Think Pieces

CAUSALITY AND SUBJECTIVITY IN THE RELIGIOUS QUEST

by Ursula Goodenough

Abstract. The dynamics of seeking causation and the dynamics of subjectivity are presented and then brought together in a consideration of the three core components of the religious quest: the search for and experience of ultimate explanations, the interiority of religious experience ("spirituality"), and the empathic experience of religious fellowship.

Keywords: causation; empathy; fellowship; materialism; spirituality; subjectivity; theism versus non-theism.

Thomas Berry proposes that the universe functions on three principles: differentiation, subjectivity, and communion (Berry 1988). These three categories can be mapped as well onto the core components of a religious orientation, with differentiation translated as the quest to develop an orientation with respect to ultimacy, subjectivity reflected in our spiritual quest (or interiority), and communion reflected in our search for fellowship with one another and with the Earth and all its creatures.

In this essay I develop these relationships. I first describe two distinctive facets of the human psyche, the search for causation and the subjectivity of experience, and I then consider how these operate in our religious quest to apprehend ultimacy, deepen interiority, and experience fellowship (the substrate for morality).

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The Components of Causality

All animals seek causes: they respond to sensory inputs by identifying the eliciting stimuli (potential prey, mate, food). But human beings possess an additional capacity: they can imagine/invent/construct causes in their minds.

Psychologists speak of this operation in terms of the "causal operator," the brain function that takes in stimulus, responds with a cause, *and*—and here's where we're different—imagines a possible cause if no coherent cause can be identified. (I use "imagine" here by choice to remind us that such cause-construction is done in scenarios, in narrative, in image.) Early human beings, who had limited understanding of Nature, attributed the travails and the joys of natural existence to the causation of all sorts of wonderful gods and ancestor-gods. In the Abrahamic traditions, the causation factor became more unitary, powerful, and abstract, while in the Eastern meditative traditions a central tenet was to let go of the angst of seeking causation, finding religious experience instead in accepting and becoming an unquestioning part of the universe.

Psychologists also tell us of the robust human tendency to pair experience with some causative agent. Thus, when we think of Uncle Fred and he calls minutes later, we wonder yet again about the possibility that, just maybe, psychic forces can cause subsequent events. We are much slower to recall the many times we thought of Uncle Fred and he didn't call, or the times he called when we weren't thinking about him. We are fascinated by apparent causative pairings, and they generate our superstitions (wearing a lucky hat when we play golf) and fuel our biases. This same dynamic, I would argue, convinces us that our prayers are (sometimes) answered and our rain dances (sometimes) rewarded, where the "sometimes" is forgotten as we recall the (story of) the year that a particularly powerful rain dance brought deluges of rain in a particularly dry season.

These two kinds of causal systems—the search for direct cause and for causal pairings—come together in interesting ways. When I do a rain dance and it doesn't rain, what then? What's the cause? Well, one possibility is that the whole Rain God story is untrue. A second is that I and my villagers did not dance powerfully enough or are being punished for transgressions. We opt for the second kind of possibility, time and time again, because it offers an explanation, imparts causality, satisfies the causal operator in ways not sustained by the "there's no Rain God" explanation (which deprives us of causality and instead elicits existential anxiety).

It is our ability to invent causes that allows us to be both scientists and philosophers. A bold scientific hypothesis is no more than a stab at causation, as is a novel philosophical treatise. But scientists throw in the extra insistence that the cause-postulate must suggest experiments that test its validity (generating the spectacular success of empirical science), and philosophers insist that the cause-postulate must possess coherence, must occupy a niche in the web of cause-postulates that form the overarching system.

Neither science nor philosophy asks that we *believe* in a postulate. Rather, we are asked to evaluate its consequences, its manifestations, and its germinativity.

The search for causation is, of course, at the core of our theological endeavor as well, where belief in the outcome is a central component of the process. Whereas the scientist and the philosopher make every effort to purge their search for cause of any vestige of subjectivity (success here being variable), the search for a satisfactory account of ultimacy comes to roost in the subjective. Therefore, I next consider the dynamics of subjectivity.

The Components of Subjectivity

Antonio Damasio (1999) presents a brilliant in-depth version of the concepts I will traverse here (using my own language and offering my own spin) and should be considered required reading by anyone interested in the human being. I will outline my understanding first of temperament, then of sentience, and then the co-participation of the two in the generation of subjectivity.

Temperament. Anyone who has reared children can testify that each child manifests, early on, a temperament, expressed along numerous axes—serene/restive, shy/outgoing, focused/daydreamy, optimistic/pessimistic, somber/jovial, daring/cautious—that is retained throughout a lifetime (Kagan 1984): "Joey has *always* been that way." Temperament, as I understand it, is a description of a person's basic emotional configuration—the myriad hormones and neurotransmitters, their receptors and re-uptake systems, and the neuronal maps and connections that govern our moods and motivations.

Studies of identical twins reared apart document that temperament is highly heritable, and this is what we would expect of a system of this kind. To say that our temperaments derive from our genetic endowment is not to suggest that there is a gene for, say, conviviality: numerous gene products collaborate in numerous developmental contexts to produce the systems that generate temperament. Moreover, because we each have different sets of genes (unless we are identical twins), we expect (and find) each system, and hence each temperament, to be different, displaying a distinctive panoply of neurotransmitter levels, synaptic configurations, thresholds of reactivity, and so on. To the extent that such a thing as human nature exists, it is robustly rooted in temperament, but there are numerous kinds of temperaments—numerous weightings of the various emotional axes—and hence numerous kinds of human natures.

Primatologist Frans de Waal was recently asked to describe the ways that chimps and bonobos are different from human beings, and he responded that there are obvious cognitive differences, but then he paused and remarked thoughtfully: "But you know, in terms of their emotional

makeup, once you've spent a lot of time with these animals you come to understand that they're basically the same as we are." By this he meant, of course, that they display the same *range* of temperaments as we do. Primatologist Barbara Smuts recalls Fifi as being confident and calm, Patty as being insecure and excitable, Figan as being friendly and extroverted, and Goblin as being aggressive and unpredictable. Our temperaments are a robust, if often difficult and frustrating, legacy from our evolutionary history.

Sentience. If we use the term *awareness* to describe the ubiquitous ability of organisms to scope out the salient features of their context that are important for survival and reproduction, we can use the term *sentience* to describe that mode of awareness found in animals, one that utilizes neurons to negotiate perception. Because neurons can modulate the activity of one another, sentience gives rise to emergent operations, permitting such combinatorial processes as learning and memory. As mammalian and eventually primate brains moved through the evolutionary stream, the ontogeny of sentience came to acquire a mind of its own, so to speak, with the crafting of the sentient brain being increasingly open to the effects of both serendipity and sensory perceptions (Deacon 1997).

And then, the human being. Terrence Deacon, tracking the evolution of the brain, makes the haunting statement that "biologically we are just another ape. Mentally we are a new phylum of organisms" (Deacon 1997, 23). Our mental trick, of course, is our ability to form symbolic representations, as made manifest in our generation and comprehension of language, a trait that has come to dominate human sentience. Almost everything else that we uniquely engage in—culture, art, science, philosophy, technology—flows from our capacity to symbolize.

Included in our sentience is our causal operator, which takes things in and ascertains, or imagines, their causal antecedents. The imagining operation represents a complex collaboration between sentience and temperament as they construct a scenario that is both maximally plausible and maximally appealing.

Subjectivity. Subjectivity has many synonyms—*consciousness, core consciousness, self-awareness*—and many have offered definitions, as this one from Damasio:

> In a curious way, consciousness begins as the feeling of what happens when we see or hear or touch. . . . Placed in the appropriate context, the feeling marks those images as ours and allows us to say, in the proper sense of the terms, that we see or hear or touch. Organisms unequipped to generate core consciousness are condemned to making images of sight or sound or touch, there and then, but cannot come to know that they did. From its most humble beginnings, consciousness is knowledge, knowledge consciousness, no less interconnected than truth and beauty were to Keats.
>
> It is through feelings, which are inwardly directed and private, that emotions, which are outwardly directed and public, begin their impact on the mind; but the full

and lasting impact of feelings requires consciousness, because only along with the advent of a sense of self do feelings become known to the individual having them. (Damasio 1999, 26, 36)

Subjectivity, I suggest, represents a synthesis of our sentience and our temperament. As our sentience processes input and relates it synaptically to the typologies and belief systems that constitute our cognitive context, the input passes as well through our temperamental filter before being experienced as a feeling by the subjective self. Our temperaments—or, more precisely, the neural and hormonal mechanisms that generate our temperaments—interpret each input: we like it, it makes us nervous, it outrages us, it makes us laugh. Given that our temperaments, albeit largely inherited, are nonetheless unique, and given that our sentience, being largely acquired, is by definition unique, it follows that we each have unique subjectivities. We each experience experience in our own way, as a fusion of our cognitive and emotional systems. I am my subjective self. You are your subjective self. What is utterly remarkable is that we inhabit a planet where 6 billion subjective selves are wandering about, taking themselves in.

We can also recognize that each subjectivity is not necessarily some 50-50 balance of sentience and temperament. "Intelligence," in all its manifestations (Gardner 1983), may be another word for a robust sentience (and what that entails in terms of, for example, prefrontal "wiring"), and for some persons, sentience comes to exert the dominant influence on their subjective experience. For others, their subjectivity is much more influenced by their temperaments. Their sentience serves to communicate experience to their temperaments, but otherwise sentience is not as important to their subjectivity as the feelings elicited by emotional response. When these weightings are translated into personalities that we encounter, we may say that one person is "cerebral" or "analytical" and the other "emotional" or "out there."

Ultimacy

So how do our causal operators and our subjectivities collaborate in the search for ultimate causality, our search for answers to such questions as Why is there anything at all rather than nothing? or Is there a God?

Kenneth Miller, biologist and emerging theologian, gave a paper at a recent conference in which he articulated his concept of God as working through the evolutionary process (Miller 1999). In the follow-up discussion, someone asked why it was that he invoked God in his system. "Ah," Ken responded with the dispatch of someone who clearly had been asked this question before, "what I hear in your question is that you yourself don't need that hypothesis?" The person nodded. Ken nodded in return, and then said quietly, "Well, I do."

For me, this exchange summarizes much that is important to say about theism versus non-theism. If we combine our consideration of causality

with our consideration of subjectivity, we realize that the causes that we imagine—in the sense of imaging—in response to questions of ultimacy will be fashioned by our subjective selves and, therefore, will be the product of both our sentience and our temperaments. Some persons need the God hypothesis, and some do not. Those who need it report that it renders the universe, and hence their lives, meaningful; it allows them to feel at home in their own existence; its absence engenders alienation, a lack of connection, despair. Of those who do not need it, some report that their theological impulses are satisfied by asking questions of ultimacy rather than by imaging answers. Others report disinterest in the questions. Others register antagonism toward the questions.

To my mind, the existence of this spectrum, from theism to agnosticism to indifference to atheism, is a fascinating manifestation of the rich diversity of human natures. Religiosity is reported to display high heritability in twin studies (Eaves, Martin, and Heath 1990), and although this study is restricted to church attendance and therefore measures only one manifestation of the religious response, it suggests that a theistic orientation is, at least in part, a manifestation of temperament. Again, this is not at all to suggest that there is a "gene for God" (and perhaps a corresponding allele for atheism) or any such nonsense. Rather, the input of ultimate questions activates our sentient causal operators; and inasmuch as there are no "real" answers to these questions, the imagined responses are heavily biased in favor of our temperamental preferences.

Ours is a time of particularly heated mudslinging along these lines, with certain atheists publicly denouncing theists and certain theists publicly denouncing atheists and agnostics moving about with lowered heads lest they be caught in the crossfire. Theists, moreover, are hardly a homogeneous group; rather, they partition along what I suspect are temperamental lines between those who align fiercely with traditional God-concepts (the many kinds of fundamentalists, for example) and those whose God-concepts are heavily informed by post-traditional understandings (Miller, for example).

Perhaps it will be helpful to remind those engaged in such contretemps that our rainbow of human subjectivities generates many other kinds of diversities that we have come to accept and even celebrate: our response to sexual stimuli, to art in its numerous manifestations, to choices of friends and pastimes. If we could come to regard the need or non-need for the God hypothesis as a value-neutral manifestation of our subjectivity, much divisiveness might subside.

The reason there is so much divisiveness, of course, is that this question is not, for many, easily put in the same category as the choice between golf and reading. There is a real sense, for most theists, that God is an objective and not a subjective reality, and a real sense, for most atheists, that such a claim is incomprehensible since she or he fails to have such subjective, and hence objective, experiences. Perhaps because the stakes seem so high,

those at each pole are particularly prone to feel frustrated at the blindness of the other. From my perspective, these polarities are inherently unresolvable because we are inherently incapable of entering into one another's subjectivities and hence are incapable of persuading one another of the veracity of our subjectivities. Therefore, we are best served by celebrating, or at least respecting, theistic diversity and then moving on to other religious terrains where we can find more common ground.

Interiority

Our interior selves grapple with a different set of religious questions from those that beset our search for ultimacy. Who am I? What is my value? How do I transcend the mundane? And the big one, How do I reconcile myself with my materiality?

At an early point in my exploration of the religious potential of the epic of evolution, I presented some of my ideas to an adult-education group. During the course of the discussion, one of the women blurted out plaintively, "But I like the old stories better!" Even as I was assuring her that the meaning and import of the old stories need not be compromised by an apprehension of the new ones, I knew that I was encountering something very deep: her fear of materiality. My assurances seemed flimsy in its presence.

We encounter everywhere the manifestations of this fear. "Scientists are saying we are robots." "The product of selfish genes in an uncaring universe of quantum weirdness." "Wired for rape and perfidy." And again the big one: "Nonexistent when our materiality falters and we die." And we encounter as well the various voices that attempt to deconstruct or deny understandings, and offer misunderstandings, of what scientists are trying to explain about our material nature. Many listen eagerly. A great deal of confusion and alienation is being generated.

My response here is to suggest that much can be done to turn down the volume of discord by considering the nature of our subjectivity.

Here is the argument. First, we *are* material, we *do* emerge from mechanism, we *are* primates. Our present-day scientific understandings of molecular genetics and physiology and neurobiology and evolution are foundationally true; those additional discoveries that will be made in the future will build upon and deepen these foundations but will not overturn them.

Second, as I have detailed earlier, our subjectivity too is material. It can be reduced to the level of neurotransmitters and ion fluxes and synaptic transmission and action potentials, or it can be integrated such that we speak of cortical domains or prefrontal waystations, but it is material all the way up and all the way down.

And now, third, the remarkable rub. Our subjectivity doesn't *feel* material at all. It feels "spiritual." In fact, we lack completely the capacity to experience materiality. Our subjective selves can come to understand that

we think with neurons and that the sun is a mass of thermonuclear reactions hotter and denser than we can possibly conceive, and we can absorb this and hopefully devise some ethics based on these understandings. But we cannot experience being a neuron—if indeed there is anything to experience, which I anthropocentrically doubt—nor can we experience a hydrogen-helium fusion event. So we drop back to the subjective experience of our (neuronal) thoughts as reality, and we experience the sun subjectively in terms of its warmth and its beauty while "setting."

Therefore, materialism does not, in fact, "spoil" subjectivity. The subjective self invariably files away, compartmentalizes, reductionist-materialistic explanations, even as it may have experienced fear while encountering them. They can be accessed for their interest or for their ability to provide helpful understanding, but they do not invade subjective experience.

Let me illustrate this with an example. Let's say that I have suffered a deep personal loss and am besieged with despondency. My understanding of my neurobiology provides the comfort of knowing that the "I," my subjective self, is being bombarded with dolorous neurotransmitters and connecting to all those other synapses recording my past experiences of despair or loneliness or rejection. My understanding is a resource; it helps me to assure myself that this will pass, that there is another side to my blue mood. And then I go ahead and have the experience. The sorrow invades me just as much as it invades anyone without this knowledge. I am my spiritual self.

Subjectivity is an emergent property, in the same sense that, for example, motility emerges from the interaction of actin and myosin filaments in a muscle cell. Something more (motility) arises from nothing but (actin and myosin). But whereas we can learn a great deal about motility by studying how the actin and myosin interact, we learn nothing interesting from a description of the mechanisms that generate our subjectivity: I could stare at a PET scan of my despondency and ascertain that certain regions of my brain are activated and others repressed, and I would have no greater insight about my feeling state.

So our subjectivity, and hence our interiority, is a whole new ball game, a whole new category of reality. Truths that describe the material world, those designated by V. V. Raman (1999) as "exopotent"[1] truths, may or may not have subjective valence, may or may not resonate as "endopotent"[1] truths. And reciprocally, endopotent truths, such as the beauty of a sonata or the savage joy of human connection when it really works, may or may not map onto an exopotent material reality.

It is important that I not be misunderstood here. I am not saying that I regard our emergent spirituality as something caused by a "supernatural" presence, although many do of course believe this to be the case. I am perfectly comfortable with my interiority's being grounded in the biology of my somatic self. Damasio says this for me beautifully:

> To discover that a particular feeling depends on activity in a number of specific brain systems interacting with a number of body organs does not diminish the status of that feeling as a human phenomenon. Neither anguish nor the elation that love or art can bring about are devalued by understanding some of the myriad biological processes that make them what they are. Precisely the opposite should be true: Our sense of wonder should increase before the intricate mechanisms that make such magic possible. (Damasio 1994, xvi)

But here I celebrate the magic. I am the creator, the responder, and the keeper of my endopotent truths, and hence I indeed transcend the mundane with every feeling that feels important or deep. My truths, my insights, my sentience-temperament fusions become revelations, to believe in and live by.

Fellowship

Our religious quest to feel at home in the universe and in our subjective selves will be barren and narcissistic if this alone is our path. The most ascetic Buddhist monk emerges from his temple to encounter and help alleviate human suffering. The most important outcome of a centered interiority is that it can ground and nurture our exteriority and, hence, our service.

We inhabit a planet with 6 billion subjective selves wandering about, taking themselves in, and we are inherently incapable of entering into one another's subjectivities. But this doesn't mean that we don't try! We continually perform the operation of putting ourselves into the minds of others, doing our best to "read" their subjectivities—as outwardly manifested by their personalities and their "vibes." That is, once we can put ourselves into our own minds, we can imagine ourselves in another person's mind, although there is never any way to verify that we have in fact been successful at doing so. Michael Tomasello (1999) offers intriguing experimental evidence that this capacity to project oneself into the mind of another is completely absent in nonhuman primates and argues that this attribute is what allows human beings to acquire and transmit cultural understandings.

The ability to put oneself in someone else's shoes, then, is an emergent property embedded in the emergence of human subjectivity. I believe that this capacity represents the foundation of our capacity for empathy. And once there is empathy, there can arise the feeling we call compassion. A version of the Golden Rule—Do unto others as you would have them do unto you—is found in most religious traditions. It is as we can imagine being "the least of these" (Matthew 25:40, 45) that we can begin to experience the anguish of deep poverty or deprivation. It is as we are able to identify with the oil-soaked shore bird and the bewildered moose that they come to symbolize our environmental concerns.

If empathy and hence compassion are emergent functions, flowing from the emergent function that we are calling subjectivity, then to my mind

they represent our best hope for grounding our morality in the essence of human nature. I sharply part company with certain forms of theism when the claim is made that the only way to have ultimate moral grounding is to have an unjudged judge, an uncreated creator, any alternative being portrayed as morality "up for grabs." The problem with this proposition, of course, is how one verifies that any particular theistically perceived morality represents the ur-morality. For me, there is a second robust alternative, which is to fashion a morality based on human nature's affinity for the Golden Rule.

One of the functions of our art is to articulate the shared human experience. To the extent that we can in fact enter into the subjectivity of another, his or her artistic expression offers a particularly open portal. Our art, and particularly our religious art, lets us know that we are not alone, that there are other human beings out there who seem to feel the same way that we do—and have done so for millennia. We experience the feeling of communion.

NOTE

1. Raman proposes that exopotent truths furnish us with the capacity to alter, manipulate, formulate in consistent terms, and predict occurrences in the world around. These are recognitions that can be demonstrated on purely rational and empirical grounds. They do not necessarily possess objective validity: many successful (ancient) medical systems and technologies were based on mistaken views about the physical world and the human body. Much of scientific knowledge conveys exopotent truths. Endopotent truths contribute, positively or negatively, to our inner experience as human beings. These are profound perceptions, induced by cultural upbringing and/or personal sensitivity to the world around. They are deeply meaningful and spiritually uplifting to individuals. These are the transrational truths that, though they may not be amenable to logic and analysis, do not violently contradict reason either. They cannot always be formulated in incontrovertibly logical modes and are generally ineffective in altering any aspect of the perceived world.

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