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THE DESCRIPTIVE PROBLEM OF EVIL

Brad J. Kallenberg

Earth's cramm'd wi' heav'n
And every bush and tree with fire of God;
But only he who sees
Takes off his shoes.
—Elizabeth Barrett Browning

1 Introduction

Language is like the cane in the hand of the blind person. The better one becomes at getting around with the cane, the more he or she is apt to forget the cane but *through* the cane perceive the objects scraped and tapped by the other end. A defective cane may distort the world perceived by the blind person. So too, defective use of language threatens to muddy our understanding of the things we talk about. When discussion something as difficult as natural evils, a frequently undetected defect in our language use is "overly attenuated description." In what follows, I will sketch three conditions under which attenuated description multiplies confusion in general conversation. I will then describe ways in which the lexical shortcuts taken in discussion about "natural evils" can be corrected. Although it remains to be seen whether conversants are willing to pay the cost involved. For, in order to talk most clearly about "natural evil," and thus understand the problem most deeply, those doing the talking must employ descriptions that require correlative practical actions in order to be intelligible. I give an example of how the juxtaposition of two components, rich descriptions and appropriate action, makes possible the trained eye to perceive a pattern that, while falling short of an explanation per se, serves as a satisfactory response to natural evils. I conclude my essay by proposing a protocol for advancing the conversation about natural evils.

2 Humans Respond to Evil by Talking

It is a matter of historical record and empirical fact that natural phenomena can bring about intense suffering. The fact that suffering, which is entailed by tsunamis, wildfires, earthquakes, tornadoes, floods, lightening strikes, etc., is unwanted, unnecessary, undeserved, or overkill is bound up with the very concept "suffering."[1]

Humans respond to instances of suffering in their environment with a variety of reflexive behaviors. Ludwig Wittgenstein called all such behavioral responses "primitive reactions." This term is helpful for expressing the fact that human beings, like other animals, respond to their physical environment in physical ways.[2] In the face of relatively minor pain we brace

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[1] For a catalogue of types of suffering, see Wildman's essay in this volume.

[2] The term is a little misleading if we think that *primitive* means something like "presocial" or even "prerational." For Wittgenstein, primitive reactions could be

ourselves, we wince, we cry out, we pout. As biological creatures, these re-
actions are primitive and reflexive. Just as primitive and reflexive are our
reactions to the suffering of others: we weep, we touch, we empathize, we
hug, we offer aid, we ward off others from danger, we shelter the children,
and we attempt to avoid future instances of similar dangers. All such ha-
bitual reactions (and more) constitute the complicated form of our life as
human animals.

One set of behaviors among all those that human beings perform in re-
sponse to pain and suffering, is that of verbal behaviors. We are the ani-
mals, who more than any other, respond to our surroundings audibly. Hu-
man beings respond to their world *by talking*. We call for help, we offer
words of comfort, we recount the event to others, we educate the children,
we discuss blame for past events, we strategize for the future. And so on.

One tiny fraction of all the conversations we have about any particular
tragedy is the puzzling we do together over events that seem beyond hu-
man control. Of course, sometimes when we ask Why? we are not looking
for an explanation but simply sighing. Yet on occasion, perhaps when we
are at a relatively safe distance from tragedy and suffering, we talk in or-
der to make the best sense we can of the offending event. We instinctively
hope that our conversation will produce an adequate *explanation* of evil.
While an explanation may put an end to our questions (as explanations
may occasionally do), more often than not, what we are really after are not
explanations but rather ways of telling the story of our lives in a way that
encompasses tragedy in a *satisfactory* way.

I use the term "satisfactory" as a way of reminding us that the vast
majority of our lives as physical critters is governed by the metric of "satis-
factoriness."[3] For example, engineers compete among themselves to offer
solutions to a particular design problem. Some proffered designs may be
clearly unsatisfactory. But obviously, there may be *many* "satisfactory" de-
signs. Granted, some designs may be more satisfying than others with re-
spect to a given set of contextual constraints. But on no grounds is one war-
ranted in concluding that there is a single, logically-compelled "correct"
design.

If verbal responses to evil fall under the class of physical behaviors
humans perform to cope with a particular physical environment, then it
makes sense to evaluate these verbal behaviors in a way similar to the way
we assess engineering projects: is it "satisfactory?" For, conversations
around the Why? question are themselves a form of verbal design. The con-
straints against which a "satisfactory" description of suffering is assessed
includes, among other criteria, its fit with the complicated form of life
shared by speakers. But whose form of life is in view? For the purposes of
this present essay, I am presuming a reading audience composed of scien-
tifically-minded religious believers. So, on the one side, a "satisfactory" ver-
bal response must comport with the best scientific practices and models
available. On the other side, the "satisfactory" answer must fit with the
contours of a religious form of life.[4] Just as it is true that not every natural

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socially- or rationally-conditioned, though they need not be. See Kallenberg, *Ethics
as Grammar,* 161–214.

[3] Kenny, "Practical Reasoning."

[4] "Satisfactory" does not reduce to something that merely coheres with other

drive ought to be fulfilled nor every primitive reaction be deemed trust-worthy, so too, for religious believers not every askable question is worth asking. Truth is, in the communal practice of living well that goes by the name "religion," some questions *ought not* be asked, since the artful habit of resisting the asking of some questions is taken by the group to be itself a crucial part of the larger project of shaping this group's moral habits (vir-tues), particularly their *habitual manner of seeing the world.*

Iris Murdoch once observed that we can only act in the world that we see.[5] One way to think about "vision" is to list the variety of aspects under which (or "lenses" through which) we view our environment. For example, a bridge can be viewed under the aspect of structural integrity or it can be viewed under the aspect of artwork (or romance or politics or theology; i.e., bridges themselves may be speech-acts). Each aspect corresponds to a dis-tinct manner of interrogating the bridge. Not every person is equally skilled in considering the bridge under a given aspect. In this example, the aspects of artistry and engineering are not mutually exclusive, they are complementary. In other cases, skills for one way of observing may inter-fere with skills required by the complementary aspect. Balancing these demands is part and parcel of what counts as "satisfactory."

I hasten to point out that despite the priority we tend to assign to some batches of words over others, every "satisfactory" verbal design will have to vie for acceptability against the field of other satisfactory designs. Within communities who view their environment under *both* the aspect of science and that of religion, no verbal responses to the Why? that surrounds suf-fering has an *automatically* privileged status in the common life. Like all other speech acts, sentences are spoken not to the wind, but to and with each other. As such, our sentences are measured for their felicity by how well they are taken up by our conversation partners and grounded by sub-sequent behavior.[6] As is always the case, any given speech act is open to lexical ambiguity, semantic misunderstanding, and grammatical confusion. But the most satisfactory speech act is the verbal design that minimizes such difficulties.

But there is a linguistic gopher that, because it is so often overlooked, cuts off fruitful conversation at the root. This pest is the habit of using the phrase "natural evil" as an adequate description for naming what is being talked about. In this essay, I challenge this designation as overly simple and the breeding ground for grave confusions that preempt the satisfac-toriness that our conversations about suffering might otherwise achieve. I will show that just as attenuated descriptions in ethics render moral obli-gations invisible, so too attenuated descriptions of "natural evils" make the plausibility of religious belief virtually disappear. Additionally, in this pa-per I argue that broadening the description with respect to narrative time and space helps us perceive the description for what it is: a speaker-in-volving speech act. What I propose amounts to a shift in focus from the talked-about-subject ("natural evil") to the formerly transparent linguistic

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propositional statements, since the religious form of life itself cannot be reduced to assent to some set of propositions.

[5] Murdoch, "Vision and Choice in Morality."

[6] I take as a benchmark for intelligibility, Wittgenstein's dictum: "*Practice* gives the words their sense." Wittgenstein, *Culture and Value,* 85e.

behaviors themselves. The upshot of this shift will be the emergence of formerly unnoticed relevant patterns from the now rich descriptions to the end that a fitting response to the so-called "natural evil can be disclosed.

3 Attenuated Descriptions of "Natural Evil" Hinder Conversations about Suffering

Attenuated description is a common occurrence in conversations between persons who are adequately fluent. But attenuation is a bad idea under three conditions.

3.1 When Conversing with the Nonfluent

Taking shortcuts is human nature. It is not more precise to say "hand to me the four-foot pole with the 907 bristles bound together and attached to the one end" than to say simply, "hand me the broom." We instinctively conserve our energy in speech as well as in labor. "Broom" enters the English language as the name of a family of artifacts ranging from whisk brooms to broom trees and everything in between. If on this occasion, there happens to be an array of brooms to choose from, the listener would likely "read" the context instantaneously (e.g., we are standing in a garage) and select the proper broom (i.e., the push broom) for such an occasion. The usefulness of the word "broom" depends both upon the fluency of the listener and the listener's aptitude for reading the surroundings.

   Naming is the most common form of attenuated description. But names can be misleading and may even hinder communication if fluency is in short supply. For example, the sentence "F equals m multiplied by a" is only recognized as true for those who are fluent in the terms. It may not help the uninitiated to learn that F, m, and a go shorthand for "force," "mass," and "acceleration." After all, the following sentence, while grammatical, is sheer nonsense: "The force of love equals the mass of the cheesecake multiplied by the acceleration of the economy." Clearly, "What force?" "What mass?" and "Which acceleration?" are questions that cannot be answered simply by affixing more labels. What is needed in this case is the *tutoring* of the novice by means of a progressively complex series of stories the response to which cultivates the requisite skill of similarity recognition by the novice to the end that he or she becomes able to carry on conversations about "$F = ma$."

3.2 When Facing an Impasse in the Conversation

A second instance in which attenuated description can perpetuate confusion is when the referent is ambiguous. If one overhears a conversation about a famous dead Greek person named Aristotle, one is likely to enter a conversation on the assumption that Plato's most famous pupil is the referent to the name "Aristotle." But if the next topic to arise is the referent's personal wealth, perplexity would abound until it became clear that the "Aristotle" in question was not a philosopher, but the famous dead Greek who married John F. Kennedy's widow in 1968 and who himself subsequently died in 1974. Of course, the speaker can get some of the details wrong (Aristotle Onnassis actually died in 1975) and still achieve under-

standing simply by filling in *enough* details to disclose the referent's identity. How much detail is "enough" is of course a function who the listener is and of how much skill is required to read the surroundings.

3.3 When How to "Go On" Is Uncertain

A third instance in which attenuated description muddies the water is related to the second. Attenuated description not only breeds perplexity about the identity of the referent, it fosters confusion about how to go on. Consider the following example. Francis of Assisi is championed as the paradigm of charity. Refusing to take over his father's prosperous enterprise, Francis disavowed his family wealth by stripping naked and swapping his rich man's tunic for the flea-ridden rough shirt of a local beggar. Thereafter becoming the most famous of the mendicant preachers, Francis's self-induced poverty is taken by some to be a morally supererogatory habit. If however, I model my own life after St. Francis and give away my fortune (ha!), I would *not* be acting in imitation of St. Francis. Why? Because his life and mine are similar only under vastly attenuated descriptions: "religiously minded males intent on growth in personal holiness." If the descriptions are expanded only slightly to include marital status (Francis never married, Kallenberg is married and father of three children), then the voluntary poverty that is supererogatory in Francis's case may prove to be downright immoral in my own.[7]

   With simple illustrations in hand, it is now possible to see how conversations about "natural evil" have been infected by overly attenuated descriptions in ways that multiply confusion.

4 Recent Descriptions of Natural Evil Have Been Attenuated

There are at least three ways in which descriptions of "natural evil" have been unwisely attenuated in contemporary conversations about theodicy. Confusion enters the conversation when (1) occasions of suffering are described in self-distancing ways, when (2) the narrative context is overly compressed, and when (3) the range of acceptable causal explanation excludes nonefficient forms of causality.

4.1 Overly Restricting the Involvement of Human Agents in the Description

Objectivity is a virtue in the humanities as it is in the sciences. For example, in historiography, theologically-minded historians presuppose a stance of "methodological atheism" in order to do their practice well.[8] This is as it should be. Yet both scientists and theological historians can testify that in the study of objective data, *patterns* often emerge from the data. As not everyone seems able to see the pattern, it is difficult to make the case that the pattern is actually *in* the data. Consequently, the pattern is probably best understood as a function of the interplay between the data and the ob-

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[7] I owe this anecdote to Nancey Murphy.

[8] Tilley, *History, Theology, and Faith*.

server.[9] I suggest that the term "natural evil" names just this sort of pattern, the sort of uptake that requires a high degree of involvement by the observer with the data.

4.1.1 "Natural Evil" Names a Pattern

When we consider any event under the rubric of "evil," we are implying that more than objectivity is required to correctly name it.[10] For this reason, in some cases, objectivity serves to obscure rather than clarify descriptions.

Imagine I spy a little old lady being savagely mugged across the parking lot. I turn to you and say in a monotone voice, "It is 11:30 pm EST on the 11th of November 2005 and I am beholding a 92-year-old, 100-pound white female being struck 6 times within the span of 5 seconds by a 200-pound, 31-year-old male holding a 24-inch length of ¾-inch pipe his right hand." Imagine this statement is factually correct. Yet things are horribly wrong. The "objective" description of the event involves mis-description precisely for what it leaves off in the name of objectivity.[11] Vocabulary such as "mugging," "wielding," "accosting," "beating," as well as "savagely," "gruesomely," and "mercilessly" are all emotionally laden terms, but surely the most appropriate terms for completely and correctly describing this event. However, the ability to render just such a description accurately implies something about the self-involving character of truthful description. To spring forward with a cry, "Oh no! She's being mugged! Stop! Help! Police!" is a more truthful speech act and therefore an indication that the description ought not be reduced to the aspect of objectivity.

When a jury is later given eye-witness testimony, now properly deposed in an objective voice, it is not exclusively their objectivity that enables them to deliver a fair verdict. If objectivity alone delivers a just verdict, then justice would be the sort of thing that could be looked up in a table. ("Let's see . . . a frequency of striking that exceeds one strike per second is defined as "wanton and malicious, ergo . . .") Rather, judgment is rendered fairly by means of the jurors' abilities to reconstruct the event and imagine it in all its original resplendent horror. Such imaginative skill is common, though it is not automatic. A young child would be unable to reconstruct the original event, as are those who are emotionally or psychologically defective in certain ways. Such skill is not an innate talent, but requires that one be able to see events under aspects that necessarily include objectivity, but also crucially *exceed* it.

Lest the emotional component of witnessing assault and battery eclipse the point I am trying to make, let me summarize: the aspect under which a natural phenomenon is best observed, one which allows the observer to af-

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[9] See reception theory of Hans Robert Jauss with respect to philosophical hermeneutics and, more popularly, the Reader Response Criticism of Stanley Fish. Jauss, *Toward an Aesthetic of Reception*; compare Fish, *Is There a Text in This Class?*

[10] It is well known that data does not speak for itself. See, e.g., Vesilind, "How to Lie with Engineering Graphics."

[11] D. Z. Phillips writes of this in numerous essays. Those new to his work can find no better place to begin than his *Introducing Religion.*

fix the label "natural *evil,*" necessarily includes more from the witness than simply his or her acquisition of facts. Even in cases where emotions are not so near the surface as the parking-lot mugging, to view through the lens of ethics requires of the observer an aesthetic-like engagement with the data. I am not saying that ethics is merely about taste. I am saying that ethical perception must be trained in ways similar to those that cultivate appreciation of art.[12] The upshot is this: when natural "evils" are described as mere natural phenomena, an incomplete story is told. In order to achieve truthful description, the *rest* of the story must be told. The telling of the rest of the story will require greater participation of the speaker than is required of an objective witness.

4.1.2 Aspect Seeing as Self-Involving

Walking through the mall, I was brought up short outside a store window. Inside a group of people stood gawking at a picture. Several kept moving towards the picture then away, now leaning this way then that, while their companions pointed over their shoulders at the painting. Curious, I asked what all the fuss was about. One of the bystanders told me that the picture was a computer-generated stereogram. As I listened, I learned that to see the 3-D image (in this case a dinosaur), one needed training in viewing the geodesic confusion in a certain manner.

Was he pulling my leg? Was a dinosaur *really* there in the picture? Until I had been adequately trained, I would not be able to tell for myself. Nevertheless, the fact that there was an image there could be deduced from the reactions of the other admirers. One by one they exclaimed, "Oh! I see! It's a dinosaur!" or "There's a volcano in the background." Their cries were spontaneous and uncoerced. I suppose that some may have been carried along by the enthusiasm of the others and simply pretended to see. But their skills could have been tested by asking them what they saw in the next stereogram (it was a flying saucer). As a (nonparticipating) bystander, my belief in the "reality" of the dinosaur at this moment was limited to deductions drawn from my observations of the spontaneous reactions of those whose skills were more up to the task than mine. But if I wanted to see it for myself, reason dictated that I follow the suggested protocol ("Stand three feet in front of the picture and stare at your reflection in the glass.")

For any given experience, human participants can be divided into two camps: those who see it and those who don't. Often enough, *everyone* sees. In fact, human insight is so uniform that we often slide unwittingly from the belief "The pattern is self-evident to me" to the conviction "*No one* can possibly deny that the pattern is really there." Yet not everyone *sees* an object in a technical drawing, *sees* beauty in a printed music score, *sees* numbers on a display as data, *sees* the function in a mechanism, *sees* a whole world in a book.[13] Of course, those who cannot see are *not* warranted in denying the reality of the thing in question any more than those who do indeed see the pattern are warranted in asserting the "undeniable reality" of

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[12] Kallenberg, "Ethics as Aesthetics" in *Ethics as Grammar,* 49–82.

[13] Ferguson, *Engineering and the Mind's Eye*; Frei, *Eclipse of Biblical Narrative.* See also Barth, "Strange New World within the Bible."

that which is, after all, a pattern the perception of which depends as much upon training as upon the data.[14]

Communication *within* a linguistic group is enabled by agreement in reactions and judgments in response to the seeing of a particularly patterned world. Communication *between* two different groups, where what goes for shared judgment within one group may be only barely imaginable to the other, must begin with each group noting the similarities and differences between the two respective sets of spontaneous reactions. Even before the outsiders have had a chance to undertake insider's training in reactions and judgment, the reality of a thing or event or pattern may be charitably supposed by the outsiders on the basis of the visible behavior of members of the community fluent in such things.[15]

The word "evil" does not belong to the vocabulary of objectivity. That we instinctively employ the term "evil" with respect to some natural phenomena indicates that the door has been opened for seeing these phenomena through moral and theological lenses as well as through the lens of "objectivity." To the extent that one lacks (or refuses) training appropriate to ethics and theology, such a one remains as a deaf person who may provisionally conclude that music is real but must content themselves with someone else's description of a lively concert. Until one undertakes the training necessary for seeing the world under these additional aspects and engages the world in the correlative manner, one is left with a merely objective, which is to say impoverished, view of the world.

A second way natural evil receives attenuated descriptions is when too much of the background is left out of the description.

4.2 Overly Restricting the Narrative Context of Description

The Solvag Conference in Brussels in the fall of 1927 signaled a definitive victory for the Copenhagen school of quantum physics as Bohr painstakingly solved each daily puzzle Einstein proposed. The "duel" between Einstein and Bohr (as Heisenberg later dubbed it[16]) epitomized what Thomas Kuhn would later call the "proliferation of paradigms" that follows the demise of the received account while rival schools of thought struggle for supremacy over each other.[17] One of the sticking points between Bohr and Einstein was whether mathematics referred to anything real.[18]

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[14] Nor does the spontaneous reaction of trained observers tip the balance toward the ontological realists. For the *lack* of response among the group that cannot see is itself a primitive reaction from which the third-party conclusion might be deduced with equal validity: there's nothing there. On the role of observer skills in perception see Wykstra, "Humean Obstacle to Evidential Arguments from Suffering."

[15] Wittgenstein thought that all language worked this way. The reality of the runaway bus is not in question until it runs me over. It is already shown by the fact that everyone jumps out of the way—including, importantly, the blind person who speaks English and jumps in response to the cry: "Watch out for the bus!"

[16] "Commentary of Heisenberg (1967)."

[17] Kuhn, *Structure of Scientific Revolutions*.

[18] Quantum mechanics constituted a revolution in thought. "It is not a new chapter in the ontological tradition [of Western philosophy] but rather a phase of another evolution. The source of this evolution is mathematics, not philosophy. Its

Einstein believed that there were "perfect laws in the world of things existing as real objects."[19] For his part, Bohr could not deny this. But neither could he affirm Einstein's simple realism. Bohr saw that human language is itself the culprit that prevents us from settling the question: "we are suspended in language in such a way that we cannot say what is up and what is down."[20]

When the reality of the quantum world was at stake, Bohr observed that like all other English words, the word "'reality' is a word in our language and that this word is no different from other words in that we must *learn to use* it correctly. . . ."[21] But being the sorts of critters that human beings are, there are inescapable restrictions on how broadly we can properly use the term "reality." On Bohr's view, measurements in quantum experiments can only be framed in terms of classical physics. It is this problem that raises the issue of how much context is enough in order for the description to be a truthful one. As Bohr's problem resembles my present discussion, his solution may prove useful.

Every atomic phenomenon is closed in the sense that observation of it is based on data obtained *not* by direct detection of the quantum particle but by recording the irreversible registrations displayed by suitable amplification devices.[22] In other words, a measurement amplifies things up to the classical level, where "that" indeterminate electron becomes "this" discrete and unmistakable mark on the photographic film. Only with these amplified results can human beings, who are neither quark-sized nor photon-fast, "describe" quantum events. These marks are observed, recorded, and subsequently discussed. But by the act of amplification a necessarily *distorted* picture is rendered.[23] Consequently, rather than *settling* the age-old problem about the existence of objective reality, quantum physics is the paradigmatic case of human *inability* to say anything one way or another. "The limit," Bohr writes, "which nature herself has thus imposed upon us, of the possibility of speaking about phenomena as existing objectively finds its expression, as far as we can judge, just in the formulation of quantum mechanics."[24]

The problematic status of mathematical descriptions of the quantum world (are they depictions of an objective world or of the patterns humans happen to see?) did not lead Bohr to conclude that they weren't worth

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trend is a search not for ultimate reality but for rigorous use of language." Petersen, *Quantum Physics and the Philosophical Tradition,* 129.

[19] "Bohr-Einstein Dialogue," vi. Einstein was also reported to have said "If, without in any way disturbing a system we can predict with certainty . . . the value of a physical quantity, then there exists an element of physical reality corresponding to this physical quantity." Petersen, *Quantum Physics and the Philosophical Tradition,* 166.

[20] Cited in Petersen, *Quantum Physics and the Philosophical Tradition,* 188.

[21] Ibid., 172. Emphasis added. Here Bohr seems to borrow from Wittgenstein (*Philosophical Investigations,* §43).

[22] Bohr, cited in "Bohr-Einstein Dialogue," 7.

[23] If elections are non-local entities, we would have no way of detecting the property of "non-locality" since amplification devices necessarily register the effect of electrons as *localized* entities.

[24] Ibid., 3.

troubling about. On the contrary, even if mathematical descriptions were human constructs, they were constructs that challenged the tidy way human beings conceived of their world. In order to compensate for the untidiness, Bohr urged for *expanding* the context when describing quantum events in hopes that the quantum events might be anchored by a background we *do* understand.

> In electron interference, the physical "process" starting at the electron's emergence from the gun and ending at its impact on the plate has no definable course. It cannot be broken up into physically well-defined steps. Unlike classical phenomena, a quantum phenomenon is not a sequence of physical events, but a new kind of individual entity.[25]

For Bohr the "inscrutability of the quantum event's interior" is simply the result of the indivisibility that characterizes the quantum world.[26] "Indivisibility" was Bohr's term for a quantum event's resistance to dissection. There are no tinier parts which can be treated in isolation and added to make up to the larger quantum event. The "movement" of the electron from gun to plate is a seamless whole. Rather rue human inability to zero in on the electron-as-particle-in-flight, quantum indivisibility led Bohr to insist that quantum description was incomplete until it was *expanded.* In other words, instead of doubling his efforts to break down the quantum event into tinier pieces, Bohr's strategy was to expand the horizon to include not only the end conditions (most notably the markings on the photographic plate), but also other classical phenomena such as the initial conditions of the gun and even *the table top.*[27]

On Bohr's view, a perspicuous understanding of the quantum world cannot be achieved by the old-school strategy of divvying up each event into smaller and smaller events. To the extent that Bohr considered the issue of indivisibility and closure "of fundamental significance, not only in quantum physics but in the whole description of nature,"[28] when we are faced with inscrutable mysteries in nature, we ought to resist the temptation to divvy the event into smaller and smaller steps but rather follow Borh's protocol by viewing the event in a broader and broader context.

It doesn't take much imagination to expand Bohr's protocol to enfold not just the table top but also the *human observer* as part of the initial and final conditions. Aage Petersen, one of Bohr's last students, explains:

> In exploring the quantum world we are no longer detached observers, but we mold that which we describe. Thus quantum mechanics is not a description of nature as such but it has an *observer-dependent aspect*. It is a description of nature as exposed to man's method of questions.[29]

Bohr realized he was faced with two radically different domains of cause and effect. Both domains belong to the natural world. The entities of

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[25] Petersen, cited in Ibid., 6.

[26] Petersen, *Quantum Physics and the Philosophical Tradition,* 173.

[27] Ibid., 171.

[28] Ibid., 177.

[29] Ibid., 141–42. Emphasis added.

the one are entirely unlike the "new kind of individual entities" of the other. The grammatical rules for speaking about the other constitute a terribly misleading way for speaking about the one. Under these conditions, Bohr concluded that the best strategy for understanding the quantum world was to expand descriptions of it to include *more* (rather than less) of the world in which we live. Bohr's is a reasonable strategy for reconciling two dissimilar domains of cause and effect. Since religious believers are bent on claiming divine cause and effect (whatever that is) is displayed in the natural world, conversations about "natural evil" likewise straddles two dissimilar domains of cause and effect. In the fourth section of this paper, I will apply Bohr's protocol of expanding the scope of description in conversations about inscrutable evils. But first I will add to the list one more tempting way to attenuate descriptions of so-called natural evils.

4.3 Overly Restricting the Range of Acceptable Causes

Third, contemporary descriptions of natural evil tend to unnaturally restrict what sorts of causes are acceptable answers to the question Why? From Aristotle up through the Baroque period in the West, investigators of natural phenomena framed their inquiry along four lines. They sought accounts of efficient, material, formal and final causes. These four were taken as conspiring together to precipitate any natural event.

After the Renaissance, emerging sciences tended to divvy up causal explanation in a slightly different fashion. After describing the shape of contemporary causal explanations, I will suggest why the modern taxonomy of cause and effect is insufficient for conversations about "natural evil," as it fails to account for all the natural causes in the mix.

4.3.1 Science Restricts Itself to Uncovering Material and Efficient Causes

By and large, contemporary science has restricted itself to the discovery of efficient and material causes.[30] When considering what was previously known by the names "formal" and "final" causes, science has redivided the natural world into the domains of the *technological* and the *natural*.

As regards *technology,* formal causes are lumped in with efficient causes. A given technology—say a bridge—succeeds because the human agents exert control over the materials by mastery of the formal properties that relate the materials to each other. Knowledge of the formal principles of trusses guides the engineer to construct a framework of overlapping triangles rather than to duct-tape I-beams end to end. Final causes of technologies are less often explicitly considered. In the case of a bridge, the final cause is a no-brainer: it's for getting to the other side. In the more dicey

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[30] Strictly speaking, scientists do not seek material "causes" in the same way that medieval thinkers did. Clearly knowledge of material properties is determinative for understanding how efficient causation proceeds. But the ancients understood material causes as playing an additional, almost agent-like role in the event. Thus the ancients would raise questions about the wisdom of creating new alloys, new viruses, new nano-products precisely because one can never predict what havoc these "agents" might wreak down the road.

case of nuclear warheads, scientists tend to defer to politicians and ethicists in matters of final causes.

Unfortunately, this division of labor is not altogether satisfying for responding to cases in which technologies fail. If a bridge collapses in a dramatic way, an account of the material and efficient causes does not head off the urge of those touched by the tragedy from asking "But why?" Nor will observation of formal causes quell the question of Why? For example, just because we know that bridges tend to fail on a thirty-year cycle doesn't remove the urge for us to ask "Why this bridge, and why today?"[31] Human beings seem predisposed to react to the event as if the bridge, or perhaps technology in general, were itself an agent of evil since the Why? question expects an answer in the shape of a description of *final* causes.

I suspect that human beings ask the Why? question in the face of natural disasters for the same reason they ask it when technology fails: they are requesting a description of final causes. If human beings do reflexively ask Why? then Aristotle's fourfold account of causation may not be an outdated mode of reasoning after all, but one that corresponds to the very shape of human existence. We simply cannot stop ourselves from requesting explanations of final causes whether or not the question itself makes sense.[32]

A similar urge to ask Why? crops up in the face of nontechnological, which is to say *natural,* disaster. Of course, technological failures differ from natural disasters *only* in the sense that one sort of efficient cause (namely human beings) is taken as *the* classifying mark for the former but not the latter. To say a disaster is "natural" cannot mean that it differs in kind from a technological one, because human beings are clearly a part of the natural world. Rather, the class "natural disasters" is what remains of the set of all disasters once human beings are disqualified from the list of efficient causes. My complaint is that we too quickly exclude human agents from descriptions of natural events. This exclusion breeds confusion and prevents us from crafting satisfactory responses to the Why? question.

Setting aside, for a moment, those disasters in which human beings are obviously complicit, we can ask whether it is intelligible to ask for an account of *final* causes as well as material, efficient, and formal. Clearly not every askable question is intelligible. So, it may turn out that our reflexive request for an account of final causes implied by the Why? question says more about human beings and our Feuerbachian projection of an Agent above, below, or behind the natural world, than about the way things really are. In response, I maintain that we ought not be overly hasty in ruling out requests for final causation in cases of natural evil. Our difficulty in seeing final (and sometimes formal) causes often tricks us into describing events in ways that exclude, without warrant, the possibility of giving an account of final causation. We describe natural events only in terms of those causes that are most readily apparent to us. But attention to

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[31] Petroski, "Past and Future Failures."

[32] Martin Heidegger, for one, thought that this question made eminent sense and our failure to realize this only makes us slaves to our technology. In his essay, "The Question of Technology," Heidegger describes Technology, with a capital T, as something that takes on a life of its own. As such, Technology ought to be classed with other social structures, power relations, and emergent properties capable of exerting top-down causal force in our world. See Heidegger, "The Question Concerning Technology"; for a theological interpretation see also Berkhof, *Christ and the Powers.*

the grammar of the word "cause" will show that the intelligibility of requests for causes of any sort turn upon how human speakers conduct their lives. Consequently, it may be that our inability to properly hear, much less respond to requests for fourfold causal explanation of natural evils is more an indication of a defective way of living more than it is a lack of data.

4.3.2 Grammar of "Cause" Demands Skillful Participation of an Observer

In this section, I argue that (contra Hume) assignment of "cause" depends more on a skill of seeing than on a configuration of data.

In his essay "The Limits of Empiricism," Bertrand Russell argues that causation is not always arrived at by deduction, but in its simplest forms, causation is *intuitively perceived*: "We have reason to believe: that if any verbal knowledge can be known in any sense derived from sense experience, we must be able, sometimes, to 'see' a relation, analogous to causation between two parts of one specious present."[33] The simplest case occurs when we stub our toe on a chair leg and we immediately fault the chair. How did we *know* the chair is the cause of pain in our toe? We know this not by deduction but by a form of perception. Russell reasons, "when I am hurt and cry out, I can perceive not only the hurt and the cry, but the fact that the one 'produces' the other."[34] This runs against the general grain of the Humean insistence that "causes" are unperceivable fictions that we posit only after observing a regular series of events. ("The chair is stationary, my foot swings forward, there is a sound, my toe hurts, the chair is still stationary, therefore the striking of the chair *causes* the pain in my toe. Let's try that again to make sure.") It only takes one exception to disprove the empiricist's rule. Russell concludes therefore, "If we can sometimes perceive relations which are analogous to causation, we do not depend wholly upon enumerations of instances in the proof of causal laws. . . ."[35]

Russell criticized Humean empiricism for barring claims to certainty with respect to knowing a causal relation (short of an infinite string of data pairs). Russell was surely correct to say that the empiricist's demand for "proof" of causation must come to an end somewhere. On my view, he was also right to say that it ends with a way of seeing. But in sharp contrast to Russell, his one-time student Wittgenstein showed that "seeing" causation *did* rest upon regularity, but not the kind of regularity that Hume sought, regularity of data (B_1 follows A_1, B_2 follows A_2, . . . B_n follows A_n, therefore A causes B). Rather, "seeing" causal links is a function of regularities in *ways of acting* for the speakers of a language. As mentioned above, Wittgenstein sometimes called this regularity "primitive reactions." Some of our primitive reactions are biological: we squint at bright lights, we pucker at lemons, we sneeze at pepper. We also "instinctively look from what has been hit to what has hit it."[36] Yet others of our primitive reactions have been *trained* into us. For example, while social creatures (humans, chimpanzees,

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[33] Cited in Wittgenstein, "Cause and Effect," 370.

[34] Ibid., 371.

[35] Cited in Ibid.

[36] Ibid., 373.

etc.) instinctively follow the gaze of tribe member, we must be *trained* to respond to signs, such as this arrow "→" in this case by looking to the right. Regular ways of responding to our environment, both *natural* (following another's gaze) and *trained* (turning right at the arrow), constitute the *unquestioning certainty* from which language—in the present case, the language of causality—grows. Wittgenstein concludes, "I want to say: it is characteristic of our language that the foundation on which it grows consists in steady ways of living, regular ways of acting. Its function is determined *above all* by action, which it accompanies."[37]

Wittgenstein goes on to say that our ordinary language of cause and effect is fuzzy at both edges. On the one side, we have to admit "what a powerful urge we have to see everything in terms of cause and effect."[38] Consequently, we are overly quick to assign causes where none may exist. We have all had this experience: "Sometimes we think we are causing a sound by making a movement and then realize it is quite independent of us."[39] Yet not all nominations for an instance of cause and effect can be suspect. So on the other side, it is not the case that absolutely everything and anything can always and at any time be doubted. Those who sprinkle doubt on the most basic perceptions are confused about what it takes for language to be working properly.[40] "The basic form of our game," Wittgenstein writes in reference to the language game of cause and effect, "must be one in which there is no such things as doubt. . . . Doubting . . . has to come to an end somewhere. At some point we have to say—without doubting: *that* happens because of *this* cause."[41] In other words, there is a de facto limit both to gullibility and to skeptical demands for proof.

Imagine following a moving string down the hall and around a corner to see who is tugging it. Suppose we catch him or her red-handed. Are we able to doubt whether the culprit is the primary cause of the string's movement? So naturally do we say, "Aha! *You* did it!" that we cannot even imagine how someone could maintain the position of doubt while admitting "Yes, yes. I saw her pulling the string But how am I to *know* that this is an instance of causation?" If we conjure up in our imaginations such a hyperskeptic, could we also imagine that the matter could be settled by a series of experiments?[42] Clearly not; if someone cannot recognize causation in its simplest form, he or she will be unable to grasp additional empirical demonstrations of it. For proofs get their force from the fact that the paradigm cases of causality cannot be questioned.

It seems then, that the concept of causation in every instance rests on human ability to "perceive" or "see" *something* as a cause. Mastery of everyday life and language governs the range of our primitive reactions with respect to causes so that we search for causes from the presence of attention-getting effects (e.g., a loud voice in a room makes us look for a microphone). Likewise someone's fluency both in *specialized* experience and in attending *specialized* language use trains him or her to see causes within

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[37] Ibid., 397.

[38] Ibid., 375.

[39] Ibid., 373.

[40] Language that isn't working properly is gibberish or "idle" or "on holiday."

[41] Wittgenstein, "Cause and Effect," 377.

[42] Ibid., 387.

highly specific situations. Thus familiarity with physics' laboratory and fluency in the mathematical language of quantum mechanics trains the physicist to extend adapted notions of cause and effect to lab experiments. If the scope of our application of the word *cause* is related to the specificity of our training, we can conclude that the *sort* of cause we look for is related to the conceptual lenses through which we have been trained to see.

In this light, it makes sense to ask whether our regular ways of acting are sufficient for seeing broadly enough for handling cases of natural evil. It may be that our mute inability to give an "answer" to the problem of evil indicates a deficient way of living rather than insufficient data. The solution therefore, may not be to multiply words but to change the way we live. Space will not permit me to pursue this topic here.[43] Sufficient for my present purpose is an explication of how descriptions of "natural evils" might be satisfactorily expanded.

5 Broadening the Descriptive Context

5.1 Narrative Space

In one of his classically provocative statements, Wittgenstein once observed that if his sofa were moved onto the front lawn, it would be tempting to say that it had become a quite different object. In some sense, the identity of a thing includes its connections to its surroundings. For example, while visiting the Hermitage Museum I stood for many minutes in front of Rembrandt's painting. Suppose I become quite taken by the color of one character's kind eyes and endeavor to paint my house this color because of the warmth it kindles in me. Were I to succeed in matching this hue (say, by some form of spectroscopy), I'd be terribly disappointed with the results, not because the house paint was the wrong spectroscopic hue, but because it will have become quite a different *color*. A color is what it is in a particular configuration with its surroundings.

The same phenomenon holds for descriptions of objects and events. Consider the sentence, "Cadavers are frequently in the prone position." Devoid of context, this sentence is trivially true. But the very absence of context bewitches us into thinking that what is primarily at stake is the truth or falsity of the sentence.

Imagine now a different conversation. At a casual gathering, I begin to brag how nimble I am as a forty-seven-year-old distance runner. I recount how just this afternoon while running through the forest I nimbly leaped over a bolder, a cadaver, and a fallen tree.[44] "Wait just minute! Did you say 'Cadaver'?" "What of it?" I reply, "Cadavers are frequently in the prone position." If I calmly proceed to inform you how far I ran and at what pace, you'd think something was horribly wrong with me. Part and parcel of a proper description (in this case of cadavers) is the inclusion of a broad enough context so that what is really going on is made apparent. To leave out such details is substandard, even demented, by the canons of ordinary conversation.

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[43] See Kallenberg, "Some Things Are Worth Dying For."

[44] I must credit my friend Charles Pinches for this fanciful story. See Pinches, *Theology and Action.*

Relevant context includes narrative space. It is important to the conversation about my nimbleness that an unnamed cadaver was encountered on a trail run. Had I instead been visiting the morgue in my capacity as a forensic pathologist and reported at a dinner party (with a twinkle), "Cadavers are frequently in the prone position," you might think me humorous, but not because any of the bodies were out of place. A cadaver becomes suspicious when it is discovered in surroundings in which we normally do not encounter cadavers. It does not become suspicious *simply* in virtue of being a cadaver in the prone position.

As in the case of cadavers, important relevant details must be included from the surrounding context to render a description truthful. An example of the significance of expanding spatial context for describing natural disasters can be seen in reports that surrounded the spate of tropical storms that have recently plagued the Atlantic. To cite but one example, tropical storm *Jeanne* ravaged the tiny country of Haiti in 2004. In the city of Gonaives alone, nearly 2,900 cadavers were recovered. Such a tragedy might easily prompt the question, "Where was God in September?" But this disaster is not yet properly described. If we expand the narrative space to include not just Haiti but the entire Atlantic seaboard, we learn that *Jeanne's* strength grew after it passed Haiti, elevating it to hurricane status. Yet when hurricane *Jeanne* pummeled the Atlantic coast, only four persons died.[45] The "tragedy" is evidently understood not by viewing the storm itself, but by viewing it in light of the enormous disparity of wealth between Haitian poor and rich North Americans.

A similarly expanded re-description ought to be conducted for the Armenian earthquake. Fact #1: On December 7, 1988 an earthquake of 6.9 magnitude struck and killed 25,000 people leaving some 400,000 homeless.[46] Fact #2: When a similar-sized earthquake struck California two days before Christmas of the same year, only three persons died.[47] Fact #3: Civil engineers attest to the fact that the difference between the earthquake-safe construction and its alternative is an additional construction cost of a mere 15%. Taken together, these three facts shift the description Fact#1 from a theodical problem to an economic, political, and moral problem.

Not only must the spatial context of so-called natural evils be expanded to achieve a truthful description, the temporal context must also be expanded.

5.2 Narrative Time

5.2.1 Expanding the Narrative Context Prior to the Event

In the first place, the temporal context must be described so as to include enough of what came *before* the event so as to render perspicuous the relevant connections between this event with events that precede it. In *Zettel,* Wittgenstein observed "Only in the stream of thought and life do words have meaning."[48] So, for example, we may misunderstand a command is-

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[45] Lawrence and Cobb, "Tropical Cyclone Report: Hurricane Jeanne."

[46] See US Geological Survey, "Earthquakes Facts and Lists."

[47] See Branigan and Whitaker, "Dangerous Buildings."

[48] Wittgenstein, *Zettel,* §31.

sued to us unless we have an adequate grasp of what came before the command. Once again, a concrete example can help show what I mean.

Diseases such as tuberculosis are designated as "natural evils" since people, especially children, contract it through no fault of their own. It is my claim that not every case of TB implicates God as deeply as every other. In the opening years of the new millennium, the *increase* of incidence of TB on U.S. soil has epidemiologists worried. But this trend is made all the more troubling by what events preceded it. First, as Harvard cultural anthropologist and physician Paul Farmer has demonstrated, TB can have an astonishing 100% cure rate at minimal cost . . . provided the money is spent in the right places. In the protocol introduced to Haiti, Farmer was able to attain 100% cure rate for only $150–200 for persons treated in their homes compared to $15,000 to $20,000 for persons treated in a U.S. hospital setting. The difference? Money was spent not simply in the treatment of the disease (the same in both cases) but in providing a small but continued food allowance that reversed the malnourished state of the poverty-stricken Haitians.[49] Second, failure to eliminate TB in the West is made morally more serious by the fact that in the past 70 years the gap between the rich and the poor has dramatically increased. The rich-poor gap in the United States is the worst it has been since 1929; the top 5% of money makers owns 58% of the nation's wealth. Only the top 10%—the *very* rich—have made economic gains over the past 20 years. Ninety percent of American wage-earners have actually lost ground. Yet the top 0.001% (some 13,400 families) have had a wealth gain of 558.3%.[50] These economic facts radically alter the identity of the evil of reemergent tuberculosis. Reemergent TB is not a "natural evil," but most correctly described as a *moral* evil.

It will surely be objected that not every instance of natural evil can be so readily dispatched. My response is simply this: until we expand the description enough in every case, we dare not say one way or the other.

5.2.2 Expanding Narrative Context Subsequent to the Event

In addition to expanding the temporal context *prior* to an event, a truthful description also requires skillfully expanding the context to include what *follows* the event. Recall Wittgenstein's observation that we are able to understand a command, say one issued by an authority, to the extent we understand the context that precedes the command. Leave it to Wittgenstein to continue: "if the meaning-connection can be set up before the order [is issued], then it can also be set up *afterwards*."[51] It doesn't take much imagination to see the possibility that the last line of a play or story may convey information that casts everything that happened previously in a new light, one that forces a re-reading of the entire work. My point is this: If history is itself narratively shaped, its "ending" may one day compel a reexamination of the entire story. If the ending is in some sense uncertain (i.e., contingent rather than necessary), then knowledge of the ending cannot be logically compelled or scientifically predicted (though some theo-

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[49] See Kidder, *Mountains beyond Mountains*; see also Satchell, "Wiping Out TB and Aids."

[50] Morris, "Economic Injustice for Most," 12–17.

[51] Wittgenstein, *Zettel,* emphasis added.

logians claim that the end of history is proleptically present in the resurrection of Jesus Christ[52]). In the meantime, we need not sit on our hands waiting for history to end before we begin writing a nonreductive description of disasters. But we do need to expand our description of the events in question in order to include both what came before and what happens after.

A relevant part of what comes after tragedy is the immediate response of human animals to these events.[53] Inclusion of human responses to natural disasters renders a truthful description of the way things are.

5.3 The Way Things Are

When descriptive context is taken broadly in the ways I am advocating, conversations are apt to become more lively. As descriptions widen in narrative time and space, they become more contestable and hence more contested. To the extent that such descriptions fall short of universal verifiability, the descriptions will fail to garner unanimous acceptance. As disagreements get heated, it is tempting to strip down descriptions to something less controversial in order to gain wider acceptance. Unfortunately, acceptability comes at a price: stripped down descriptions no longer have what it takes to do the necessary conceptual work. Still, *within* a linguistic community (defined as those who rally around a particular thick description and share a determinate form of life) conversation is possible, because some statements stand firm and serve as the collective hinge upon which the rest of the community's speech is anchored. These statements embody the community's deepest notions about "the way things are." Examples may be as obvious as "I am now wearing clothes" or as esoteric as "God is love."

A surprising possibility emerges when the descriptive context is expanded to include statements which may be definitive for a given community yet importantly lie *outside* the set of statements acceded by *every* speaker ("The sun rises in the east.")[54] When a rich enough description of the way things are is juxtaposed with a practical response to a given occasion for suffering an arrangement properly deemed as *satisfactory* is achieved. Sometimes the proper action is to weep with those who weep. Sometimes it is most fitting to solve the presenting problem. Other times it is most appropriate to rush to relieve physical suffering. But when an appropriate enough action is taken in the presence of a rich enough description, the arrangement of the two has the possibility of striking us as satisfactory. There may be other satisfactory arrangements, and there is no way of telling in advance of talking about it which arrangement will turn out to be the most satisfactory. Yet clearly some arrangements are *un*satisfactory. To recap, I explained above that attenuated descriptions will yield an unsatisfactory arrangements just as surely as will the absence of an appropri-

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[52] See Robert John Russell's essay in this volume. See also Pannenberg, *Jesus, God and Man*.

[53] For a compelling account of the need for practical theodicy, see Don Howard's essay in this volume.

[54] It is important to note that statements such as "The sun rises in the east" are not more certain for being *shared* per se; they simply are shared by many rather than shared by few. On Wittgenstein's view, there is no private language.

ate practical response. But when both pieces are present, both a broad enough description of the way things are and a proper practical response, there exists the possibility of achieving a harmonic resonance as description and response become tuned to each other. Sadly, I cannot demonstrate this in any quantitative or logically compelling fashion; for this harmony is perceivable only by the one with ears to hear and eyes to see.

5.4 "Explanation" as that which Supervenes upon the Juxtaposition of Theology and Action

In his poem "Which," R. S. Thomas writes of the religious believers' response to suffering:

> And in the book I read:
> God is love. But lifting
> my head, I do not find it
> so. Shall I return
> to my book and, between
> print, wander an air
> heavy with the scent
> of this one word? Or not trust
> language, only the blows
> that life gives me, wearing them
> like those read tokens with which
> an agreement is sealed?[55]

The poet's ultimate conclusion about whether there is a God of love, as Christians claim, turns upon the sort of data one is impelled to exclude. If one considers *only* "the blows that life gives," one is hard pressed to keep reading a Book that speaks of a divine being that is both loving and omnipotent. But, if language is to be trusted, there is more to consider than simply the blows that life deals. What is it about language that make it a reliable compass for navigating the choppy waters of natural evils? It is simply this: verbal behaviors and nonverbal behaviors are inextricably bound together in the successful functioning of a complicated linguistic form of life a community of human beings inhabit.[56] Consequently, both actions and words conspire to give a satisfactory response to natural disasters.

Perhaps somewhat surprisingly, words do not, and cannot, succeed in isolation. In other words, evil is not the sort of thing that can be adequately responded to by an explanation offered by a single person, or by a string of persons for that matter. If it were, the uptake of the explanation(s) would have long since been perceived as satisfactory and the problematic retired.

I claim that in contrast to the stand-alone explanation, a "satisfactory" response to the enigma of suffering involves the perception of a pattern that emerges when properly rich descriptions are juxtaposed to concrete behaviors taken in response to a given occasion of suffering. The descriptions I have in mind are broad in space and time, at least broader than typical descriptions of natural evils.

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[55] Thomas, "Which."

[56] See Kallenberg, *Ethics as Grammar*.

I suspect that it is the *constellation* of adequate verbal and nonverbal responses taken together that strikes the believer as satisfactory. Satisfactory, yes, yet neither necessary nor sufficient. A satisfactory constellation is never the only one possible. Portions of either element (i.e., verbal or nonverbal) may be wrong and surely may be improved upon, for there is always more to be said. Moreover, an adequate description must also be "theological" in the sense that it is not only a description of an event, but more properly a description of a pattern in the data taken by religious believers to be undeniably the way things are. In sum, I have argued for the possibility of achieving something more realistic than the ever-elusive explanation to the Why? question we pose to natural disasters. This possibility is the emergence of a satisfactory constellation between description and action when these two are so tuned to each other than harmonic resonance is achieved. For persons who are capable of perceiving, the constellation not only is satisfactory, it has the force of a speech act. But who is the speaker? If the perceiver is a religious believer, he or she quite instinctively attributes his or her perception of the pattern as if it were a speech-act spoken without words by God.

What follows is a twelfth-century example of the juxtaposition of theological claims about the way things are with a seemingly isolated work of mercy. Taken together, these disclose a satisfactory response to a single natural evil in southern France.

6 The Theological World According to Hugh of St. Victor

To recap, as biological critters, human beings respond to their environment in physical ways, by making noise and moving their bodies. Often noise-making and movement are intentionally coordinated to achieve an effect that is larger than any one human animal can accomplish alone. Sometimes, though not always, a kind of synergy is attained even when noise-making and bodily movement are not intentionally coordinated. I take as my example a book and a bridge. In the late 1120s, a monk in Paris wrote a book called *Didascalicon* for his students. In it, Hugh of St Victor reflected on the ways that the presence of evil (a.k.a., the absence of good) serves to orient human beings in their corporate quest for the God who alone is Wisdom. Several hundred kilometers to the southeast and five decades later, a teenage shepherd boy quit his day job to build a bridge over the Rhone River. Neither Bénezet nor Hugh were aware of the other. But their respective actions taken in response to the evils they saw achieve resonance.

Hugh's theology takes the brokenness of creation *as a given*. (He is, after all, an Augustinian.) But Hugh does not display any compulsion to reconcile the brokenness of creation with the goodness of God, for God is known to us as much as a source of *abundant redemption* as eternal goodness (Ps 130:7). Hugh sees the brokenness of human beings and of their world as gesturing to what human life is for. Human beings alone are creatures capable of imitating divine redemption by their appropriate response to the world's brokenness. Doing this is itself sacramental: the picture that the redemptive human community displays is the very reality of what is being depicted. (A generation later, Aquinas would describe this sacramental action as simultaneously human and divine under his doctrine of "double agency." Human beings who imitate divine redemption by taking

redemptive action in response to particular cases, participate (a technical term for Thomas) not only in God's being, as do all existent things, but in both the very *agency* and *redemptive goodness* of God.[57])

For Hugh, the brokenness of the world that makes natural evil a terrifying prospect is not as much a cause for alarm as it is the impetus for a quest. As fallen creatures living in an unpredictable and threatening world, Hugh maintains that human beings "are restored through instruction, so that we may recognize our nature."[58] God in redemptive grace has intended the very condition of human fallenness and nature's brokenness as the impetus for our corporate pursuit of Wisdom, a quest which is the "highest curative in life."[59] All dimensions of human relations are directed by this quest.

> And so arose the pursuit of that Wisdom we are required to seek—a pursuit called "philosophy"—so that knowledge of truth might enlighten our ignorance, so that love of virtue might do away with wicked desire, and so that the quest for necessary conveniences might alleviate our weaknesses. These three pursuits first comprised philosophy. The one which sought truth was called theoretical; the one which furthered virtue men were pleased to call ethics; the one devised to seek conveniences custom called mechanical.[60]

In this passage, Hugh asserts that redemption is assisted by the practice of "arts" that correspond with *all* the powers of the soul. Corresponding to the understanding *(intelligentia)* are both the theoretical arts (i.e., the contemplation of necessary truths; here Hugh intends theology, physics, and mathematics) and the practical arts (namely, the practice of morality and the cultivation of virtue). Corresponding to knowledge *(scientia)* are all the mechanical arts. These latter have to do with feeding, fortifying the body against harm, and the contrivance of "remedies" for alleviating physical weakness.[61]

Unlike his predecessors, Hugh's theological vision encompasses all aspects of human knowing, including the perennially maligned "mechanical reasoning." By his day, "mechanical arts" had evolved into a very broad category. To be specific, mechanical arts was comprised of seven classes of practices: fabric-making, armament, commerce, agriculture, hunting, medicine, and theatrics. (Granted, "theatrics" seems like a stretch, but Hugh purposed to make the list seven in number so that it matched the perfection of the seven liberal arts. Besides, under theatrics Hugh envisioned any

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[57] These points were made clear to me by Elizabeth A. Johnson's wonderful essay, "Does God Play Dice? Divine Providence and Chance."

[58] Hugh of St. Victor, *Didascalicon* 1.1, p. 47.

[59] Here Hugh shows similarity to Irenaeus's take on the problem of evil. For a comparison of Augustinian and Irenaean theodicies see Hick, *Evil and the God of Love* [1968]. Though the term *wisdom* resonates with Platonic and Stoic philosophy, Hugh clearly equates divine Wisdom with the second person of the Trinity who is revealed as the Logos of creation and the Christ of the Gospels. See Taylor's introduction to *Didascalicon,* 14 n. 39.

[60] From Hugh's *Epitome Dindimi in philosophiam,* cited in Taylor, introduction, 12.

[61] Hugh of St. Victor, *Didascalicon* 1.8, p. 55.

coordinated activity of a *group* of people. Not just drama, but marching bands and gymnastics would fit under this heading. Had Hugh lived to see Ford's assembly line, he surely would have treated it as a type of theatrics.) each mechanical art names a *family* of practices. For example, "hunting . . . includes all the duties of bakers, butcher, cooks, and tavern keepers" as well as those who actually do the gaming, fowling and fishing.[62] And "armament" included material science, even metallurgy: "To this science belong all such materials as stones, woods, metals, sands, and clays."[63] With this last move Hugh has managed to bestow honor even upon the grimy-faced smithy[64] so consistently maligned for sixteen centuries.

On Hugh's account, all modes of rationality are mutually supportive. The ends of mechanical arts are displayed by the physical things contrived by the artificer. The "ends" of a device may be final with respect to the device but only provisional with respect to the ultimate end of human life revealed in Christ: reconciliation of God and humans. In this sense, theology can benefit mechanical arts by providing a benchmark for assessing the aptness of its aims. But the benefit also works the other way around: mechanical arts benefits theology by rendering visible invisible things. Mechanical arts yields artifacts (and processes) that are inherently sacramental because they render visible the final ends of mechanical reasoning, and in fact the final end of all human reasoning. Not only is the provisional or natural end of mechanical reasoning (namely, the alleviation of physical weakness) embodied in mechanical artifacts and processes. Mechanical reasoning also contributes to the incarnation of the ultimate or final end of human life (namely, our journeying toward reconciliation with all peoples and with God).

Hugh is quick to emphasize the difference between *worldly theology* (a theology that moves from human knowledge to God) and *graced theology* (a theology that moves from God to human knowledge). Grace figures prominently in Hugh's account because he has no other way of explaining how human beings come to "see" more clearly. In his *Exposition of the Heavenly Hierarchy,* Hugh writes:

> Invisible things can only be made known by visible things, and therefore the whole of theology must use visible demonstrations. But worldly theology adopted the works of creation and the elements of this world that it might make its demonstration in these. . . . And for this reason, namely, because it used a demonstration which revealed little, it lacked ability to bring forth the incomprehensible truth without stain of error. . . . In this were the wise men of this world fools, namely, that proceeding by natural evidences alone and following the elements and appearances of the world, they lacked the lessons of grace.[65]

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[62] Ibid., 2.25, pp. 77–78.

[63] Ibid., 2.22, p. 76.

[64] Just as persons who were skilled at philosophy were called "wise," so too were persons skilled in mechanical reasoning *(techne)* called "technicians." Unfortunately, the term *technai* was used pejoratively rather than complimentarily of those who worked metal in front of the large furnaces. Such activity was regarded as beneath the dignity of free persons from Socrates' day until the twelfth century.

[65] Cited in Taylor, introduction, 35.

What are these lessons of grace? For Hugh grace is not something added on top of nature, but the very Spirit of God that already permeates the created world and with which human beings may keep step *(gratia cooperans)*. Although the mechanism of grace's operation in the natural sphere is elusive, if not ineffable, theologians who write of grace do not conceive of grace as a cause that stands in competition with other material or efficient causes. More commonly, theologians speak of the efficacy of grace in terms of illumination. "Grace," writes Hugh, is the powerful medicine that "was fittingly given both to illuminate the blind and to cure the weak; to illuminate ignorance, to cool concupiscence; to illuminate unto knowledge of truth; to inflame unto love of virtue."[66] How do we account for a person coming to perceive for the first time a pattern that has been "in" the data all along? Hugh asserts that it is here we see God at work; the moment of illumination is called "grace."

7 A Premodern Practical Theodicy: St. Bénezet the Bridgemaker

Hugh's vision was not without practical corollary. During the solar eclipse of 1177, a teenage shepherd in southern France reputedly heard the voice of Jesus Christ telling him to build a bridge at Avignon. Because he was young and untrained, Bénezet was scoffed by the bishop. The river was surprisingly swift at Avignon, not to mention over a half-mile across. Even good swimmers died in the Rhone. But after the boy erected into place the first stone, one larger than could be lifted by 30 men, ecclesiastical support and financial backing followed. Bénezet died shortly before the bridge's completion some eight years later.

We have no way of knowing how well Bénezet understood the significance of his project. We do know that in the twelfth century rivers posed a number of dangers. The Rhone river was capable of devastating floods. (For sake of comparison, in December of 2003, the floodwaters of the lower Rhone claimed the lives of seven people.) The river was also cold, swift, and wide.[67] Crossing the Rhone was very hazardous, especially for the region's meagerly equipped peasants. In view of these dangers, the Middle Ages looked on bridge-building as a charitable act, a work of mercy.

But rivers contributed to more "natural" dangers than flooding and drowning. Human beings are part of the natural world, and for them rivers serve as political boundaries and as a form of protection against one's enemies. (The fact that rivers typically divided property owners meant that bridges frequently fell into disrepair as neither side of the river felt that upkeep fell on their shoulders.[68])

In 1177, the Rhone divided the County of Toulouse from the County of Provence and the County of Maurienne in the old Kingdom of Arles (the northern neighbor of Provence, identified with lower Burgundy). Turmoil in the area was exacerbated by two features. First, political boundaries and allegiances were constantly shifting.

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[66] Cited in Rydstrom-Poulsen, *The Gracious God,* 206.

[67] Students of history will recall the trepidation and care with which Hannibal moved his troops across the Rhone just a few miles north of *Pont d'Avignon.*

[68] Not surprisingly, St. Bénezet's bridge today is in total disrepair. Of the original 22 arches, only four remain standing.

> Capable of magnificent feats in order to achieve expansion, the dukes [of Aquitaine, just to the north of Toulouse] had poor control over a vaguely defined area, subject to anarchic forces. The collapse of the Carolingian structures had given way to a whole system of relations, more or less binding, based on a temporary *convenientiae.* Ducal suzerainty was inconsistent, many-layered and unstable, castellanies virtually independent. All this was further aggravated by ecclesiastical privileges and a rapid decline in the public peace.[69]

To cite but one example of the region's political instability, land-hungry nobility north of Toulouse took Pope Innocent III's call to a crusade (1204) as pretext for invading Toulouse en route to Jerusalem![70]

This political picture is complicated, second, by the fact that a count or viscount's political clout was sometimes shared with a bishop (such was the case for the Archbishop of Narbonne in C. Toulouse) or even simply transferred to a bishop (such as at Albi in C. Toulouse).[71] That churchmen were major players on the political scene is made more significant by the fact that the doctrinal stakes were extremely high in this region. Toulouse had been originally settled by the Visigoths who held to a heresy resembling that of the Arians.[72] Although the Visigoths were conquered in the sixth century, the Arian heresy of the Albigenses had such a stronghold in Toulouse that the entire region "constituted a cancer in the body of European civilization that had to be rooted out at all costs."[73] So many of the nobility of Toulouse (perhaps even the count himself) and Provence were allied with the Arian sect that eventually a crusade (1208) was to be declared directly against Toulouse and Provence (the two counties were to become united by marriage).[74] But even as early as 1163, the Council of Tours had called upon the secular powers to dispossess the "heretics" of their land.[75] In the meantime, the heretics "were to be subject to a social and economic boycott so that they may be forced through the loss of human comfort to repent of the error of their way of life."[76] Sadly, as is often the case, it was the region's poor who suffered most. For the least members of the planet, there is no difference between starvation by boycott and starvation by famine.

It was in this tumultuous context that Bénezet set out to build a bridge over the treacherous Rhone at the geographical corner of fierce political

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[69] Bur, "Kingdom of the Franks," 543.

[70] In the ninth and tenth centuries, the Duchy of Aquitaine had contained the County of Toulouse within its borders. Ever since, northern noblemen had vied, though unsuccessfully, for these lands. Bur, "Kingdom of the Franks," 542; Cantor, *Civilization of the Middle Ages,* 300.

[71] Bur, "Kingdom of the Franks," 545.

[72] Cantor, *Civilization of the Middle Ages,* 113. Arians denied the full divinity of God the Son and were defined as heterodox at Nicea in 325 CE.

[73] Ibid., 389.

[74] In 1208, a papal legate had been murdered in Toulouse. The Count of Toulouse was himself implicated in the crime. Cantor, *Civilization of the Middle Ages,* 424.

[75] Robinson, "The Papacy, 1122–1198," 337.

[76] Ibid., 336.

and doctrinal adversaries.[77] Whether Bénezet, the mechanical genius, was even vaguely aware of the multiple layers of evil represented by the Rhone is immaterial to my point. Bénezet's exercise of practical reasoning, born of need, is at once a redemptive and sacramental response to evil in the natural world. In the words of Hugh of St. Victor, the right use of human reason, even mechanical reason, "reconciles nations, calms wars, strengthens peace, and commutes the private good of individuals into the common benefit of all."[78]

8 Conclusion

A three-dimensional jigsaw puzzle cannot be completed on a table top. Some of the pieces simply do not fit together on a flat surface. Any attempt to force the fit in two dimensions will be not only frustrating, it likely ruins the pieces. Even the best puzzlers may be stumped until they are given the right tip. "Well, that explains everything!" is the likely exclamation when they learn the puzzle is 3D rather than 2D. In this scenario, the key to understanding is not another puzzle piece, but a *protocol for proceeding*.

In this essay I have argued that one way human beings respond to evil is by talking. Yet "natural evil" frustrates our attempts to speak directly about it. Natural evil is like a puzzle whose pieces do not easily fit together in a satisfactory way. My *protocol* suggestion is that what functions as a satisfactory "explanation" does not take the form of a "missing piece" nor of a bird's-eye view of the "boxtop" (a 2D picture of what's inside). In contrast, I suggest that a satisfactory defense supervenes upon the constellation of two components: (1) a rich enough description and (2) a set of practical actions. My essay has spent the greatest energy on the first element of the protocol. In particular, I've argued for the *expansion* of the descriptions that are given to natural evils. I've advocated increasing the participation of the observer in the speech-act of describing, expanding the range of acceptable causes, and broadening the narrative context of the description. What results is precisely the sort of conversation that constitutes theology. When theological dialogue serves as the backdrop to practical action at the same time practical action grounds the theological conversation, conditions are ripe for the emergence of an aspect, the dawning of which may strike some with the force of a satisfactory explanation.[79]

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[77] In 1309 Pope Clement V took up residence at Avignon. The fact that "the papacy eventually bought it outright from its ruler the Countess of Provence" implies that Avignon in Bénezet's day had been a part of the County of Provence and thus more likely than not tainted by its heretical associations with Toulouse. MacCulloch, *The Reformation,* 35. See also "Map 12: The Angevin Empire."

[78] Hugh of St. Victor, *Didascalicon* 2.23, p. 77.