65-6) is another physicist who conceptualizes the role of structure, agency, and contingency: "What role do we have as human beings who perceive, make decisions, laugh, and cry, in this great fresco of the world as depicted by contemporary physics? ... We are nodes in a network of exchanges through which we pass images, tools, information, and knowledge." As I was working my way through Buchanan's books, I sent him an email in defense of the Christian faith, as well as my appreciation of his scholarship. He provided a gracious apology and explication why he lumped all Christians with one political self-identified evangelical in particular.

As a Christian who believes in "His-story" via SAC, I am rather confident of God's "beginning" as noted in Genesis and His "end" in Revelation (Inch 1998; Dumbrell 2001). I am convinced that sociology is a necessary tool to exegete society. As much as my ability to use certain biblical tools are important to read the Scriptures as texts in contexts, sociology helps

me to "read" human interactions in contexts. Being able to engage in biblical and societal exegesis helps me to be all things to all men and women, if by any means, some may be saved (I Cor. 9:19-23). Within a SAC intersection, the Spirit of God allows me to see the same things as all of God's image bearers do, and perhaps see something different that is moving beyond common grace.²⁵ Perhaps these distinctions explain why, though Marx and a contemporary saw the same problematic social conditions regarding "industrial capitalism" (Lyon 1983:228), they interpreted them differently and therefore provided different solutions.

Structure, Agency, and Contingency Re-visited

If Marx and European sociologists have been castigated and eschewed as godless modernists by certain evangelicals, most of the early American sociologists have been equally criticized for promoting a social gospel (Lyon 1983:234). However, perhaps one should proceed with caution in assessing any socio-political system as inherently inferior or superior. After all, Christians are commanded to "render to Caesar the things that are Caesar's; and to God the things that are God's" (Matt. 22:21). Interestingly, Carl F.H. Henry ([1947] 2003:23) warned presciently at the outset of the Cold War that perhaps Christianity employed "an unstudied and superficial analysis of the specific modern evils." He questioned whether Christians may have uncritically accepted "capitalism" and rejected "communism," and stated boldly, considering his social milieu, that "A redemptive totalitarianism is far preferable to an unredemptive democracy; a redemptive Communism far more advantageous than an unredemptive Capitalism, and vice versa" (Henry [1947] 2003:73).

As noted, one of Marx' contemporaries "happened" to witness the same evils regarding the abuses of an "unredemptive capitalism." In fact they both arrived in London in the same year, 1849. Regarding the impoverished and destitute, like Marx this person wished "to do something in mitigation of the miseries of this class" and noted that "a man's labor is not only his capital, but his life" (Booth 1890:5 and 42). Perhaps you guessed that it was William Booth (1829-1912) who founded The East London Christian Mission, known today as the Salvation Army (Church).²⁶ Booth (1890:284) acknowledged that private property could be a problem within a larger context of the noetic effects of sin:

There is a great deal of idle talk in the world just now about capital, as if capital were the enemy of labor. It is quite true that there are capitalists not a few who may be regarded as the enemies, not only of labor, but of the human race; but capital itself, so far from being a natural enemy of labor, is the great object which the laborer has constantly in view. However much an agitator may denounce capital, his one great grievance is that he has not enough of it for himself. Capital, therefore, is not an evil in

²⁵ See Paul's distinction between those with the mind of Christ and those without in I Corinthians 2:10-16.

²⁶ I have found only one substantial work that attempts to compare and contrast Marx and Booth (Woodall 2005).

itself; on the contrary, it is good – so good that one of the great aims of the social reformer ought to be to facilitate its widest possible distribution among his fellow-men. It is the congestion of capital that is evil, and the labor question will never be finally solved until every laborer is his own capitalist.

Like Marx, Booth (1890:240) saw how changes in the means of production created new conditions of choosing:

There is a story told likely enough to be true about a young girl who applied one evening for admission to some home established for the purpose of rescuing fallen women. The matron naturally inquired whether she had forfeited her virtue; the girl replied in the negative. She had been kept from that infamy, but she was poor and friendless, and wanted somewhere to lay her head until she could secure work and obtain a home. The matron must have pitied her, but she could not help her, as she did not belong to the class for whose benefit the Institution was intended. The girl pleaded, but the matron could not alter the rule, and dare not break it, they were so pressed to find room for their own poor unfortunates, and she could not receive her. The poor girl left the door reluctantly, but returned in a very short time, and said, "I am fallen now, will you take me in?"

Like Marx, Booth wanted structural change²⁷ whereby individuals would be able to actualize "species-being." 28 Although both Marx and Booth acknowledged the importance of socialmaterial relations, only the latter posited that "no change in circumstances, no revolution in social conditions, can possibly transform the nature of man" (Booth 1890:107). Nevertheless, the Christian faith must be implemented within a SAC framework. Accordingly, Booth (1890:108) "exegeted" society and contextualized the Gospel: "The remedy, to be effectual, must change the circumstances of the individual when they are the cause of his wretched condition, and lie beyond his control."

Booth (1890:58) unequivocally acknowledged that only Christ could save a person's soul. Yet in purporting a holistic gospel, he, like Marx, wanted to optimize the conditions of choosing:

But what is the use of preaching the Gospel to men whose whole attention is concentrated upon a mad, desperate struggle to keep themselves alive? You might as well give a tract to a shipwrecked sailor who is battling with the surf which has drowned his comrades and threatens to drown him. He will not listen to you. Nay, he cannot hear you any more than a man whose head is under water can listen to a sermon. The first thing to do is to get him at least a footing on firm ground, and to give him room to live.

²⁷ Few are willing to castigate "the wild boy of Aveyron" or "Genie the feral child" for making poor choices and therefore not functioning well in society. Rather, their conditions of choosing are highlighted. Yet for racial and ethnic groups, the conditions of choosing are downplayed and abstracted culture is overplayed. See Lieberman (1998).

²⁸ Compare Ephesians 2:8-10. Vss. 8-9 teach us how one is saved, and vs. 10 for what purpose – good works.

Then you may have a chance. At present you have none. And you will have all the better opportunity to find a way to his heart, if he comes to know that it was you who pulled him out of the horrible pit and the miry clay in which he was sinking to perdition.

Although Booth and Marx were in similar contexts, they were different "r" values within the same "equation" and hence they have "bifurcated" outcomes. Their choices were not made under conditions of their choosing, yet they both wished to optimize the conditions of choosing for humanity. Though both conceptually employed a SAC intersection, one entailed a selfcontained reality and the other acknowledged the Triune God.

In conclusion, sociology in general emerged within a modernist context, and sociology emerged in the U.S. within a more particularly Christian context. Today, Christian sociology is challenged to account for the interplay of structure, agency, and contingency. Contingency is required for "good" sociology, and some understanding of God's Sovereignty is necessary but not sufficient to enact Christian sociology. Moving forward with models or formal representations of society is a perennial challenge for social scientists; it is difficult to make accurate inferences regarding human social behavior with so many interacting variables. Nonetheless, revisiting Comte and Simmel via "social physics" or "social atoms" with requisite technology – a broad field that falls under "complexity science" – is one direction sociologists must push toward with respect to SAC (Castellani and Williams 2010). And this push, preferably in the form of exegesis of the original texts, is a new frontier for Christian sociologists and theologians working together.

References

Ariely Dan. 2008. Predictable Irrationality: The Hidden Forces that shape our Decisions. New York: Harper Collins.

Arthur, W. Brian. 1990. "Positive Feedbacks in the Economy." Scientific American 262:92-99.

Bak, Per. 1996. How Nature Works: The Science of Self-Organized Criticality. New York: Springer-Verlag.

Ball, Philip. 2004. Critical Mass: How One Thing Leads to Another. London: Arrow Books.

Bauer, Walter, William F Arndt, F. Wilbur Gingrich, and Frederick W. Danker eds. 1979. A Greek-English Lexicon of the New Testament and Other Early Christian Literature Chicago: The University of Chicago Press.

Berger, Peter L. 1967. The Sacred Canopy: Elements of a Sociological Theory of Religion. New York: Doubleday.

Black, Edwin, 2001. IBM and the Holocaust. New York: Crown Publishers.

Booth, William. 1890. In Darkest England. Chicago: Charles H. Sergel & CO.

Brewer, John D. 2007. "Sociology and Theology Reconsidered: Religious Sociology and the

- Sociology of Religion in Britain." History of the Human Sciences 20(2):7-28.
- Buchanan, Mark. 2002. Ubiquity: Why Catastrophes Happen. New York: Three Rivers Press.
- Buchanan, Mark. 2007. The Social Atom: Why the Rich get Richer, Cheats get Caught, and Your Neighbor Usually Looks Like You. London: Marshall Cavendish Business.
- Buri, Fritz and Charley D. Hardwick. 1972. "The Reorientation of Theology in the Light of the Challenge from Sociology." Journal of the American Academy of Religion 40(3):304-315.
- Callinicos, Alex. 2004. Making History: Agency, Structure, and Change in Social Theory. Boston: Brill.
- Carson, E. Ann. 2014. "Prisoners in 2013." U.S. Department of Justice. Retrieved July 15, 2016 (http://www.bjs.gov/content/pub/pdf/p13.pdf).
- Castellani, Brian and Frederic William Hafferty. 2010. Sociology and Complexity Science: A New Field of Inquiry. Duluth: Springer.
- Casti, John Leena Ilrnola, Petri Rouvinen, and Markku Wilenius, X-Events. 2011. Helsinki: Taloustieto Oy.
- Chang, Ha-Joon. 2002. Kicking Away the Ladder: Development Strategy in Historical Perspective. London: Anthem Press.
- Chang, Ha-Joon. 2008. Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism. New York: Bloomsbury Press.
- Cohen N, 1997. "Fractal Antenna Applications in Wireless Communications." Electronics Industries Forum of New England. 43-49.
- Coleman, John A. 1999. "The Bible and Sociology." Sociology of Religion 60(2):125-148.
- Coleman, Robert. 1959. "Relational Analysis: The Social Study of Social Organizations with Survey Methods." Human Organizations 17(4):28-36.
- Comte, Auguste. 1876. Course of Positive Philosophy. London: George Bell and Sons.
- David, Paul A. 1985. "Clio and the Economics of QWERTY." The American Economics Review 75(2):332-37.
- deSilva, David. 2004. "Embodying the Word: Social Scientific Interpretation of the New Testament," in The Face of New Testament Studies eds. Scot McKnight and Grant Osborne. Grand Rapids: Baker.
- Dumbrell, William J. 2001. The End of the Beginning: Revelation 21-22 and the Old Testament. Eugene: Wipf and Stock Publishers.
- Edstrom, Jennifer and Marlin Eller. 1998. Barbarians led by Bill Gates. New York: Henry Holt.
- Eldredge, Niles. 1985. Time Frames: The Evolution of Punctuated Equilibria. Princeton: Princeton University Press.
- Elliott, John Hall, 1986. "Social-Scientific Criticism of the New Testament: More on Methods and Models." Semeia 35:1-34.
- Elliott, John Hall. 1993. What is Social-Scientific Criticism? Minneapolis: Fortress Press.

- Feldman, David P. 2012. Chaos and Fractals: An Elementary Introduction. Oxford: Oxford University Press.
- Fraser, David A. and Tony Campolo. 1992. Sociology Through the Eyes of Faith. New York: HarperCollins Publishers.
- Gaddis, John. 2002. The Landscape of History: How Historians Map the Past. New York: Oxford University Press.
- Gill, Robin. 1975. The Social Inquiry of Theology: A Methodological Enquiry. London: Mobrays.
- Gill, Robin. 1977. Theology and Social Structure. Oxford: Mobrays.
- Groysberg, Boris. 2010. Chasing Stars: The Myth of Talen and the Portability of Performance. Princeton: Princeton University Press.
- Heddendorf, Russell and Matthew Vos. 2010. Hidden Threads: A Christian Critique of Sociology. New York: University Press of America.
- Henry, Carl F.H. [1947] 2003. The Uneasy Conscience of Modern Fundamentalism. Grand Rapids: William B. Eerdmans Publishing Company.
- Horrell, David G. 1999. "Social-Scientific Interpretation of the New Testament: Retrospect and Prospect," in Social-Scientific Approaches to New Testament Interpretation ed. David G. Horrell. Edinburgh: T&T Clark, 1999.
- Hudson, W. Donald, 1980. "The Rational System of Beliefs," in Sociology and Theology: Alliance and Conflict, eds. David Martin, John Orme Mills, and W.S.F. Pickering. Bury St Edmunds: St Edmundsbury Press,
- Inch, Morris. 1988. Chaos Paradigm: A Theological Exploration. Lanham, University Press of America.
- Janis, Irving L. 1972. Victims of Groupthink: A Psychological Study of Foreign-Policy Decisions and Fiascoes. Oxford: Houghton Mifflin.
- Jensen, Michael C., Fischer Black, and Myron S. Scholes. 1972. "The Capital Asset Pricing Model: Some Empirical Tests." Studies in the Theory of Capital Markets. Retrieved July 20, 2016 (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=908569).
- Kahneman, Daniel. 2011. Thinking, Fast and Slow. New York: Penguin Books.
- Kim, Henry H. 2014. "How the Model Minority Thesis became a Transcendent Meaning." Christian Scholar's Review 43(2):109-129.
- Lansing, J. Stephen, John Schoenfelder, and Vernon Scarborough. 2006. "Rappaport's Rose: Structure, Agency, and Historical Contingency in Ecological Anthropology," in Reimagining Political Ecology eds. Aletta Biersack and James B. Greenberg. Durham: Duke University Press, 325-357.
- Lieberman, Robert C. 1998. Shifting the Color Line: Race and the American Welfare State. Cambridge: Harvard University Press.

- Liebowitz, S.J. and Stephen E. Margolis. 1995. "Path Dependence, Lock-In, and History." Journal of Law, Economics, and Organization, 11:205-226
- Luhmann, Niklas. 1995. Social Systems. Trans. John Bednarz, Jr. and Dirk Baecker. Stanford: Stanford University Press.
- Lyon, David. 1975. Christians & Sociology: To the Challenge of Sociology... A Christian Response. Downers Grove: Intervarsity Press.
- Lyon, David. 1983. The Idea of a Christian Sociology: Some Historical Precedents and Current Concerns," Sociological Analysis 44(3):227-242
- Mandelbrot, Benoit B. 1977. The Fractal Geometry of Nature. New York: W.H. Freeman and Company.
- Mandelbrot, Benoit B. 2012. The Fractalist: Memoir of a Scientific Maverick. New York: Pantheon Books.
- Marsden, George M. 1991. Understanding Fundamentalism and Evangelicalism. Grand Rapids: Wm. B. Eerdmans Publishing Co.
- Marx, Karl. [1852] 1978. "The Eighteenth Brumaire of Louis Bonaparte," in The Marx-Engels Reader, ed. Robert C. Tucker. New York: W.W. Norton & Company.
- Mathews, Shailer. 1895. "Christian Sociology." American Journal of Sociology (1):69-78.
- Mathews, Shailer. 1912. "The Social Origin of Theology." The American Journal of Sociology 18(3):289-317.
- Merton, Robert K. 1936a. "The Unanticipated Consequences of Purposive Social Action," American Sociological Review 1(6):894-904.
- Merton, Robert K. 1936b. Social Theory and Social Structure. New York: The Free Press.
- Merton, Robert K. 1968. "The Matthew Effect in Science," Science 159 (3810):56-63.
- Meyers, Morton A. 2007. Happy Accidents: Serendipity in Modern Breakthroughs: When Scientists find what they're NOT Looking for. New York: Arcade Publishing.
- Mills, John Orme. 1980. "Introduction: Of Two Minds," in Sociology and Theology: Alliance and Conflict, eds. David Martin, John Orme Mills, and W.S.F. Pickering. Bury St. Edmunds: St Edmundsbury Press,
- Moberg, David O. 1977. The Great Reversal: Evangelicalism and Social Concerns. New York: A Holman Book, 1977.
- NOVA. "Hunting the Hidden Dimension." First aired on August 24, 2011 on PBS.
- Page, Lawrence, Sergey Brin, Rajeev Motwani, and Terry Winograd. 1999. "The PageRank Citation Ranking: Bringing Order to the Web." Retrieved July 20th, 2016 (http://ilpubs.stanford.edu:8090/422/).
- Parsons, Talcott, 1937. The Structure of Social Action. New York: Free Press.
- Pentland, Alex. 2015. Social Physics: How Social Networks can make us Smarter. New York: Penguin Books.
- Pickering, W.S.F. 1980. "Theodicy and Social Theory: An Exploration of the Limits of

- Collaboration between Sociologist and Theologian" in Sociology and Theology: Alliance and Conflict, eds. David Martin, John Orme Mills, and W.S.F. Pickering. Bury St. Edmunds: St Edmundsbury Press,
- Rigney, Daniel. 2010. The Matthew Effect: How Advantage Begets Further Advantage. New York: Columbia University Press.
- Rovelli, Carlo. 2016. Seven Brief Lessons on Physics. New York: Riverhead Books.
- Ryan, Camille L. and Kurt Bauman. 2016. "Educational Attainment in the United States: 2015, Population Characteristics." United States Census Bureau. Retrieved July 15, 2016 (http://www.census.gov/content/dam/Census/library/publications/2016/demo/p20-578.pdf).
- Sassoon, Donald. 2001. Becoming Mona Lisa: The Making of a Global Icon. New York: Harcourt, Inc.
- Simmel, George. 1950. The Sociology of George Simmel, translated by Kurt H. Wolf. New York: The Free Press.
- Small, A.W. 1895. "The Era of Sociology." American Journal of Sociology 1(1):1-15.
- Stiglitz, Joseph. 2012. The Price of Inequality: How Today's Divided Society Endangers our Future. New York: W.W. Norton & Company.
- Surowiecki, James. 2005. The Wisdom of Crowds. New York: Anchor Books.
- Talbott, E. Guy. 1915. "The Relation between Theology and Sociology." The Biblical World 46(3):162-173
- Taleb, Nassim Nicholas. 2001. Fooled by Randomness: The Hidden Role of Chance in Life and in the Markets. New York: Random House.
- Taleb, Nassim Nicholas. 2007. The Black Swan: The Impact of the Highly Improbable. New York: Random House.
- Thaler, Richard H. 2015. Misbehaving: The Making of Behavioral Economics. New York: W.W. Norton & Company.
- Thaler, Richard H. and Cass R. Sunstein. 2008. Nudge: Improving Decisions about Health, Wealth, and Happiness. New Haven: Yale University Press.
- Urry, John. 2004. "Small Worlds and the new 'Social Physics." Global Networks 4 (2):109-130.
- Vidich, Arthur J. and Stanford M. Lyman. 1985. American Sociology: Worldly Rejections of Religion and Their Directions. New Haven: Yale University Press.
- Wallis, Louis. 1907. "Sociological Significance of the Bible." American Journal of Sociology 12(4):532-52.
- Watts, Duncan J. 2003. Six Degrees: The Science of a Connected Age. New York: W.W. Norton & Company, 2003.
- Wilson, William Julius. 2009. More than Just Race: Being Black and Poor in the Inner City. New York: W.W. Norton & Company.
- Wolfram, Stephen. 2002. A New Kind of Science. Champaign: Wolfram Media, Inc.

Woodall, Ann M. 2005. What Price the Poor? William Booth, Karl Marx and the London Residuum. Burlington: Ashgate Publishing Company.

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