Chapter 3

Inside and outside

So far, I have described how acting is initiated by the person (not by the environment) and how it is enabled and restricted by the available environment. And I have said that the basic assumptions made by almost all social scientists are those of physics—the assumptions of a science of nonliving things. For example, one of Newton's laws of motion, stated in language one might find in a high-school text, is: A body will continue at rest or in uniform motion unless acted upon by an external force. In Chapter 2, I gave several examples of how easy (and wrong) it is to think as if human behavior obeys Newton's law. I will say a little more here about linear causation (the physical kind), and then I will go on to describe circular causation (the kind that enables living creatures to live).

Almost everyone, psychologist or not, thinks of action as starting *here* and ending *there*. Our language seems to make it easy to talk about delimited events. We say that we "did something." We started doing it, did it, and stopped doing it. When we want to draw attention to a particular portion of what was happening, we usually put it into the subject of the sentence and put it within a frame of beginning and ending. When we want to report that we made a trip to Ashland last week, we almost always say, "I drove to Ashland last week," not, "I was driving to Ashland." If we were to say, "I was driving to Ashland," our listener would probably say, "Yeah? What happened?"—thinking we were giving the background against which we would now describe the event (with a beginning an ending) we had primarily in mind. In an effort to take attention away from beginning and ending, we might say something like, "During my behaving last week, I spent some time driving to Ashland." Or, "During my comings and goings last week, Ashland was one of the places I passed through."

You can see that I find it difficult to construct a sentence that shies away from putting a beginning and ending on an experience while still sounding like ordinary conversation. That is my point. We usually do talk as if what we do has a *thing* character, and when we try to describe our doings as part of a continuous flow, the result has a strange, weak, and uncomfortable sound. But behavior, actually, does flow. Our muscles never completely relax while we are alive; the constant tension is called "muscle tone" and is necessary to proper functioning. Our brains, awake or asleep, never stop their electrochemical moiling. Our *purposes* in acting come and go as we achieve their intent, but our acting goes on seamlessly. One's life is not a succession of actions, but a ceaseless maintenance of one direction and another, a ceaseless pursuit of goals. Sometimes the goals help each other; sometimes they conflict. In brief, actions are not really separated by inaction; action varies between violent and quiescent, between this purpose and that, but action never ceases. The importance of this point will swell as we go along.

Almost everyone, psychologist or not, thinks of the causes of behavior as acting linearly—in a line that starts here and ends there. Almost everyone, psychologist or not, believes that when some sort of energy impinges on a person, it causes an action. The stimulus goes in that side, and the response comes out this side, and that's the end of the matter—the end of this linkage of cause-and-effect. The physician says, "Say ah," and you open your mouth and say, "Ah!" Your parent says, "Stop that!" and you take your finger away from the cake frosting. You see a picture of a pretty woman smoking a Virginia Slim and you run out to buy a package of Virginia Slims. The bell rings, and you run out of the classroom. We all, including the psychologists, know that those sequences do not always play themselves out, but we continue, most

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of us, including the psychologists, to think as if they do. We continue to hunt for the stimulus that will set off the reaction we want. Sometimes we think a *stronger* stimulus will do it. Buy the reluctant woman a bigger box of candy. Beat the disobedient child more severely.

Figure 3–1 symbolizes this linear kind of causation.

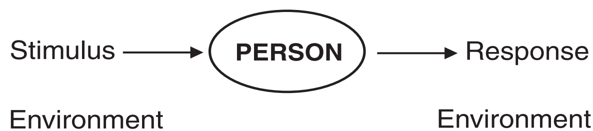

Figure 3–1.

Something in the environment impinges on the person, something happens inside the person, and the person acts on the environment. In this kind of thinking, those three steps complete the story. The story says nothing about what happens next. Presumably the person must wait for something further to happen in the environment.

We do not always think in such simple one-two-three sequences. Sometimes we say, "Oh, he won't respond to that; he's not the type." The speaker is dividing people into two or more types and saying that despite the indifference of this person, there are persons of another type who *will* respond. As I said in Chapter 2, this is the strategy of the moderator variable (or intervening variable, or contingency). The reasoning is that if you divide a collection of people by this criterion, and again by this variable, and yet again by this contingency, and so on, you will eventually find a subgroup in which all the people do react in the same way when you offer them a certain incentive or threaten them with a certain punishment. In an earlier book (Runkel 1990, Chapter 7), I called this tactic "fine slicing" and explained why it is hopeless for use in research on human functioning. I explained there, too, that this sort of reasoning does have some practical use. When you don't care whether everyone will act as you hope, or who will do so, but only whether a sufficient number will do so in the near future in a specified population—as in advertising—this reasoning is useful. But my topic here is individual human functioning, not shotgun advertising.

When we look for the type of person who will react to certain conditions, circumstances, sentences, incentives, or some other "input" from the environment, we often think about the "personality" of the person. Some people use that word to mean attractiveness—"Oh, she really has personality." Psychologists, however, use the word merely to mean the make-up or clusters of dispositions of the person, leaving the particulars to be specified—attractive, repulsive, lively, quiet, or whatever. Psychologists have invented hundreds of personality types. Their hope has been that if you can isolate people who are of this or that type, you will be successful in predicting what they will do in certain situations. Many still hope.

I hope the paragraphs above will be sufficient to give the flavor of the assumption of linear causation, the assumption almost universally found in whatever you read or hear about human motivation. Linear causation, however, is not the way living creatures function. Almost everyone believes in linear causation, but in respect to the actions of living creatures, that is a mistake.

In the conception of circular causation, the person and the environment are in constant, unceasing interaction. Purposes start and stop, but actions flow. Imagine two figure skaters whirling together on the ice. Each skater is part of the environment of the other. When the two are holding each other and whirling about a point between them, each is both enabled and limited by the other. Neither could whirl in that pattern, leaning backward with an arm up like that, without the other. Notice, too, that movements do not have any obvious starting and ending points. One glide slides into another. One gesture of an arm wafts smoothly into another, so smoothly that you realize that "another" is happening before you realize that the "one" is no longer happening. At all moments, what one person is doing opens some possibilities and closes others for what that person, and the other person, too, can be doing at later moments.

The relationship of person and environment is always like the relationship between the one person and the other on the ice. The environment pulls or pushes on us, and we pull or push back to keep what we care about in balance. We can choose, too, to pull or push with a force greater than necessary to maintain the balance—to change the direction of the whirl, to alter position in relation to environment or to alter the environment. But all the time, we can move only *because* we can push on the environment, and we do move only because we choose to alter the way the environment pushes on us (or sends energies to others of our senses).

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PERSON AND ENVIRONMENT

The environment acts on us, and we act on the environment. Winds buffet us all, the rain falls on the just and the unjust, some of us are mashed by automobiles or falling trees, and some are swept way by floods.

> There once was a singer named Hannah
> Who was caught in a flood in Montana.
>   She floated away,
>   And her sister, they say,
> Accompanied her on the piana.

At every moment, too, we are affected by forces less harsh than floods but part and parcel of our living. Light interacts with the cells of the eye's retina in such a way that electrical pulses run along the fibers of nerve cells, and as hundreds and thousands of those fibers act in parallel, the effect is one of electrical currents reaching thousands and millions of more complicated circuits deep in the brain. Pressure waves in the air impinge on our ear drums, moving bones that move liquid in the cochleae of our ears, where the throbbing liquid shakes fine hairs against nerve cells, which in turn send currents to deeper (or "higher" if you prefer) neural circuits. Other sensors tell us of many other energies coming from outside and inside our bodies that we interpret as taste, odor, balance, pressure, muscular fatigue, pain, heat, cold, and so on.

Our sensors enable us to perceive some of the effects of our actions on the environment. If those perceptions are not yet the perceptions we want, we take further action in the hope of bringing our perceptions into match with our internal standards. Usually, we succeed. Living requires the continuous control of perceptions through actions on our environment, including actions within our bodies.

We live only because we interact with an environment that is in part nonliving. The nonliving environment provides us a planet to which we cling. We feel the pressure of our feet upon the ground and the swell of our lungs as we breathe. We step into the sunlight to feel its warmth. We live, too, because of the living part of our environment. We feed upon other living creatures—beginning with our mothers. We sit at table and savor a taste of melon or shrimp. We join others to accomplish our daily work. We look up to enjoy the smile of a lover. We give attention to a supervisor, hoping for words of encouragement. In a million ways, we look for signs that things are going the way we want—or are not.

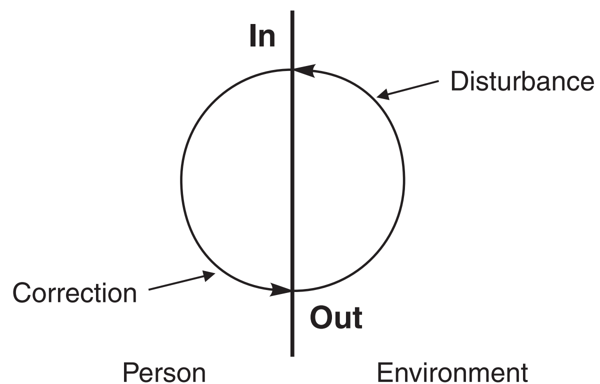

Figure 3–2.

Figure 3–2 symbolizes the circular causation through which life is possible. The circle has two parts, one in the person and one in the environment. The half of the circle in the environment represents the person's actions. The beginning of that semicircle at the bottom of the figure (at "Out") represents muscular or glandular action that will affect some aspect of the environment perceived by the person. At the upper part of the semicircle, the arrowhead (beside "In") symbolizes the sensing of an environmental energy by a sense organ—the perception of a variable quantity in the environment. At the same time that the person is acting to bring a perception of a variable close to an internal standard, the environment is continuing to have an effect on that variable; it is *disturbing* the energy. For example, when you are driving a car along a highway, you want to perceive your car to be near the middle of your lane. So you move the steering wheel a little to maintain that perception close to that in-the-middle standard. But at the same time that you are adjusting the steering wheel, the wind is blowing your car away from the position you want to maintain. You must act to steer where you want to go, but you must also steer to *counteract* the disturbing effect of the wind. The joint result of your muscular action (at "Out") and the disturbance of the wind produces the position you perceive (at "In"). Another example: When I chew food, my hearing aids amplify the sound of my chewing well beyond the level at which people with normal hearing hear their chewing. As a result, when I converse with my wife at mealtime, I must stop chewing while she is speaking if I want to hear her words (which I do). The joint result of the sound of my wife's words and my muscular effort (at "Out") to hold my jaws still to counteract the noise

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