Refiguring Religion

Mark C. Taylor

THE CHANGING WINDS OF THEORY reflect the circulation of broader religious, social, political, and economic currents. Why does theory become a preoccupation at a particular historical moment? What makes different theories fashionable at different times? We cannot understand the significance of discussions about contrasting theories of religion without analyzing the complex context in which they occur. In his insightful and thoughtful response to After God, Tyler Roberts highlights the question of theory. While my argument in this book is about much more than theory, Roberts’s way of framing the issue provides a helpful point of entry to recent theoretical debates as well as the socio-cultural circumstances implicitly and explicitly informing them.

When discussions turn to theory, critics invariably tend to draw a sharp distinction between the study of religion and the practice of religion. While there is an obvious difference between analyzing and practicing religion, theory and practice are more closely related and theory is considerably more theological than most critics are willing to acknowledge. It is, therefore, worth asking why so many students of religion are so insistently antitheological, if not antireligious. As Roberts suggests in passing, the answer to this question has something to do with the emergence of Religious Studies as a discipline—if it is a discipline—since the late 1960s. Up until that time, most departments of religion focused primarily on Judaism and Christianity and the approach to the study of religion was closely tied to Protestant theology.

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In an effort to establish an independent identity and to secure what they believed to be the academic respectability of the field, many scholars set up an opposition between the study of religion, which is academically legitimate, and theology and the practice of religion, which are not. In an effort to make clear to themselves and others that they were neither theological nor religious, these interpreters appropriated—often naively and uncritically—the methods of the social and, more recently, the natural sciences.

During the latter part of the twentieth century, the stakes of these debates increased considerably. Contrary to the predictions of many astute theorists, religion did not fade as processes of modernization advanced; rather, new forms of traditional religion emerged. The recent interest in theory is, in large measure, a response to this unexpected turn of events. What is surprising about these discussions of theory is how little they have changed in the past forty years and how little critics have learned from the failure of once popular modernization and secularization theories. As religious fervor has spread across the globe, the search for the psychological, social, political, economic, and even neurological bases of religion has become all the more frantic. It is undeniable that some of these inquiries have shed considerable light on humankind’s religious behavior. But it is no less undeniable that many of these critics have a naïve understanding of the history of western theology that leads them to misunderstand the people and communities they study and to overlook the implicitly theological convictions underlying their own purportedly nontheological investigations. Theology is no more monolithic than theory. Just as there are both foundational and nonfoundational theories, so there are foundational and nonfoundational theologies. All too often interpreters do not recognize that the theories they uncritically accept are every bit as foundational as the beliefs of the so-called fundamentalists they criticize. Moreover, since these critics do not understand the complexity of theology and the theological genealogy of theory, they do not realize the rich resources for overcoming foundationalism in all of its guises that can be found in the western theological tradition.

Ever since its publication more than half a century ago, Mircea Eliade’s *The Sacred and The Profane* has been a focus of fierce controversy among theorists of religion. For his supporters, Eliade’s combination of phenomenology and the history of religions opens productive avenues of inquiry for the comparative study of religion. His critics, by contrast, maintain that Eliade’s argument is actually theology disguised as theory. From this point of view, Eliade’s insistence that religion is *sui generis* precludes precisely the kind of critical analysis that the study of...
religion requires. When understood in this way, the contrast between theological and nontheological approaches translates into the opposition between nonreductive and reductive accounts of religion. “In this story,” Roberts explains, “Eliade’s anti-reductionist discourse of the ‘sacred’ becomes the epitome and, it is hoped, the last gasp, of religious studies as a quasi-theological discourse.”

Roberts approaches his analysis of theory through two essays published in Willi Braun and Russell McCutcheon’s *Guide to the Study of Religion*: Jonathan Z. Smith’s “Classification” and Sam Gill’s Epilogue, “Play.” Roberts’ concentration on these two essays is strategic because he sees in the contrast between Smith’s account of the “locative” function of religion on the one hand, and Gill’s interpretation of the ambiguity and incongruity of “play” alternative approaches to the study of religion on the other. Roberts correctly argues that my reading of religion in terms of virtuality falls between these two ostensible opposites and thereby “disturbs the idea that religion is primarily locative and, in so doing, also disturbs the boundaries between the theological and the theoretical, religion and the study of religion.”

Braun and McCutcheon make their theoretical commitments perfectly clear in the introduction to the volume. In his essay on “Religion” that introduces *Guide to the Study of Religion*, Braun explicitly states the theoretical presupposition of the volume: “Most simply put, this Guide is a multi-faceted asking of and replying to two basic questions that students of religion must sooner or later take up with some degree of seriousness as a matter of remaining transparent and cogent about what they are up to when they study religion: what is religion? How is it successfully investigated within the shared aims of the family of human and social sciences in the university?”1 Given this approach, it is not surprising that the most important contemporary theorist represented in this volume is Jonathan Z. Smith. For nearly four decades, Smith has been arguing that the study of religion cannot be legitimate if it does not become a genuine human science. In advancing this argument, he has devoted much of his academic career to developing a critique of Eliade’s approach to the study of religion. While Smith is considerably more sophisticated than many of his epigones, his argument still suffers from an antitheological bias that reflects an inadequate understanding of the western religious tradition. Smith’s influential account of the locative function of religion rests upon his interpretation of Eliade’s foundational distinction between the sacred and the profane in terms of

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1 Braun (2000: 7).
the opposition between cosmos and chaos or order and disorder. Roberts effectively summarizes Smith’s argument when he writes, “locative and utopian maps try to overcome incongruity once and for all, the former by emphasizing place and the importance of everything having a place and the latter by rebelling against existing order in anticipation of a new world and new order.” In his influential essay, “Map is not Territory,” Smith admits that matters are more complicated than he had previously acknowledged. Instead of always attempting to overcome uncertainty and ambiguity, religion sometimes “delights” in ambiguity and increases rather than relays tensions. With this insight, Smith’s argument moves toward a reversal of the sacred/profane opposition with which his analysis began. This slippage provides the opening for Gill’s argument.

The inclusion of Gill’s contribution as a postscript suggests the marginal role his approach plays in the interpretation of religion advanced by Braun, McCutcheon, and most of their colleagues. Far from providing a map that creates order, purpose, and meaning, play, Gill argues, marks “a boundary that presents alternatives governed by self-contradiction that each leads to and negates the other in an apparent endless cycle.” A lifelong student of Native American religion, Gill emphasizes the productive ambiguity of many religious myths and rituals. From Gill’s point of view, religion, in terms Victor Turner has made popular, is irreducibly liminal. But just as Smith shifts from understanding religion as locative to admitting its dislocative function, so Gill’s argument, Roberts explains, sometimes slides toward “a view of religion much more in line with theorists of social formation.”

If we have learned anything from the theoretical debates of the past forty years, we should be suspicious of every opposition like sacred/profane, cosmos/chaos, order/disorder, locative/dislocative, surface/depth, and superstructure/infrastructure. But, alas, many influential theorists remain committed to an implicitly structural mode of interpretation that is, in the final analysis, foundational. Gill correctly argues that the notion of play renders apparently clear distinctions inescapably ambiguous. But play, like everything else, can be interpreted in different ways. On the one hand, play can be understood as a self-reflexive or auto-affective structure that folds back on itself in a way that seems to secure self-presence and self-identity by excluding difference and otherness. As we will see in more detail, this is the notion of play that Kant identifies in his account of inner teleology in the *Critique of Judgment* and Hegel appropriates in the foundation of his speculative system. When read against the grain, this self-reflexive structure harbors the conditions of its own disruption and clears an
opening for a different notion of play. Rather than closing the circle of self-reference, play can also dislocate self-presence and interrupt every circuit of self-reflexivity. This understanding of play informs Kierkegaard’s reading of irony, humor, and pseudonymity. In his widely influential essay, “Structure, Sign and Play,” Derrida, who by the end of his life had become a Kierkegaardian, explains the implications of this alternative notion of play:

Play is the disruption of presence. The presence of an element is always a signifying and substitutive reference inscribed in a system of differences and the movement of a chain. Play is always play of absence and presence, but if it is to be thought radically, play must be conceived before the alternative of presence and absence…. Turned toward the lost or impossible presence of the absent origin, this structuralist thematic of broken immediacy is therefore the saddened, negative, nostalgic, guilty, Rousseauistic side of the thinking of play whose other side would be the Nietzshean affirmation…. This affirmation determines the noncenter otherwise than as the loss of center and it plays without security.2

This notion of play subverts the opposition between the theological and the theoretical as well as the sacred and the profane.

Though not immediately evident, this dislocation of presence actually occurs in Eliade’s argument precisely at the point that most disturbs his antitheological critics. As always, the most telling remarks are not offered in the text proper but are in a textual supplement. In the introduction to The Sacred and the Profane, Eliade, citing Luther, draws on Rudolf Otto’s category of the “wholly other” to explicate his view of the sacred. “The numinous presents itself as something ‘wholly other’ (ganz andere), something basically and totally different. It is like nothing human or cosmic; confronted with it, man senses his profound nothingness.” Eliade proceeds to appropriate the category of the “wholly other” to advance his own argument. “The sacred tree, the sacred stone are not adored as stone or tree; they are worshipped precisely because they are hierophanies, because they show something that is no longer stone or tree but the sacred, the ganz andere.”3 Eliade does not seem to realize that his identification of the sacred with the ganz andere subverts the structure of his own argument as if from within. That which is

2 Derrida (1978: 292). Derrida presented this paper at the 1966 Johns Hopkins conference “The Languages of Criticism and the Sciences of Man,” where both structuralism and poststructuralism were first introduced in America.
3 Eliade (1961: 9, 12).
wholly other cannot be categorized in terms of the clear and precise oppositions defined by any logic based upon the principle of noncontradiction. The *ganz andere* is neither sacred nor profane and, by extension, is neither simply locative nor dislocative. The strange, even uncanny, interstitiality of this neither/nor marks and remarks the domain of what I have described as the virtual. Far from merely imaginary or unreal, the virtual is the elusive matrix through which all possibility and actuality repeatedly emerge. The implications of this notion of virtuality are theoretical and practical as well as epistemological, ontological and axiological.

In defining religion, I have taken account of the polarities Roberts associates with Smith and Gill.

Religion is an emergent, complex, adaptive network of symbols, myths and rituals that, on the one hand, figure schemata of feeling, thinking and acting in ways that lend life meaning and purpose and, on the other, disrupt, dislocate every stabilizing structure.⁴

Roberts correctly identifies the importance of the interplay between order/disorder, location/dislocation, structuring/destructuring, and figuring/disfiguring in this definition. Any interpretation that associates religion with one of these poles to the exclusion of the other is inadequate. While the relationship between the moments of figuring and disfiguring is not precisely dialectical, there is a constant oscillation, or as I have argued elsewhere *altaration*, between structure and emergence.⁵ While helpful, the analysis of the theory of religion presented in *After God* in terms of the interplay between location/dislocation or order/ambiguity is incomplete because it overlooks the no less important insistence on the claim that religion is “an emergent complex adaptive network of symbols, myths and rituals.” One of the reasons I did not directly engage the theorists Roberts so helpfully considers is that I did not want to remain bound to the terms of past debates but wanted to introduce a new set of categories to theoretical discussions of religion. For more than a decade, my work with new media and information technologies as well as my study of information theory, economics, and the biological sciences has convinced me that recent analyses of complex adaptive systems provide a way out of the theoretical impasse in which we have been mired far too long.

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Looking back over the past four decades, I now realize that I have gradually been developing a philosophy or, perhaps more accurately, a theology of culture, which has a consistency and coherence I did not recognize as I was developing it. However, even as an undergraduate, I did realize that my intellectual as well as my spiritual soul is suspended between Hegel and Kierkegaard. Indeed, one way to understand the trajectory of my work over the years is as the oscillation or alternation between Hegel and Kierkegaard. Never completely satisfied with Hegel or Kierkegaard, I have attempted to formulate a position, if it is a position, that is neither Hegelian (both/and) nor Kierkegaardian (either/or).

When I started reading Derrida in the late 1970s, I quickly realized that the unmappable territory he was exploring was the intermediate domain of the neither/nor for which I had long been searching. Derrida’s project began as an extended critique of Hegel and gradually drifted toward Kierkegaard. In a 1971 interview, he explains, “We will never be finished with the reading or rereading of Hegel, and, in a certain way, I do nothing other than attempt to explain myself on this point.”6 A generation of French thinkers taught by Jean Hyppolite and Alexander Kojève read Hegel as a protostructuralist and interpreted structuralism as a latter-day Hegelianism. Derrida’s critique of structuralism (and here I would also include the arguments of thinkers as different as Levinas, Blanchot, Lacan, Foucault, Bataille, and Kristeva) indirectly repeats Kierkegaard’s criticism of Hegelianism. For Derrida, Hegelianism and structuralism are both totalizing systems that exclude differences and repress otherness. Since existentialists like Sartre and Camus had appropriated Kierkegaard’s writings to develop their distinctive brand of humanism, poststructuralists, who were resolutely antihumanist, did not avail themselves of Kierkegaard’s insights. Slowly, however, Kierkegaard’s categories began to seep into the writings of Bataille, Blanchot, Lacan, Levinas, and, above all, Derrida. In late works like The Gift of Death and Acts of Religion, Derrida’s position is effectively indistinguishable from that of Kierkegaard.

This critical turn brought problems with it. Just as Kierkegaard’s effort to recover the singular subject he believed Hegelianism negates is morally vacuous, so Derrida’s “solicitation” of singularities supposedly repressed by totalizing systems and comprehensive structures leads to an interminability of mourning that is ethically and politically paralyzing. For all the richness of his diverse writings, Derrida’s point is always the same: While systems and structures—be they psychological, social,

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political, economic, or literary—totalize by excluding differences and repressing otherness, they are inevitably divided as if from within because they include as a condition of their possibility that which they can neither negate nor incorporate. Though unavoidably faulty, these systems and structures are nonetheless inescapable. Significant change is, therefore, impossible and the most we can hope for is persistent resistance to unending repression. Protests to the contrary notwithstanding, this theoretical position is ethically and politically inadequate—resistance without transformation is not enough.

To develop a theoretical model capable of informing responsible ethical and political activity, it is necessary to reconsider recent versions of structural analysis and systems theory. Is it true, as Derrida and other poststructuralists insist, that systems and structures inevitably totalize or, perhaps, is it possible to imagine nontotalizing structures that act as a whole? As I pondered this question, an answer gradually began to emerge from the unexpected intersection of my personal and professional interests. For many years, I have been involved in both creating and writing about media and the visual arts. With the advent of digital technologies in the early 1990s, I began to experiment with new media in my research and teaching. In 1992, Esa Saarinen, a colleague from Helsinki, and I taught the first global seminar using teleconferencing technology and six years later New York investment banker, Herbert Allen, and I founded a company named Global Education Network whose mission was to provide high-quality online education in the arts, humanities, and sciences to all people of all ages anywhere in the world. As I attempted to theorize these practices, I quickly discovered that the most promising resource was work being done in the new field of complexity studies. The study of biological systems and information networks has produced a model of complex adaptive systems that can be productively extended to social, political, economic, and cultural systems and networks. These networks have the same structure and operational logic regardless of the context or medium in which they are deployed.

1. They are composed of many codependent parts connected in multiple and changing ways.
2. They display spontaneous self-organization, which occurs within parameters of constraint that leave space for the aleatory.
3. The structures resulting from spontaneous self-organization emerge from but are not necessarily reducible to the components in the system.
4. Self-organizing structures are open and, therefore, are able to adapt and coevolve with other structures.
5. As connectivity increases, networks become more complex and drift toward disequilibrium until they reach the condition of self-organized criticality, when a discontinuous phase shift occurs.

With these insights, I finally had an answer to my question: not only are nontotalizing systems that act as a whole possible, this is the precise way in which structures ranging from molecules and our immune system to ecosystems and from neural networks to the Internet and markets actually operate. The Moment of Complexity: Emerging Network Culture (2001) draws on the insights of complexity theory to analyze new digital technologies and emerging media and information networks and Confidence Games: Money and Markets in a World without Redemption (2004) extends the argument to financial markets.

With these insights in mind, it is now possible to return to the discussion of theory in After God. This book has four distinct but related aims:

1. The formulation of a theory of religion as an emergent complex adaptive system of symbols, myths, and rituals.
2. The elaboration of a religious and theological genealogy of modernism, secularism, and postmodernism.
3. The presentation of a critical assessment of neofoundationalism in all of its forms, ranging from religious literalism and fundamentalism to scientific and social scientific reductionism.
4. The explanation of the ontological and axiological implications of the interpretation of life as an emergent complex adaptive system.

Complex adaptive systems, I have argued, are isomorphic across media. In different terms, they are fractal, i.e., they display the same structure at all levels and in all operational phases. Every network is a network of networks in which everything is codependent and coemergent. Cultural, social, natural, and technological networks are inextricably interrelated and cannot be understood apart from one another (Figure 1). This means that any adequate understanding of religion must take into account its interconnection with all of these other networks.

These networks are not static but are dynamic and, thus, are always in the process of emerging. Each particular network must, therefore, be analyzed not only synchronically, i.e., in relation to other particular networks at a given moment but also diachronically, i.e., in relation to its own development over time. This developmental process is, like the networks it connects, a complex adaptive system. Since all of these
networks are codependent and coemergent, every form of reductive analysis is simply wrong.

This approach simultaneously expands and complicates the study of religion. It is necessary to explore the relations between and among different religious traditions as well as the interplay of religious symbolic networks with other natural, socio-economic, and technological factors. This mode of inquiry flies in the face of the hyper-specialization plaguing the contemporary university. Rather than concentrating in ever-narrower fields of investigation, it is necessary to think along the margins of established disciplines and at the boundaries of cultures and traditions, whose differences are more clearly articulated as they are bound more closely in global networks and worldwide webs. To unravel these complex interconnections, it is necessary to concentrate on specific nodal notions.

In an effort to illustrate how this kind of investigation might proceed, I will return to a seminal idea I have already mentioned in the previous discussion of play—Kant’s notion of inner teleology or purposiveness without purpose (Zweckmäßigkeit ohne Zweck). The Critique of Judgment (1790) marks the boundary between the Critique of Pure Reason (theory) and the Critique of Practical Reason (practice). Through his investigation of aesthetic judgment, Kant attempts to mediate oppositions within both theoretical and practical reason as well as the tension between theory and practice. His argument turns on a
shift from the mechanistic metaphors endemic to Deism to organic ones that eventually became normative for romanticism and idealism. Kant develops this distinction by recasting the ancient distinction between efficient and final causality in terms of the problem of teleology or purposiveness. In mechanism, cause and effect as well as means and ends are externally related. Drawing on the well-worn image of God as a transcendent clockmaker, Kant argues that in the mechanistic model, order is imposed from without by a designer who remains external to creation. Like the watch, different parts of the world are not integrally related but are held together by extrinsic design. In contrast to a machine, an organism is a “self-organized being.” Rather than imposed from without, order in the organism emerges from within through the complex interactions of parts, which, when taken together, constitute the activity of the whole. According to the principle of “intrinsic finality,” “an organized natural product is one in which every part is reciprocally both means and ends.” Elsewhere Kant describes this intrinsic finality as “purposiveness without purpose.” When purpose is internal instead of external, the object or activity has no end other than itself. Kant offers two examples of inner teleology—the beautiful work of art and the living organism.

It is difficult to overestimate the significance of this idea. In this context, I can only indicate briefly the importance of the nodal notion of inner teleology for art, philosophy, religion, economics, and biology. In his account of the beautiful work of art in terms of inner teleology, Kant develops what becomes the standard definition of art for modernism. As I have suggested, the reciprocal structure of purposiveness without purpose is self-reflexive. This self-reflexivity is nonreferential or, more precisely, a self-reflexive structure refers only to itself. When extended to the work of art, the structure of self-reflexivity leads to a notion of art as nonreferential and, thus, nonrepresentational. When understood in this way, art is not the product created but the activity of creation; to insist that the purpose of art is intrinsic is to argue that telos of art is creative activity as such. Kant was the first to distinguish high art from low art and fine art from craft. While low art is produced for the market, i.e., its purpose is extrinsic, high art is created for its own sake, i.e., its purpose is intrinsic. In his *Letters on the Aesthetic Education of Man* (1794), Schiller appropriates Kant’s notion of art to define the modern avant-garde. While accepting Kant’s interpretation of art, Schiller argues that the work of art must be transferred from the
museum wall and pedestal to the actual world where it can transform
everyday life. This vision of the avant-garde informs twentieth-century
art, from Russian Constructivism and the Bauhaus to Duchamp’s ready-
mades and Warhol’s Factory. In this scheme, the religious prophet
becomes the avant-garde artist who will lead his followers into the
Promised Land, now understood as an artistic utopia. For post-Kantian
romantics and idealists like Schleiermacher, Novalis, Hölderlin, the
Schlegel brothers and, by extension, Wordsworth, Coleridge, and
American Transcendentalists like Emerson and Thoreau, art displaces
religion as the source of religious inspiration and expression. Religion,
in other words, is a matter of aesthetic intuition rather than knowledge
(theory) or morality (practice).

Hegel, in turn, recasts artistic images and religious representations
as philosophical concepts. In his account of teleology in the Science of
Logic, Hegel translates Kant’s notion of inner teleology into the struc-
tural principle of his entire system. Looking back, Hegel discovers the
anticipation of this self-reflexive structure in Augustine’s interpretation
of the Trinity; looking ahead, he identifies the principle of self-reflexivity
with the logical structure of self-consciousness. In his comprehensive
philosophy of history, which includes all natural, social, and cultural
process, Hegel describes a complex archaeo-teleological process in
which self-consciousness first evolves from natural processes and then
gradually moves toward perfect transparency, which is achieved in his
own speculative philosophy. Marx proceeds to reread Kant’s notion of
inner teleology as Hegel elaborates it in his Logic to develop his under-
standing of capital. In his Philosophical Notebooks, Lenin goes so far as
to claim: “It is impossible completely to understand Marx’s Capital …
without having thoroughly studied the whole of Hegel’s Logic.”8 Just as
the purpose of art is nothing other than itself, so the purpose of capital
is nothing other than the production of more capital. The structure and
operational logic of speculative philosophy and speculative markets are
the same. It is precisely this speculative structure that is now imploding
with the collapse of financial capitalism. Finally, Kant’s account of
living organisms in terms of inner teleology anticipates the structure of
life itself as it is understood by many of today’s most sophisticated
scientists. Stuart Kauffman, who is a leading theoretical biologist,
writes:

8 Quoted in Nicolaus (1973: 26).
Immanuel Kant, writing more than two centuries ago, saw organisms as wholes. The whole existed by means of the parts; the part existed because of and in order to sustain the whole. This holism has been stripped of a natural role in biology and been replaced by the image of the genome as the central directing agency that commands the molecular dance. Yet an autocatalytic set of molecules is perhaps the simplest image we can have of Kant’s holism. Catalytic closure ensures that the whole exists by means of the parts, and they are present both because of and in order to sustain the whole. Autocatalytic sets exhibit the emergent property of holism.9

For Kauffman and other complexity theorists, Kant’s notion of self-organization prefigures contemporary interpretations of emergent complex adaptive systems, which scientists are currently using to understand natural, social, and technological processes. If, as I have argued, these systems are isomorphic across media, then it is possible to extend the analysis from natural, social, and technological systems to cultural networks. Different networks as well as their interrelation and development all follow the same logic and operational principles.

Knowledge, like the world itself, is, as Don DeLillo insists, “webby”—to be is to be related or, in a more contemporary idiom, to be is to be connected and, therefore, knowledge is relational. As Nietzsche once said, everything is “entwined, enmeshed, enamored.” In this webby world, the creator God dies and is reborn as emergent creativity deemed divine.

By identifying significant nodes, it becomes possible to unravel some of the connections that constitute knowledge as well as our very being.

Trinitarian God ↔ Work of Art ↔ Romantic Infinite ↔ Speculative
Absolute ↔ Speculative Capital ↔ Global Capitalism ↔ Life
(Emergent Self-Organizing Network of Networks) ↔ Divine Creativity

In these strange loops, where does theory end and practice begin? Is theory ever non-theological? What is the difference between the study and the practice of religion? In a webby world, nothing is clear, distinct, fixed or stable. Absolutely nothing—nothing absolute.

After resisting the conclusion for many years, I have finally come to believe that history does, in fact, have a discernible trajectory: everything is becoming increasingly interrelated. As connectivity increases,

stability, security, and certainty decrease. Growing complexity, uncertainty, and insecurity create the desire for simplicity, certainty, and security, which leads to foundationalism on the left and the right as well as among those who admit they are believers and those who insist they are not. Every such flight from the present deepens the dangers we face. In an increasingly globalized world, models matter more than ever. If the map does not fit the territory, we cannot navigate the perilous currents surrounding us.

As I write these words, we are in the midst of the most critical economic crisis in modern history. For the moment, raging clamor about financial markets drowns out warnings about the much more serious threat of global climate change. What few people realize is that both of these crises have, in large measure, been created by actions growing out of the use of linear equilibrium models for nonlinear, nonequilibrium processes. We cannot begin to address these challenges until we both acknowledge the interrelation of markets and climate change and, more importantly, realize that the structures and operational logic of financial markets and global weather patterns are identical. Precisely the same dynamics that produce financial bubbles create climate change. When extended from natural and social processes to culture, the model of complex adaptive systems helps us to understand that cultural development is neither smooth nor continuous but is a process of punctuated equilibrium in which we must always expect the emergence of the unexpected. Theory and practice are inseparable: every theory harbors practical principles that guide conduct and all practices implicitly or explicitly entail theories about the world and our place in it. We are now at a tipping point or, in scientific terms, a moment of self-organized criticality. As I have argued in After God, when one begins to comprehend the scope of the problems we face, it is difficult not to despair. Processes have been set in motion that cannot be reversed, and it is unclear whether people are willing to make the changes necessary to delay, if not avoid, looming disaster. The acknowledgment of peril can, however, provoke committed action rather than hopeless resignation. This struggle will require faith as fragile and uncertain as the world in which we are destined to dwell.

REFERENCES

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