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THE HUMAN CONDITION:
Some Formal Aspects

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I. Cleaning Out the Swamp: Experience and All That

I must say, if somebody had come to me six months ago and said, "How about giving a talk on the human condition?", I would have said "Yecch!" My experience has been that people who talk about the human condition tend to be insufferably profound, whereas my style is to be practical and pragmatic. So the subtitle of the talk, namely, 'some Formal Aspects", is a warning not to expect wisdom and profundity but to be prepared for a consideration of some formal aspects of the domain of persons and behavior. And it's because these considerations apply to the entire domain of persons and behavior that there is that point in talking about "the human condition."

I'm in the same position as Tony was yesterday, namely, three hours is not nearly enough; and I will do what he did, namely, put in enough of the pieces and hope that the pattern emerges. Just to spare you some unnecessary suffering, we've divided this into three segments with some breathing room in between.

By way of leading into the first segment, let me tell you how I came to be interested currently in this strange notion of "experience". As many of you know, for many years I've been peripherally involved in what press releases call "the leap into space", starting from the first lunar mission, through the current plans to build a space station, to send a manned mission to the moon, and to send a manned mission to Mars. Because of that, I've had some contact with many of the problems that arise in connection with these kinds of activity even when I'm not actively involved with them. Just being in the milieu, you come in contact with these problems.

A case in point is what is currently being called "the optimum mix problem", or simply "the mix". What this refers to is this: with respect to something like the space station or a lunar mission or a man-to-Mars mission, everybody takes it for granted that the mix is going to include people, mobile and more or less intelligent robots, robots that are not intelligent that you control at a distance, automated machinery, and

communication systems. The question is, “What is the optimum mix to make this effective, to do the job well?”

As you might guess, there are all kinds of trade-offs, and there’s no simple answers. One of the main trade-offs is this: it’s between the robots and the people. The trade-off is that robots are expendable and people are not. But conversely, people have capabilities that robots don’t. One is ground for sending out robots, the other is ground for sending out people instead of robots.

In this situation, just cutting through all the other trade-offs, it’s clear that the thing to do is to push to the limits, the extent to which the robots are human-like. This raises a couple of interesting questions. The first is: is it just a technical problem to make robots human-like, something that more money, more computers, faster computers, more engineers would solve? Is it the kind of problem that you would solve that way? Or is there some in-principle difficulty? The other question that arises as soon as you start talking about human-like robots is: “What is it to be human? What is this target?”

As it turns out, the answer to those two questions come out pretty much the same. The answer to “Why isn’t it a straightforward problem to build a robot that’s like a person?” is that people have experience and robots don’t. Not only don’t they, there is no known way to arrange it so that they do. So it doesn’t look like simply a technical problem that you throw more things at.

The second one is a little more indirect: “What is it to be a person?” There is in Descriptive Psychology already a definition of a person, and if you didn’t get it in the tutorial, it goes like this: “A person is an individual whose history is, paradigmatically, a history of deliberate action". That’s a very robust definition in the sense that it’s been used in all kinds of places, it’s never failed us, never created problems for us, the definition fits the phenomena. On the other hand, there’s nothing to keep us from asking, and there is some point in actively doing so, the question, “Is there any other definition that’s even plausible?” And it turns out that there is: “A person is an individual whose history is, paradigmatically, a history of experience”.

That’s subject to all kinds of controversy. But let me just give you a simple thought experiment to illustrate why I think that that one is compelling. Imagine you’ve got somebody here, her name is Jane, she had a normal birth, all of her vital signs are clear, normal, nothing wrong, and she’s been in a coma since she was born. She has lived sixty years, and suddenly her vital signs start going haywire, and lo and behold, she’s dead, and her ashes are scattered over the Pacific Ocean. One of the things that you could say, with very little fear of contradiction, is that she never lived. Isn’t that what you would say? She never lived.

You could also say she did—she lived, but she didn’t *really* live. Or you could say, well, she lived the life of an organism but not the life of a person. As an organism, she did everything that a normal organism does if you’re a member of that species, but she had zero human experience. She didn’t at all live the life of a human being.

That does two things. It says that definition seems to be on target. It also says anybody who makes too strong a connection between being a person and being an organism is going to wind up in left field. Here is a neat, simple case where you have an absolute separation: a totally normal life as an organism, zero life as a person. That's how come I have a current interest in this crazy notion of experience.

Why do I say "crazy notion"? I'm being kind. There is a set of terms that are notable for their intellectual noxiousness. Some of the central terms are "experience", "consciousness", "awareness", "feeling", "perception". Others that are more on the fringe are "the normal waking state", "intuition", things like that. Why are they noxious? These are terms that have been so used, misused, abused, that they have no meaning. It's almost impossible to communicate anything to anybody by using these terms. Just out of sheer perversity, I looked in the dictionary. Under these five terms, I found a total of thirty meanings. There is no single one of those five that doesn't have at least one of the others as a synonym. There is no pair of those that don't have one or more other terms as synonyms of both of them. Given that, it's not surprising that people have used these terms in all kinds of strange ways. I think it was George Orwell who said, "The slovenliness of our language makes it easy to have foolish thoughts".

It was my impression initially that to be able to make some of these terms usable, and particularly the notion of experience, you would have to do a systematic job of clarifying this whole domain. That's why I called it "cleaning out the swamp". Fortunately, I think that's not necessary, that what we really need for the task at hand is, not that the job doesn't need to be done, but for the task at hand, it's enough to clarify certain uses that we want to understand. We might say, the bottom line is that we don't have to clean out the swamp; we just have to be able to tiptoe through the tulips.

I want to call your attention to three different cases in which we might talk about experience. The first case is what you might think of as the most straightforward, namely, we experience the world and ourselves. Normally and normatively, doing that is a case of finding out something about the world. There's a cow over there, and I look, I see a cow. Two things: one is, I find out there's a cow there. Two, I find out that what I'm doing is seeing the cow. So in this case, it's simply a matter of being in touch with the world, including myself.

This involves any of the sensory modalities. I can see the cow, I can touch the cow, I can smell the cow, I'm not going to say that I taste the cow, but there are other things that I could taste. And then with respect to myself, I can feel. I can feel my moods, I can feel headaches, I can feel pains, I can generally feel my states. *All* of those are part of the world. I'm part of the world; my states are part of the world; there being a cow there is part of the world. And that's how we normally operate in real life. When you walk in the room, you simply take it that there's a bunch of chairs and a long row of tables, etc., and you sit in them because that's what you do with chairs in the real world. One of the features of this case is that we do this without any basis at all. When I look over and see a cow, and find out that there's a cow there, that's where I begin. I don't begin somewhere else and wind up with there being a cow there. I don't have to find out something else first, and then from that I find out that there's a cow. There is nothing

preceding it. There is no basis from which I get to the fact that there is a cow there. It starts with my seeing it. This is an aspect that's familiar, and it's generally discussed under the heading of "Experience is direct, unmediated, intuitive".

That's Case 1. That's one of the cases where we talk about experience. Case 2 is quite different. "He has ten years' experience as a salesman." Or we say, "As a child, he experienced constant abuse during his early years." Both of these are now talking about a biography, a historical episode that the person participated in, was part of, lived through. Part of what goes with that is that we expect certain consequences. If somebody has had ten years' experience as a salesman, we expect that that experience has had certain effects. In general, these are person characteristics. We expect certain kinds of knowledge, certain kinds of skills, certain kinds of attitudes, certain kinds of values**.** Life experiences make that kind of difference, and so if this guy has had ten years' experience as a salesman, we expect those kinds of consequences.

As I say, this is a very different case from Case 1, where I look over and see a cow. On the other hand, there is a connection, namely, that if he had ten years' experience as a salesman, we also expect that he had certain kinds of experience that fit Case 1. If you knew that the only experiences of Case 1 that he had during those ten years was that he was wandering through burning buildings and had that *—falling all over, you wouldn't expect those ten years of experience to have the same effects. So having those effects depends on his having the right kind of Case 1 experience. Even though they're very different senses of "experience", they are connected that way.

Case 3: there's a cow over there, and I look over there and I say, "There's a buffalo". What do we do with that? We could say, "my experience is the experience of seeing a buffalo"; you could say, "I experience the buffalo being over there". We could say, "There's a cow there, but I saw a buffalo". We could say, "There's a cow there, but I experienced a buffalo". We could say, **"I** saw a cow, but I experienced it as a buffalo". We could say, "I didn't experience the buffalo; I experienced the cow, but I experienced it as a buffalo". That's only the beginning. Imagine what happens if I had the experience of the person who's *—me is his experience that it's my experience that that's a buffalo, and on and on. That's part of the noxiousness of this set of notions, that when you have a phenomenon like that, and language like this, there's no effective way to pin down the facts that are necessary to understand what's going on, or to communicate them, or to be clear about them. I won't say that it's literally impossible, but I've never seen it done—unlike baptism.

This case, Case 3, is the one that creates all those problems. Those problems have a long history, and so far they are hopeless problems in that there have been no good solutions. It's Case 3 that leads us to say either, "Everybody lives in his own private world" or "All we really have direct access to is our own experience". How many times have you heard some version of that? "All we really have access to is our own experience." What is this thing called "experience" that is the only thing that we really have? You can give your own explanations; let me give you a diagnosis.

Let me take advantage of Joe Jeffrey's talk yesterday. Remember that equation he put on the board, and there was a little coefficient called A. Somebody asked, "What is A? What is that?" He said, "What that does is, it reflects a lot of different influences, and A stands for the total influence of one generation on the next." Notice that this A is a kind of artifact. It's called for by the equation, but it doesn't correspond to how things are happening out there. It's simply a requirement of the mathematical framework. We have something similar in psychology. What we have are machine theories of mental processes. We have different idioms: we have mechanical idioms, we have physiological idioms, we have phenomenological idioms, but machinery is machinery whether it's biological, phenomenological, or whatever. Machinery is machinery.

Now machinery requires real things to make the wheels go around. It requires real things to serve as causes for further effects down the line in the machinery. You can't have machinery operating on imaginary parts. Experience is part of the machinery. It's part of what makes behavior go. It's part of what makes the processes go. Therefore, it has to be a real something. This notion is embodied in what I think is a familiar model—call it the television model—namely, that our experience is kind of like a television screen which has some connection with something beyond it, but basically all we can do is look at the television screen. That's the force of saying, "All we have ever have is our own experience", that we have something like this television screen, but of course it's multimedia because we have five senses, plus a sixth. But there it is, and it's all we have, and maybe there's some connection beyond it, but this is what we have. That raises problems. By and large, they are homunculus problems. How do I get access to my television screen? Do I need a second television screen to give me access to the first one? After all, if there's some problem in making contact with the world, the world is real, if this television screen is real, there's going to be the same problem in making contact with my own television screen. I'm going to have to look at it. That's what I had to do with the cow.

The television screen appears in the literature in the form of unexperienced experience, unconscious experience, unsymbolized experience. There it is: it's there, but we don't see it. It's like the cow is there, but I don't see it. Or distorted experience: it's there, and I see it, but I make it into something else, just like I look over at the cow and see the cow as a buffalo. So all of the original problems of making contact with the real world are going to get reproduced in making contact with our own television screen. That's one of the things you bought into in making that television screen a real something. But it had to be a real something in order to make the machinery work.

It means that if we insist on machinery models, we're stuck with that television screen. Are we going to insist on machinery models? You bet we're not. On the other hand, there's a problem with that, too, that if we come from the kind of theories we have, with experience as a real something, if we try to dispense with experience, we're going to feel guilty because we're ignoring something real. It's going to feel like an evasion rather than a solution. And we will be accused of that. "What good is a theory if it can't say anything about experience?" It might be possible just to ignore all that, and just go directly after what we want, but if there were a way of exorcising this thing, that would probably be preferable.

[change tape]
*—Let me begin with a reminder.

There is no way to describe experience. I'm sure that the reaction is going to be, "What do you mean? I do it all the time." Let me suggest that you don't do it all the time, and that we don't describe experience, and can't, that we do something else instead. What do we do? Well, we have ways of distinguishing one experience from another, and the primary way we have of distinguishing one experience from another is to say what it was the experience of. "I had an experience of the cow." That makes it a different experience than if I had an experience of a chair. But notice that those aren't descriptions of the experiences; they're the descriptions of what they're the experience of. That's familiar in the literature, and it's generally discussed under the heading that experience has an intentional aspect, that it's inherent in the notion that experience refers to something beyond itself.

That's okay, but if experience is going to refer to something beyond itself, and it's a real thing, then it had damn well better have some characteristics of its own that *enable* it to refer to something beyond itself. Specifying what the experience is of does not get at any characteristics of experience that would enable it to refer to something.

We also distinguish experiences by whose experience it was and under what circumstances. I'm standing here, and the cow is there, and I'm looking at the cow at ten o'clock on Saturday morning. That's the experience I had then. It was my experience under those circumstances. Notice that none of that is a description of the experience. It's a description of whose and the circumstances. Those two things, whose it was, and under what conditions, and what it was the experience of, probably account for about ninety-five percent of what we would normally say was a case of describing our experiences. And they are not descriptions of our experiences.

The remaining five percent is where we describe the relation of this experience to something else. For example, if I say I had a sudden experience, I'm talking about a sequence of experiences and the place that this one has in it, in relation to the others. If I say I had a thought-provoking experience, I'm talking about the effect that experience had on me. If I say I had an impressive experience, I'm talking about the comparison of this experience with others on a scale of impressiveness. None of that is a description of the experience.

The net result is that we have no descriptions of any experience. As far as we can tell, experiences have no characteristics whatever. There is nothing they have that would enable them to refer to anything. If we were not so invested in the notion, it would be very easy, just on that basis alone, to say, "Well, obviously there's no such thing as experience." You can't give up your sins that readily. The notion is too well embedded in our psyches to just drop it like that. But that's a beginning.

A different aspect of the exorcism is: if it isn't a real something, what the hell is it? And we can say something about that, too. Remember Case 3: the cow there, and I look over and say, "There's a buffalo." That serves as a powerful reminder that I can be

wrong. You can be wrong. Now if there's a cow standing here, and I see it, and you look over at it, and you say there's a cow, normally I would say, "He sees the cow." When I say, "He sees the cow," I'm endorsing something that he's claiming, namely, that there's a cow there. Sometimes I want to play it safe. I don't want to endorse that there's really cow there, even though he says so, and even though I believe that he's being sincere. What do I say in those cases? The old, familiar list: he experiences a cow, he believes there's a cow there, he perceives a cow, his experience is that of seeing a cow, his awareness is the awareness of a cow, he's conscious of a cow. All of those terms have in common that they are noncommittal in respect to the reality of the damn thing. To say that he experiences or is conscious of or is aware of, etc., is to be noncommittal about, "Is there the thing that he is conscious of.?" So if I say he experiences such and such, it is a way of being noncommittal. Those terms are what I call "disclaimer terms", because they are ways of being noncommittal about something.

Disclaimers are part of the pragmatics of discourse. They're part of the politics of human interaction. Recall Fernand, in his presentation yesterday, when he was talking about some Filipino schools that say, "Always get along, and that means that you talk obliquely, you never make a straightforward claim." Remember his case about five guys trying to decide which restaurant to go to? Nobody wanted to say, "Let's go to this one." That's part of the politics of interaction. Disclaimers are part of the politics of interaction. It's a case of playing it safe, of not being overbearing, of not making claims that you might have to back down on, of leaving room for the other person to get a word in first. Clearly, there's utility in them. But there is one thing that a disclaimer is not, and that is: it's not a reference to anything.

If you put those two pieces together, namely, that experiences have no characteristics, that there is no way to describe them, and secondly, that the use of that kind of terminology is a disclaimer, a way of being noncommittal, and that that does not constitute a reference to some special phenomena, about that time you might begin to see your way clear to saying, "Well, maybe we can get along without this notion". Maybe we're not missing anything if we don't have that in the picture.

It's a truism that you don't give up bad habits unless you have something new to take its place. Let me suggest something new to take its place. To do another simple thought-experiment: Suppose that every place where we want to say "he experiences X", we say, "For him, it was as if X". Would we have the same understanding that we have now when we say, "He experiences X"? Would our understanding have changed? I want to suggest two things: one, that it wouldn't, and the other, that it shouldn't. "For him it was as if"—

Question, mostly unintelligible.

Peter: For him it was as if the world was a wonderful place. For him it was as if the world was a joyful place. You can make up the thing to fit whatever you think the phenomenon is.

Notice something, that this brings us back to the second alternative that I just glossed over. Remember, after Case 3, I said that this is what leads us to say, "Everybody lives in his own private world" or "my experience is the only thing I really have". Notice the connection between "For him it was as if" and "He lives in his own private world". So talking about worlds, then, is an alternative to talking about television screens, except that you don't want to call it a private world.

The history of philosophy in the last fifty, seventy years, there's good testimony to that effect. Calling it private is one of those redundant adjectives. It's like talking about inner feelings. What other kind of feelings are there? Outer feelings? Or inner experiences. The adjective is simply redundant. Likewise, to talk about his private experience—once you've said it's *his* experience, calling it private doesn't do anything except get you into trouble.

So we have an alternative. Why would it be preferable? In one sense, the proof of the pudding is in the eating, but one of the things we can say is, remember the kind of confusion about look at all the different things you can say in a simple case like looking at a cow and seeing a buffalo. Think of how rich, elaborate, definite, and systematic our language for talking about the world is. All of that becomes available if you talk about people's worlds instead of their experience. You have a lot more powerful resource. That leads to our second segment, which has to do with world-construction, so let me stop here and just ask for questions, with the understanding that I will pick up *—

Question. Perhaps one piece of validation of your last point is when you look at really great writers, the way they describe people's experience is by metaphor, "as if", and what you get is some picture of the world. It's really the only method we have for it. I'm noticing that the construction "as if" so and so still leaves a certain ambiguity because you would probably not be inclined to say, "For him it was as if there was a cow there" if, in fact, *—. There's still a certain disclaimer aspect, the difference between "as if" and—

Peter: That's right, it has the force of a disclaimer, but it doesn't do it by referring to a television screen. Because remember, you do want to be able to disclaim.

Question: How does it relate to Case 2?

Peter: Case 2 connects to Case 1, and those are the senses of experience that I want to retain.

Question: What about when somebody says, "I heard that and I went cold all over", or "I felt a hot feeling in my stomach". Isn't that describing the experience?

Peter: Cases like that are ambiguous, totally. You have a sensation. Do you experience the sensation, or is it enough that you just had it?

Question: Is there a difference?

Peter: Well, you've got two terms in one description and only one term in the other. Is it just another redundant adjective to say you experience the sensation?

Question: I was going to say *— I experienced hotness in my stomach seems like a groovy way of saying it was as if my stomach was hot.

Question: In that case you're not describing the experience but what you experience.

Peter: One of the other things you can do is, you can try assimilating it to Case 2 rather than to Case 1. That was an episode that you lived through. And there, if you do that, it's unspecified what the Case I-type experience was that went with it.

Question: I'm reminded when my son Joel was three and—. "What's frustration?" I said, "Well, that's like when you go to the toy store and you really, really want something, and I won't give it to you."

Question: I put your model of the television screen together with your earlier distinction between a person and an organism, and I came to the following conclusion, that as a scientist, it's okay for me to draw a boundary around an organism and analyze what *—, but I'd better not do the same thing with a person.

Peter: It doesn't raise any red flags. Notice the use of disclaimer language. Okay, let's take a break.

II. Seeing Is Better than Believing: An Exercise in World-Construction Construction

At the end of the first segment, we had generated an alternative to talking about experience, and that was talking about somebody's world. Let me give you another clinical diagnosis here.

The problems with experience arise in large part from connecting it primarily and exclusively to cognition. As a cognitive thing, it creates all kinds of problems, and the alternative I want to suggest is to connect it primarily and essentially to behavior rather than to cognition. It's in that connection, it's in that genre, that we talk about world construction. Given our habits of mind, that has an air of paradox. What is this notion of world construction?

Look, the real world is what you see when you look around you. What you see when you look around you is precisely what doesn't depend on you. The chair is there whether I think about it or not, whether I want it to be there or not, whether I know it's there or not. What is this construction business, then? What do you mean, "construction"?

Let's review the realistic basis for that. We already did the first one, namely, I can be wrong about that chair; I can be wrong about the cow. I can be wrong about anything. Secondly, different people have different views of things. Even such a mundane thing as the chair, if each of us were to walk up here and describe that chair, you'd get a lot of differences, and those would not just be from the limitations of language. Imagine: if you get differences with a chair, what you would get if somebody—if we all came up and described him? Or if we all came up—actually, we wouldn't have to come up—if we just all described something abstract like the game of chess. Or the process of raising children. Much less the process of raising children properly. Think of how much you would get in the way of differences, what a range of agreement and disagreement you would get. You might put it this way, that in the world of fact, disagreement is the rule and agreement is the exception.

From just those two things, a couple of consequences follow. Number 1, the fact that the world is a certain way doesn't force me to see it that way, nor does it force you or you or anybody to see it that way. If that were true, we would all see it the same way, namely, the way it is. From that it follows that we make an essential contribution to the world as we see it. If it doesn't force us to see it the way it is, we have a world, and we have made some essential contribution. It alone is not enough. It takes us.

That all by itself, without any of the other things that we could get into, is enough to justify saying we construct our worlds. We don't need to mean any more than that. We could, but we don't need to.

Question: When you say we construct our world, what more are you meaning than to say we see our world?

Peter: We perceive worlds in ways that they're not. Therefore, how we perceive the world depends on us in some essential way.

Question: You're meaning we see and misperceive our world.

Peter: No, we don't misperceive *our* worlds. We misperceive *the* world. In my world, there's a buffalo there, but I've misperceived the cow.

Question: Are you saying anything more than saying we construct our experience?

Peter: We don't construct our experience. In my world, there IS a buffalo. There's nothing about experience there.

Question: I mention this, because there's something called constructivism—

Peter: It may be *—because there's no reality constraints on it. If you read the edited book by Ken Gergen and Keith Davis, you'll see that if you read it, it's persuasive, it's compelling, except for the feature that as far as one could tell from his formulation, a

person ought to be able to do anything. The fact is, I can't create a buffalo there just by wanting to. There's no magic move I can make to make it the case that there's a buffalo there. So the issue of what the limitations on construction are is not well handled by constructivism.

Question: You're saying we construct our world *—.

Peter: So far, all I've said is, there's several salient facts that are sufficient to warrant talking about our constructing a world. Later on we can address the limitations on that. This just gets us into the game.

Question: When I brought in constructivism *—

Peter: There's no point in getting into its limitations if there's no point in getting into it at all. So all I've tried to do is establish that there is a point in getting into that game. I'm talking about construction. I'm talking about the person's essential contribution to the product, which is the world.

Unlike experience, we can describe the world. Let's do that. As you look around you, what do you see? You see a lot of things, but let me tell you right off the bat, to save you trouble, ultimately what you see are going to be objects, processes, events, and states of affairs. I can say that with confidence because there's remarkable unanimity about that. If there's anything that philosophers agree on, it's that. I don't know if you're familiar with the philosophical tradition of examining the question of what is there in the world; it goes back at least two thousand years.

By now there is a tremendous consensus to the effect that you can describe what there is in the world in terms of objects, and you can think of the whole universe as a big object which consists of smaller objects which consists of smaller objects, etc., in certain relationships. You can do it in terms of processes. You can think of the history of the universe as a gigantic process that involves all kinds of sub-processes that involve sub-processes, some of which involve some objects that involve some events, etc. Similarly, you can think of the history of the universe as a grand succession of events, some of which constitute processes, events which involve objects and states of affairs. And you can do it in terms of facts. That's the most recent addition to the list. You remember Wittgenstein's thing that says, "The world divides into facts, not things. The world is everything that is the case". That has stuck. So there is, as I say, remarkable consensus, because usually there is no consensus among philosophers on anything.

You can do it in each of these four ways. There's also the fact that each of these is something that you can directly observe. You certainly can observe objects. If you see me wave my hand, you're observing a process. When I stop and when I start, that is an event. And my having waved my hand is a state of affairs. Likewise, there being a cup of coffee on the top of the lectern is a state of affairs. You can see those things. You can observe them. Each of these things are things we can observe, and we can observe them in multiple modalities. You can hear things. You can see things. You can smell things. You can taste things. But they will all be either objects, processes, events, or states of affairs.

So you can say with confidence that that's what there is in the real world. Of course, they come in all kinds of varieties: there's all kinds of different objects, all kinds of different processes, all kinds of different events, and kinds and kinds and kinds of states of affairs.

Notice, I said three kinds when it comes to states of affairs. That's because the notion of states of affairs has a concealed complexity. The notion of a state of affairs is the notion of how things are. And it's not as simple as there being a cup on the lectern. There's also all of the connections and all of the regularities about how things happen. Regularities, like what causes what; necessities like if X causes Y, then Y is later than X; necessities like if this thing is here it's not also somewhere else at the same time. There's lots of these connections in that real world, and those connections enable us to traverse it systematically and easily, just like an experienced bookkeeper looks down your balance sheet and he goes this way and this way, and he has the picture. That's how we work with the real world. We traverse it easily and naturally. It's no effort at all. That doesn't mean that we don't encounter misfortunes and bad experiences, but traversing the real world is not per se difficult at all. It's the easiest thing in the world.

What's this got to do with behavior? Remember, I said the idea was that one of the mistakes we've made is to connect experience too strongly to cognition rather than to behavior. Let me try an image on you, and it's called The Desert Island. Imagine you're standing on a desert island, and it really is a desert island, namely, all that there is there is sand, and it's not very big. And ask yourself, What could you do there? You can think of things like, "Well, I can dig in the sand, I can make holes, I can make tracks, I can pile it up"—there are various things you can do there, but not a whole lot.

Now imagine that instead of being purely sand, there's a rocky cliff that's part of the island. Now ask yourself, "What could I do there?" Notice there's a lot more things you can do with a rocky cliff. You can climb it, you can stand on the top and look down, you can look down at various places, you can take some of it and take it down over here, you can take some of the sand and put it up there, you can jog around it. It's still pretty sparse in human terms, but there's sure as heck more than just a flat desert island.

Now imagine that you've got a tame fish who comes up to the shore and sort of wiggles around there, and sort of reacts to you. What can you do now? *[unintelligible from the audience]* That's one of the possibilities. *[more suggestions, unintelligible]*

Now suppose there's a few trees on the island, a palm tree and some other kinds of trees. What can you now do? Well, you can climb those trees, you can cut off branches, you can plant—do various things, again.

Now suppose you have a dog there. What can you do if there is a dog there? *[unintelligible interchange]* Well, anybody who has a pet dog knows there's lots of things you can do with a dog, a lot more than you can do with a tree. Think of what the dog can do with a tree.

And now think of having a five-year-old child there. What kind of increment is that over having a dog? That's another quantum jump, isn't it? One thing, you can talk to a five-year-old. You can engage in all of those kinds of interaction that require language—at least as much as a five-year-old can manage.

And now imagine you have an adult—Robinson Crusoe and Friday, or something. What additional things can you do then?

And imagine the difference between an adult of the same sex and an adult of the opposite sex. That takes you off in different directions.

The use I'm going to make of that image is not the usual use. Usually I use that in clinical practice. I'm going to use it now to give some content to the slogan that the real world codifies our possibilities and limitations in behavior. It codifies our behavior potential.

All of the things I mentioned are things out there in the world, and with each of them, you can experience that there's things you could do with them and that you couldn't do without them. Those things in your world provide you with opportunities for certain kinds of behavior. There are also things that you can't do with them. So you're codifying both limitations and possibilities.

If you push that a little, you say, "Well, gee, it looks like this real world that seems so independent of me is simply a bookkeeping system for codifying what I can and can't do." Whether it was designed that way, it certainly works that way, doesn't it? That's a very strong connection to behavior. It makes behavior the essence of what's out there. But we're missing an essential piece, namely, how could a person possibly do that? It's one thing to examine these considerations and say, "Well, that justifies talking in certain ways, that persons construct worlds," but there's very little point in talking that way if there's no way that a person could construct a world. There's a "how" question there that we cannot just slough off.

That's a good question: How could a person possibly construct a world? The answer is, it's easy. [passes handout of State of Affairs System Transition Rules] Glance through those for a second. What you have here is a simple formal system that has several interesting features. Number 1, notice that it brings together those four things that I mentioned (objects, processes, events, states of affairs), and it defines them implicitly in terms of one another. When you think of those four things, think of them like you think of addition, subtraction, multiplication, and division. Those are not independent somethings that we have names for. There is a conceptual, logical structure that we express by using these four terms. In doing so, it answers a question that the philosophers have never been able to answer, namely, why *these* four? I said they were all agreed that you can do it in terms of objects, and you can do it in terms of processes, and you can do it in terms of events, and you can do it in terms of states of affairs, but as far as they're concerned, you've got to make your choice.

State of Affairs System Transition Rules

1. A state of affairs is a totality of related objects and/or processes and/or events and/or states of affairs.
2. A process is a state of affairs which is a constituent of some other state of affairs.
2a. So also is an object; so also is an event; and so also is a state of affairs.
3. An object is a state of affairs which has other, related objects as immediate constituents. (An object divides into related, smaller objects.)
4. A process is a sequential change from one state of affairs to another.
5. A process is a state of affairs which has other, related processes as immediate constituents. (A process divides into related, smaller processes.)
6. An event is a direct change from one state of affairs to another.
7. An event is a state of affairs having two states of affairs ("before" and "after") as immediate constituents.
8. That an object and/or a process and/or event and/or a state of affairs has a given relation to another object and/or process and/or event and/or state of affairs is a state of affairs.
9. That an object or a process or an event or a state of affairs is of a given kind is a state of affairs.
10. That a process begins is an event and that it ends is a different event.
11. That an object comes to exist is an event and that it ceases to exist is a different event.

One of the questions that you ought to have in hearing that is, "Why these?" What is it about these concepts that makes it the case that you can do it in those terms but not some other terms? What is this business about having to make a choice? What this says is, "Here's why. It's these four terms because these are the four terms that relate in this logical way." There is a formal system that encompasses these four terms, and that's why it's these four terms that will do the job.

Secondly, those philosophers are wrong. You don't have to make a choice. Anything you can do one way, within the same system you can translate into the others. Anything you can describe in object terms, you can describe in state-of-affairs terms. These are rules for redescribing, because anything you can describe this way, you can describe that way. That's why we call them Transition Rules. The closest thing that you're liable to be familiar with is transformational grammars, which also are a set of rewrite rules. Unlike transformational grammars that start somewhere and end somewhere, this one does not start somewhere and end somewhere. It's simply a set of logical relationships that allow you to traverse these four notions. But as you can see, using these four notions, you can build up an entire real world, because that's what there is in the world, that's what the real world consists of.

Then, look at how simple it is. These are not fancy concepts. These are not complicated concepts. These are very simple concepts, simple enough so that this thing can be learned by a five-year-old. And that's important, because five-year-olds do. By the time a child is five years old, he pretty much has a world. A one-year-old infant does not.

A one-year-old has this thing and this thing and this thing, but he hasn't got them all together. A five-year-old, by and large, has it together.

Okay, that's how. That's how we construct worlds, by learning something so simple that a five-year-old can learn it, and operate with it in obvious ways, and you come out with a real world—except for one additional move. You don't have a real world unless you introduce a limiting case, and you can introduce limiting cases in several ways or in several places. One is, you can introduce an object that doesn't have any parts. You can introduce ultimate objects, and then build it all up from there. That's what we do in physics. We have ultimate objects, and everything else is built up from them. That's what we do in games. In baseball, you have ultimate objects: they are called players, baseball, bat, diamond, referee or umpire, bases—those are ultimate objects in the world of baseball.

Once you've picked your ultimate objects and specified what kinds of objects there are, that sets a limit to what sorts of facts there can be, what sorts of relations there can be, what sorts of interactions there can be, what sorts of events can take place, and on and on. You can construct a real world by setting that kind of limiting case, namely, the ultimate object that has no parts, whereas according to this, an object is something that divides into objects. That's why you have to do something in addition to this.

Now the ultimate object approach is not the real world as we know it. That comes from a different limiting case, and there you go in the opposite direction. The ultimate object is going down to the smallest level, the most concrete level. The world of persons is gotten by setting the limit at the opposite end, namely, the state of affairs that includes all other states of affairs.

That's not in the system. The system says that any state of affairs is part of another state of affairs. Putting a limiting case that says there is one beyond which there is nothing, then you've got the framework within which everything fits, because everything that you're ever going to encounter is going to fit within that framework, since that thing is defined as the "state of affairs that includes all other states of affairs." All of those states of affairs include the existence of that chair, the presence of the chair, the presence of us, what we think about it, what we feel about it, what we experience, etc., etc., etc. All of those are states of affairs. That's how things are.

So the state of affairs that includes all other states of affairs is the one thing that has the logical capability of fitting the world as we know it. It also gives us the framework within which to observe. I don't know what's at the top of the building, but I know there's something there. I don't have to have seen it to know it's there. I can go observe something I've never seen before, and there is a place for that observation within this schema of the state of affairs that includes all others. And remember that we don't operate just with this bare notion of a state of affairs that includes all others. We have our experience that tells us what some of those things are. As I said, we know that we're in Pensacola, we know we're at the Holiday Inn, we know lots of things that we're not here and now experiencing. So when I make a new observation, I'm not starting from scratch, from the notion of a state of affairs that includes all other states of affairs. I'm starting

from what I already know of how things are, of what there is, how it works, and on and on—including knowledge about myself.

As I say, that knowledge provides a place for every observation, for every piece of knowledge you're ever going to have, for every discovery that anybody is ever going to make, for any change that is ever going to take place, and even for changes that are never going to take place but are possible. That's [change tape] *— It all comes from a simple, five-year-old-level, formal system, which is so simple that a five-year-old can learn it, that even a computer can more or less implement it.

Question: Can you give an example of a five-year-old *—

Peter: Yeah. When you go away he expects you to come back. He knows you're over there; he knows you're not over here. He knows that your hand is part of you. He knows that you are part of what is in the room.

Question:—when you say a five-year-old can learn this, you mean the five-year-old can learn—to be described by these rules, which is not the same thing as to say that a five-year-old can—

Peter: That's right. Your closest parallel is language learning. Kids learn to talk without learning the grammar of English, explicitly. But when it comes to saying what it is they learn, that's our best cut at saying what it is they learn is to layout the grammar and say, "This is what they learn". So yeah, you can say, "This is what they learn", or you can say, "This is how they've learned to operate". And saying that this is how is how they've learned to operate has the virtue of not suggesting that they learned it in these terms. These are our descriptions of what they've learned.

So we can say what we say of the grammar, namely, if this is what they've learned, that accounts for all of the things they do. That accounts for all of the things they're able to do. And that's primarily what we want out of it. Remember, I said the question is, "How can people possibly construct worlds?" Well, if they learn how to operate this way, that's how they can construct worlds.

Back to the notion that all of this is just a big bookkeeping system codifying our behavior potential. How do you use that bookkeeping system? Again, let me draw you a simple diagram, and this time I don't have a handout so I'll do it on the board. [Judgment Diagram] [**Editor's Note: This can be found on p. 228 of *The Behavior of Persons*.**]

Can everybody see this? You've got a set of Cs here, and a large C for the whole thing. You've got a set of Rs here, one for each C. You've got a W here; you've got four Ws, a PC and a D and a B. How you read this is this:

This (the large C) is your overall circumstances. Each of these Cs represents a relevant circumstance that is part of your over-all circumstances. "Relevant circumstance" translates into "This is a state of affairs", some piece of how things are. R is for reasons. How things are give you reasons for acting one way or another. The reason

there are four is that conventionally, you put four in because of the four Perspectives: Hedonic, Prudential, Ethical, and Esthetic. When we try to classify reasons as to why people do what they do, we wind up with these four major categories, and although that's an open-ended list, in that there's no reason why there couldn't be some other ones, in fact, these four seem to cover everything. And that's why conventionally we draw four types of reasons. These are reasons pro and con.

The different reasons will carry different weights with you. One reason will count more than another. The weights that things carry with you is an expression of your Person Characteristics. For example, for somebody for whom relationships are important, ethical reasons will carry a lot of weight. For somebody who's only interested in his self-interest, ethical reasons will not carry much weight. So how much weight these things carry is an expression of who you are, of what kind of person you are.

Given all these considerations, you make a decision and you act on it. This, too, is a very robust diagram. It's been around a long time; it's been used in all kinds of ways and all kinds of circumstances. For our purposes today, the key fact is not on the board. The key fact is that the Cs are the same as the Rs. Remember, Cs were the relevant circumstances that give us reasons. That's a careless way of saying it. The correct way is to say that these circumstances are states of affairs that *are* reasons. There is an identity between the C and the R. Some states of affairs are reasons. What's my reason for drinking the coffee? I'm thirsty, and the coffee will slake my thirst. That's a state of affairs. The fact that the coffee will slake my thirst is a state of affairs that's also a reason to drink it. I'm not talking hypothetically.

Likewise, with all of these circumstances, they are reasons for acting one way or the other. There's no gap between them. They are not separate things that are connected. They are the same thing. What the diagram says, though, is that not all of your circumstances are relevant. Not all of the states of affairs are reasons. As a person, you are looking at your circumstances and picking out the ones that are reasons. Remember that ubiquitous banker. You're a banker; you're sensitized to those things that are important to hankers, that make a difference in doing one thing rather than another. Among the ninety-five maxims that we mentioned, there are several that deal with person and world, and the first one says that a person needs a world in order to have any possibility of acting at all. The next one says that a person needs the world to be one way rather than another in order to have a reason to act in one way rather than another. That's how you get back out what you put into that bookkeeping system. You've constructed the world in such a way, using this, that you've codified what was possible and what was not. As you traverse your world, you are picking out those things that give you reasons to do one thing rather than another. So it's not just idle talk or pretty metaphor to say that the world, the real world, is a way of codifying our behavior potential. And you can look at it as no more than a bookkeeping system for doing that.

This is the point that I wanted to reach at the end of the second segment, and I think we're just a little bit behind. Questions?

Question: Would you just repeat what you just said about——codify what was possible and what was not, and the way you get it back out, you traverse—

Peter: This way. This is a schema for representing how you get back out of the world something that makes a difference in what you do. What you put in is the schema, the bare schema of the real world, the results of all of your prior observation and experience about what things there are, how they work, etc. That's here. You draw upon that when you're actually living your life and being in the world, and you find there those things that make a difference to your behavior. And you act on it, and that's what you act on, and that's why you do what you do.

At this point, I think we've given a fairly full body to that notion that people construct worlds, and that worlds connect to behavior primarily rather than to cognition. So let's stop there.

Discussion during the break; most of it is unintelligible.

> *Peter:* This is the product of your world-construction…You put it in in the form of facts, you take it out in the form of the facts that are reasons. And your reasons are why you do what you do…
>
> *Question.* It happens automatically, a lot. A lot of the time we do not—
>
> *Peter:* You do it after the fact, but those were your reasons…Both of these are states of affairs, facts. In one context, you call them circumstances; in another context, you call them reasons. It's the same thing.
>
> *Question:* Is that kind of like *.—moral judgments *—it's tautological: there isn't an intervening step.
>
> *Peter:* You appraise the circumstances. Having appraised them, *—seeing danger *—

III. Swimming in the Eternal Sea: What the Tortoise Says about Achilles

So far, I wanted to make it plausible that the world is a human construction, the sense in which it's a human construction, how that construction works, and how we use it. And that's to take it out of the category of a broad generalization that has no substance. Remember, this is a practical approach.

Now let me set the stage for the third part by reviewing for you the myth of Atlas. It goes back to the Greeks. The Greeks, you remember, were serious and intellectual, and they noted that everything falls unless something is holding it up. The cup is held up by the lectern, the lectern is held up by the floor, the floor is held up by the building, and the building is held up by the earth. And you can go around and do that. And that left them with an interesting leftover, namely, what holds the earth up?

They applied the same schema and said, “Well, the earth is being held up by this huge guy named Atlas, and he’s holding the world on his shoulders. And *there* is a statue to show you how he did that.” The logic of the schema still applies, though, and so the next question was, “Well, what holds up Atlas?” The answer was, “Well, Atlas was standing on the top of this huge elephant.” That does the job for Atlas, but again it leaves a question, because the logic of that schema now requires a new answer, which is, “What holds the elephant up?” It turns out that the elephant is standing on top of a gigantic tortoise. The same logic holds. You need an answer to what holds the tortoise up. Now pay close attention. What the tortoise is doing is swimming in the eternal sea. Notice the difference. We’ve dropped our schema of what holds what up, and instead given a different kind of answer. That answer is successful in bringing the questions to a close, not because it’s a good answer, but because at that point you don’t know what the hell to say. What are you going to say when it’s swimming in the eternal sea?

Now that’s the Atlas story. That’s a logical structure with that kind of outcome. Now I want to remind you of a number of things in the real world that are like that, and the most familiar one is knowledge. Start anywhere—that’s a chair, or she just wrote something on the pad—and you’ll get the question, “How do you know?” Why? Because in order to qualify as knowledge, it has to have some kind of justification, some kind of supporting evidence. As it happens, the only thing that will qualify as supporting evidence is some other fact: well, she’s got a pencil in her hand and she’s moving it. Since that’s another fact that I claim, you’re going to ask me, “How do you know that?” You’ve got a schema, and the logic of the schema forces you to the next step: How do you know that? And how do you know that?

Eventually you wind up with the equivalent of “the tortoise is swimming in the eternal sea”. You can’t answer forever. Your last answer is not a good answer; it’s simply a way of bringing the thing to a close.

There are variations on “How do you know?” Try it with “What makes you think that?” “And what makes you think that?” You find the same sequence. You find the same thing in theories of perception that make use of cues. If in order to see a chair, I have to see that there are certain cues present, how do I see that those are the cues present? There must be further cues that give me the cues about the first cues. But if it takes cues to accomplish perception, than I need some third-level cues to give me cues to the second-level cues, and on and on.

Another familiar one is “What good is it?” You get an answer and you say, “What good is that?” Eventually, you encounter the tortoise swimming in the eternal sea. You don’t get a good answer; you get some way of bringing it to a close. Again a variation: “What’s the value of that?” “And what’s the value of that?” “And what’s the value of *that?*” You’re going to go on forever—except you’re not. You’re going to call upon the tortoise again. Or try this line: “What does this mean? What does it mean that you’ve taken a drink of Coke?” “And what does that mean?” “And what does *that* mean?” You know where you’re going to end.

There's variations on that. One of the more colloquial ones is, "What do you have when you have that?" Well, you have X. "And then what do you have?" Well, you have Y. "And then what do you have?" Again, you know where you're going to end, and you're going to end with that tortoise. Another variation on the same one, namely, one that I mentioned yesterday: "What do you make of that—drinking a Coke?" "What do you make of that?" "What do you make of that?" "And what do you make of that?" Again you know where you're going to wind up.

Try a different line: "What are you doing?" "What are you doing by doing that?" "And what are you doing by doing that?" "And what are you doing by doing that?" Again, you know where you're going to end. Try it in the opposite direction: "What are you doing?" I'm doing X. "How are you doing X?" I'm doing X by doing Y. "How are you doing Y?" I'm doing Y by doing Z. "How are you doing Z?" Guess what—you're going to end up with that tortoise again. That also works for "Why did you do X?" Because of Y because of Z. "Why did you do X because of Y because of Z?" And you're off to the races.

Try a different one: "How does that work?" Well, it has X and it has Y. "How does X work?" Well, it has P and Q. "How does P work?" It's going to go on forever in that way, too. Remember our old favorite, "Why is the sky blue?" Well, because there's dust in the air. "Why is there dust in the air?" "Why is the sky blue when there's dust in the air?" Well, because of this kind of principle. "Why is there that kind of principle?" Well, that's just the way things are.

You can do it with "What's the point of doing that?" "And what's the point of doing that?" "And what's the point of doing that?" A less familiar one is detail: "What does this tape-recorder look like?" You give me a description. "Well, what does the left part of it look like?" You give me a description of the left side of that. "What does the left side of that look like?" "And what does the left part of that look like?" Eventually you run out of detail. You can't tell me what that part of it looks like.

Each of these is something that you can do ad hoc things with, particularly the one with "How do you know?", since that's been around a long time. Lots of people have agonized over it and come up with all kinds of tortuous solutions—except they're not really solutions. They're just fancy ways of evading that thing, and we still have that problem. You can do fancy footwork with each of these. You can arrange to talk in ways that don't so obviously create the problem, but it's going to still be there.

Notice that with our examples we've covered knowledge, we've covered appraisal, we've covered interpretation, we've covered behavior, we've covered processes, we've covered visual detail, and we've covered facts and explanation. Have we left anything out? Is there anything for which we don't run into the tortoise? Here's a case where the whole is greater than the sum of its parts. Anyone of those you could dismiss—"Well, that's an aberration, let's do this ad hoc thing with it." By the time you see all of these, the cumulative effect says, "Hey, there's something fundamental here." It's not something you can just explain away here or here: it appears all over.

Think back to what I said about the State of Affairs System, that you have to put in a limiting case before you generate a real world. There's another version of the tortoise. The system itself has no place to stop. You've got to put it there. That's an even stronger suggestion that we're dealing with something fundamental about this whole domain and not something that you want to just try to explain away.

Notice that these sequences, the logic of these schemas, comes with an air of necessity. Remember when I said, "It's all in vain if we have no idea how people construct worlds. We need that explanation." Well, look at this "how" sequence: How do you do that, how do you do that, how do you do that? "How" ends up with the tortoise. But you need the "how". You're not going to be satisfied without an answer. That's why it's so unsatisfying if you simply stop in an arbitrary place. A poet might summarize it by saying, "And the face of the tortoise was seen throughout the land".

What implications can we draw from all of that? Here we've laid the groundwork that says the world is a human construction in a clear, simple, and practical sense. This construction codifies our behavior potential. And it's full of tortoises. What sort of conclusions can we draw? What can we make of that? Notice what I'm asking. Remember—"What do you make of that"?" is one of those sequences. Look how necessary those sequences are. We need to know what to make of that. It's not something we can just shrug off and ignore. We've got to ask, "What do you make of that?" There are a few things that if you took a conservative approach, you might say without undue disclaimers. For example, you might say, "All of these have to do with our ways of understanding things. All of these are question-and-answer type situations. All of these have to do with our uncertainties about things and our clarifications of things, our ways of understanding." And all of these take place within a construction of our behavior potential.

You can be pretty sure that any interesting conclusion is going to have to go at least a little beyond what can be deduced, that is, what follows logically, because nothing follows logically.

The first conclusion I would draw is that the domain of knowledge is everywhere circumscribed by the domain of behavior. The domain of knowledge is embedded in the domain of behavior. That's why the connection to behavior is more fundamental than the connection to cognition.

Secondly, that knowledge is not an adequate basis for, and it's not an adequate representation of, behavioral possibilities. If it were, we wouldn't encounter any tortoises. As it is, our knowledge is left dangling everywhere we turn.

Third is that things aren't *simply* the way we take them to be. Are not. Things are not simply the way we take them to be. Or as another poet has said, "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy."

Just as an aside, one thing I did not mention in connection with that State of Affairs System is that although the real world is a way of codifying our behavior

potential, there is something more fundamental, and that's dealing directly with the notion of behavior potential. That's done by talking about reality constraints. Reality constraints are purely and simply the boundary conditions on our possible behaviors. That deals directly with possible behaviors, not through the intermediary of a bookkeeping system that involves objects, processes, events, and states of affairs. It deals with it directly.

What we've seen is that the real world is not an adequate way of getting at all of that. In that case, you might ask, "Why the hell do we have a real world at all?" If it's that deficient, why do we have it? You can take an evolutionary approach and say, "Gee, why didn't the human race die out, then?" The answer is that even though it's deficient, it's pretty damn good. Remember I talked about there being consistencies that allow you to traverse, easily and naturally, wide ranges of facts, wide ranges of phenomena, wide ranges of experience. That's one of the things that real worlds do for us.

It's kind of like being able to calculate using Arabic numerals instead of Roman numerals, and if you've ever tried to do anything beyond simple addition with Roman numerals, you can imagine what a torture it is. The other system makes it easy. Roman numerals make everything difficult. So the systematizations provided by the real world make lots of things easy. But they don't get it all.

The tricky question is, is that the best we can do? It may miss things, but maybe it's the best we can do. Think of it this way: you pay a price for that consistency; you pay a price for the connectedness. The price you pay is sacrificing everything that doesn't fit. And you can have a looser system that has less connections, and therefore is less efficient in certain ways, but the trade-off is that you probably will have to sacrifice less, too. So there may be a net gain.

That's the possibility I want to introduce here, that there may be a net gain in a codification that isn't that consistent, isn't that systematic, as our normal real world. Given the trade-off, there is no guarantee that what we have now is optimal. Is there anything other than logical possibility there? There is, and some of them are tantalizing. One is something that got mentioned very briefly this morning, I think, and that was imaginary companions of children. One of the impressive things about studies of imaginary companions of children is just how many of them there are. Something like twenty percent of the population has had imaginary companions at one time or another. A surprising number still have them as adults. And the main way to understand that phenomenon is that at the critical point in that person's life, there was more behavior potential in having an imaginary companion than in not. That's not a choice. It's not a voluntary construction. That's just how people work.

One of the maxims says, "A person will not choose less behavior potential over more". What that means is that a person will go the route that seems to him to have more behavior potential, whether he knows about it or not. That's a tautology that's comparable to a physicist's saying, "A smaller force will not overcome a larger force. A weaker force will not overcome a stronger force". It's not an empirical thing; it's a tautology. If this force overcame this force, you wouldn't say it was a smaller force.

That's the same kind of tautology. A person will not choose less behavior potential over more.

The evidence of imaginary companions of childhood and adulthood is that even in our normal circumstances, there can well be more behavior potential in not having the same kind of complete consistency that is our ideal as hard-headed scientists. That is, our ideal is "practical *—. There may be more behavior potential in some other pattern. Now the formula for imaginary companions is very much like the formula for imaginary numbers. Both of them created problems when they were first discovered. And that is, yeah, these are real, okay, but they're not real the way these other ones are. An imaginary companion is real but not the way other people are real. Imaginary numbers are real, but not the way other numbers are real.

So there's an example that even in current circumstances with nobody trying to do anything different, it seems that it's often the case that there is more behavior potential in having less consistency rather than more.

Okay, let me give you another example that's going to surprise you: science. There's lots of different sciences, and they are not compatible with each other. There's no single story to be told across the sciences. Even after many years of lots of people trying to reduce everything to physics, it just does not work. What you can observe is that when people try to reduce their science to something else, they show a loss in creativity, in inventiveness, in discovery.

That, by the way, is my private diagnosis for psychology. Psychologists have been so hell-bent on reducing psychology to biology that the only kind of explanation they can think of is something that's like biology. That's why you get machine explanations even of mental phenomena. It's got to be something that somewhere or other could represent the functioning of the brain. That kind of notion—you lose your inventiveness as soon as you give up the autonomy of that science. Look at how much progress those sciences made just going their own way and not worrying about consistency with all of the other sciences. Was that a gain in behavior potential? Hell, yes!

Think of games. Each game is an encapsulated little world of its own that has nothing to do with any other game. There's no connection between baseball and football and chess and tennis. Every one is its own little world. There's no consistency there. I leave it to you to think of other ways in which less consistency gives more behavior potential *—.

Let me close again on a personal note. I told you how I got interested in "experience" recently. One of the other problems that besets the field of space endeavor is the notion of other forms of life that might be encountered. There are several primary concerns. One is, would we know it if they didn't look like people? That's the issue of separating out persons from homo sapiens. Would we even recognize them if we encountered them? Secondly, any form of life that we encounter is likely to have discovered us first. [change tape] *— probably better than ours. And it's in our interest to

be able to communicate, to be able to establish some kind of relation. But if they're nothing like people, how could we possibly establish any kind of communication or relationship? If their codification of behavior potential is very different, what's going to happen?

This leaves us with the sobering conclusion that the continued existence of the human race may depend on doing strange things in our heads, on forsaking the comfort of complete consistency and getting into regions that are less comfortable for us, but allow us to expand into those areas of behavior potential that the real world does not touch upon, and that you can bet that alien cultures—really alien cultures—are going to touch upon. It's those areas that are going to be the link between us and truly alien creatures.

I have a sucker bet with one of my partners, a sucker bet because neither of us is ever going to live long enough to collect on it. The bet is this: he says that if we ever reach the stars, it'll be because we've built a faster-than-light drive. I say, if we ever reach the stars, it'll be because we've learned to do some very funny things in our heads. With that I leave you.

Question: What does the tortoise say about Achilles?

Peter:—the conclusions that I drew, namely, that the domain of knowledge is embedded in the domain of behavior, that knowledge is not an adequate basis for codifying behavioral possibilities, and that things are not simply what we take them to be.

Question: Where does Achilles come in?

Peter: Let me explain Achilles. There is a famous something by Lewis Carroll called "What the Tortoise Said to Achilles", and it has to do with infinite regresses. So it seemed appropriate in this case to switch it a little to say "what does the tortoise say about Achilles".

Question: I want to just share two examples to answer that question. One is I do martial arts, *—light years from *—, and in martial arts class and karate class, we're always *—asked to do something that makes no sense whatsoever in terms of all of my *— training, that's been driven very, very deeply into my soul. And if I try and make it fit, I simply can't do it. If I look to consistency with any physical *—. If I stop worrying about it and do what the instructor says to do, it works. That makes me intensely uncomfortable. Nevertheless, it does increase the behavior potential.

Question: More is less.

Question: I was waiting to hear you give an example of *— not consistent with the real world, especially one that would apply toward the space exploration problem.

Peter: That's the problem, not the solution.

Question: So you're stating this a problem-stating. Next year we can expect *—.

Peter: It might happen, but don't bet on it. *—

Question: Not an answer to that but a pointer to something like an answer that I remember from one of these—has anybody read all those "Teachings of Don Juan" books? That very thing is talked about in there, explicitly. Don Juan told Carlos, "Yes, you can go to the moon. You can't bring back any rocks."

Question: It's a real trip but not like other trips.

Question: At first I thought that you meant that it might be wise under certain circumstances to develop real worlds that were internally inconsistent. I take it you don't mean that.

Peter: When I say "consistency", I mean the exact kind of consistency that characterizes our real worlds now. There could be other real worlds with other kinds of consistency, there could be other real worlds, including ours, that have a different sort of consistency *—. Where we start is the kind of thing that we know, namely, a real world that has all of these wonderful consistencies that allow us to do all of the wonderful things we do.

Question: Any of those pieces of construction, any of them—we might discover tomorrow, an alternative real world which is better for us, which turns out—which we like better-

Peter: Discover or create?

Question: Create.

Peter: Let me, without being apocalyptic, give you a warning on the other end. If you recall, in the short paper on "Religion without Doctrine", we used the Justification Ladder—judgment, custom, theory, principle, competence. You appeal upward on this ladder. If I want to justify my judgment, I appeal to custom. If I want to justify the custom, I appeal to theory. If I want to justify the theory, I appeal to principle. And the final court of appeal is competence. It's when the artist says to the other artist, "Can't you see that that's good art? It doesn't fit any of our theories. It doesn't fit the kind of principles—but can't you see that it's good art?" That's the final appeal.

What I said was that the customs, the theories, and the principles are our social inheritance. They represent the ways that we have discovered that work, that are safe, that are fruitful, and so on. That means that you violate them at your own risk. Basically, yes, you can operate from competence to judgment, directly. But my sense is that to carry it off, you really have to be a saint. It's not something to be undertaken lightly.

Moderator concludes session.