

06. The Creative Advance

The “Creative Advance” is Whitehead’s word for the ongoing process of actualization which constitutes the actual world. In this chapter, we will explore in greater detail how the four causes outlined in the previous chapter play out in the creative advance of actual occasions. With a deeper understanding of the causal interactions that bind the universe into a coherent whole, we will be better positioned to understand the transphysical worlds, and their role in everyday life as well as in life after death. We will also see how understanding the creative advance illuminates the five fundamental propositions I outlined at the beginning of this book.

First, let’s look at one of the most important key terms that defines the very possibility of the creative advance—*Creativity*.

Creativity

In Transpersonal Process Metaphysics (following Whitehead), we call the ultimate source of all actuality “Creativity.” Because this is a technical use of “creativity,” I will capitalize it whenever I use the word in this sense. Creativity, here, serves the function that earlier philosophies ascribe to “substance.” It is the material cause, the ultimate ingredient of all actual entities. However, unlike classical philosophies in which the material cause, substance, is thing-like, in process philosophy we think of the material cause as a *recursive function*—an activity that feeds back into and builds on itself. We can make this clear by thinking of Creativity as a set of instructions, something like a computer program.

- Our initial assumption is that the creative advance is beginningless and endless. Note that this does not deny the possibility of a “Big Bang”; it merely makes the Big Bang a particular incident in an ongoing process of actualization.
- Given this assumption, we can assume that Creativity always has a past to work with. At the inception of each new instance of Creativity, the past shows up as a

universe of completed actual occasions. We can symbolize actual occasions with the letter a, and then we can write the formula:

$$\text{Past} = (a_1, a_2, a_3 \dots a_\infty).$$

which indicates that the past consists of an infinite number of already settled actualities.

- Creativity, then, operates on the past to produce a new actual occasion that we will designate as a_{new} . Note that each operation of Creativity embodies a quantum of freedom in the interpretation of the past and in the choices that are made among the mutually incompatible possibilities for the future. Note also that every occasion, arising as it does out of a unique and never-to-be repeated past and involving free decisions, is a novel and unique actuality. We can then write:

$$\text{Creativity}(\text{Past}) = a_{\text{new}}.$$

Finally, this new actual occasion becomes part of the past for a new instance of Creativity. We symbolize this by:

$$\text{Past} = \text{Past} + a_{\text{new}}.$$

- Now we can put this together into a simple, informal program:

$$\text{Past} = (a_1, a_2, a_3 \dots a_\infty)$$

REPEAT THE FOLLOWING STEPS

$$\text{Creativity}(\text{Past}) = a_{\text{new}}$$

$$\text{Past} = \text{Past} + a_{\text{new}}$$

FOREVER.

This formula is somewhat oversimplified, given that many instances of Creativity are taking place simultaneously, but it gives us a sense of Creativity as a recursive function. It also illuminates some of the difficulties inherent in describing this process, since we must know what actual occasions are like before we can describe the process of their formation.

Concrescence and Prehension

Concrescence is the process by which an actual occasion attains actuality. If we analyze a single instance of concrescence, we find it is composed of other concrescences of the same or of lower grade than itself.¹ In other words, an actual occasion is a “drop of experience” and if we attend to a single drop of experience, we can always decompose it into smaller and simpler drops of experience. At this time, we can leave open the question whether there is a definite bottom or a definite top to this hierarchy of actual occasions. Each actual occasion, while engaged in maximizing its enjoyment of value for itself, also thus plays two other roles in the creative advance:

- First, an actual occasion may order the experience of many other other occasions (of a grade similar to or below that of its own) into the unity of a new drop of experience. An example of this would be the way in which the experiences of the actual occasions that are the cells and organs of my body all form part of one drop of experience that is me at the current moment (me/now). When I analyze my experience (or the experience of some other actual occasion) in this way, I will say that the drops of experience that are making up the drop of experience that is me/now are functioning as “prehensions” in my concrescence.
- Secondly, any actual occasion may serve as a prehension for one or more actual occasions of a grade similar to or higher than its own.

Thus the terms concrescence and prehension are relative. Every prehension is a concrescence in its own right, and every concrescence may serve as a prehension in one or more other occasions. As we will see later, this doctrine is very helpful in explaining how it is that we are a personality embodied in a physical body.

¹ Whitehead generally holds that actuality consists of God, actual occasions, and prehensions. Prehensions, which belong exclusively to one actual occasion, are themselves like actual occasions, except that they get their aim from the occasion to which they belong. In *Transpersonal Process Metaphysics*, I regard prehensions as actual occasions in their own right. For a more extended discussion of this difference between Whitehead’s process philosophy and transphysical process metaphysics, see Eric Weiss, *Embodiment, An Explanatory Framework for the Exploration of Reincarnation and Personality Survival*, 2004, <http://ericweiss.com/?p=102>, particularly the appendix

When an occasion is functioning as a prehension in the concrescence of another occasion of the same or higher grade, the prehending occasion in the relationship experiences just so much of the prehended occasion as is relevant to its own aim and its own position in the creative advance. For example, the concrescences forming the retinas of my eyes are contemporary with some member of my personality and are strongly influenced by my subjective aim and so I prehend them more vividly than I do, for example, the occasions in my fingernails. Each of those actual occasions prehends the entirety of its world and makes its own choices as it comes into being. However, my influence on the occasions of my retina disposes them to pay particular attention to color and form as they construct their appearance of the world. I then prehend those cells, under the abstraction appropriate to my aim, as visual elements in my experience. I abstract from the full experience of the cells in my retina only those elements that are relevant to the formation of my own “appearance” of my own world.²

One occasion can function as a prehension in the concrescence of another in a variety of ways. Let’s look at some of these now.

Causal Prehensions

Occasions completed at the time a new concrescence begins serve as “causal prehensions” for the new occasion.³ The way in which the new occasion abstracts from the the experiences of its own causal prehensions is strongly conditioned by several factors.

² I will sometimes refer to prehensions as objects in the world of the occasion in which they function; at other times, I refer to them as elements of subjective experience. This ambiguity is important: Each prehension is an actual occasion, a drop of experience on the inside (for itself) and a causally effective event on the outside (for others). For a concrescence in which an occasion is serving as a prehension, it can be considered both as an object *of* experience and as an element *in* experience. Because occasions (and prehensions) can be described in these two complementary ways, we can use phenomenological methods to identify them as elements in experience, and simultaneously we can consider them as objects involved in networks of causation.

³ Whitehead refers to these occasions as “physical prehensions.” This terminology, however, makes the mistake of confusing the actual with the physical—a mistake I aim to avoid in this work. Since the already completed actualities that enter into the initial phase of concrescence can be of various grades, not just the lowest grade I refer to as “physical,” I refer to them as “causal prehensions.”

The first of these factors is *the relative positions of the two occasions in time and space*. Each new occasion has a position in the creative advance—it is somewhere in time and space—and so it has a perspective on its own past. In general, the greater the temporal and spatial distance between the new occasion and the already completed occasion, the more abstract is the experience of the old occasion by the new one. In other words, the further away something is from us, either in space or in time, the fewer details about it are relevant and perceptible to us. Furthermore, certain features of the old occasion may be hidden—for example, I cannot, in the normal course of events, directly apprehend the back of your head while I am looking directly at your face. Distance in time and space, then, strongly condition the fullness with which a causal prehension is experienced.

The second factor is *the aims of the occasions involved*. The fullness, or concreteness of one expired occasion in the life of a new occasion is a function not only of distance (which is the main consideration in physics), but also of the *aims* of the various occasions involved.

Every actual occasion aims at a maximization of value. This includes both the value it experiences in its own moment of existence, and the value that may be realized by virtue of its current existence in the various futures relevant to it. More specifically, each occasion has its own particular way of valuing its world. The subjective aim is a tapestry of values. All of us work towards the realization of values such as truth, beauty, justice, power, convenience, wealth, and so forth. And each of us weights the various values that we hold differently. Each of us, then, is characterized by our own, very individual, way of aiming at value.

We can think of the relationship among the complex aims that characterize different occasions in terms of Rupert Sheldrake's idea of "morphic resonance." Morphic resonance is, in general, a relationship between complex forms. For example, there is the form of a waterfall and, in some sense, all waterfalls, wherever and wherever they occur, "resonate" with each other by virtue of their shared form. Morphic resonance is not, *per*

se, a measurable quantity⁴. And yet the ability to feel morphic resonance is an important human faculty that lies, unexamined, in the background of all activity that depends on classification. For instance, let's say I look at two very different animals, and yet I recognize a morphic resonance between them. Then this feeling of morphic resonance may lead me to find criteria that allow me to categorize them as belonging to the same species. Our ability to define classes of entities presupposes a recognition of similarity of form, or of morphic resonance. When we speak of morphic resonance in Sheldrake's sense, we are not just talking about a way of subjectively interpreting the world, but rather about an actual feature of the world that we feel as it is incorporated into our moments of existence. The often unacknowledged genius of Sheldrake's work is that it points to the genuine causal efficacy of these patterns that we might otherwise dismiss as mere aids in classification. There is some sense in which each member of a species has a causal effect on all other members of that species by virtue of their shared form. Transpersonal process metaphysics expands Sheldrake's ideas by applying the notion of morphic resonance to aims, as well as to the accomplished characters, of occasions.

The relation of resonance cannot be reduced to the relation of similarity. Two aims might be resonant by virtue of their similarity, but they might also be resonant by virtue of their complementarity or even by virtue of their contrast. A further analysis of the relation of resonance is an important task that awaits those sciences that base themselves on transphysical process metaphysics.

In any case, I am suggesting that the aims of actual occasions are more or less resonant with one another. I am further assuming that that *the greater the morphic resonance between an occasion and its predecessor, the more fully the new occasion objectifies it*. This explains, for example, why the occasions of our own personal past, which are extremely resonant to us in aim, objectify so fully in our present moment. This principle will also be important when we come to discuss reincarnation in Chapter 11.

⁴ Sheldrake suggests that morphic resonance might be indirectly detected by its influence, for example, on the ease of learning a certain subject that many others have already mastered. [GET REFERENCE](#).

No matter how fully an expired occasion may be objectified in a new occasion, the new occasion further abstracts from the old occasion only that which is relevant to its current aims. Note, however, that even though there is the imposition of abstraction on the objectification of the old occasions in the new occasion, all causal prehensions are “conformal.” That is to say, each new occasion, even though it experiences only some portion of the experience of the old occasion, experiences those portions it has selected *exactly* as they were. Since each of the old occasions had a subjective form—its own mood of certainty or of questioning, its own emotions of attraction or aversion, its own degree of meaningfulness and so on—the new occasion prehends the subjective form along with the objective data. In addition, and crucially, *the new occasion generates its own subjective form*, its own individual reaction, to the objective data and the (now-expired) subjective form it receives from the old occasion. The subjective form of the new concrescence influences how this particular prehension will figure in the further reaches of the creative advance.

Sensation, Empathy and Telepathy as Modes of Causal Transmission

The subjective forms of actual occasions of different grades differ along an important qualitative dimension. The subjective form of a low-grade occasion tends to be one of simple, taken-for-granted certainty. Thus, a low-grade occasion, such as an atom, objectifies itself as having a certain gravitational and electro-magnetic field, and a certain vector in time and space, and it entertains no doubts or questions about these characteristics. We register our causal prehensions of low-grade occasions as simple sensations, or “facts.” Science, which tends to concentrate on low-grade occasions and on the sensations that give us access to them, borrows its certainty from the subjective forms of the occasions it studies.

By comparison, medium-grade occasions mix and agument simple causal prehensions with considerations of possibilities (by means of propositional prehensions that I will discuss shortly), and evaluate those possibilities with various shades of appreciation, disgust, hope and fear. These more complex subjective forms are possible because medium-grade occasions consider the relationship between the actual and the possible.

This way of understanding highlights a crucial difference between sensation and emotion: Emotions always involve some form of comparison between the actual and the possible. To say that I am disgusted by some particular experience, for example, implies that I evaluate this experience by contrasting it to what it might have been. The subjective forms of medium-grade occasions, then, are *emotional*. This accounts for the feeling that accompanies the prehension of life. Not only do we experience sensations that inform us of the presence of living beings, we also feel life vividly and emotionally because that is how living occasions experience their world, and our experience of those occasions is necessarily an experience of them just as they were. The causal prehension of one medium-grade occasion by another medium- or high-grade occasion has the quality of *empathy*.

High-grade occasions go a step further. Not only do they consider (or “prehend”) the immediate possibilities of the current situation, but also consider possibilities in the abstract. As a result, high-grade occasions have subjective forms characterized by “meaning.” The subjective form of “meaningfulness” arises when the mere contrast between the actual and the possible (characteristic of emotions) is supplemented by a consideration of the relationship between a particular experience and the whole of all experiences, and also a consideration of the relationship between a particular experience and the larger context of aims in which it is being evaluated. We could say that the causal prehension of a high-grade actuality by another high-grade actuality is telepathy, where telepathy is defined as the *prehension of a proposition with a feeling of meaning*.

In short, I am suggesting that the subjective forms of actual occasions, while they are each distinct, share certain forms that are appropriate to their grades. Low-grade occasions have a kind of “sense certainty,” medium-grade occasion have kind of emotional vividness, and high-grade occasions have a feeling of meaningfulness.

Such an understanding of subjective form opens the way for a metaphysics that includes *sensation*, *empathy*, and *telepathy* as modes of causal transmission in the creative advance. This is a major epistemological step forward beyond the limits of the

metaphysics of materialism and sensory empiricism that dominates modern science. It allows us to account for a much wider range of phenomena and research data.

The reality of empathy and telepathy is well established both by anecdotal and laboratory data, yet modern science is unable to explain such phenomena. They simply do not fit into the materialist paradigm. Transpersonal process metaphysics covers a much broader range of experiences and data. While fully accounting for the behaviors of low-grade occasions observed by physicists, the new metaphysics makes it clear that each occasion—every actual event—is capable of empathic and telepathic interactions. Given the new metaphysics, we are no longer have to attempt the impossible task of explaining empathy and telepathy as the outcome of merely physical forces. Indeed, we now have to explain why empathic and telepathic interactions are so minimal among the merely physical occasions studied by physicists. This is easily done, as we have just seen, by a consideration of the properties that differentiate different grades of occasions from each other.

We will now consider two other ways in which occasions can function as prehensions—*conceptual* prehensions and *propositional* propositions. Both of these differ from the causal prehensions of a given occasion in that they must be in “unison of becoming” with the concreting occasion for which they are prehensions. The phrase “unison of becoming” requires clarification.

The concrecence of actual occasion is restricted to a finite quantum of time. Only an abstraction has existence at an instant. All actualities are finite in both time and space. While process metaphysics recognizes no abstract, absolute time in which actualities transpire, different durations can be defined by comparisons among occasions. Whitehead suggests that the duration of a human-grade event is something like $\frac{1}{8}$ of a second (as measured by oscillations of inorganic occasions in some form of clock). We know that many cellular events go into the making of one human moment, and that millions of atomic events go into making up one cellular moment. All of the events that transpire during a concrecence of some one occasion are said to be in “unison of becoming” with that occasion.

The subjective aims of occasions that serve as causal prehensions for a new concrescence are not influenced by the aims of the new occasion. This is because the causal prehensions were already fully actual before the prehending occasion began its actualization. But *all occasions that are in unison of becoming with a given concrescence are influenced by its aims*. This influence is a matter of degree, so that 1) those occasions that are more proximate in spatial terms are more powerfully influenced than those that are further away and 2) those occasions whose aims are more resonant with that of the new occasion are also more powerfully influenced.

The important point here is that each concrescence has a powerful influence on the aims of some set of occasions that are in unison with it in the process of becoming. These are the occasions Whitehead has in mind when he discusses the prehensions that make up an occasion of experience. Later in this chapter, when I discuss “embodiment,” we will see that the capacity of a high-grade occasion to influence the aims of lower grade occasion with which it is in unison of becoming will enable us to understand the relation between a presiding personality and its host body through which, during waking life, it functions.

Conceptual Prehensions

For each causal prehension, an occasion must have a conceptual prehension that abstracts from the causal prehension some subset of those eternal objects that are ingredient in it. For example, let us return to the example of the retina of my eyes. Let us say that a particular cell in my eyes is prehended by me as a patch of color. My further concrescence then demands another prehension of the eternal object characterizing that particular color. Thus, under the influence of the currently concrescing occasion, another occasion (of lower grade) will take place in unison of becoming with it, and that occasion will be missioned, by me, to pay particular attention to some of the eternal objects instantiated or ingredient in its environment. This new occasion will serve as the needed conceptual prehension in the new concrescence. Whitehead, in his formulation of process metaphysics, suggests that the conceptual prehension is a very simple matter. For example, if the relevant causal prehension was of a concrescence that had an experience of redness, then the eternal object abstracted from it would be “red.” But Whitehead then needs another mechanism (he calls it “conceptual reversion”) to permit the concrescing

occasion to experience the character of its prehension in ways other than as “red.” In order to simplify Whitehead’s scheme, and to bring transphysical process metaphysics more in line with quantum physics, I suggest that a conceptual prehension objectifies itself as something like a probability matrix. We know from physiological studies that the way in which that particular color will ultimately be perceived by an occasion in my personality is heavily dependent on context. Therefore, the initial conceptual prehension of that occasion in my retina will be a prehension of the various colors that might, ultimately, come to characterize that occasion for me. Only as my concrescence proceeds, and as various causal and conceptual prehensions are formed and compared, will the final decision be made as to which of the possible colors will characterize that past entity in my formed perception.

The Binding Problem, and How a Living Body Differs from a Dead One

The idea that the aim of one occasion can be an important factor in the aim of another occasion of lower grade is an important doctrine of transphysical process metaphysics. It is a novel solution to what is called the “binding problem”—the problem of how a collection of entities can come together into a new and higher whole (e.g., how the multiple “little” consciousnesses of my cells bind into the single unit consciousness that I experience as “me”). Whitehead, in his process metaphysics, uses this idea to explain the wholeness and unity of actual occasions. He says that all of the prehensions within an actual occasion are just like full actual occasions except that they share an aim in common with the concrescence to which they belong. Thus the unity of an occasion consists in its unity of aim. The unity is not an expression of the physical pole—it is not the result of some arrangement of efficient causes. Rather the unity is an expression of the mental or conscious pole, and it consists in a unity of aim. Transphysical process metaphysics generalizes this idea by maintaining the relativity of concrescence and prehension. In this way, we can explain the wholeness of macrocosmic entities, such as living bodies, in the same way that Whitehead explained the wholeness of individual occasions. All of the occasions making up a human body are functioning as prehensions for the inhabiting personality of that body, and it is in this unity of aim, or final cause, that the body finds its unity. It is precisely this unity of aim that is lost at death, causing

the individual occasions of the body to lose their unity, and initiating the process of decay.⁵ The conceptual problem of explaining what occurs at the death of a living body is solved by this understanding of the unity of the body. If the unity of the body over time consists in the presence of a higher grade personality that makes all of the occasions in the body into its prehensions by means of influencing their subjective aims, then the liberation of this higher grade occasion from the body would free the occasions of the body to pursue their own individual aims, and so the body would begin to disintegrate.

The importance of conceptual prehensions cannot be overstated. It is by virtue of conceptual prehensions that freedom enters into the creative advance. By eliciting into relevance, the gap between what was and what might be for a new occasion, a conceptual prehension creates an opening for free interpretation, and permits the contemplation of new possibilities for actualization.

Propositional Prehensions

Once an occasion has assembled its causal prehensions and its conceptual prehensions, it begins the work of unifying these prehensions into a single experience of the past, and a set of intentions regarding the future. Unification is done by means of propositional prehensions; but before we can understand what these are, however, we must first examine how propositions function in process metaphysics.

Whitehead introduces the word “contrast” as a useful technical term. A contrast is a togetherness of two entities in which the individuality of each is preserved. Thus we could put two peanuts together and say we have a contrast of peanuts. We could also put those two peanuts together with an almond, and call it a contrast of nuts.

A proposition is a specific type of contrast in which at least one of the terms is an eternal object (an idea, a possibility, or a form). Some propositions, for example $(1 + 1 = 2)$,

⁵ This understanding of the unity of the body permits an interesting speculation about cancer. It is said that, in cancer, individual cells of the body cease to respect their place in the unity of the body, and begin to function more like parasites. This suggests that cancer does not result from an interaction of efficient causes, but rather from a breakdown in the sharing of final causes among the occasions involved. This could explain the “miraculous” cures sometimes reported in cases of cancer, and could validate the effectiveness of psychoneuroimmunology, and possibly open up new avenues of research.

consist of contrasts between eternal objects alone. Other propositions, such as “The machine is green” holds together an actuality (the machine) and an eternal object (green). Note that the propositions I am using here as examples can be verbally expressed. Most propositions, however, operate below the threshold of fully lucid consciousness and thus are never verbally expressed. For example, we can deduce from the behavior of a bacterium that it interprets its environment in terms of a chemical gradient that points towards food and away from toxins. If the bacterium could speak, it might form the verbal proposition “there is food in that direction.” But, of course, it can’t speak. Indeed, it doesn’t have to speak in order to entertain a proposition in this sense.

In *actuality*, all propositions belong to actual occasions. In other words, the elements in an actual proposition are held together in the conscious experience (the mental pole) of the actual occasion that entertains the propositions. Propositions play a number of very important roles in the process of concrescence.

- First, the unifying activity of concrescence is accomplished by means of propositions. This happens in at least three ways:
 - * An actual occasion takes one or more actualities of its past and holds them in contrast with some eternal object that belongs to all of them. It then forms a proposition judging them to be a single entity. Whitehead calls this particular act of unification “transmutation.” For example, some collection of actualities in the past of an actual occasion share the characteristics grey, cold, and hard. Then these may be judged to be “a rock.” What is particularly important here is that this rocklike collection of actual occasions will be prehended by future concrescences—through the transmuting occasion—as a single entity. This is very important in perception where, for example, some concrescence involved in the perceptual process carried on by my body has performed just this transmutation, and so I, the high-level personality inhabiting the body, see that collection of grey, cold, hard occasions as a single entity, a rock. Because of this operation, we can apprehend our world—a vast multiplicity of occasions—as a collection of discrete entities.

- * An actual occasion may hold several entities together as a recognizable group. It then forms a proposition linking those entities together under a single category. This differs from transmutation in that the the individual members of the group still stand out within the group *as* individuals. Nonetheless, it is an important unifying move in that future concrescences can then form propositions concerning the group as a whole, abstracting from the individual members. For example, it might hold that group of people as “my family” or as “citizens of the United States.”

- * Ultimately, in the final satisfaction of the occasion, all of the entities prehended by the concrescence are held together as “elements of this experience.”

- An actual occasion can form propositions that function as questions— which, in effect, a concrescence asks of itself. For example, as we saw before, a concrescence might hold machine and green together in a proposition with the subjective form of certainty, in which case the proposition would translate as “That machine is green”; but it might hold that proposition with the subjective form of a question, so that the proposition would translate as “Is that machine green?” When a proposition is held by one occasion in the interrogative mode, it may inspire a subsequent occasion to re-examine the original causal prehensions that had been transmuted into “a machine.” Thus it forms an interrogative contrast between “the green machine” and the original concrescences involved. This interrogative contrast may then be resolved into an affirmative or negative judgement. In other words, propositions enable concrescences to form hypotheses, and to test them.

- Propositions are the means by which novelty is introduced into the creative advance. An easily understood example of this is the situation in which I mistake a stick for a snake. In the train of concrescences that constitute by body’s perception of its world, some particular concrescence prehends the actual occasions making up the stick and forms the affirmative proposition “that is a snake.” As far as I am concerned, then, there is a snake in the path in front of me, and I experience all the

reactions that are usually attendant on that discovery. In this case, I might subsequently form the interrogative proposition “Is that really a snake?” and then, by means of another proposition test it against the original prehensions. But in other cases, the novelty introduced in this way remains effective in the creative advance. For example, in quantum mechanics, the ultimate character of an event is actually determined by a subsequent event which prehends it. Take another example: Some water-breathing ancestors of ours formed a proposition expressing a pleasurable evaluation of sunlight and dry air, leading, ultimately, to the emergence of life from the oceans.

- Actual occasions form propositions that function as lures for feeling. A concrescence in a plant might hold a proposition such as “there is more light over there,” leading to a new direction of growth. Or a concrescence in the life of a human personality might hold the proposition “this society could be more just,” and that proposition might come to dominate much of its behavior.
- Actual occasions form propositions that function as efficient causes for particular occasions that might happen in the future. In transpersonal process metaphysics, this is an especially important function of propositions that has not, to my knowledge, been explored in the literature on Whiteheadian process metaphysics. Let us, then, consider our own personalities as sequences of actual occasions. An actual occasion feels its world (as causal prehensions), interprets its world (by means of propositional prehensions), and makes whatever decisions among possibilities that it must in order to become actual. Then it expires into “objective immortality,” which is to say that henceforth it is available as a causal prehension for any subsequent occasion. That’s all it does. It has no hands, no voice, no feet. So how does it have causal effect in the actual world? Quite simply: It does so by means of propositional prehensions. For example, let’s say I want to raise my right arm over my head. I form a proposition predicating that movement of the actual occasions making up my arm. That’s all *I* do, and then my arm moves. In terms of transphysical process metaphysics, here’s what happens: because the occasions in my arm are under the influence of my subjective aim, they are tuned into the

propositions that I form. They thenprehend those propositions, and, most of the time, they make the relevant decisions necessary to effect the action I am contemplating. Admittedly, important details need to be further explicated; but the important point is that actual occasions make a bid to influence the future by means of the propositions they form concerning it. All actual occasions, like the occasions of experience making up our own personalities, influence the world only by means of propositions they form. Understanding this helps explain the widely reported phenomenon of psychokinesis, discussed below.

- The very last stage of the concrescence of an actual occasion is a special propositional prehension.—called the “final satisfaction.” The final satisfaction of an occasion enjoys a causal prehension of all of the previous occasions that contributed to its formation. It resolves any last decisions among possibilities that may be left at that point, and it contributes to this synthesis its own subjective form—its own freely generated aesthetic response to the process that led to its coming into being. This subjective form may include any mode of aesthetic appreciation or even aesthetic disgust, emotional tones (such as anger or boredom), attitudes such as certainty or questioning, and some degree of awareness—anywhere from bare noting to complex mental self-consciousness.

An Explanation for Psychokinesis

Having explored and illuminated the nature of the creative advance, we can now offer a preliminary explanation for psychokinesis or “PK.”

Earlier, I defined a “personality” in terms of a society of actual occasions organized like beads on a string, with only one member of the occasion taking place at a time. Now we see that each member of a personally ordered society regularly forms its own propositions concerning future members of the society to which it belongs. In other words, all the actual occasions that constitute us form propositions that have some influence on our subsequent personality.

In particular, every member of a personality forms a proposition concerning the next member in its series. This proposition could be verbally translated as “there will be a concrescence with an aim and at a position in the creative advance that will enable it to function as the next member of this society.” This proposition is not always fulfilled, as the society may not, for conditions beyond its control, continue. We will explore this more fully in the discussion of reincarnation (Chapter 11). But a proposition of this sort will almost always be formed. Without a proposition such as this, it would be impossible to construct a “process mechanics.” Consider a situation in which two atoms are about to collide. Each of them must prehend the other, and form a proposition concerning the probable location of the next member of the series of occasions that makes it up. Then, it forms a proposition concerning its own next instantiation. If that instantiation would put it in the same position as the other atom involved, it must form a new proposition suggesting a new trajectory for itself. Extending this explanation to larger systems of occasions will enable us to form a process metaphysical understanding of the interactions among billiard balls and other macrocosmic entities.

Modern physics has assumed that the non-sentient, vacuous things and energies it studies follow a set of “natural laws” that are entirely external to those entities. In other words, physicists simply assume that energy invariably follows mathematical laws. However, these very same physicists can discover these laws and calculate and predict how energy will behave. Few, it seems, have taken the time to ask a simple question: How could non-sentient, mathematically governed entities produce human beings that can discover natural laws and apply mathematical analysis that enable them to *know* and *predict* the behavior of those entities?

In short: “Who or what is doing the calculation by means of which the energy itself knows how to behave?”

Process metaphysics provides an answer: The calculation of future behavior of an entity or event is intrinsic to actual occasions themselves.⁶

And this leads us to an understanding of psychokinesis. Keep in mind that an occasion will project for itself along a trajectory influenced by the aims of the occasion that constitute it. Low-grade occasions, such as those making up inanimate objects, tend to aim at preservation of value, and so are directed towards the maintenance of the status quo. Sometimes, however, the low-grade personalities of the low-grade entities making up an inanimate thing can become responsive to the aims of a higher grade personality, changing the relevant aims, and so a different trajectory might be calculated. By influencing the aims of inorganic occasions, a higher grade occasion might induce them to move in ways that would not otherwise be possible for them—hence *psychokinesis*.

This, of course, raises important questions about the conservation of energy. For now, let me just say that transpersonal process metaphysics does not accept the idea of the causal closure of the physical world. Rather, it holds that the causal power of occasions in the transphysical worlds constitute a kind of energy that can enter into the physical world from “above.” Thus the fact that the anomalous movements of physical objects caused by higher grade occasions may violate the principle of the conservation of energy is not an insurmountable problem.

Societies of Actual Occasion

I have already spoken of “societies of actual occasions,” and have informally defined them as self-organizing systems of actual occasions. Now, we are in a position to give a more precise, and more interesting, definition of societies of actual occasions.

⁶ Making the calculations that determine the unfolding of natural process an intrinsic function of actual occasions themselves has significant implications for understanding the nature of “natural law.” Whereas modern scientists generally assume that laws are eternal, unchanging, and transcendent to the entities they govern, Whitehead has convincingly argued that it is more plausible to think of laws as immanent in the system from which they can be abstracted. In other words, because the entities we observe function the ways they do, we can tentatively formulate propositions concerning the general relations among them. Whitehead demonstrates that with this understanding of natural law we can solve the “problem of induction.” Of course, this means that natural laws are neither universal or eternal. See Whitehead, *Adventures of Ideas*, Part II.

Four types of system

Systems theorists have identified various types of systems that emerge in the interaction of actual entities. For our purposes, it will be sufficient to identify four types:

- **“Crowd”**—a group of actualities that can be identified merely in terms of their proximity and, usually, in regard to some character they share. For instance, we might speak of a crowd of gas molecules in a box, or a crowd of people on a street.⁷
- **“Assembly”**—a group of occasions that remains together as an identifiable unit by virtue of some pattern of efficient causes. For example, a rock is an assembly of actualities. The electromagnetic interactions⁸ among the various molecules making up the rock are so arranged that the path of least resistance for those molecules involves their staying in close association. All types of machinery, including computers, are assemblies in this sense.
- **“Dissipative System”**—a system that is similar to an assembly defined by the efficient causes operating among its constituent entities. But it is unlike an assembly in that it takes place only in the context of entropy flows.⁹ Dissipative systems are interesting to scientists because they draw their own boundaries in space, exhibit some adaptive behavior, and undergo occasional re-organizations. Thus, they mimic certain properties of life.
- **“Autopoietic System”**—a self-organizing system. The idea of autopoietic systems was introduced in the 1970s by Maturana and Varela¹⁰ in an attempt to specify the nature of living systems. Such a system is held to be organizationally closed and recursive—that is, it produces the products and processes needed to keep it

⁷ Whitehead refers to crowds as “nexus.”

⁸ The task of fully describing these efficient causal interactions in terms of actual occasions and propositions is fairly straightforward in principle. The electromagnetic field of an event, for example, can be described as a proposition formed by that event concerning the motions of all future events. A detailed working out of a process-oriented physics is an important and urgent task.

⁹ Entropy awaits coherent and adequate interpretation in terms of process metaphysics.

¹⁰ Humberto R. Maturana and Francisco J. Varela, *Autopoiesis and Cognition: The Realization of the Living*, Boston, D. Reidel Publishing Co., 1980.

producing those products and processes. With this idea, Maturana and Varela attempted to reduce life to systems of efficient causes. They seemed to have come close to capturing the essence of life, but they failed in several important respects. In the next section, we will consider the difficulties inherent in their idea, and propose a new definition of self-organization and life.

Embodiment

The problem with the idea that life consists of self-organizing systems of entities interacting entirely through efficient causes is threefold:

- ***Coordination of spontaneities.*** First, scientists have no idea how it is possible for self-organizing systems to come into being. To be sure, some do have a good understanding of how dissipative structures emerge, and it is generally assumed, in a vague sort of way, that self-organizing systems are a further complexification of dissipative systems. But exactly how a dissipative structure can actually become fully self-organizing is not understood. When we take into account the insights of quantum mechanics, particularly the intrinsic spontaneity of each component in a self-organizing system, it quickly becomes apparent that full self-organization requires *a coordination of spontaneities*. This is quite clear when we consider living systems of great complexity, such as human bodies. If we try to stop ourselves from blinking, the fact that our organs retain some degree of their own independent will becomes clear very quickly. We can tell our eye to stay open, but without some extraordinary effort on our part, it will close when it wants to. And yet, by and large, our eyes are willing to let us tell them when to open, when to close, and where to look. In general, at a deeper level, all of the uncounted cells in our bodies make free decisions in a way that works to our overall benefit. How can there be a coordination of spontaneities in a complex system if the system is held together only by networks of efficient causes?
- ***Discerning possibilities.*** Secondly, living systems, as a whole, are able to discern possibilities in their worlds that none of their components could access. Back to the example of a cell: It is clear that no macromolecule (macromolecules are probably

assemblies) could possibly identify or follow a chemical gradient. How can any mere assembly of entities discern possibilities that none of their individual members can discern?

- ***Unified consciousness.*** Third, and most telling, the theory of self-organization by means of efficient causes entirely fails to account for the unified central consciousness that belongs to every living being. To make this clear, let us consider human beings. Humans are certainly living beings, and we know that each of us has a central consciousness, indeed a central personality, around which we are organized. Clearly this is so for other animals, as well. In the case of plants, we might imagine, as Whitehead suggests, that they are more loosely organized and are something of a democracy. They may fall in some intermediate ground between assemblies of living beings, and integrated living beings, such as animals, which possess (in addition to the myriad “little” consciousnesses of the individual beings that constitute them) a central unified, presiding consciousness. But even individual living cells act as if they are operated by a central personality. Confronted with a chemical gradient, for example, they will decide, as an individual being, which way to go. I have heard scientists who work with cells under microscopes say that if they were large enough, they would make good pets.

Transpersonal process metaphysics enables us to redefine living systems in a way that overcomes the difficulties with the idea of self-organization or autopoiesis. Rather than considering the essential property of living systems to be organizational closure, I propose rather that living systems are the *embodiment* of actual occasions of higher grade. In other words, a living system behaves as it does because the aims of each of its components has been conditioned by the aim of some higher grade occasion. Indeed, each of these lower grade occasions is functioning as a prehension for the higher grade occasion to which they belong. Organizational closure is possible because the subjective aims imposed on the lower grade occasions of the system makes them into prehensions for the higher grade occasion involved. Organization closure is, thus, the unity of an actual occasion writ large.

From this point forward, I will no longer speak of living systems as self-organized, and will refer to them as *embodied* systems. As we will see in subsequent chapters, this understanding of life will allow us to have a clear understanding of the life of the personality after the death of its physical body.

The Process of Concrecence

With all of these definitions in place, we can now review the entire process of concrecence. While I have previously discussed this issue in terms of three broad stages of feeling, interpretation, and decision/enjoyment, here I will discuss concrecence in terms of prehensions, thus laying a firm ground for our discussion of transphysical worlds and their involvement in our waking and postmortem lives.

The Inception of New Actual Occasion

A concrecence begins from a universe of settled actualities. Somewhere, a concrecence has completed and has added to the totality, and now a new instance of Creativity is about to begin.

Several determinations must be made as the concrecence begins. First, the new concrecence must have an aim. Part of this aim is inherent in Creativity itself—that is, the new concrecence must have an aim at integrating the universe in which it finds itself into a novel experience that maximizes value for itself and for its relevant future. The new concrecence must also have a position within its universe that will establish its perspective on it, and will thus determine the societies to which it belongs. For example, an atomic concrecence with an appropriate aim, taking place in sufficient proximity to the other molecules of a particular cell belongs to (or is a prehensions for) the society of that cell, and also, indirectly, to all of the societies to which that cell belongs (or for which it functions as a prehension).

The position and the aim jointly determine the grade of the new occasion. A high-grade occasion can emerge only if the actual world out of which it grows is sufficiently interesting to support the construction of an elaborate appearance. A sufficiently interesting actual world is a necessary condition for a higher grade occasion, but it is not

a sufficient condition. An occasion with a deficient aim might arise in a very interesting environment, and yet ignore most of its richness. Thus both an interesting world and an appropriate subjective aim are needed as conditions for the formation of high-grade actualities.

Finally, the aim of the new occasion is partially determined by the aims of the societies to which it belongs.

Note that all of these determinations must be made *before* concrescence begins. Who or what makes these determinations? To answer this question, Whitehead calls upon a factor in actuality that he calls God. If the aims of actual occasions were somehow spontaneously chosen by the occasions themselves, or if they were random, then the spontaneities of the various occasions would be in no way coordinated, and so there could be no evolving order in the universe. Every occasion would just go its own way, and no stable patterns could form.¹¹ There must be in the actual world some agency that coordinates the aims of occasions in such a way that they tend, generally, towards order. In Whitehead's system, this function is played by God.

For the purposes of this book, I will accept Whitehead's explanation.¹² In short, I will assign the function of providing an aim and a position for a new concrescence to God. Note that God, by hypothesis, is also aiming at maximum value. "God" in this sense is purged of mythic significance. This is not the God of any particular religion. It is only a factor in actuality that persuades occasions to participate more or less cooperatively in the creative advance by providing them with appropriate aims. Thus God places the concrescence where it is most likely to achieve maximum value, and it coordinates the aims of the new occasion to the the aims of the societies to which it will belong.

¹¹ It might be suggested that some kind of statistical ordering of spontaneities might emerge out of "natural selection." But what is natural selection? It must, at least, be a tendency in the environment to encourage certain sorts of behavior over others—and where does that tendency come from? In terms of transpersonal process metaphysics, this tendency itself must be a function of the aims of God and of other relevant occasions.

¹² In subsequent works, I hope to expand transphysical process metaphysics so that its theology is more in line with Sri Aurobindo's as articulated in *The Life Divine* (2d American Ed., Pondicherry: Sri Aurobindo Ashram, 1990).

How Concrecence Unfolds

As soon as the aim and position are established, the already settled occasions of the world out of which the new occasion is arising become, for it, causal prehensions. Several limitations on this process must be noted.

- ***Abstractions from the past.*** First, as discussed earlier, causal prehensions experience the experiences of the past under abstraction. While everything that an occasion experiences of its past conforms to the actuality of the past, it does not experience the past in its entirety. Rather it abstracts from the past those features that are relevant to its own aims. Because of distance in space and time, or because of a lack of a significant resonance among aims, some occasions of the past may be largely irrelevant to a current concrecence. In that case, they would tend to fade into the background of experience..
- ***Downward causation.*** Occasions of higher grade than a new concrecence may have an effect, as previously discussed, on the aim or purpose of the new occasion. If the higher grade occasions are prehended—which is to say if they function as an efficient cause in the new concrecence—they will do so under a very high degree of abstraction. For example, a rock in my garden may prehend me as a factor in the overall gravitational gradient, but it will not, and cannot, prehend me as an element in an operating, high-grade personality. However, a lower grade concrecence may prehend, and be affected by, propositions formed by higher grade occasions, especially if those propositions have specific relevance to it. As I explained earlier, the casual effectiveness of these propositions explains, in the context of transpersonal process metaphysics, our partial control of our own bodies, as well as the phenomenon of psychokinesis. If a new concrecence is partially shaped by the aim of a higher grade occasion, it will be especially attentive to propositions formed by that higher grade occasion. In this way, transphysical process metaphysics accounts for the particularly intimate relationship between a personality and its physical body.

Disembodied Actual Occasions

A new occasion, even if is of a very high grade, need not prehend any lower grade occasions at all. This doctrine is crucial to transphysical process metaphysics, and I want to pause to elaborate on this idea.

In the modern world, we have lived with the notion that the actual world *is* the physical world, and nothing but the physical world. In transpersonal process metaphysics, we define the physical world as a system of low-grade, inorganic occasions. Physics is the study of these low-grade occasions by the higher grade occasions making up human personalities. Standard modern science, is grounded in the assumption that these low-grade inorganic occasions are the fundamental actual entities. However, transpersonal process metaphysics recognizes that the high-grade occasions making up human personalities, and, indeed, the high-grade occasions embodied in a living beings in the physical world are also actual—and constitute a different form of (nonphysical) matter and embodiment. In the next two chapters, we will consider these “higher types of matter” in some detail.

In the waking world, the world that has evolved out of physical processes over many billions of years, all higher grade occasions are closely associated with systems of low-grade, inorganic occasions. This has led to the notion that living and thinking beings are nothing but arrangements of low-grade, physical entities. In contrast, I am granting these higher grade occasions full actuality. For example, I understand a living cell to be a system of macro-molecules organized by a higher grade personality that has its own existence, independent of the existence of the macromolecules.

The living personality organizing a cell is intimately associated with its system of macromolecules. Indeed, it could not function *in the world of our waking experience* without using those macromolecules as its prehensions in the physical world. But the personality of a cell does not prehend only its macromolecules, it also prehends other occasions of its own (and possibly higher) grades. This allows us, for example, to account for the way all of the cells in our bodies directly feel each other in a kind of empathic web.

The point to notice is that the personality of a cell is not *dependent* on the macromolecules through which it expresses itself in the world of evolution. It could come into being, and stay in being, merely on the strength of its interactions with other occasions at its own grade. I will return to this point when I discuss the transphysical worlds in more detail in subsequent chapters.

Following its initial causal prehensions, the currently concurring occasion is partially involved in the concurrence of other, lower grade occasions that will serve as its conceptual prehensions. This gives it creative access to the forms, or eternal objects, that were ingredient in the past, and also to other eternal objects in terms of which that past may be experienced and the future may be imagined.

With this grasp of its actual world, the concurrence begins to construct its coherent appearance of that world by means of layers of occasions of successively higher grade that function as its propositional prehensions. Thus we can imagine actual occasions as hierarchies of subsidiary actual occasions.

This hierarchy culminates in the final satisfaction, which is the last concurrence in the process, and is the concurrence of highest grade. In the process of this concurrence, the past is experienced coherently, propositions concerning possible futures are formed (the “probability matrix”), and decisions among those possibilities are made—the completed occasion is enjoyed with a specific subjective form.

This new occasion, and all of the concurrences that were involved in it, is now added to the universe, and a new iteration of Creativity is initiated.

Understanding the creative advance, as presented in this chapter, we are now in a position to discuss my second proposition: *The actual universe in which we live includes transphysical worlds.*