Chapter 1
The Limits of Language

I. The ineffable

The classic of Eastern spirituality, the *Tao Te Ching*, begins with these famous lines:

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\begin{align*}
\text{The Tao that can be told} \\
\text{Is not the eternal Tao} \\
\text{The name that can be named} \\
\text{Is not the eternal Name}
\end{align*}
\]

There is something of a play on words here, apparently, for the Chinese character for “tao,” “way,” (逍) can also mean something like “to explain” or “to convey,” so the first line would read\(^1\) “the tao that can be tao’d…” or (less cryptically) “the way that can be conveyed…” Interestingly, a second play on words, on the third line, works well in English, since “name” can be both a noun and a verb.

Puns aside, however, the author’s meaning is, clearly, that the ultimate reality he is trying to describe cannot be properly expressed in human words. Our language, born of our interaction with the world of phenomena, of beings localized in time and space, is simply incapable of properly conveying the timeless reality, beyond all shape and form, that the author calls “the way.”

This is not, I think, something to be dismissed as just an instance of Eastern “mysticism” (meaning, inscrutability). Rather, it is something that modern scientists (especially those with a grounding on relativity and quantum mechanics) may recognize as a plain statement of fact. Early in the twentieth century, physicists realized that the terms and categories they were familiar with simply could not be applied (at least, not without heavy qualifications) to the description of situations well beyond the realm of everyday experience: objects moving at near the speed of light, or as small as an atom. And it is, in retrospect, not really that surprising that it should be so.

Much more will be said, later on, about the difficulties and insights of atomic physics, but for now, to return to spiritual matters, it is important also to realize that the *Tao Te Ching’s* initial and fundamental observation about “the way” has many parallels in Western religiosity. The

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\(^1\) I learned this from the extensive annotations on the *Tao Te Ching* at http://www.friesian.com/taote.htm
Catholic 20th-century philosopher Gabriel Marcel, for instance, is reported to have said somewhere\textsuperscript{1} something like

“Quand on parle de Dieu, ce n’est pas de Dieu qu’on parle”

which I would translate and explicate as follows: when we speak about God, the thing we are talking about, the object of our speech, is not \textit{really} God: it is a finite image or approximation to “something” that is intrinsically ineffable, entirely beyond words.

One may perhaps gain some insight on the fundamental difficulty involved in all these attempts to condense or capture the infinite in a few words from a simple geometrical example. Many years ago, when I was still a kid, I was introduced to a peculiar object called “the Klein bottle,” a closed surface in four dimensions that has no inside or outside. Of course, we cannot really picture in our minds an object that needs four dimensions to exist. All pictures (in two dimensions) and models (in three dimensions) of the Klein bottle end up depicting an object that intersects itself, something that geometers and topologists assure us that is not \textit{really} the case. It is just that it is impossible to depict it in less than four dimensions, without making it look like it is intersecting itself, more or less like it is impossible to represent an ordinary cube in two dimensions without making it look like its sides intersect each other:

Now, somebody with no knowledge of the third dimension (nor, of course, of the rules of perspective that are used to represent three-dimensional objects on two-dimensional media) might take the above picture as a literal representation of what a cube \textit{really} is—and be quite mistaken. In a similar way, Marcel’s words suggest, all our mental pictures, all our definitions, all our mental representations of God may well be—indeed, they necessarily are—incomplete, imperfect, and potentially quite misleading.

Nor is Marcel alone in this observation. There is a whole strand of thought in Christian theology, the \textit{apophatic tradition}, that holds that “we cannot say what God is; we can only say what he is not.” For instance, to say that God is infinite means, very specifically, that it is \textit{not} correct to

\textsuperscript{1} Unfortunately, I have not yet been able to track down the precise reference!
imagine him\(^1\) as any finite being; to say that he is eternal means that he had no beginning in time; and so on. Apophatic thought appears to be especially strong in the Eastern Christian church, but it is quite within the Christian mainstream: St. Thomas Aquinas, in his *Summa Theologica*, starts his Question 3 of Part I (“On the simplicity of God”) with the statement:

“Now because we cannot know what God is, but rather what He is not, we have no means for considering how God is, but rather how He is not.”

It is also true, on the other hand, that St. Thomas defends the use of analogy and metaphor in making actual, positive statements about the attributes of the divinity\(^2\). But it is essential to remember that any such statements remain only analogies, and that it would be quite wrong to take them all too literally. Analogies and similes are, indeed, the only course that appears left to us, as it was to the author of the *Tao Te Ching*; and, fraught as it may be with the possibility of misunderstandings, it is a course we need to follow, because we cannot afford to not talk or think about God. If the Ultimate Reality is of any relevance to our lives, then it is likely to be of the utmost relevance.

There is, at least, one happy thought that occurs at this point. If every “literal” image of God is fundamentally false, if every one of the “Gods” that we think we can understand is, in reality, merely an idol, then the “Gods” that the current (as of 2008, A.D.) crop of radical, and often strident, atheists are busily debunking in one best-selling book after another are just that, idols—and we need not be particularly concerned about the fate of any of them.

And yet, things are not quite that simple. The “speakable” notions of God may all be fundamentally flawed, but it is not clear that we have really anything better to offer in their place. Moreover, some, if not many, of them may have value of their own—as metaphorical or analogical as it might be. We cannot simply and cheerfully throw our lot with the iconoclasts and declare God entirely beyond the reach of the human intelligence. And this not only, as stated above, because the matter is too important to just give up out of hand, but also because we have the example of great figures, in many religious traditions, telling us with their deeds as well as their words that it is, in fact, possible to know God, as much as, if not more than, anything or anyone can be known. It would be quite irresponsible to ignore this empirical evidence, as it would be, for that matter, to ignore all the insights gleaned from centuries of theological and philosophical thought.

The thing to do, then, is to proceed with care: to examine the main “models” or conceptions of God, to point out their flaws and limitations, but also to recognize their value when we find it. The way this particular study will proceed, however, will be very apophatic at the beginning,

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\(^1\) As purely a matter of style, I will refer throughout the book to God as “he” or “him,” because I find “it” inappropriate for the kind of personal God I am trying to establish here. This is merely in keeping with the Christian tradition, and in no way intended to suggest that God has a gender of any sort, of course.

\(^2\) *Summa Theologica*, Part 1, Question 1, article 9
emphasizing above all the things that God is not and which, nonetheless, continue to pervade God’s representations in popular culture. The goal is to get the reader to push these very wrong and very misleading ideas of God out of his or her mind from the very outset, and adopt instead an extremely abstract, even impersonal notion of God as the starting point; a notion to be developed in the next few sections. Only later, as we move on to explore the relation of this God to the world—both to the world of matter and energy, and the world of the spirit—will we slowly and tentatively, very carefully, restore to our description some of the more traditional attributes of the Christian deity. Thus, not until the very end will we actually be in a position to speak of a personal God. This may seem awkward, but it is quite deliberate. To start right away with the “personal” predicate is, in my opinion, to invite and encourage all sorts of misunderstandings and unhelpful notions, and generally to lose your credibility before you have even begun. Moreover, I really believe that a properly developed impersonal model of God has a great deal of value in its own right. For those who cannot make the final leap of faith to Christianity, the impersonal (and, most often, unspoken and unacknowledged) God of Buddhism offers, in my opinion, a very worthwhile alternative.

II. A starting point

A possible starting point for thinking about God is the notion of a “first cause.” Roughly, one can understand it as follows: everything that happens has a cause, so we can ask “why A?” and the answer will be B, and then we can go on and ask “why B?” and the answer will be C, and so on. If the chain does not go on forever, we eventually come to a cause for which no cause can be found—“the uncaused First Cause,” which we may write in capital letters and call (tentatively) God, more or less by definition.

This is more or less the substance of the second of Aquinas’ famous five proofs of the existence of God. Note that there are sometimes many different ways to think of a “cause” for something, and hence, potentially, many different “chains of causation”; we may distinguish, for instance,

1 At this point these terms are simply shorthand for “the world of things that exist (presumably) outside our consciousness”—that is, the “physical” world—and “the world of things that exist in our consciousness”—such as ideas, concepts, and values. The respective natures of these “worlds,” and their mutual relationship, will be explored in greater detail, and these notions further refined, in the remainder of this book.

2 The best example of what I mean by this can be found, perhaps, in the book Living Buddha, Living Christ, by the Zen Buddhist monk Thich Nhat Hanh, as well as in his later collection of talks Going Home: Jesus and Buddha as Brothers. I do not want to suggest, however, that there are no important differences between the Buddhist and the Christian perspective; some of them, in fact, will be examined in some detail in Chapter 5 below.

3 Some people seem to bristle at the mention of a First Cause and start asking questions such as “Why do we have to say that God is the First Cause? Why can’t we just say that the Universe is uncaused and leave it at that?” The point, however, is that what we call “the Universe” is a huge collection of things, most of which are clearly caused by—either in the sense of owing their being, or their structure and functionality, to—something else. There is a chain of causation (or perhaps several of them), whether one likes it or not, and the question (to be addressed in this and the next Section) is what one finds when one follows it (or them) as far as one can go.

4 Summa Theologica, Part 1, Question 2, article 3.
between causes for “events” (“why did this happen?”) and causes for things, which themselves can be of several different kinds, answering somewhat different—although typically related—questions, such as “how did this thing come into existence?” “what is this thing made out of?,” and so forth.

As far as causes for events go, a word of caution may be in order here. It has become apparent (and I will argue this at great length in Chapter 2) that the laws of physics alone simply do not determine every event that happens, even in the “physical” world; in other words, that this particular “chain of causation” is actually full of holes, especially at the microscopic level. We may, nonetheless, if not attribute to God directly the responsibility for every single event in the physical world (the direction in which a photon is emitted when an atom decays, for instance, or the timing of the decay), still view him as the ultimate source of the entire framework in which physical processes take place—something like “the cause that the laws of physics are what they are,” including their apparent indeterminacy—, and understand the “First Cause” terminology in this sense.

Alternatively, instead of events, we can focus on the things themselves, and on the way they are “brought into being”: everything that we are familiar with has been “brought into being” by something else. Again, if we swim upstream this river of generations, we find eventually something that does not owe its being to anything else. This absolutely self-sufficient “something” we may call the Source (or Ground) of Being, or alternatively God. In a sense, it would be the (inexpressible, and ultimate) answer to the question “why does anything exist?”

We are, of course, assuming that all these chains do have a beginning somewhere, but note that this is not necessarily a beginning in time; we are not necessarily asking “where do atoms come from?” but rather “why are there such things as atoms?” Here again, if we rephrase the question as—for instance—“where do atoms get their stability from?” we would soon end up invoking the laws of physics again, and from there it’s a hop, skip and a jump back to the First Cause. So the “beginning” we are concerned with is primarily a logical beginning, and not one that depends on whether the universe did or did not have a beginning in time; although, certainly, if the universe did have a beginning in time we would naturally expect to find the First Cause “just beyond” that point.  

So what would the “uncaused first cause,” the “being that does not owe its being to anything else,” be like? We may begin by noticing that these expressions suggest strongly a huge amount of inevitability; they suggest something that, if we could only fully understand it, we would all have to say something like “well, of course—it couldn’t be anything else.” Something that does

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1 If the physical universe had a beginning in time, it can be argued that nothing in it can be self-caused. Indeed, imagine that there is something (say, a particle) that has the property, by virtue of its own nature, of being able to “bring itself into existence-in-time,” out of “nothing”; then, presumably, this particle would be “popping into existence” all the time and everywhere. The fact that we do not observe this is consistent with the traditional understanding of the First Cause as being “eternal,” or “atemporal”—existing, in some fundamental way, “outside of time.”
not require (nor indeed admits of) an external cause in order to exist, is, we feel, something so inevitable that it simply must exist, if anything exists at all. From this perspective, we may call God the necessary being (the meaning of the word necessary will be made more precise and technical in a moment): that which cannot not-be (given that anything is at all); or, slightly differently put, that which cannot be otherwise.

But this conception of God already places some strong constraints on what we can logically expect “him” to be like. Physicists have been searching for a long time for a “theory of everything,” their own version of a first cause, and one of their guiding principles is the search for simplicity. Here, “simple” certainly does not mean “easily understandable”—at least not to a layman—but rather “uncomplicated,” or better yet, as free from arbitrariness as possible. To see how this works, consider the tremendous simplification in our view of the material world that came about with the realization that all material things, in their myriad different forms, result from the combination of just under one hundred different kinds of atoms, and the further simplification that all the different kinds of atoms could be explained as different arrangements of just three different kinds of “fundamental particles” (electrons, protons and neutrons). With every successive reduction along this ladder, the amount of arbitrariness in the object being considered (specific form, physical or chemical properties) goes dramatically down: a tree can come in countless forms, shapes and sizes, but any of its constituent carbon atoms can only have a very precise set of different states, and the electrons that make up the atom basically have no intrinsic features by which they could be told apart. They all have the same attributes, and only these three: mass, charge, and spin (of which only the numerical value of the mass remains unexplained and hence, as far as we can tell, “arbitrary”).

Instead of “arbitrary,” we could have used above the more technical term “contingent.” Something contingent is something that could have been different—or that could have not been at all. When we look around us, all the properties of the things we see are contingent: the height of a tree, the precise shape of a pencil, our own genetic makeup. “Contingent” is the opposite of “necessary,” although in the material world nothing appears to us as absolutely necessary, only relatively so. For instance, most properties of a wheel—what it is made of, its color, weight, etc.—are contingent, but the fact that it is round is necessary if it is going to be a wheel at all. But this does not mean that wheels as a whole necessarily must exist (we know of civilizations that never developed them), still less that this or that specific wheel necessarily had to be produced anywhere.

If God is the “necessary being,” one would then argue, there must be nothing contingent about him: no “traits” that could conceivably have been otherwise. This is almost self-evident: if we can imagine God, say, with a beard, we can ask “why a beard?” There is nothing necessary about the beard, nothing in the “job description,” as it were—as we have developed it so far—that calls for a beard. The beard is arbitrary, and any degree of arbitrariness destroys the kind of inevitability that we have been trying to postulate for God in the first place.
Where I am heading towards is, clearly, the notion that God must be, in some sense, *absolutely simple*: devoid of any contingent traits, and not made up of any component parts. The two things go together, in our experience, because anything that is put together can always be imagined as having been put together differently, and hence has a degree of arbitrariness or contingency associated with it. We can also argue that if God was, in some way, put together from some (physical) parts, these parts, and the forces keeping them together, would in some sense be more fundamental than God himself. Hence, any “parts” that we might come to identify in God must be absolutely non-physical; merely, one might say, “logical” parts, conceptual distinctions that we may want to make for the sake of an explanation, but not actually corresponding to anything that we could call a *structure*.

The above is not just a physicist’s prejudice: the notion that God is absolutely simple is right there at the beginning of the *Summa Theologica*¹. I will take it as a guiding principle for everything that follows.

One more thing that sort of slipped in up there, and which may need to be cleared up before proceeding: should we imagine God as a “physical” being at all, something belonging to the universe of matter and energy? The answer intuitively would seem to be no, and yet we are postulating him as the source of the being of the physical universe. However, one thing we have learned in physics over the past hundred years is that as we proceed up the chain of causation, or of breaking down things into their ultimate constituents, the “things” that we run into at one end of the chain can be so unlike the “things” at the other end that they can hardly be said to belong to the same “category of being” at all.

This, too, will be elaborated on at greater length in the coming chapters, but for now a simple example would be the following. Physicists will gladly tell you that the ultimate reality of the physical universe is provided by something we call “quantum fields.” These things are taken to be real, yet one cannot properly say that they are “physical,” in the sense of being “made” out of matter or energy. To see this, it is enough to consider an interferometer (such as the one illustrated in the next section) into which one sends a single photon (or electron, or neutron), whose quantum field is then split into two beams. Before the two beams recombine, we must say that there is a quantum field in both branches of the interferometer, yet no physicist actually believes that at any point, in this experiment (which is one routinely performed these days in laboratories) there is matter and/or energy *simultaneously* present in both branches of the interferometer. So the quantum field—the physicist’s ultimate reality—is already not really a “physical” object, as we would understand the word from our everyday experience.

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¹ Part I, Question 3, Article 7.
I am not, of course, trying to suggest anything as crude as that God is really “a quantum field”; I am only pointing out again (and also not for the last time) that, when we drift so far from the realm of ordinary sensory experience, the categories of language themselves become inadequate to describe what we encounter, and terms such as “physical,” “material,” or “spiritual” may well be among the resulting casualties.

III. Not turtles all the way down

When trying to imagine the things that we do not know, the regions that lie beyond our everyday experience, a common approach is to think that they must be just like the things we know, only bigger, or smaller, or different only in some relatively trivial way. The reason for this is probably that we simply cannot imagine things that are fundamentally different from the things we know. This relative lack of imagination would seem to lie behind many of the hypothetical infinite regresses that have been postulated over the centuries to try to explain things such as what is “holding up” the world (“it’s turtles all the way down”), or what the microscopic world may be like (“fleas have smaller fleas that prey on them, and these have smaller fleas to bite them, and so proceed at infinitum”).

Contrary to this, however, modern science has shown that when we move far away from the world of everyday experience in virtually any direction, things become very different, in a qualitative way: so different, in fact, that the very language that we have developed to describe the everyday world proves inadequate, and words need to be twisted into expressing new meanings, that in some cases we barely understand, if by “understanding” we mean having an intuition that goes beyond our ability to merely calculate. Physicists first ran into these difficulties early in the 20th century, with the theory of relativity (developed to describe what happens when objects move very fast, at speeds comparable to the speed of light), and then with quantum mechanics, an even more radical conceptual revolution, developed in order to describe phenomena taking place at the smallest distance scale then imaginable, the atomic scale.

One notion that had to be abandoned once the facts of Einsteinian relativity became solidly established was that of an absolute time, a time that is always regularly ticking away

1 For one thing, it would make no sense to assume that the last link that we can comfortably describe mathematically is truly the last link on the chain; most physicists certainly do not believe this, which is why they keep searching for something at an ever deeper level (things like quantum gravity and superstrings). For another thing, there is no indication anywhere that quantum fields can “cause their own existence.” And, finally, there is a fundamentally subjective aspect to our description of quantum fields (see below) that should probably prevent one from taking them literally as a totally objective reality. What we may well expect, in any case, is that whatever lies beyond that level of reality will not be any more likely to fit any of our familiar categories (such as “physical” or “mental”) than quantum fields are.

2 The “canonical” version of the “Turtles all the way down” story (which has its own entry in the Wikipedia) appears to be in Stephen Hawking's 1988 book A Brief History of Time.

3 Jonathan Swift, On Poetry A Rhapsody (Poems, 1733)
“somewhere,” away from any influences, as it were outside or beyond the material universe. On the contrary, time turned out to be relative, something that, in a sense, we carry with us (it is then technically known as “proper time”) and literally passes at different rates for people in different places or different states of motion. Simultaneity, and, more generally, the temporal order in which events are recorded by different observers, also proved to be necessarily a relative concept: under some circumstances, two events, A and B, that occur simultaneously for an observer need not be simultaneous for somebody else, and some observers will record that A preceded B, and others that B preceded A.

Perhaps even more dramatic was the realization, also stemming from relativity, that mass and energy are interconvertible (as expressed by the famous relation $E = mc^2$). Almost everybody is used nowadays (probably because of science fiction films) to thinking of energy as a sort of invisible fluid, but the concept started out as a mere abstract definition. In its simplest form, what is known as kinetic energy is just a number that you can make out of the mass and speed of a moving object, a property of the object’s motion (which means also that, according to relativity, different observers will give it different values, for there is also not such a thing as absolute motion, and an object that is moving in some reference frame will be at rest in another one—in which case it will have no kinetic energy in that frame of reference). Yet everyday, in particle accelerators all over the world, physicists routinely make mass—matter—out of this abstract, relative, “energy” quality.

As an example, in the Large Hadron Collider recently inaugurated at CERN, protons are accelerated until they “have” an energy so large that, if it were all to be converted into mass, one could make more than 7,000 protons in the process. The hope is that, indeed, when oppositely-traveling beams of such protons collide, an extremely massive particle known as the Higgs boson will, for the shortest of times, be created out of the protons’ energy. Yet, a naive attempt to visualize what is going on as imagining that each proton objectively “carries” this energy to the collision with it is questionable, because each of the colliding protons—or a hypothetical observer moving along with the proton—does not “see” itself in motion at all: the moving observer would see his proton at rest, and conclude that all the energy released (and converted into mass) in the collision came from the other proton. And, according to the principle of relativity, it is simply impossible to prove either observer wrong, and hence it would be meaningless to favor either description.

Energy, therefore—despite its ubiquitousness in physics—is not at all a trivial concept. It may not be simply imagined, in the above example, as somehow stored in any one of the protons and carried around by it. Objectively speaking, relativity would insist that nothing changes in the proton itself (in its own reference frame) as a consequence of its being accelerated to about 99.9999999% of the speed of light. The most even-handed way to describe in simple terms what is happening in the collision would be to say that relative motion has been converted into matter. This is a remarkable statement: something that we would normally describe as an intangible quality or property of a certain setup (the relative state of motion of two objects) seems to be
convertible into something material, “solid.” Grammatically, it is as if an adverb (how fast something is going) was said to be equivalent to a noun.

Professional physicists no longer realize how shocking this is, because we are used to doing calculations with energy, and the question of which reference frame to use makes no difference: as long as the right rules to calculate are followed, the result of the calculation will be correct. But in fact, if we are honest, we cannot really say that we understand what energy “is”: we just know how to calculate with it. Also, the fact that it interconverts with matter makes it almost material “by association,” as it were: the total sum of matter and energy is always conserved, and this might almost be enough to make of energy a “substance”—except that it is still objectively impossible to say, in the experiment mentioned above, which, if any, of the protons is actually “carrying” that substance.

Even greater challenges to our ability to imagine or describe reality in words were posed by quantum mechanics, developed a mere twenty years after relativity into a conceptual framework so counterintuitive that, as has been widely reported, Einstein himself, by right one of its founding fathers, was unable to accept it for as long as he lived.

What Einstein objected to the most in quantum mechanics was its indeterministic character, which will be discussed in detail later in this book; however, besides indeterminism, quantum mechanics presents many other counterintuitive features. Perhaps the best known is the so-called “wave-particle duality,” which encapsulates some of the difficulties that arise when one tries to visualize quantum objects. Any such object—such as, say, an electron—can be imagined sometimes as a particle (a point-like object, located at some precise position in space) and sometimes as a wave, that is, a sort of “disturbance” spread out—or, as we sometimes say, “delocalized”—over some region of space. Some types of experiments may be said to reveal the particle properties, and some the wave properties, and generally the setups for both types of experiments are incompatible, or “complementary” (in the terminology introduced by Niels Bohr). For instance, a wave would exhibit interference: if split up and then recombined, as in the interferometric arrangement shown in the figure, the wave’s strength at the exit of the interferometer would oscillate as a function of the length difference between the two paths. This is because the wave really does split, go through both paths, and recombine. The experiment can be done with an electron or a neutron, and interference is indeed observed in the output.
However, if a detector is placed along one of the two paths, to determine the position of the electron—to force it, so to speak, to behave as a particle—then it will always find the whole electron in one of the two paths, never in both; and moreover, the interference at the output will disappear. The particle and wave properties are said to be “complementary” for this reason. This kind of complementarity may be said to be expressed (albeit indirectly) by the famous Heisenberg uncertainty principle, which states that the position and momentum of a particle cannot be simultaneously well defined with arbitrary precision: a well-defined position is arguably the most “particle-like” attribute of a particle, whereas in quantum mechanics a precise momentum is tied to a wave-like property, namely, the spatial period or wavelength of the wave. In that sense, the more particle-like we make our electron, the less wave-like it will be, and vice-versa.

The fact that we have to carry in our heads, simultaneously, these two mutually excluding pictures—a localized particle and a delocalized wave—means that visualization of what is going on is difficult and always contextual. Even what might be thought to be a simple question, such as “what is the size of an electron,” becomes impossible to answer in a straightforward way. Depending on the context, it could be the size of its charge distribution (say, how far its charge extends away from its center)—in which case the answer would be, as far as we can tell, indistinguishable from zero, that is, a truly mathematical point; or the size of the whole region of space over which it is “delocalized” as a wave—in which case it could be almost anything. In other contexts, however, it could be what is known as the “Compton wavelength,” which is related to how big the electron would, in some sense, appear to be to an X-ray scattering off of it with the appropriate energy.

The wave nature of the electron is, however, even more mysterious. The waves of classical physics, such as water waves or sound waves, are disturbances in a material medium. When asked what it is that is oscillating or changing from one point to another, a definite, physical answer is always available: it is the pressure, or the density, or the height of the fluid. But in the quantum case, there is no underlying material “fluid” involved in, for example, the
The interferometric experiment described above. The “quantum wave” splits and recombines, but neither the particle’s charge nor its mass becomes split at all (since these quantities are always found wholly on one side or the other). In fact, if we change our mind and decide, after the wave has been split, that we want to detect the particle after all, the wave that supposedly was present along both paths suddenly disappears from one of them—the one where the particle was not found—just as if it had never been there at all. The closest we can come to explain “what it is a wave of” is to call it “a wave of probability”—a “disturbance,” if you will, of the probability to find the particle in one place or another.

There is here a semantic tension that is really impossible to resolve. “Probability” is not a physical thing: it is a mental, subjective construct. This, of course, explains why the wave simply “disappears” from one side of the interferometer once we know that the particle is on the other side. Yet there are objective, physical consequences that follow from the existence of a quantum wave on both sides; namely, the interference effect. The wave has both an objective and a subjective nature, and these cannot really be neatly separated.1 We could say that the quantum wave describes, not the deeper reality “as it is,” independent of our observations, but only what we know about that reality: because we do know something, there is an objective part to it; but, because it is ultimately only an expression of our knowledge, there is also an irreducible subjective component to it. And the only way our language seems able to cope with this is by apparently lending an objective-of-sorts nature to a subjective notion, and speaking about “probability waves” as if probability was a substance.

Through all this, the ultimate reality of the quantum wave/particle, whatever it is, remains veiled, elusive: with our mathematical formalism, we describe it as well as we possibly can, but we are really only describing how we interact with it, or how it will manifest itself to us: not how it intrinsically is. It is not just that its “true nature” is (probably) beyond our capability to imagine; the problem is really deeper. It is that we have no way to operationally separate what “it” is from what it is to us, its “intrinsic” substance from its contingent manifestation.

Much more could be written about this—in fact, entire books have been written about the epistemological implications of quantum physics2—but the immediate goal of this section has by now, hopefully, been accomplished: namely, it should be clear that to simply imagine that the world that we are not immediately familiar with merely duplicates, on a different scale, the world of things immediately familiar to our senses, is absolutely wrong. Things do become very different, even to the point of becoming unimaginable, and (this is important) the neat categories of our language, and the mental divisions they reflect (such as quality vs. substance, or objective vs. subjective) become, at least to some extent, inadequate.

1 This, incidentally, shows that a division of reality into a non-overlapping “objective world” of matter and energy and a subjective “spiritual world” (of, among other things, concepts and ideas) is ultimately impossible, since the “quantum wave fields” cannot be wholly assigned to either one.

2 See, for instance, Bernard d’Espagnat’s On Physics and Philosophy, where many points similar to the ones made here (including the “veiled reality” idea) are presented and discussed in great detail.
It is perhaps worthwhile to point out that at least some of this could have been, and indeed to some extent was, anticipated by the philosophers who, long ago, debated the possibility of the “atomic hypothesis,” namely, the notion that all material things are made of extremely small, indivisible things—the word *atomos* means indivisible—and that they derive all their perceptible qualities, such as shape, texture, color, taste, etc., from the arrangement of these atoms. Even early on, opponents of this theory pointed out what seemed to be insurmountable logical difficulties with it.

To begin with, how big would these atoms be? If they have a finite size, then why are they that size, and not, say, smaller or larger? If size itself, for a macroscopic object, results from the arrangement and the number of atoms, from what does the size of the atom result? If I can imagine an atom as, say, a very small ball, no matter how small it is, I can always “blow it up” in my mind: and then, what do I “see”? I “see” again an object with a finite extent, that I can at least mentally separate into regions (east and west, north and south). But if it is *mentally* separable, that is, divisible, why should it be *physically* indivisible?

Again, what would its “surface” be like? Would it have any texture? How could it, if “texture” itself, as we have postulated, is a derived property, resulting from the arrangement of the atoms themselves? Similarly for color, or for absorbing or reflecting or transmitting light—if all these macroscopic properties result from the arrangement of the atoms, then we cannot imagine the atoms themselves as having any of them.

From this we might be tempted to conclude that, since a finite-size atom appears to be unimaginable, each atom must be infinitely small, that is, a pure mathematical point. But then, the classical philosophers would ask, how can extension—the size of material objects—arise from the accumulation of atoms that have *no* spatial extension at all?

From arguments like these some ancient philosophers\(^1\) concluded that the atomic hypothesis must be false, and that atoms could not exist; and yet, as we now know, this conclusion was premature. Not that the arguments were flawed: only, what they proved was not that atoms were impossible, *but that they were unimaginable*. And indeed, as I have briefly attempted to show above, they *did* turn out to be both real *and* unimaginable. There are a number of lessons that could be learned from this. One is that we should not dismiss too casually the intelligence of the ancient philosophers; another one is that, upon reflection, the weirdness of quantum mechanics could have been anticipated; or, at least, it could have been expected that any account of atoms would have to be weird in some ways, and even very weird. And lastly, of course, that just because something is unimaginable it does not mean it cannot exist.

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\(^1\) I have in mind primarily Aristotle (who, for instance, brought up the question of the atom’s “surface”) but I’m not quoting anybody directly here; the phrasing of the various objections is entirely my own, admittedly with some benefit from hindsight.
IV. Approaches to the unimaginable

The somewhat long discussion in the previous section may, hopefully, have made it clear that attempts to understand God as being basically like the things we know, only “bigger,” or “more powerful,” or “wiser,” or whatever, are almost certainly going to be way off the mark. If we cannot even visualize a humble electron as being like anything that we know, how can we hope to get a handle on the idea of God by such crude means?

On the other hand, the lessons learned in our dealings with the physical world beyond our immediate sphere of perception may actually guide us, as possibly pointing out some ways in which we may need to broaden our imagination or align our expectations, when trying to understand, conceptualize, or simply speak about, God. We may, for instance, have to accept a blurring of verbal distinctions, such as “quality” versus “substance,” or “objective” versus “subjective.” We may have to come to terms with the need for carrying in our heads two (or more) mutually incompatible pictures, each with a limited range of applicability, and neither one to be taken too literally. We may simply have to give up altogether the idea of understanding God “as he is,” and rather work only with “the way he manifests himself to us,” while at the same time allowing for the possibility that there is, in fact, an objective “substance” in this “manifestation”: a “what” in this “how,” a noun (the eternal “name”) concealed in an adverb (the “way” that can be taught).

Several pages ago I pointed out that it would be irresponsible to ignore the evidence gathered by mystics and saints of all religious traditions regarding the direct experience of God, or of what one might more abstractly call “the divine” or “the holy.” At first sight, such experiences, as developed in the world’s various religions, appear as a bewildering array of often incompatible claims, rituals, and customs; but it is important to remember the very real possibility that with God, as with the deeper levels of physical reality described by quantum mechanics, the results you get from any observation are conditioned at least in part by the entire “experimental setup”: you get a “particle” result if you ask a “particle” question, a “wave” result if you ask a “wave” question. It is not unreasonable to assume that with God, being a far more remote and fundamental kind of reality, the potential, both for obtaining a wide range of different outcomes, and for the “human contribution” to affect the final result, might be much greater.

Under this hypothesis, the wide differences across religious belief systems would be a reflection, not of God’s complexity, but of the variety, and indeed the contingency, of human experience. And, indeed, so diverse are the manifestations of religious belief that one might even be tempted to give up from the start, and assume that no reliable knowledge of God is attainable in this way, if not for the existence of remarkable parallels and coincidences, across all traditions, as soon as one digs down a little deeper, beyond the level of everyday precepts and practices—whether one should eat pork or drink alcohol, for instance—and starts looking at the answers provided by the world’s main religions to the truly fundamental questions of human existence, such as how to
live a meaningful life.\(^1\) In this respect, I find the parallels between Christianity and (at least some strains of) Buddhism particularly remarkable\(^2\). In scientific terms, it is as if the same experiment had been performed, independently, in two laboratories across the world, and they had obtained substantially the same answer.

It may, then, be valuable at this point to examine how the various religious traditions have gone beyond what we have so far accomplished, in our preliminary attempts to characterize God, if only to get an idea of some of the possibilities that are “out there” and worth considering. We should not, however, in any case, lose sight of the basic principles stated in the previous pages: we still expect God to be “absolutely simple,” for instance, and devoid of any contingent elements in his own essence (regardless of how complicated and contingent his manifestations within the world of phenomena may turn out to be).

One thing we can certainly say, to start with, is that the God we envision is *not*, and cannot legitimately be imagined as, “a being among other beings.” Forget altogether the cute “Far Side” cartoons that depict God as a game show contestant: here’s Bob, here’s Jane, here’s God. It cannot possibly be anything like that at all\(^3\). We are talking about a completely different kind of “being”—if indeed the word “being” can be applied to God at all.

In his last, posthumous, album, the ex-Beatle George Harrison included a song that featured some readings from “How To Know God: The Yoga Aphorisms of Patanjali”\(^4\). One line in particular went like this: “The soul does not exist; it is existence itself.” We in the West tend too often to dismiss this sort of statement as mystical mumbo-jumbo, but it is worth stopping for a moment to think of how a sentence like “God does not exist; it is existence itself” might be actually accurate: “God does not exist” in the sense in which all the other, contingent, beings exist: he *cannot be listed among the universe’s contents*. In language that has sometimes been used by Christian theologians, God is “pure fact,” THE “ultimate fact”—“the fact of existence itself.”

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\(^1\) From this perspective, an excellent book on comparative religion is *The World’s Religions*, by Houston Smith.

\(^2\) There is a story (which I haven’t been able to confirm, so I regard it as apocryphal, but it is a good story all the same) that, when the Catholic missionary St. Francis Xavier arrived in Japan in the 1500’s and started preaching Christianity, he was remarkably successful at first. It took him a couple of years to realize that this was because his listeners thought that he was talking about the Buddha, when all the time he had been trying to tell them about Jesus.

\(^3\) While we’re at it, forget also (if you can) the terrible *Star Trek V* movie, in which a deranged Vulcan steals the *Enterprise* to go look for God in some distant region of space. It had one good line (“What does God need with a starship?”), but it suggested that 23rd-century Vulcan theology was no more sophisticated than that of the 20th-century Russian cosmonaut who, after orbiting the Earth, reportedly claimed that God did not exist because he had not run into him “up there.”

\(^4\) Translated with a commentary by Swami Prabhavananda and Christopher Isherwood (Vedanta Press, 1952). It turns out that the line itself is not from Patanjali, but from the commentary, and in fact it is part of an extended quote that the commentators attribute to Swami Vivekananda (1863-1902), a well-known Hindu spiritual teacher (whose favorite books, reportedly, were the *Bhagavad Gita* and *The Imitation of Christ*). The word “soul” in the quoted text is the Atman of Vedanta philosophy, so it is equivalent to God.
This is an extremely abstract conception of God, and obviously, for it to be useful, more will have to be added to it eventually; but it is still worth lingering on for a moment, for several reasons. First, note that it is naturally consistent with the way I defined God above, in Section II, as “the necessary being”: \textit{that which cannot not-be} (given that \textit{anything} is at all). What would that be, other than existence itself?

Second, observe that existence is in itself a deep mystery, and by somehow equating it with God we really only trade one mystery for another. Why is there anything, rather than nothing? Why does what exists now continue to exist another instant? If God “is” the fact that something, rather than nothing, exists, then he is indeed very close to each of us, behind the continued existence of every atom in our bodies, behind the “forces of nature” that bind them together. If God “is” existence, then truly, as St. Paul said, “in him we live and move and have our being” (Acts 17:28; quoting the poet Epimenides).

I keep putting quotation marks around “is” in the expression “God is existence,” because (as expected) I feel a semantic or linguistic conflict here. “Existence” is normally thought of as a fact, not a substance. And yet, this may not be so for God; again, at the ultimate level, the language categories break down and merge into one another. Aquinas himself argued in the \textit{Summa Theologica}, that for God (and for God alone) his existence and his essence are the same thing\textsuperscript{1}. This could be rephrased as: “the essence of God is that he exists,” or: \textit{the essence of God is existence}, as we have been saying above.

This seems also nicely consistent with the “name” that God gives himself in the book of Exodus, when revealing himself to Moses: “I AM”. “Tell your brothers, I AM has sent me to you.” (Ex. 3:14) In this sentence, a verbal form has become a noun—the kind of twisting and stretching of the language that, by now, we must expect when dealing with the unimaginable.

It is, however, important—and it will take us one step further—to point out at this stage that the Jewish philosopher Martin Buber, in his book \textit{Moses}, has questioned this conventional, and purely existential, reading of Ex. 3:14. To him, a better rendering would be “I am \textit{here},” or, in future form “I will be there.”\textsuperscript{2} It is not (just) an affirmation of existence but an assurance of \textit{presence}.

The same idea has been expressed by another Jewish philosopher, Abraham Joshua Heschel. In the quote below, he appears to make again some of the points I have tried to make above (the italics are mine):

\begin{quote}
Infinite meaning is uncomfortable, not compatible with our categories. It is not to be grasped as though it were \textit{something in the world} which appeared before us. Rather it is
\end{quote}

\textsuperscript{1} \textit{Summa Theologica}, part I, question 3, article 4

\textsuperscript{2} Martin Buber, \textit{Moses}, ch. 4
that in which the world appears to us. It is not an object—not a self-subsistent, timeless idea or value; it is a presence.¹

If we adopt this idea, we might say that God is both “existence itself” and “a presence”—the former considered “objectively,” as to his essence (what he is in himself), the latter considered subjectively, as to how he manifests himself to us, or at least one of the possible ways in which we can experience him.

It is interesting, I think, to bring Buddhism into the picture at this point. Buddhism started out by denying very firmly the idea of a personal God, for several reasons—some of which I hope to elaborate on in a later chapter. Nonetheless, Buddhism recognizes one “unconditioned” reality, known as Nirvana. In the Buddha’s words:

There is, bhikkhus, a not-born, a not-brought-to-being, a not-made, a not-conditioned. If, bhikkhus, there were no not-born, not-brought-to-being, not-made, not-conditioned, no escape would be discerned from what is born, brought-to-being, made, conditioned. But since there is a not-born, a not-brought-to-being, a not-made, a not-conditioned, therefore an escape is discerned from what is born, brought-to-being, made, conditioned.²

As described here, Nirvana matches our earlier definition of God as “that which does not owe its being to anything else.” Note that Nirvana is commonly thought of as “a state of being,” the result of enlightenment, but this is not accurate. To quote Walpola Rahula: “Nirvana is not the result of anything. If it would be a result, then it would be an effect produced by a cause. It would be samkhata ‘produced’ and ‘conditioned’. Nirvana […] is not produced like a mystic, spiritual, mental state, such as dhyana or samadhi. TRUTH IS. NIRVANA IS. The only thing you can do is to see it, to realize it.”³

Hence, in Buddhist thought, Nirvana is a reality—the ultimate reality, in fact, to which one “awakens” upon reaching enlightenment. Yet, as far as an outside (unenlightened) observer can see, the enlightened one still exists in the same apparent “reality” of the world of phenomena, the “cycle of continuity,” samsara. So enlightenment, or “awakening,” in fact, amounts to becoming aware of the presence of Nirvana in samsara, and learning to see “things as they really are”.⁴

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² *Udana* 8.3.  This translations (and a few others in what follows) were taken from the *Access to Insight* website (http://www.accesstoinsight.org), an invaluable resource for Theravada Buddhism.
³ Walpola Rahula, *What the Buddha taught*, Ch. 4
⁴ “To see things as they really are” is the stated goal of Buddhist insight meditation. Without wanting to sound pretentious, I would like to think of it as the basic goal of this book as well.
In Buddhism, the experience of Nirvana is usually described in negative terms as “the cessation of suffering,” but it could equally well be described in positive terms as “the arising of joy.” To the extent that Nirvana may be regarded as God (or an aspect of God, that we can experience under certain conditions), this is an extremely important indication of the relevance of God to our lives. God, thus understood, is not just an object for idle speculation: it is a reality (THE reality) that makes possible our liberation from suffering, and the arising of true joy.

To this (tentative) characterization of God, at this stage, we may consider adding something else that has also been said by many religious traditions, namely that “God is love.” In the Christian tradition, perhaps the most definite statement is that of 1 John, 4:16: “God is love, and whoever remains in love remains in God and God in him.” Love, of course, has to be understood here in the agape sense, as what some translations call “loving kindness” or “charity” (compare 1 Corinthians, 13). In Buddhism, “love” is understood to be given by the “Four Immeasurable Minds” of loving kindness, compassion, joy and equanimity, which Thich Nhat Hanh calls “the very nature of an enlightened person. They are the four aspects of true love within ourselves and within everyone and everything.”

Most of the time we take the statement “God is love” as a metaphor. But we have just seen how a verbal form “I am,” or “I will be there,” was turned into a noun, a declaration of the essence of God, in Ex. 3:14. It does not seem too far-fetched to postulate the same kind of transformation for “love,” which, after all, already feels as something like an “energy” in everyday life: something that moves, that causes things to happen. Recall that the physicist’s energy, a property of the state of relative motion of objects—a “way” of moving, if you will—emerges as a near-substance in relativistic physics; if, then, a physicist can seriously contemplate the “independent” existence of disembodied energy (such as photons), there is no reason why we could not envision the possible, and also, so to speak, “disembodied,” existence of something that might be called “pure love.” The objection that one can quantify energy but not love is not a logical difficulty at all, merely a scientist’s natural prejudice in favor of quantifiable things.

As mentioned above, the possibility of thinking of God as “love itself” has certainly been envisioned in religions other than Christianity. In fact, the complete quote from Vivekananda in George Harrison’s song goes like this:

```plaintext
The soul does not love. It is love itself.
It does not exist. It is existence itself.
It does not know. It is knowledge itself.
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1 Thich Nhat Hanh, *The Heart of the Buddha’s Teaching*, Ch. 22

2 At least, in Harrison’s version. Here is how it reads in my copy of the book, with a little added context: “The Atman does not love, it is love itself. It does not exist, it is existence itself. It does not know, it is knowledge itself. It is a mistake to say that the Atman loves, exists or knows. Love, existence and knowledge are not the qualities of the Atman, but its essence. When they get reflected upon something, you may call them the qualities of that something. They are not the qualities but the essence of the Atman, the Infinite Being, without birth or death, established in its own glory.”
Since I am, ultimately, arguing for a personal God, I am not suggesting to take literally the first part of the first line, but the second part is enough to establish that the notion of God as “love itself,” spoken of in the first letter of John, is quite at home with Hindu philosophy and theology.

This understanding also opens up another view, namely, that in a similar way as we could say that God is “existence itself,” and we derive our existence from him, we could say that our own love, the one we experience, the one we give and receive, also ultimately derives from God and, still more, *is of the nature of God himself*. In this way we can, fairly literally, say with John that “he who abides in love abides in God, and God abides in him.”

An interesting parallel to this idea is documented in Buddhist tradition as well. Thich Nhat Hanh (*The Heart of the Buddha’s Teaching*, Ch. 22) recounts the following story:

During the Buddha’s lifetime, those of the Brahmanic faith prayed that after death they would go to Heaven to dwell eternally with Brahma, the universal God. One day a Brahman man asked the Buddha, “What can I do to be sure that I will be with Brahma after I die?” and the Buddha replied, “As Brahma is the source of Love, to dwell with him you must practice the ‘Brahma Abodes,’ (Brahmaviharas) or Four Immeasurable Minds—love, compassion, joy, and equanimity.”

This is a remarkable tale for many reasons, not the least of which is the fact that the Buddha certainly did not believe in Brahma as the Supreme Being, the way the brahmin did. But he knew that, as Hanh says, love is “the very nature of an enlightened person.” Hence he expected that his advice would help the brahmin achieve, or at least come close to achieving, enlightenment.

Note that, if we accept the idea that God, the “ultimate reality” is “love itself,” then, by making love one’s nature, by, in effect, *becoming love*, we are with that reality, and that reality is with us. We may also describe this as God *working with us towards our own salvation*. Buddhism, at least in its least-speculative form (as represented by the Theravada school) would certainly not

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1 Recall the observations made above about the possible breakdown of the categories of language when dealing with divine reality. The statement “God is a verb” enjoyed a certain popularity a few years back, but it is not quite accurate: better to say that, at God’s level, the distinction between the verb “to love” and the noun “love” probably no longer holds in any meaningful way.

2 Which, according to tradition, appears to have been the case. The story is originally told in the *Digha Nikaya*, 13.

3 Compare, for a parallel, Paul’s claim (Rom 8:26) that, when we pray, it is actually God (the Spirit) that prays within us.
go as far as to positively equate Nirvana with love, but, as Hahn also points out, the Buddha did express many times the importance of the practice of love in achieving enlightenment.

There is still one more factor to consider, and that is the last line in Harrison’s Vivekananda quote: “[God] does not know. It is knowledge itself.” In this form, I do not personally like it much, because of its strong gnostic flavor; but if we are not talking here about any mystical or secret knowledge, merely about the ability to apprehend the truth, and to see things as they are, then this, too, is an essential part of the process of enlightenment (wisdom or discernment, prajna, is at the heart of the Noble Eightfold Path). We could then say, in parallel to what we have been saying about Love and Existence, that God is Truth, or “ultimate truth,” and take this to mean, in practice (and, as it were, at a minimum) that he is the source of our ability to discern the truth (and hence of all true knowledge that we might acquire). Then, similarly to what we just said about love, we can say that, as we strive to see the truth and understand the way, God is present in us also under this particular manifestation, as the Spirit of Truth, working with us towards the salvation which consists, ultimately (compare the earlier quote from Rahula about Nirvana) in “seeing” him, “realizing” him.

It must be emphasized that when we sort-of “define” God as Existence, Love and Truth, we need to be aware that these words, inasmuch as they might be used to described God’s essence, whatever-is-in-himself (as opposed to the way he manifests himself to us, that is, the way we experience him) may have a meaning that is quite different, and only remotely related, to their everyday meaning, a meaning that we simply cannot penetrate. They are, presumably, extensions of our everyday notions, perhaps (to give a mathematical example) in a similar way as the complex numbers are an extension of the “natural” numbers; which means that, in trying to understand what Love really stands for in the statement “God is Love,” by an extrapolation of our everyday experience, we may not be much better off than a parrot that has learned, after years of training, to recognize the numbers from one to seven, trying to understand the “numberness” of the square root of minus one. Or, to put it backwards: our everyday notions of Love, Truth, and even Existence, may be like “projections” in a finite-dimensional space of

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1 In the Majjhima Nikaya 52, for instance, it is said that this practice can lead directly to enlightenment, provided one realizes that even the joy that it brings is conditioned and impermanent. One might read into this a word of caution: that even when we say that “God is love” we need to be careful not to be mistaking a mere human feeling, however exalted, for the ultimate Reality.

2 The Eightfold Path can be divided into three groups, corresponding to wisdom (Right View and Right Thinking), ethical conduct (Right Speech, Right Action, Right Livelihood), and concentration or discipline (Right Effort, Right Mindfulness, Right Concentration). I am taking the liberty here of suggesting that progress in the first group is facilitated by God as “that which makes possible our discernment of truth,” and in the second group as “that which makes it possible for us to love.”

3 In Christian thought, “God as Truth” is mostly associated with the Spirit, the third person of the Trinity. Compare 1 John, 5:6: “And the Spirit is the witness, because the Spirit is the truth”; John 16:13: “When the Spirit of truth comes, he will guide you into all the truth.”

4 There is, or was, such a parrot; his name was Alex. (See National Geographic, Vol. 213, No. 3, p. 36 (March 2008).
something” that can only be fully apprehended in, perhaps, an infinite-dimensional one (compare the discussion of the Klein bottle and the cube in Section I above).

Moreover, to the extent that God is “infinitely simple,” we cannot speak of “parts” within him: the “love” part, the “truth” part, and so on. This means that, “at the God level,” all these things: Existence, Love and Truth really have to be the same. But interestingly, again, this may not be unlike something we observe in physics, which we call a unification—the realization that a series of seemingly disparate phenomena are really manifestations of a single underlying reality. The first great unification in physics was that of electricity and magnetism into one single “force,” described by classical electromagnetic theory; a century later, electromagnetism was unified with the so-called weak nuclear force into “the electro-weak interaction.” It is a characteristic of this type of unification that the various components appear very different in the realm of ordinary experience (where, for instance, the “weak interaction” manifests itself as being many orders of magnitude weaker than the electromagnetic force), yet at some “unification scale” (typically an extremely small length, or, equivalently, an extremely high—by atomic standards—energy) they are really seen to be substantially the same.

We may, thus, speculate that these “essences” or attributes of God, that appear to us to denote different things in everyday life—Love, Truth, Existence—really are one single thing, as I said above “at the level of God,” and what we are seeing “down here” is something not unlike what particle physicists would call a “spontaneous symmetry breaking.” To speculate further, and try to visualize how the unification “works,” may put us in the position of the parrot I mentioned earlier. Personally, I feel only up to offering the following suggestion, that both Love and Truth are existence-affirming (love, because it desires the existence of that which is loved, and truth because it states that it is), and hence, arguably, this makes them natural attributes for “that which is existence itself.”

However things may be “at the God level,” in any case, our formulation is far from empty or meaningless when we take it to describe the way God manifests himself to us, our God-experience. We can, from this perspective, merely say that God is the source of existence, truth and love, where these words may be taken to have (more or less) their familiar everyday meanings. We may imagine these three rivers of being, each very different in its course “down here,” all ultimately pointing, indirectly, to the distant mountaintop from which they flow as one.

V. Summary and outlook

We have seen, in the previous section, that it is possible to gather, from the similarities between the various religious traditions of humankind, enough materials for a definition (or several definitions) of God, which, however incomplete or tentative, may provide a valid starting point for further reflection; a starting point that is both abstract enough to avoid the “Far Side cartoon
fallacy” (the notion that one could, even conceptually, envision God as “a being among other beings,” in some hypothetical lineup)\(^1\) and relevant enough for our lives.

It may be hard (and it is, in any case, not necessary) to settle on just one such definition. For conciseness and evocative power, I like what I might call the Judeo-Christian formulation,

> God is Existence experienced as a loving Presence

but for more detail and more explicit relevance I would favor a Christian-Buddhist hybrid:

> God is the ultimate reality that makes possible the deliverance from suffering and the awakening to true joy; he is also the source of the love and the discernment of truth that are required for such an awakening to take place.

This pushes Buddhism a bit but not too much; technically it is not very different from the Mahayana notion that the *dharmakaya*, the “Body of Teaching,” is essentially the same thing as the “ontological Buddha,” the ground of all being, and Nirvana itself.\(^2\) It could be argued that Buddhist practice through the centuries has sufficiently established the validity, as an empirical fact, of at least the first half of this second definition\(^3\).

On the other hand, for a fully reasoned and justified defense of theism, this is *really* only the first step, and much more work needs to be done. I can see at least three possible concerns, or objections, that may still need to be addressed at this juncture:

- From a Christian perspective, it could legitimately be argued that the above definitions are still lacking some essential elements; in particular, any explicit reference to the Trinity. This is true, although I believe that much of the discussion in the previous section can be regarded as “implicitly trinitarian” or “pre-trinitarian”: to make this explicit, God as the Source of Existence may be identified with God the Father, God as Love with the Son, and God as Truth with the Holy Spirit. But I agree that all this needs to be developed further, and I intend to do so in what follows.
- From a purely materialistic perspective, it can be argued that my appealing to the notion of something like “disembodied love” as an efficient cause of anything, as I did in the previous Section, is pure nonsense, because, for a reductionist-materialist, there are no other “causes” at

\(^1\) It also passes what might be called “the Gagarin test,” although Gagarin may be unfairly blamed here; according to the Wikipedia, it was Khrushchev who once said, “Gagarin flew into space, but didn't see any God there.”

\(^2\) This is reported, and called “a natural development,” by Thich Nhat Hanh in *The Heart of the Buddha’s Teaching*, Ch. 20.

\(^3\) Buddhism is perhaps unique among the world’s religions in that it clearly states that the “ultimate bliss,” which is the fruit of enlightenment, and the goal of the religious life, can be directly experienced *in this life*. Christianity is in this respect a little less explicit, but there are enough examples of joyful Christian saints and mystics—from St. Francis of Assisi to St. Thérèse of Lisieux—to bely the popular notion that Christianity is all about being miserable in this life so we can be happy later, in Heaven.
work in the world than the matter-energy constructs that are the object of study of the natural sciences. As it happens, this position is nowadays scientifically untenable, in the face of quantum mechanics and chaos theory, and has always been philosophically bankrupt anyway, since, if pushed to its logical conclusion, it would deny the very possibility of apprehending truth, and hence of science itself; but this argument needs to be made in detail, and I intend to devote much of the next couple of chapters to doing precisely that.

• Finally, from a humanist perspective there remains the greatest objection to theism, the problem of evil: How can I attribute love to a God that is presumably also responsible for the existence of a world full of suffering? This is a serious problem that cannot be overlooked, and it is my intention to address it in full in what follows, after the reductionist objections have been properly disposed of.

The plan for the remainder of this book involves an in-depth look at what we know about the world, organized according to a scheme which is also, I believe, “crypto-trinitarian”. It is based on the observation that all that we know and perceive, all of what constitutes “our reality,” breaks naturally down into the following three categories:

1. Our inner self, including our consciousness, thoughts, ideas, intuitions and values. This is what I call the “world of the Spirit.”
2. Other people, regarded as “spiritual beings” (in the above sense) and hence as “beings like us,” with which a relationship as equals is possible. This is what I shall call “the relational sphere.”
3. Everything else, that is, “the world of matter and energy,” including ourselves regarded as “material beings,” that is, as objects of study for the natural sciences.

I will make this scheme explicitly trinitarian by arguing below that we encounter a different aspect of God in each of these three “realms” (the Spirit, the Son, and the Father, in this order); moreover, I will argue that “the problem of evil” consists fundamentally in reconciling the demand for justice that we experience at level 1, with the reality of the material world as we experience it at level 3. One might put this in somewhat fanciful terms as the problem of reconciling “God the Creator” with “God the Spirit” (of truth and justice); that is, the problem of understanding, somehow, how both manifestations of God be “integrated,” as it were, in one and the same ultimate reality—presumably, as postulated above, a loving reality.

This is the task ahead, and it will proceed in this order: the following chapter will study world 3, the “material” world; the next chapter will study world 1, the world of the spirit; and the next two chapters will discuss, at considerable length, the central difficulty of theism, the reconciliation of these two worlds, first by taking an honest look at the problems and shortcomings of all the proposed “objective” solutions, and finally by presenting my best attempt at an answer, which, as we shall see, will necessarily pass through level 2 above.