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The Ecological Self and Its Metaphors

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Psychological theory about the self begins, as so much else begins, with William James. James was the first to postulate an array of different kinds of “selves,” defined in various ways to include various domains. Some of those definitions were remarkably generous: “In its widest possible sense,” he wrote, “a man’s self is the sum total of all he can call his.”¹ This was what he called the *empirical self*—“all that [a man] is tempted to call by the name of *me*.”² The *me*, so defined, could readily be divided into subcategories: the *material self*, the *social self*, the *spiritual self*, and so on. James sometimes described the *me* as “the self as known,” but there I would quarrel with him. We know things in the first instance through perception, and yet there is no mention whatever of perception in his account of the *me*. What James really had in mind was not the entire “self as known” but only “the self as thought about.” Today, we would call it the *self-concept*.

If there is a *me* that is thought about, who is doing the thinking? Although James was reluctant to postulate any thinker more enduring than the thoughts themselves, he could hardly resist introducing an *I* to go with the *me*. “Henceforth,” he said, “let us use the words *me* and *I* for the empirical person and the judging thought.”³ His successor George Herbert Mead was clearer on this point: the *me* is the self as known and conceptualized, the *I* is the self that knows and conceptualizes it.⁴ Generally speaking the *I* is a knower and a chooser and a constructor; the *me* is what results from the

choices made by the *I*. The key feature of human thought is its *reflexivity*, in the philosophical sense of that term. As Mead put it, “[T]he self . . . can be an object to itself.”⁵

Leaving the knowing *I* aside for a moment, what can we say about the *me* that it knows? Strictly speaking, the *me* is just one possible object of my thought, one concept among many others that I also have. It is my concept of Ulric Neisser, my self-concept. You have one too. We all know that self-concepts exist, but what are they like? Are they consistent over time or inconsistent? Sharp-edged or blurry? Accurate or delusional? Frequently or rarely in their owner’s private thoughts? It is when we begin to ask questions like these that metaphors sometimes cloud our judgment.

James was only the first of many to personify the self-concept; many others have done so, including me. In a 1988 paper,⁶ I introduced the term *conceptual self* for what James called the *me*. The qualifier “conceptual” was intended to distinguish it from other actual or metaphorical aspects of the self. Many theorists, apparently less concerned with the possibility of such confusions, often just call it “the self.” As we shall see, this usage leaves something important out of account.

Concrete-sounding nouns and pronouns like these—the *me*, the *self*—encourage us to think of self-concepts as well-defined. It’s a little like thinking of life as a journey or categories as containers—figures of speech that Lakoff and Johnson have made very familiar.⁷ Such metaphors are obviously based on our experiences in the physical environment—experiences of taking real journeys, or handling real containers. So, too, is the metaphor under consideration here. Referring to a set of beliefs or a class of knowledge as “the self” or “the *me*” or makes it seem more like—well, like what, exactly?

THE ECOLOGICAL SELF

For a metaphor to work, its source must be something familiar. We understand “life is a journey” or “Juliet is the sun” because we know what a journey is, what the sun is. What, then, is the familiar entity from which self-knowledge so often borrows concrete characteristics? It is what I call the *ecological self*—the self as we directly perceive it, situated in the real and immediate environment.⁸

Although that definition seems straightforward enough, I have learned from experience that it is easily misunderstood. Talk of self-perception often brings an inappropriate image to mind—namely, the image of a mirror. That is not at all what I mean. We shall see below that there are many kinds of information that specify the position and movement of the self, and none of

them depend on specular reflection. No reflecting surface is necessary at all; we all perceive ourselves continuously and accurately without one.⁹

Here's a definition: To *perceive* is to find out about one's local situation by picking up information that specifies it. The "local situation," as I am using the term, includes the ground on which one stands, the layout of nearby objects and surfaces (including other people) on that ground, and various kinds of motions, changes, and events. It also includes the self: that is, the perceiver's own body with its momentary position and its complex movements. According to James J. Gibson's ecological analysis (which is the basis of my argument here),¹⁰ these aspects of the local situation are *specified* by various forms of structure: optic, acoustic, mechanical, and so on.

What does the specifying—and provides the information—is not the mere presence of these forms of energy but how they are structured in the situation at hand. Vision is perhaps the clearest example: terrestrial animals live in and move through an ambient ocean of structured light that Gibson called the *optic array*. The exact configuration of the array at any moment depends on the layout of surfaces in the local environment; thus it provides information about that layout. How the visual system actually picks up that information and responds to it are questions with which the neuroscience of vision is much concerned, but they are not relevant here. For present purposes, it is enough to know that the information is out there and that perceivers can use it.

MOVEMENT-PRODUCED INFORMATION

The movement of an eye through the optic array gives rise to a set of continuous structural changes that are collectively known as the *optic flow field*. Considered as a whole, the optic flow field uniquely specifies the layout of the environment as well as the perceiver's path of motion through it. This is a key point. It is because we move, because we are not limited to fixed points of observation, that we see the layout of environmental surfaces as it really is. In doing so, we necessarily see our own path of motion as well. Thus self-perception is not something rare and unusual; it occurs all the time. As Gibson put it, "egoreception accompanies exteroception like the two sides of a coin. . . . One perceives the environment and coperceives oneself."¹¹

There are several different kinds of optic flow. One case arises whenever a perceiver moves parallel to a surface such as a wall: every contour and texture element in the corresponding sector of the array streams backward as the perceiver moves forward. Similar flows are manifest in almost every surface that is in the field of view during motion: they all contribute appropriate flow

patterns to the array. Under natural conditions, these omnipresent flows are 100 percent reliable information for motion of the self.

Another form of optic flow, “looming,” occurs when an object moves toward the perceiver. The sector of the array that corresponds to the approaching object gets larger and larger, until just before contact it fills the whole visual field. The *rate* of this magnification is important: it specifies precisely how much time remains before collision (that is, if there is no change in velocity).¹² Thus the perceiver’s situation in the environment—a crucial aspect of the ecological self—is given in the optic array not only for the present but also for the immediate future.

Another important kind of motion-produced information is produced by changes of *occlusion*.¹³ Occlusion itself, of course, is a limitation on vision. Unlike Superman, we cannot see through walls: from any given station point, most of the world is hidden behind occluding objects. To be sure, other (non-visual) perceptual systems are less limited in this way: if we are lucky we can hear a waterfall half a mile away through the trees, or, if unlucky, smell a goat shed on a neighboring farm. But as humans we are primarily visual animals, and our chief source of information about the environment is the optic array. As a result we are sometimes at risk for being *disoriented*—that is, for not knowing where we should turn or in what direction we should go. I will have more to say about orientation and its metaphors below.

Occlusion blocks our lines of sight, but it can also be a source of useful information. As a perceiver moves through a normally cluttered environment, objects that are fully visible from one position may be shifted behind other objects that occlude them. By the same token, new objects that were previously invisible may be revealed. These patterns of appearance and disappearance at an occluding edge precisely specify the relative positions of objects with respect to the self. The basic principle is simple: the occluded object is always farther away from the observer than the one which hides it. And even without actual occlusion, the changing visual directions of various objects specify the observer’s path of motion through the clutter: we can always see where we are and what we are moving toward.¹⁴

EYE HEIGHT

Another important source of information for the self is *eye height*: the vertical distance from the ground to the eyes of a seated or standing perceiver.¹⁵ As it happens, eye height is nearly always given in the field of view. If you stand on level ground in any ordinary environment and look in any direction, your level gaze will meet some object at some distance. It is then easy

to see just where (that is, how high up) your gaze intercepts the object in question—as easy as if there were a white stripe painted around the whole field at eye level! Given this kind of information, no one needs a mirror to see how tall they are.

The perceiver's eye height is not specified in absolute terms, but only with respect to objects in the field of view. There is a two-way relationship here. In one direction, eye height specifies your own size: taller than this table, say, but shorter than that doorway. In the other direction, it specifies the sizes of objects: some of them are bigger than you, others smaller. Ever since you were about a year old—or whenever it was that you first stood up—you have been assessing the sizes of objects in relation to you as well as your own size with respect to those objects. Self- and object-perception do go together, and very closely indeed.

HAPTIC PERCEPTION

Vision is by no means the only source of information about the ecological self; several other perceptual systems are relevant as well. One of these is the *haptic* system, also called “dynamic touch.” Haptic perception is not based on a single identifiable organ like the eye or the ear but on a rich complex of receptors and nerves situated in the skin as well as in underlying tissues, muscles, and joints all over the body. Michael Turvey and his colleagues at the University of Connecticut have studied the exteroceptive capabilities of this system in a series of important experiments. In their basic study,¹⁶ the subject held a rigid rod in one hand and wielded it by flexing the wrist. A screen concealed both rod and hand; the task was to match the length of the unseen wielded rod to another length that was plainly visible in the field of view. Judgments were quite accurate, and the task was surprisingly easy. It turns out that critical information about the length of the rod is available in the sheer mechanics of the situation: the moment(s) of inertia of the hand-rod system rotating around an axis in the wrist. Those moments of inertia are the stimulus information to which the haptic system is tuned.

Why is this finding important for self-perception? In fact, all of us “wield” our own arms and legs in much the same way that Solomon and Turvey's subjects wielded their unseen rods. They rotated rods around their wrists; we rotate our forearms around our elbows and our whole arms around our shoulder joints. The same inertial variables that make it possible to perceive the motions and lengths of handheld rods also provide a basis for perceiving the motions and lengths of our limbs.¹⁷ In other words, they provide information about the ecological self. Perhaps it would make more

evolutionary sense to describe this relationship the other way around: dynamic touch not only underlies haptic self-perception but also enables us to wield rods—and all sorts of other tools—effectively. Using tools is as easy and natural as using our own bodies, because both activities depend on the same forms of information and the same perceptual system.

This brings us to an interesting and perhaps unexpected property of the ecological self—namely, that it is not co-extensive with the body. Anything that moves *with* the body is perceived as a part of the ecological self, especially if its motions are deliberately produced. The motions of the car you drive or the hammer in your hand are experienced just as directly as those of your own arms and legs. You may not *think* of the car or the hammer as parts of yourself (i.e., they are not included in your self-concept), but nevertheless you *perceive* them as parts of your (ecological) self while in the act of driving or hammering. This paradoxical condition can disappear in the case of permanently attached “tools” like wooden legs and prosthetic arms, which become so familiar that we eventually accept them into our self-concepts.

THE ECOLOGICAL SELF IN INFANCY

In some situations, vision and haptics provide information about the same event simultaneously. When we look at our hands, for example, their positions and movements are specified by both systems at once. Indeed, there is a third source of information in these cases. Our hands typically move as we *intend* them to: we can control them as we wish. It is little wonder that young infants spend so much time looking at their own hands; what else could possibly be as interesting?

Legs can be just as intriguing. In a well-known experiment by Lorraine Bahrnick and John Watson,¹⁸ five-month-old babies were placed on their backs in such a way that they could not see their own legs directly. What they saw instead was a pair of television monitors mounted side by side, each showing a pair of infant legs wearing identical baby pants. One of the monitors showed the baby’s own legs in real time; the other showed a videotape of the similarly-clad legs of another baby. The young experimental subjects clearly distinguished the two displays, as evidenced by the fact that they looked mostly at the foreign legs—the pair that they could not control. Five-month-olds can certainly distinguish self from non-self! This experiment (and many others like it) clearly refute the familiar psychoanalytic claim that infants do not distinguish themselves from the world around them. It also refutes the notion that babies have no sense of self until they can recognize their own images in the a mirror, an achievement which at five months is still more than a year away.

What Bahrick and Watson's subjects perceived—what all normal babies and all normal adults perceive in a great many different ways—was the *ecological self*. This self is no metaphor: it exists and is perceptible. It is a fact of human life that we are continuously aware of ourselves as physically located and active in a particular environment. We are not alone in this: many animal species surely have the same experience. They too are situated and perceive their situations, act and perceive their actions. Nevertheless, some ecological selves are more fully specified than others. Like many other terrestrial vertebrates, we humans experience our bodies visually as well as haptically, i.e., we can see ourselves. Primates like us, endowed with mobile eyes set in a mobile head, are especially fortunate: we can readily see all our own limbs and even a good part of our torso. In contrast, consider the limited information available to fish as they swim in the sea. Not only do they have no limbs to look at, but their eyes are fixed in the sides of not-very-movable heads; as result, they can hardly see their own bodies at all. My guess is that the self-awareness of fish—that is, their perception of their own ecological selves—is far less rich and less articulated than that of primates like us.

Ecological selves are always situated in environments, in which there are almost always many possibilities for action. Over there is a path that affords walking, a tree that may afford climbing; here is a stone I might pick up, an apple I might eat, a person I might engage in various ways. All of us are continually confronted by a wide range of such affordances,¹⁹ and we are always choosing among them. In acting on those choices we take real journeys (that is why we understand “life is a journey”) and put things into real containers (that is why it is so easy to think of category membership as containment). The ecological self is an active, embodied chooser in a specific environment. Come to think of it, that's pretty close to what George Herbert Mead said about the *I*.²⁰

METAPHORS OF INDEPENDENCE AND INTERDEPENDENCE

Having defined it as well as I can, I must now return to my claim that the ecological self is the source of many familiar metaphors. Some of those metaphors appear in the discourse of philosophers and psychologists, some in everyday language, some even in various religious doctrines. In conclusion I will suggest that a related metaphor underlies the perpetual human fascination with vistas and high places, and with the experience that Kant called “sublime.”

As we have seen, it was William James who first talked about “the sum total of all a man can call his” as if it were a person in its own right (the

“me”). Since then many others have used the same metaphor, but are they wise to do so? Does it really help us understand the self-concept, or does it just introduce another source of confusion? Let us consider a contemporary example. A number of social and cultural psychologists, most notably Hazel Markus and Shinobu Kitayama,²¹ have recently stressed an apparent difference between self-concepts in “Eastern” and “Western” cultures. This often comes down to a simple contrast between the United States and Japan: Americans are said to prize independence and uniqueness, whereas Japanese defer more to the interests of the group. That’s why the politically correct thing to tell American children nowadays is that each person is special and unique and important in his or her own way—a mantra far less common in Japan and other Asian countries.

There are good reasons to believe that such a difference exists. Americans certainly do emphasize the importance of personal achievement; Asian cultures do typically stress group harmony and group success. A related difference appears when people are asked where they stand on various personal characteristics. Americans, whose self-esteem depends so heavily on their sense of personal achievement, typically rate themselves well above the mean on almost every desirable trait. This is Garrison Keillor’s famous “Lake Wobegon effect”: in that wonderful Minnesota town, all the children are above average. But there may be no such town in Japan: Japanese informants typically rate themselves as about average—or even below average—on desirable characteristics.

When Markus and Kitayama first presented these findings in the 1991 *Psychological Review*, they summarized their data by saying that Americans tend to have “independent” selves while Japanese tend toward “interdependent” selves. From my perspective, this was not a happy turn of phrase. Whatever the merits of the contrast they proposed, it cannot possibly apply to the self as a whole. In particular, *ecological* self-perception must be much the same in Japan as it is everywhere else. People have bodies, pick up optic flow information, and wield their own limbs in similar ways all over the world. Partly in recognition of this fact, Markus and Kitayama have changed their terminology in more recent papers. They now describe the contrast as pertaining not to the self as a whole but to “selfways,” patterns that cultures make available as models for thinking about oneself.²² What may differ between East and West, then, is just the self-concept.

Even this hypothesis may be questioned. Does such a sharp contrast do justice to the complex self-knowledge of real Americans and real Japanese? After all, both kinds of self-concepts must exist in both cultures. Americans know about interdependence as well as independence, and in many situations they value it highly. By the same token, Japanese are surely aware that different individuals have different traits and different goals. Whatever the

averages may say, then, it seems likely that both kinds of self-concept are at least somewhat available everywhere.

A more important problem is that all the data cited by Markus and Kitayama are based on verbal reports. The subjects are always asked questions: what they think about themselves, what is important to them, where they rank on a given trait, how they would describe someone they know. Even when the pattern of such responses seems to support a given distinction, we must remember that language has its limits. Some things are notoriously hard to put into words, and self-concepts are among them.²³ For my part, I catch myself in confusion and contradiction whenever I try seriously to describe myself or my beliefs; others have surely had the same experience. The fact is that self-concepts are not specific and well-defined at all; they are murky and incoherent, poorly organized and full of surprises. Is this not one of the main discoveries that patients make in psychotherapy?

If self-knowledge is typically confused and complex, why do simplistic notions like “the independent self” and “the interdependent self” have so much appeal? I think it is because they draw on a plausible metaphor: namely, the metaphor of the ecological self. Here again, as in William James’s *Principles*,²⁴ one self is standing in for another. A phrase like “the independent self” tempts us to visualize an individual, alone, standing tall, perhaps striding along and forcing a way through obstacles. Such an image, perhaps sharply defined, may tempt us to think of self-concepts as equally sharp. The notion of an “interdependent self” also draws on ecological metaphors: it may elicit images of people holding hands, supporting one another, perhaps moving along together. Such metaphors seem to suggest something concrete, visible, and bounded—characteristics that self-concepts do not have in fact.

OUTER AND INNER

So far we have focused on concepts proposed by psychologists and philosophers, like James’s *me* and Markus and Kitayama’s *independent self*. But laypersons have self-concepts, too, and everyday language may be able to tell us something about them. George Lakoff has pointed out that self-metaphors in English often seem to involve two distinct individuals—a *subject* who has conscious experiences, and a bodily *self* who acts in the world.²⁵ When we say “I lost control of myself,” for example, it seems that one person—call him or her the “subject”—has lost control of another person—the “self.” Many common figures of speech exhibit this dualism: “I wasn’t myself yesterday,” “I disappointed myself,” “I have to be more self-possessed.” In all these locutions there is both an inner and an outer person.

The outer one seems much like the ecological self, but who is the subject inside?

Whoever he or she may be, we at least know that the subject is private. No one else can tell what you are really thinking right now, for example, or whether this paper is already beginning to give you a headache. That's why my 1988 theory included a category called the *private self*: the self as known through subjective experience.²⁶ That self can have surprising properties. One might think, for example, that at least the gender of the inner subject would be dictated by the sexual equipment of the ecological self. But even this is not necessarily the case: people who request sex-change operations often describe themselves as "a woman trapped in a man's body." It is apparently not a comfortable state.

Is the inner subject just another ecological metaphor? Not exactly: "inner" is an ecological notion, but "subject" is not. We do not gain access to private experience via perception,²⁷ so what we find there cannot be an ecological self. Many salient mental experiences are not based on direct perception at all—dreams and images, thoughts and feelings, pains and pleasures. It is those private experiences, contrasted with perception of the ecological self, that give rise to the duality that Lakoff describes with the terms "subject" and "self."

Nothing stays unmetaphorical for long. Once we notice the subjectivity of some of our experiences, which children probably do around age four or five,²⁸ we start to theorize about them. How can these mysterious private experiences be explained? One obvious possibility is dualism: we attribute them to a special and mysterious inner person. George Lakoff once told me that, in the course of a lecture at some California workshop, he asked members of the audience to raise their hands if they believed they had an inner, as yet unknown self. Every single hand went up! Of course that was in California, but the rest of the country is not far behind. A visit to the psychology section of any mainstream bookstore leads little doubt that many Americans are still actively searching for their inner selves.

The existence of private, non-perceptual experiences is a fact, not a metaphor. Nevertheless, theories about those experiences often draw on ecological metaphors in one way or another. This is certainly true of many religious belief systems: it's not the body that matters, we are told, but the soul. To be sure, there are some respects in which the soul is definitely *not* ecological: it is thought to survive the death of the body, which ecological selves certainly do not. But where do souls or spirits or subjects go when the body dies? Across the main spectrum of religious belief, there seem to be two alternative possibilities. One is that they just stay in the real world with the rest of us, but as ghosts or ancestors. The other is that they go on to some other world—Heaven or Valhalla or wherever—which is not too dif-

ferent from this one except better (or, for the unlucky ones, worse). Either way, the surviving spirit is still a self-aware, perceiving, acting individual located in some sort of perceivable environment—a sort of quasi-ecological self.

IDENTITY AND ORIENTATION

What I have been calling the self-concept or conceptual self may also be called one's *identity*: it is the answer to the question "Who are you really?" To speak of identities is to emphasize the importance of self-concepts for how we live our lives, how we make our basic choices. We care about them. I think of myself as a man, a husband, a father, an American, a scientist; all these categories matter to me. Someone else's identity might include being a Catholic, a Republican, an athlete, a patron of the arts. Identities like these have significant consequences; in particular, they have *moral* consequences. Our identities determine (or at least we believe that they should determine) what we choose to do with our lives.

In this area, too, ecological metaphors often seem appropriate. "To know who I am," Charles Taylor says, "is a species of knowing where I stand. My identity is defined by the commitments . . . within which I can try to determine from case to case what is good, or valuable, or what ought to be done."²⁹ Yes, indeed, and "where I stand" is clearly meant as a metaphor of the ecological self. Taylor goes further to speak not only of "standing" but of orientation, which is quite a different matter. "To know who you are," he says, "is to be oriented in moral space."³⁰ Orientation is another metaphor, and a very productive one at that. There is a whole family of orientation-relevant expressions: having a direction, looking for the right path, feeling lost, not knowing which way to turn. All these metaphors draw on our experience of being situated in a real environment. Most life decisions are not literally choices between paths in an environment, but it seems right to describe them that way.

Taylor notes that people who lose their moral orientation are in serious trouble. So they are, and the same thing is true of actual orientation: people who don't know where to turn in a forest are in serious trouble too. This kind of genuine (as opposed to metaphorical) disorientation can happen quite easily in real forests, because the information available to perception is so local in character. We can see our own immediate situation, but that's all; the rest is occluded. We may spot what looks like the beginning of a trail, but not where it may lead. To observe that two paths diverge in a wood is easy; to know which one to take is difficult. Literally as well as metaphorically, our choices do not always take us where we want to go.

We could overcome this difficulty if we could somehow look at the environment from above. Such a look—a “bird’s-eye view”—would immediately orient us with respect to the larger environment in which our local situation is embedded. W. H. Auden once put it this way:

Anthropos Apteros, perplexed
To know which turning to take next,
Looked up and wished he were the bird
To whom such doubts must seem absurd.³¹

THE SUBLIME

Birds do indeed have an enviable overview of the terrain below. They never need paths, and their view of where they are going is rarely blocked. Many birds even have access to other non-occludable sources of information such as magnetic fields, polarized sunlight, and consistent sources of odor. As a result they are almost always well oriented; *Anthropos Apteros* was quite right to envy them. We terrestrial types, in contrast, have to slog along the ground past one occluding object after another. If we have no compass (and no access to modern satellite navigation systems), we may easily become disoriented. This can be dangerous, just as being without a moral compass among the difficult choices of life is also dangerous. Wouldn’t it be wonderful—in the real world as well as in the moral metaphor—if we could somehow overcome the limits imposed on us by occlusion? If we could be as well oriented as a bird, even with our feet still on the ground?

In fact, this sometimes happens. More exactly, it happens in certain *places*. There are terrestrial locations where even we foot-slogging humans can have a bird’s-eye view, where we can see vistas, directions, and distant goals while still keeping our feet firmly planted. Any relatively high place—that is, high by comparison with its surroundings—makes this experience possible. The paradigm case is a mountain peak, though tall buildings often serve the same purpose. On the mountaintop, the whole world seems to be spread out before us. We can see all the facts of the matter; nothing is hidden. Like birds, we are fully oriented: we not only see how things are and where we are, but also where we might want to go next.

I think this is why almost everyone loves to be in high places and look at the view. To be sure it is best not to stand at the very edge: most of us are more comfortable when the surfaces within immediate reach of our feet afford stepping and standing rather than falling. But despite all the fears and dangers involved, people often go to immense amounts of trouble to reach the tops of mountains. They may climb and climb for days or even weeks,

especially if the mountain in question is at least locally the “highest” and thus by definition affords an unobstructed view. Less-dramatic expeditions—afternoon hikes to the top of some eminence close at hand—are undertaken on every pleasant weekend by thousands of ordinary people. On the same weekends, thousands of other people drive along narrow roads in high places just to enjoy the view. They stop repeatedly at turnoffs where unnecessary signs mark “scenic overlooks,” exclaiming with pleasure as they gaze down on the surrounding countryside. Why do they do this? What makes such views so attractive?

One answer to that question comes from Immanuel Kant’s famous essay on the sublime.³² Kant argues that great vistas and other natural marvels are edifying and inspiring because they remind us that nature is great but that human reason is even greater. That may well be so (at least it was probably the case for Kant himself), but my own hypothesis is more prosaic. To stand on a mountaintop is to be in a very unusual perceptual situation. One’s eye height is enormous: the optic array specifies that one is very much taller than anything else around. It is like being a giant, only more so. We have all spent our whole lives being larger than some things but very much smaller than others; on the mountaintop, at last, we are larger than everything.

There is also another, more metaphorical side of the experience of high places. As we look around, we are aware that we have transcended the usual limitations on perception. We still are situated ecological selves, but for once we are also fully oriented. Nothing occludes our view. At such a moment it is easy to make the metaphorical move from the ecological self that acts to the moral self that chooses, from the real environment around us to the larger world of possibilities for action. For a little while, at least, we know just where we are and can see where we might want to go. We are *oriented* ecological selves, a status rarely achieved in ordinary life. No wonder, then, that the experience feels so sublime. It is the best—or at least the most exhilarating—of all the metaphors of the ecological self.³³

NOTES

1. *Principles of Psychology* (New York: Henry Holt, 1890; reprint, Dover Publications, 1950), 291.
2. *Ibid.*
3. *Ibid.*, 371
4. Mead, *Mind, Self, and Society* (Chicago: University of Chicago Press, 1934).
5. *Ibid.*, 140.
6. “Five Kinds of Self-Knowledge,” *Philosophical Psychology* 1 (1988): 35–59.
7. G. Lakoff and M. Johnson, *Metaphors We Live By* (Chicago: University of Chicago Press, 1980).

8. Since the 1988 paper cited above, I have elaborated on the ecological self in articles such as "Criteria for an Ecological Self," in *The Self in Early Infancy: Theory and Research*, ed. P. Rochat (Amsterdam: North Holland-Elsevier, 1995), 17–34, and "The Roots of Self-Knowledge: Perceiving Self, It and Thou," in *The Self across Psychology: Self-Recognition, Self-Awareness, and the Self-Concept*, ed. J. G. Snodgrass and R. L. Thompson (New York: New York Academy of Sciences, 1997), 19–33. My edited book *The Perceived Self: Ecological and Interpersonal Sources of Self-Knowledge* (New York: Cambridge University Press, 1993) deals with both the ecological and interpersonal selves.
9. Children are active ecological selves virtually from birth, but they do not identify their own mirror images as such until they are eighteen to twenty-four months old; see B. Amsterdam, "Mirror Self-Image Reactions before Age Two," *Developmental Psychobiology* 5 (1972): 297–305.
10. J. J. Gibson, *The Ecological Approach to Visual Perception* (Boston: Houghton Mifflin, 1979).
11. *Ibid.*, 126.
12. See D. N. Lee, "The Optic Flow Field: The Foundation of Vision," *Philosophical Transactions of the Royal Society of London B* 290 (1980): 169–79, and his "Body-Environment Coupling," in *The Perceived Self*, ed. Neisser, 43–67.
13. J. J. Gibson, G. A. Kaplan, H. N. Reynolds, and K. Wheeler, "The Change from Visible to Invisible: A Study of Optical Transitions," *Perception and Psychophysics* 5 (1969): 113–16.
14. The perception of "heading" (i.e., one's direction of motion through the environment) is currently an active focus of research; see, for example, J. E. Cutting, "Wayfinding from Multiple Sources of Local Information in Retinal Flow," *Journal of Experimental Psychology: Human Perception and Performance* 22 (1996): 1299–1313.
15. W. H. Warren and S. Whang, "Visual Guidance of Walking through Apertures: Body-Scaled Information for Affordances," *Journal of Experimental Psychology: Human Perception and Performance* 13 (1987): 371–83.
16. H. Y. Solomon and M. T. Turvey, "Haptically Perceiving the Distances Reachable with Hand-Held Objects," *Journal of Experimental Psychology: Human Perception and Performance* 14 (1988): 404–27.
17. For a systematic discussion of this point, see Turvey, "Dynamic Touch," *American Psychologist* 51 (1996): 1134–52.
18. L. E. Bahrick and J. S. Watson, "Detection of Intermodal Proprioceptive-Visual Contingency as a Potential Basis of Self-Perception in Infancy," *Developmental Psychology* 21 (1985): 963–73.
19. The term "affordance" was coined by Gibson, *The Ecological Approach*.
20. See n. 4 above.
21. H. Markus and S. Kitayama, "Culture and the Self: Implications for Cognition, Emotion, and Motivation," *Psychological Review* 98 (1991): 224–53.
22. H. R. Markus, P. R. Mullally, and S. Kitayama, "Selfways: Diversity in Modes of Cultural Participation," in *The Conceptual Self in Context*, ed. U. Neisser and D. Jopling (New York: Cambridge University Press, 1997), 13–61.
23. The anthropologist Frederik Barth provides an insightful discussion of this problem in "How Is the Self Conceptualized? Variations among Cultures," in *ibid.*, 75–91.
24. See n. 1 above.
25. Lakoff, "The Internal Structure of the Self," in *The Conceptual Self*, ed. Neisser and Jopling, 92–113.
26. See n. 6 above. My argument is that people have five different sources of information about themselves, and that for purposes of discussion each source can usefully be

- regarded as establishing a separate “self.” The ecological and interpersonal selves are based on perception; the conceptual, private, and temporally extended selves on reflection.
27. I think Sydney Shoemaker agrees with this; see “Introspection and the Self,” *Midwest Studies in Philosophy* 10 (1986): 101–20.
 28. There are no strong data on this point; my estimate is based partly on modern “theory of mind” studies and partly on memoirs of childhood.
 29. C. Taylor, *Sources of the Self* (Cambridge, Mass.: Harvard University Press, 1989), 27.
 30. *Ibid.*, 28.
 31. “The Labyrinth,” in *Collected Poetry of W. H. Auden* (New York: Random House, 1945), 9–11.
 32. Kant, I., *Observations on the Feeling of the Beautiful and Sublime*, trans. J. T. Goldsmith (Berkeley: University of California Press, 1960).
 33. An earlier version of this paper was given as a presidential address to the Southern Society for Philosophy and Psychology in New Orleans, in April 1998.