

## Chapter 3.

# Cause, Chance, and Choice

Cause, chance, and choice are three ways of interpreting our experience of Reality. In our ordinary living all of us use all three modes of interpretation. All three modes of interpretation appear in playing a game of cards. We explain the hand we are dealt with the story of *chance*. We explain the various plays that we make with the story of *choice*. And we use the story of *cause* to explain the movement of our hand that pulls a card and places it on the table. Notice that I am simply describing what we do. I am not making an argument on the basis of some philosophical system. Nevertheless, these three modes of interpretation, once we notice them, do indicate deep insight into the philosophy of truth.

First of all, the word "truth" presupposes that there is something to be discovered that is beyond the current content of the mind. Indeed, the mind does not contain the truth somewhere in its internal recesses. The mind is simply a tool we can and do use for approaching the truth. Cause, chance, and choice are three mental games we use to approach the truth. We assume that cause, chance, and choice are qualities to be found in Reality. But we need to check that out. We need to notice if the correspondences between our mental pictures and Reality are true to our experience. Cause, chance, and choice are processes of the mind, and all processes of the mind are creations of our species or perhaps creations of the evolution of our species. At any rate, it is not obvious that any of these mental contents correspond with Reality. To discern whether a mental process corresponds with the operations of Reality, we have to look and see. So let us look first of all into the discipline of physics and its attempts to approach the truth, the truth we seek through the sensory inputs from our environment.

Newton's laws of motion use the story of cause. First of all, he used the story of local cause – one billiard ball bumping into another. In his theory of gravity Newton also used the story of cause from a distance – the sun of great mass attracting the planets. Einstein also favored the story of cause, but he rejected cause from a distance. All cause is local in Einstein's special and general theories of relativity. In his view of gravity the sun does not attract the planets, the sun's great mass alters the character of space around the sun. The motion of the planets is "caused" by their interaction with the space they are touching. Einstein sought to extend the story of cause to explain the phenomena of quantum mechanics, but he never succeeded. No one has ever succeeded. It appears that the story of chance has proved necessary for our human minds to account for the activities of a photon of energy or any sub-atomic-sized particle of matter.

We might say that Einstein sought a consilience within physics and sought it in terms of the mental imagery of causal relations. He rejected probability or chance as an ultimate explanation of the physical realm. As he once put it "I cannot believe that God plays dice with the universe."

Other physicists have been more sanguine with the probability mode of thought, but we amateur and professional philosophers of science may still be amazed that these two conflicting modes of thinking still reign in the discipline of physics. What are we to make of this? If we simply notice and accept that both cause and chance are no more than models of thinking located in the human mind, we find some illumination of our puzzlement.

When we play a game of pool, we are using the model of cause to judge what will happen as balls strike one another, bounce off rails, and enter pockets. Reality in this limited sphere seems to agree totally with our causal thinking. We may use the probability story to explain the errors in our stroking of the cue ball, but we do not

expect any uncaused options to happen among balls and rails. This is true in many, if not most, areas of our lives. We typically assume that every change has a cause that happened before that change happened. When we say, "Why did so and so happen?" we are assuming that some cause is the answer to that question. To speak of uncaused changes that are due to chance is a departure from our customary causal mode of thinking.

Probability thinking is also deterministic thinking: that is some probability number determines the outcome of the happenings we are talking about, but in this case the outcome is viewed as an array of options each of which is an uncaused occurrence. When we throw a dice we assume that each of its six sides is equally likely to turn upward. When we play a card game we assume that each of 52 cards is equally likely to be drawn. This notion of randomness is clearly in our minds, and we use the story of chance to predict outcomes. In the real world, one particular dice may not be perfectly cubical, and thus its faces may not be equally likely to turn upward. Similarly, the cards in a particular deck may not be equally slick or sticky. So the probability or likelihood that our mind assumes for the real world are in most instances approximate, that is probable. When we figure poker hands, we assume that three of a kind is less likely than four of kind, and we can put a number to this probability or likelihood.

The probability mode of thinking has been developed into a complex mathematics we call "statistics." We answer many of our questions with estimates of probability. We drop our causality thinking and simply assume a randomness in reality that is loaded one direction or another, which "loading" we assume can be approximately measured with a probability number. Take the example of a poll taken on some political issue. The pollsters use a carefully selected sample of the population that has a high probability of matching the whole population with a predictable margin of error. But even this margin of error is probable. And even though the margin of error is highly probable, the specific truth about the whole population is not being predicted with an exactitude similar to balls and rails on a pool table. Chance is a different interpretive story than cause.

I am using simple illustrations to call our attention to the ordinary and well known truth that both cause and chance are well practiced modes of human thinking. Their correspondences with Reality are actual and useful to us, but we simply do not know whether Reality as a Whole is finally causal or finally random or neither or both. And the plot thickens still further with the introduction of a third interpretive story I am calling "choice."

Neither cause nor chance can explain the existence and the functioning of that enigmatic something we are calling "consciousness." The reality of consciousness presupposes a mode of explanation that we typically call "choice." ("Freedom" or "free will" are other terms we typically use to describe this aspect of our experience.) "Choice" is a mode of human explanation that we use to interpret those aspects of our lives that appear not to be handled with explanations of cause or chance. When we rise to go the bathroom, we say that we choose to do this. There are causal factors involved. Our bladder is stretched by the presence of an accumulation of fluid. The coffee we drank earlier is being processed by causal factors in our biology. Nevertheless, we choose to go to the bathroom. We could pee on the living room floor, but we choose the bathroom instead. We explain these alternatives of future outcome with the story of choice. Choice is one of our useful explanations of real world happenings.

So what is choice? Choice is an action of consciousness that is not determined by any cause. Choice is an uncaused happening. Also, choice not a random event – that is, a choice is not the result of some chance, measurable and predictable by some probability number. Rather, you or I, the conscious being, choose something out of no

cause and on the basis of no probability. We choose with an infinite degree of arbitrariness. If this arbitrariness is not there, choice is not there. If there is any cause that totally explains an outcome, then choice was not operative. Choices are not caused. Choices are chosen. Also, choices are not outcomes that can be explained with the story of chance. No probability explains my choice to play my ace of hearts rather than my queen of hearts. I choose that. No probability explains my cat's jump upon the table. This cat chooses that. This cat might have chosen differently. And my cat has "learned" that the alternative choice is the one that is approved by me. We might use probability thinking to talk about the likelihood of the cat jumping on the table or the likelihood of my peeing on the living room floor, but we do not really believe that chance rather than choice is operating in these instances. We commonly expect cats and humans to make choices that are not based on any probability number. We intuit that conscious beings operate differently than photons, electrons, and other subatomic entities. These tiny foundational aspects of our physical being operate in a manner that is accurately predictable with probability numbers. We may not know what a particular subatomic particle is going to do, but its range of options is highly predictable. Statistically, though not causally, we know how these entities behave. We could know more, of course.

Biology, the study of living beings, uses (indeed needs to use) the explanations of cause, chance, and choice to cover the scope of our experience of these beings. We see causal relations in the mechanics and chemistry of the physical bodies of living beings. When we explain the survival of a specific species within its environment, we employ both cause and chance. When we explain the fertilization of an egg by a particular spermatozoa, we typically employ chance. When we explain mutations in the genes of a species, we typically employ chance. It might be that some mutations are caused. It might even be that some mutations are chosen. We don't know. But most biologists prefer to assume that mutations are chance happenings. Many biologists also assume that many happenings in the behaviors of conscious beings, especially humans, are chosen.

Choice is most obvious in our own human lives, but it is also quite obvious in the lives of the more complex multi-celled animals. Our cats and dogs clearly make choices. We demean their existence if we assume that all of their behaviors can be explained by cause or chance. Living beings are not machines – that is, not machines only. To some degree each living being is conscious. Living beings make choices that have no cause. And they make choices that are not random.

Some might say that humans make choices, but animals do not. But even simple microbes appear to make choices. When we watch amoebas under a microscope, we can notice that they take in signals from the environment concerning food or danger and make appropriate responses. Somewhere inside that amoeba's skin a determination is made about the "meaning" of the incoming information and a "response" is initiated by that organism. We can try to explain those observations with our mental story of cause, for there are causal relations among the chemicals and electrical signals as well as in accord with genetic patterns created in the past. But these amoebas are not rocks, and they do not operate like rocks. Nor are they dice or electrons with fixed sets of probabilities determining their actions. An amoeba can make mistakes, do unpredictable things, learn from experience, or so it seems to those of us who watch them carefully. To we human observers the amoeba appears to be alive in ways that are analogous to our own inwardly experienced aliveness. So for purposes of this discussion, let us simply assume that being alive includes choice as an aspect of being alive.

And let us notice within our own experience that choice is not the same as cause or chance. Choices are not caused; choices are uncaused selections by an enigmatic

something that we will call “consciousness.” And this choosing aspect within the fabric of the universe is not explainable with the story of chance or the story of probability. A choice is not random; rather it is a guess, a risk, a try that may or may not produce the expected result.

I am concluding that the capacity to choose is part of the basic meaning of the term “consciousness.” A conscious being makes choices. A conscious being is attentive to its environment. A conscious being is sensitive and responsive. A conscious being is both gifted with attentionality and intentionality. A conscious being pays attention, and a conscious being takes initiative or intends responses. This does not mean that all human actions are chosen. Even though we humans have a highly developed form of consciousness, we do many actions unconsciously. For example, our childhood conditioning may, in many situations, “determine” our behavior rather than our paying attention and taking initiative through conscious choice. But we also have the potential to pay attention and take initiative, and we sometimes do. If we insist on reducing choice to cause or chance we are violating our own experience of being a conscious being. We are playing a mental game with our experience that does not fit our experience. If someone tells you that every happening has a cause, that person is selling you a theory that is contradicted by your and my experience. If someone tells you that probability is the final and most basic of all explanations, that person is substituting the useful mental game of probability for our whole experience of Reality. Upon a close inspection of what is actually going on in the process of Reality, we can see validity in all three of these interpretations: chance, cause, and choice. The test of truth in with regard to these interpretations is not found within our minds, but within our experience of Reality.

Most important for the content of this book is our view of consciousness. Consciousness is not all that is going on within a living being. There are causal processes within our organism and its behaviors. There are also chance processes. But in addition to cause and chance there is consciousness. And consciousness makes choices. Choice is part of the description we need to make about living beings in order to have an adequate understanding of them.

Nevertheless, we will encounter some scientific-minded philosophers who will insist that both chance and choice are merely ideas in the human mind, but not ultimate factors in reality itself. Probabilities, they will say, are only a convenience of the mind for use with complex systems: the ultimate explanation of which is still causal. A dice turns up as it does through a complex series of tiny causes. These strict determinists also say, that we only seem to make choices, the ultimate explanation is causal. Those causes, they say, are deeply hidden from consciousness; our seeming choices are merely the result of our genetic make up, our social conditioning, our personal history, or something else. But let us each ask our own consciousness if these assertions is actually so. Is it actually so that cause is the ultimate explanation for the living operation of our lives? Indeed, is it not more likely that cause, like chance and choice, is merely one of three mental modes of explanation invented by the human mind? It is not more likely that Reality is so vast that all three modes of explanation, (cause, chance, and choice) have their relevance? Why do we prefer that there be one mode of explanation that is the ultimate mode? Can we not simply conclude that we do not have (nor need to have) an ultimate explanation of the operation of Reality? Is it not more realistic to admit that cause, chance, and choice are all three modes of explanation in the human mind that assist us to relate to a Reality that is beyond all three explanations? It may be that our mind or ego prefers simple answers, and there is a value for simple explanations over excessive elaborations where the simple will do, but there is also “oversimplification.” And we commonly indulge in oversimplification in order to escape from some disagreeable portion of our real experience. I insist that

many or most members of our current contemporary culture are guilty of an arrogance and a sloth having to do with denying the prevalence of choice in our experience.

If we choose to be more humble and simply give up our “need” to possess an ultimate rational consistency for Reality, we can say all three of these things: (1) Our beings are caused. (2) Our beings are an accident. And (3) our beings are chosen. All three modes of explanation are valid. We need not insist that one of these modes of explanation must cover our entire experience of Reality. Indeed, when we insist on the ultimate consistency of causality, we are choosing this mode of explanation! And we are probably choosing it in order to believe that the human mind has a capacity for a full correspondences with reality that it does not actually have. So let us choose the more “obvious” truth that the human mind is a finite development and that Reality is only fragmentarily understandable by this amazing and yet puny human capability we call “mind.” Our mind uses cause, chance, and choice because all three of these modes of explanation help us perceive and predict our sense of reality, our sense of past and future, our sense of present living, and the choices we might make today and tomorrow.

In the final analysis the human mind confronts Mystery (both the unknown, the Unknowable). The human mind is only a tool of a consciousness that is also mysterious, unknown in its fullness, unknowable except in that direct sense of knowing we experience when we consciously contemplate our own consciousness. And though Reality and consciousness remain mysterious, we are still curious, we seek to know with our minds what can be known in order to live our lives more consciously and fully. Part of what we can know with certainty is that our minds are only a meager tool in the quest for truth. Our consciousness seeks with the use of our minds a more useful hold on Reality (Reality with a capital “R” means the all encompassing THAT that is forever beyond our full comprehension).