

Rap Session with Peter G. Osorio
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This rap session was conducted in a question and answer format, with the bold section headings below each representing one of the questions that was asked.

The Soul

(?) Is there a point in talking about the soul, and if so, what is it?

Ossorio: The answer's "Yes." [laughter]

(?) Next question.

Ossorio: Think of the fact that down through the ages, people have been described as spirits and souls. What was the point of all that? Why did people describe people as *essentially* spirits and souls, rather than what? Well, presumably rather than bodies or animals or organisms. If you ask "What is it that makes a person a person?", it is not having a head and two arms and two legs. Now there's lots of confusion and disagreement about what makes a person a person, but there's universal agreement at that level. So the point of calling people spirits or souls is to mark that contrast, to affirm that what makes a person a person is not the obvious things you see about people. And then that lays the groundwork for all the arguments about "What is a soul?", etc. In that sense there is very clearly a strong point in talking about souls. And I presume that's why it's been done. Any follow up on that?

(?) ... Will you comment on some of the ideas you were mentioning this afternoon about soul and identity?

Ossorio: I was commenting on the parametric analysis [presented in the afternoon] that had identity and social practices and core capabilities or core capacities. I said that my reaction is that that is too big a bundle to tie up under one rubric. If I were doing it using the same materials, I would probably pick the Identity parameter and say "That's the soul." Then these other things are things that the soul has some relationship to, or are somehow involved in there being a soul, or in how a soul operates. But I wouldn't include it as part of what it is to *be* a soul. That's a kind of technical, aesthetic decision that there's too much there for one package.

(?) Would you come to the conclusion then that in the parametric analysis of behavior, you already have soul in the Identity parameter?

Ossorio: Yes. If you work it through in the way I've suggested, then that would be the conclusion. You do have it right there. But you then have to back that up with the analyses and the exposition that shows it. The closest I've come to doing that is the discussion of the dramaturgical model and the self-concept.

(?) This sounds like what came up in your ontology talk last year. I was racking my memory to get the connection.

Ossorio: The upshot of the ontology part of the ontology paper was simply the defects of ontology and the recommendation of using the State of Affairs system instead. Then the second half had to do with applying some of the very same considerations to the two questions of "What sort of thing is a person?" and "What sort of thing is behavior?"

That's against the background that there's a couple of very obvious answers within the State of Affairs system that says "A person is an object" and "Behavior is a process." Since the four major concepts in the State of Affairs system are Object, Process, Event, and State of Affairs, that's an obvious pair of answers. In fact, I think I once gave that pair of answers as a way of including persons within the scope of the State of Affairs system. Almost immediately, I began to feel uneasy about that. This time around when I raise the question of what sort of thing a person is, the answer is "A person is a state of affairs, not an object." And the same thing that I said about soul follows, namely that what makes a person a person is not being a certain kind of object.

(?) As I recall, you gave a person as the paradigm case for all other kinds of objects...

Ossorio: It is possible to do it that way. But as I say, the second time around, I figured it's better to do it the other way. Now one of the intermediate conclusions in the argument against saying that people are a certain kind of object, is that these considerations warrant people calling people spirits and souls, as they have done down through history. That recognition that people are not a kind of object - that to be a person is not to be a certain kind of object - is what has been recognized down through the years by calling people spirits and souls. So it connects to what Bill was saying.

The trouble with saying that a person is a kind of object is that persons have characteristics that objects don't have. That leaves you in a very peculiar position if you want to maintain that people are essentially a kind of object. Rather than have that kind of awkwardness, I would opt for the other awkwardness of saying that people are states of affairs, which I grant is awkward because you have to back it up with the right explanations. Those are the explanations that I gave in the ontology paper. I said that there being a person is a state of affairs. And that's the appropriate way to talk about people - "there being a person" rather than "a person *is*...".

Now that doesn't do you much good unless you're prepared to say what kind of state of affairs. That's where the parametric analysis of dispositions, powers and derivatives comes in. There being a person is there being a state of affairs that involves these various state of affairs - that's the kind of state of affairs that there being a person is.

The same goes with behavior. Behavior is a state of affairs. To back that up you have the parametric analysis of behavior. The canonical reading is that when a behavior occurs, there is a state of affairs that has as component states of affairs eight different kinds of states of affairs, each corresponding to one of the parameters. Each of those may be complex in that it is composed of still further states of affairs. So the upshot is that this is what backs up saying "Behavior is a state of affairs." You can say precisely what kind of state of affairs it is.

Now when it comes to saying that behavior is not movement, you look back at the parametric analysis and there's only one of those parameters of the eight that necessarily involves either a movement or a body. Some of the others may, but they don't have to. Only the performance parameter will refer to a body and usually to a movement of some kind - if not a movement, a posture, or you might say a non-movement.

Putting this back into the historical context, Wittgenstein asked a famous question: "What is left over in the fact I raise my arm if we subtract out the fact that my arm goes up?" Well, we're in a position to give a direct answer to that, and no one has ever done that. Namely, what's left over is given by the other seven parameters. *That's* what's left over.

So we can answer the question of what kind of state of affairs a behavior is, and we can answer the question, this famous riddle that Wittgenstein raised very directly, very simply. So it has that kind of virtue. It's systematic, clean, simple. The arguments are almost point to point parallel between "Behavior is not a kind of process" and "A person is not a kind of object."

So that's why we talk about personalities, we talk about souls, we talk about selves, we talk about all these seemingly fuzzy sorts of things because what we don't want to say is that a person is a kind of object.

I remember at one point in my more polemic days [laughter] I made up a nice example to illustrate what is wrong with saying a person is a kind of object. I wish I could remember it word for word. It goes somewhat along these lines. You say "An automobile is a kind of color. It's the kind of color that's embodied in metal and plastic, and sometimes rubber, and that we see under the aspect of 'Made by Ford'."

Now anybody can see if not *what* is wrong with that, *that* there is something wrong with talking that way. Well, that's what's wrong with saying that a person is an object. Notice in the real world a car is not a kind of color. The color of a car is an aspect of a car. That's why it sounds so strange to put it in the form of "A car is a kind of color," and then you have to talk in these strange ways of saying "We see it under this aspect", etc.

In the parametric analysis, a person's embodiment is an aspect of a person, just like the color is an aspect of a car. If you try saying that a thing is one of its aspects, you're going to be talking like saying a car is a kind of color. And that's why it's worth going the extra route to come out with "A person is a state of affairs, a state of affairs of a certain, *specifiable* kind."

(?) Is a lion a kind of object?

Ossorio: No.

(?) Elucidate a little. [laughter]

Ossorio: For all of the same reasons.

(?) Is this [pointing to a coffee cup] an object?

Ossorio: Yes. That's a paradigmatic object. If there ever was an object, there's one.

(?) ... In psychoanalytic theory when we talk about object relations, the reminder is that we are talking about a particular representation, encapsulated in one person's vision of another, and not the actual other. It's the recognition that these concepts point to something that is a reduced version, to something less than the qualities that make up the concept.

Ossorio: I'm not sure I'd want to lean too heavily on that because then you come to the nasty questions about "How do you know how things really are? If all we have are our representations of them, how do we know what it is that we're having all these representations of?" And I don't think that's unanswerable, but it's so messy that I'd rather just not get into anything that requires dealing with that.

(?) I was just mentioning that as a parallel in recent history that bears some resemblance. Because the issue is not what is really there. It is the recognition that using that kind of language as representative is clearly not what is really there.

Ossorio: Yeah. On the other hand, you have notions like "objective" which in effect is a term of praise, which comes from the same thing. An object you can see, touch, feel. It's objective. So it's not a reduction there. So you have both kinds of usage.

(?) Bill spoke about soul as initial capacity. Would you say how that fits with soul also being personal identity?

Ossorio: The notion of the soul let's paraphrase as the notion of the "real you" in some sense of real that I'll explain. Your capacity to become that way, if you have it at all, has to be there in your original capacity. Any capacity that you ever have is in your original capacity. Why? Because any change that you went through or could have gone through - that possibility was already present the day you were born. All you ever do from there on out is realize some of these potentials and don't realize others. But the potential was already there. So, yeah, it would appear in original capacity.

Keep in mind that original capacity is one of those essentially mysterious notions. By essentially mysterious, I mean that there is no way to find out. Our access to it is by those capacities that are realized in capabilities, abilities, and characteristics. Once we know you are a certain way, we can say you had the capacity to become that way. Once you have the ability, we can say you had the capacity to acquire the ability.

But we can't say what all your capacities are or were, in part because the capacity depends on circumstances, and circumstances might have been different in ways that we know nothing of. So there's no way to encompass what it is that you have the original capacity to be or to become or to do. And because we have no way of finding out, that makes it *essentially* mysterious, not just something that we don't happen to have a good enough technology to establish.

(?) How would the soul relate to the Actor function?

Ossorio: Think back to the dramaturgical model, where your identity is who you are in the ultimate sense of what part you play in the total scheme of things under the aspect of eternity. That's like specifying a character in a play. That's why it's called the dramaturgical model. And that is talking about action.

But also remember that actions are characterized by the options that you turn down in favor of the one that you took. It's not just the history of the things that you did. It also includes all of the things that you could have done and didn't. People identify themselves much more with their possibilities than with their actual histories. If you ask somebody who they are, the answer is "I'm somebody who could have done this, who might have done that, who had the ability to do this but didn't." Remember that famous line "I could 'a been a contender." Think how obviously that was so central to the guy's self-concept.

(?) If your soul is an original capacity, does soul develop?

Ossorio: No. Soul is not the same as original capacity. What I said is that you had to have the original capacity...

(?) If there is soul in original capacity, if there is soul as original capacity ...

Ossorio: That's the wrong grammar. You don't have soul as original capacity. You have the capacity to have a soul, to be somebody with a soul. There's not something called soul that's in your original capacity.

(?) This model of soul as original capacity has a real deterministic feel, yet I get this idea that there's this whole range of possibilities that could ultimately be the expression of that soul. From there, because of circumstances that you bring... So it seems like there would be many different possible outcomes to the spirit.

Ossorio: Yeah. One of the issues that emerged is the connection of the notion of authenticity to the notion of soul. Think of the issues that are raised when you talk about somebody being authentic or yourself as

being authentic. One reasonably good paraphrase is "being the real you." If you think of the real you as a paraphrase for soul, you see a connection immediately.

When it comes to authenticity, because it's familiar, because it's had a lot of use, it's clear that it works the way you say. That being authentic doesn't mean following a script. It means you have something that enables you to make choices under whatever circumstances, and some of those choices will express the real you and others won't. But you're not locked in and you're not locked out.

(?) When you make choices that do not reflect the real you, what do those choices reflect?

Ossorio: Any reason you have to do whatever you do. There are all kinds of reasons why people don't ... One of the things that Bill mentioned is that you may not have that good of a handle on who the real you is. And there are various reasons why you might not. Again, it's not a see it, touch it, feel it. So it's not easy to lay out something and say "This is the real me." In fact that's not how it works.

Your knowledge of yourself, as I pointed out in connection with self-concept, is not an Observer's knowledge. It's an Actor's knowledge. It's an author's knowledge. The big difference, the most obvious difference, is that an author's knowledge comes before the fact. You have to know your behavior before you do it in order to do it. Whereas as an Observer, I have to wait until after you do the behavior in order to know what behavior it was. So *your* knowledge of your behavior is very different from *my* knowledge of your behavior. It's not observational knowledge.

You can see that with that kind of knowledge, number one, it's not easy to say "Well, what kind is it?" in any elaborate way. We usually say "You have a sense of it" or "You know it when it comes up", or something like that. And because it's that sort of thing, it's easy to understand why somebody might not know, why they might think that they were somebody they weren't. Wishful thinking.

(?) Peter, is the real you the you that you can act on? Is that how you're using it?

Ossorio: No. It's the genuine you. It's not a "true" versus "real" issue.

(?) I want to distinguish between two types of authenticity. The first one I call "ego authenticity" or "self-concept authenticity" and the second would be "soul authenticity." Self-concept authenticity is when I express myself through words my understanding of myself as opposed to deliberately pretending to be someone I'm not. Whereas soul authenticity is the real you.

Ossorio: Yeah. That's the difference between self-concept and self. Self-concept leaves room for my being mistaken about it. Self does not. The self is the real thing about which I have this self-concept. I can be in error about the first, but the second is simply what it is. And it's the second that we are really interested in as therapists. We don't much care about the first.

(?) The first being?

Ossorio: The self-concept authenticity.

(?) But I think we care about that, too, depending on the context.

Ossorio: Mostly we don't encounter that kind of problem. Authenticity problems - at least the ones that I've encountered and heard about - are the soul kinds.

(?) I'd like to take a poll of the therapists here.

Ossorio: Take a vote.

(?) I find lots of clients who are deliberately pretending to be someone they're not. And that is a problem.

Ossorio: How many encounter those? [several people speaking at once]

(?) ... in my sense of it, with soul authenticity, intention would not be an issue...

(?) ... this is similar to the issue of bad faith, non-acknowledged bad faith, and we confront people about it all the time ...

(?) ... I have clients who want to look good all the time, and that's how they're trying to be somebody ...

Ossorio: I wouldn't include self-presentation and pretense phenomena under self-concept or identity notions. Those sounds like the first.

(?) I'm wondering about the example where "What if I told you I couldn't drive, and then I got my keys and drove the car all day?" That strikes me like it might be a self-concept problem that you would see as a therapist...

Ossorio: Let me introduce another distinction. When it comes to thinking and talking about yourself, you can either be talking PCs [Person Characteristics] or Identity. I can tell you what characteristics I have, and I am often mistaken about them. Why? Because I have to find out about those the same way everybody else finds out about them, and my life history may be such that I wasn't in optimal circumstances to find out. So I may have characteristics that I don't know about. I may not have characteristics that I think I have because I succeeded in situations that were not representative. On the other hand, the Identity ones have to do with who I am. I may be wrong but not that way. It's a different kind of error, and that would be a more serious one. It would be more closely tied into pathology.

(?) Can you talk about the distinction between soul and spirit?

Ossorio: I can say something tentative. Right now one of the things I'm working on is a chapter on reality. Basically the problem is to explain how you use the State of Affairs system to construct the world. The main move is that you distinguish Objects, Processes, etc. because those are directly in the system. But just being able to distinguish Objects, Processes, etc. doesn't give you a world. What you need in order to have a world is to relate the things of these kinds, and you may need to relate them through empirical identities.

Let me give you an example of what I mean by empirical identity. The chair that I'm looking at is the same chair as the chair that he is sitting on. There is an empirical identity. It's the same chair in both cases. The one I'm looking at, the one he's sitting on. It's empirical identities of that sort that tie the whole world together.

Now when it comes to distinguishing things and locating them in the world, where do you anchor? It's an interesting answer. Namely, there are two places that you could anchor. One is I can anchor on myself, because I am an unambiguous point of reference for myself. There's no ambiguity whatever in relating anything to me. That's a very servicable way of doing things, and people do do it. The other is I can use the totality of things and talk about the place of each thing in the total scheme of things.

The first approach we would normally say "That's subjective" because it's all in relation to me. The second approach is "objective". When you talk about the total scheme of things and where things are, that's available to all of us equally. Now notice that the two endpoints are very similar conceptually to what Bill described as "soul" and "spirit". Soul is the individual. Spirit is the whole. So there's a parallel there that you can anchor on on either end to cover the ground, in that you have these two concepts that are somehow related to each other.

(?) ... you say spirit is parallel to the total scheme of things?

Ossorio: Yeah. There's no limits to it. It's an unbounded thing. It encompasses everything. It's the Other.

(?) In that sense spirit is not tied to a person...

Ossorio: Right. It's the Other. It's a contrast term, and it's the same kind of contrast that Bill was talking about being spirit and soul. I think that's more than a coincidence. Now one of the reasons that I think so, or one of the additional considerations, is that it's in the second framework, namely the place of something in the total scheme of things, that's objective, just as the other one that anchored on me is subjective. When we talk about the real me, that has to be objective talk, so it's anchored in the second way. When you think about what Bill said about "the soul is the status assignment of God", my place in the scheme of things, in a sense you're saying that's where I am objectively. That's the real me. Whereas when I do the job of relating everything to me, I may be wrong. It's a different framework. But there *is* a real me because you have this framework that guarantees it.

(?) And if you weren't wrong, the subjective and the objective views would be the same.

Ossorio: Yeah.

(?) What was that?

Ossorio: He said if I wasn't wrong, then the subjective and objective view would give me the same answer.

(?) Did you just say that the spirit and soul would be the same?

Ossorio: No. Each one is tied to the framework, so they can't be the same, but you can get the same answer in both frameworks, namely, "Who am I?" And what the objective framework guarantees you is that there is an answer to "Who am I *really*?" So then it makes sense for me to try to say who I am, to think about it, and so forth. My most intimate knowledge of it comes from the subjective framework. I know myself by being myself. I don't know it because of some place in the scheme of things that I happen to have knowledge of. So we use both approaches, and both are legitimate ways of anchoring the entire world and anything in it.

(?) There are many metaphysical views that try to find the short cut whereby the totality has some direct relationship with the soul, not only because the totality can describe the nature of that soul, but because the soul has some kind of access to that totality directly, not through normal channels.

Ossorio: Once you have these concepts in what you might call the canonical form, there are all kinds of things you can do with them after that, including that. You might say you don't have to use them for the purposes for which they were invented and in which they have the most point. That's one of the basic facts about these concepts - and things. I don't have to use this [pointing to a cup] to drink from. Once it's there for the purpose of drinking, I can use it some other way.

Well, are we talked out on soul?

(?) Could you talk about sin in relationship to soul? Are there some relationships there to be worked out that would say what sin is?

Ossorio: The notion of sin depends on another framework that would define what is sinful and what isn't. You don't get it just by having a soul. There has to be some other kind of moral framework that defines the difference between sin and non-sin, and there are many of those.

(?) But you can lose your soul that way.

Ossorio: You may remember the discussion of spiritual, where I defined the spiritual domain as dealing with three types of things, namely, ultimates, totalities, and boundary conditions. Those things have to do with questions, questions about ultimacy, questions about boundary conditions, and questions about totality. There are many theories that purport to answer those questions, and those are primarily religions or philosophies.

You want to separate the domain that is defined by the kind of question that it makes sense to ask and the competence to see the sense that those questions make, from any particular answer that's given by some kind of theory. And it is only within some of those theories that there is such a thing as sin. There are what you might call corresponding failures of other sorts in other theories, but not sin.

(?) Is sin not the failure of the person to carry out the fundamental mission of the soul?

Ossorio: Again, that language is specific to a framework.

(?) These are interesting connections though, between the concepts of soul and sin. Can there be... Does the concept of sin have any real weight without the [inaudible]?

Ossorio: No. You have to have a soul to be eligible to sin.

(?) That's the bad news about having a soul? [laughter]

(?) Did we name the framework in which we are looking at soul and spirit?

Ossorio: No. There's a number of them. Like I say, down through the ages people have talked about souls and spirits in all kinds of frameworks, all kinds of religions, all kinds of philosophies. So if you just take soul and spirit, the main thing you get out of them is the contrast between those and material things, things you can see, touch, and feel easily. To go any further, you have to get into somebody's framework.

(?) My observation in the past few years is that the Society has been focusing more on issues about spirituality, soul, and things like that, and that the computer segment of the Society is looking at how to make computers like persons, almost like to give them souls. Do you think that's a coincidence those two things going together? Do you think they'll get there at the same time?

Ossorio: No, they won't get there at the same time. I don't think it's a coincidence. If you recall the presentation in Pensacola, I said that this notion of ultimates, totalities and boundary conditions is something that we are driven to, because we start in the normal world of tables and chairs and cups and microphones, and there's a variety of questions which we ask, any one of which is iterative, like "Why is that?" or "How do you know?" or "What good is that?" If you get an answer, you simply ask the same question again. "How do you know it's a microphone?" "Well, I touched it." "How do you know you touched it?" "How do you know?" "How do you know?"

Eventually you run out of answers. Over time we may increase the number of answers that we are able to give, but one thing about this from the very beginning is that you *will* run out of answers. That's something we then have to deal with. How do you deal with the fact they we're going to run out of answers no matter how many we give? That's how you get to the ultimates, the totalities and the boundary conditions. That's why every civilization has a religion or philosophy or something, because you are driven to it by doing normal things that make sense. You say "Why?" You say "How do you know?" You say "What good is it?"

(?) ... the pieces contributed by Descriptive provides you with the real anchorage you need to do comparative religion. There's a lot more stuff in there that's contributed by religion. Each of the world's

great religions represents a prepackaged solution about basic things in the human condition. But all of the stuff, Pete, that you're talking about is background...

Ossorio: It's the questions that make sense independent of *which* answer you give. Being able to make sense of the questions allows you to recognize when you've even got an answer, and further, which answers make more sense, what's the difference between a good answer and a bad answer. All of those depend on your competence to understand the questions. So the domain is defined by the kind of questions, not by the kind of answers. In that sense by the way, it's just like art and ethics.

What I was going to say, Paul, is that I think we've done something parallel to the progression from starting with tables and chairs and working our way out to ultimates. You start with the most immediate, and given that you keep pressing, pretty soon you recognize the overall structure.

(?) I think I might have asked you the same thing last year. [laughter]

(?) Nobody else remembers.

(?) It seems like a paradox to me that we have to ask those questions, that we are driven to ask those questions. But in my own experience, when I've gotten answers to them - I mean real answers, like in my face answers - they weren't answers to the questions I asked anymore, even anything I could put into words.

Ossorio: Say that again.

(?) I can't. [laughter] It seems like a paradox to me. I agree that we're driven to ask these questions. In my own life, when I ask them and ask them and ask them, then all of a sudden something happens, something comes to me, which is an answer, but it isn't an answer to the questions that I asked, and it isn't an answer in words, it isn't an answer in logic.

Ossorio: There's a large category of problems that are insoluble, or at least that you can't solve. You encounter that in therapy fairly often. The way out is that you don't solve them. You outgrow them. You outlive them. You change in such ways that you no longer have that problem. And it may come in a moment of inspiration, or it may come to you that you haven't been bothered by that in the last three months, because *you* have changed. That's the kind of change that we try to achieve in therapy. You want the person to change so that he doesn't have the problems that he had before. Not necessarily solving the problem, because a lot of problems are insoluble. One way of changing is to solve the problem. Another is to change in other ways so that you no longer have the problem.

(?) I think the answer I got was so much bigger than the questions I asked ...[inaudible]

Ossorio: Well, yeah, but see, the change that takes place that gets rid of the problem, there's no limit to how big a change it can be, to how much significance it may have for you. And that's good. [laughter]

(?) Take the notion of epiphany, you know, that kind of "boom..." Is epiphany necessarily related to some kind of question? Because people have those kinds of awarenesses ...

Ossorio: No. Or if it is, it may be an answer to a question that you never knew that you had until you got the answer. Just seeing things in a new way doesn't mean that you had a question that this is the answer to, or that you had a problem that this is the solution to. It may be.

Okay, I think we've done enough with that.

Status Dynamic Maxims

Ossorio: Okay, here's a nice neat one. "In what sense are the maxims status dynamic? Many of them don't seem to be about the logic of place and relation. For example, 'If a person has a reason to do something, he'll do it unless he has a stronger reason not to.'"

These are status dynamic maxims because the background model is the model of an individual's place in the scheme of things, and the fact that behavior potential depends on that, and that the person's behavior expresses that.

Now as far as the particular, "If a person has a reason to do something, he'll do it unless...", you may recall that there is a Relationship Formula that says "If A has a given relation to B, his behavior will express that relation unless..."

The short version of that is that the relations you have give you reasons and provide you opportunities for your behavior. Now, relationships translate into statuses. If you think of this room, you can talk about the relation of any two things and any three things and any four things in it. And that gets very, very complicated. Or you can talk about the place that each single thing has in the room, and that implies all these other relations. So it's a much more compact way of dealing with a whole range of things that you lose track of and may not be able to handle just because there are so many of them, if you try to do it in terms of relations.

If you think that way, reasons depend on relations, and relations are the mirror image of status, you can see why the model of status is behind this maxim.

Like I say, that was a nice, neat one.

What is Science?

Ossorio: This next one isn't [a nice, neat one], but it's interesting. It's one that one encounters fairly often. "How would you characterize what science is? What does it entail? What does it encompass?"

The short answer is "You can't." [laughter] The background paradigm is that things in the real world essentially you can never define. You can never give the necessary and sufficient conditions. That's neither unfortunate nor is it an accident. The reason you can't is that you don't learn it that way. You don't learn what a cup is by first having a definition of a cup and then learning to recognize instances. You don't learn what a mountain is by first having a definition or theory about mountains and then learning to apply it.

Instead you learn all these things by encountering them, by encountering instances, by having people say what this one is, by asking questions and getting answers. None of those amount to a definition. But you wind up knowing what a cup is. You wind up knowing what a mountain is. That's how you know about these things.

The same holds for science. Science is part of the real world. It's an institution. It's something that people do. And there are various way of consummating that sort of activity. But there's no way to say "Here's the definition. Here's what science is."

Just to turn the screw another notch, insofar as you can say what science is, I think that if you look at the history of science, you wind up with the conclusion that science isn't what it used to be. It's not a constant. It has changed.

(?) Peter, is that like airplanes have changed? Is that the way you're using it?

Ossorio: Yeah. Before airplanes used to be made of wood and wire and propellers, and now they're not made of any of those things. Airplanes have changed. The changes are not quite so dramatic in science, but let me tell you a story there.

In its original versions, scientists were people who looked at some aspect of the real world around them and said in effect, "I want to find out more about this." Then they applied certain canons about what it takes to find out more about this, and they came up with laws, with regularities. They came up with more or less explanatory laws which codified regularities.

At any given point, you could say "This is what this science is about. This is what it tells me *about*." Because it started as an inquiry about something. Psychology started as an inquiry about people. Not about cups. Not about mountains. About people. And likewise with every single other science. It started out with a subject matter that preceded the scientific study, that raised our curiosity and we wanted to find out more about it.

What evolved as a way of finding out more about it is what we came to call science. It involved making observations, collecting systematic data, introducing taxonomies, coming up with hypotheses or generalizations that you could then go out and collect more data and see if your data still fit. One of the rules of the game is that foresight is a lot better than hindsight, so that correct predictions count for a lot more than being able to explain after-the-fact things that you already know happened.

Part of the background of curiosity and inquiry was that old urge to increase our behavior potential. We want to be able to do things that we couldn't do before. And that's why you have not only prediction but control as criteria. That's the connection between science and technology. Things that you can control are technology. Things that you can build and make are technology. That was built into what science was, but science included also the explanations, the thinking, the experimentation, etc.

(?) I'm wondering if you could work out an answer to the question of "How does one person who identifies himself as a scientist recognize another person as a scientist?"

Ossorio: The answer will be the same.

(?) But you have to make use of the notions of potential, Paradigm Cases, and family resemblances?

Ossorio: You can, but it won't get you all of the way. That's like in the spiritual domain, you can have better and worse theories, but they won't do for the competence to understand the questions.

(?) But I think what it points out is that different disciplines have different standards about what identifies one as being a scientist.

Ossorio: There is not unanimity about a lot of these things. In fact there's not unanimity about anything. You are going to get different people giving different answers. So if you want to make general statements, you don't come down to that level, because you just get disagreements.

(?) In something you wrote a long time ago, you characterize scientific accounts as precise, systematic, comprehensive...

Ossorio: That's not definitional.

(?) Is that a characterization of a scientific account?

Ossorio: That's just a generalization. It's like saying "Businessmen are neat." It's not a definition of a businessman. It's an empirical generalization. And likewise, scientific accounts are generally precise, systematic, comprehensive. Those kinds of things also serve as informal criteria. For scientists, these are the kinds of things that you very likely try to accomplish. But again not necessarily.

That's the difference between knowing in the ways that we do and understanding how it works, versus being able to define the necessary and sufficient conditions.

(?) Couldn't you take social practices, and define what science is in terms of social practices...

Ossorio: Scientific social practices have changed. That's why I say that science has changed, including the social practices. They've changed.

(?) You say that we learn what things are by encountering instances of them. How does that jive with the fact that science predicts the existence of things like atoms, and we've haven't actually encountered instances of them.

Ossorio: In non-scientific behavior, things in the real world we encounter them. Let me get to that a little later.

The kind of change that has taken place - remember I said that it started out this way - what I'm describing is how science started out, what the classic picture of science is. That there is a real world. We're studying that real world. We're doing that by finding out more about it, by being systematic about this, and by testing our understanding by making predictions.

This is the basis for a lot of my prior critiques of psychology. If you have people as your subject matter, why in the hell would you go about it this way if *that's* what you wanted to find out about? Times have changed.

(?) I'd like to take a crack at backing you up on that... There's a recursion or iteration between the media and technology. These things increase the ability of scientists to invoke new types of measurement, new things to measure, new types of measurements to carry out. Recently the Ten String Theory by mathematicians had the effect of turning the tables on the physicists. Instead of the mathematicians having to explain the physicists' experiments, now the mathematicians were telling the physicists what to go experiment with because they were trying to predict what the outcome would be. It's kind of a game where the tables were turned. So consequently the things you used to think about measuring and the way you go about it have evolved.

Ossorio: Think of that as an intermediate case.

Now let me present you with a new paradigm. The paradigm goes back to Plato. It's called "The Allegory of the Cave." The story was that we're like people who live in a cave, and what we see out there are the shadows of real things that we don't see. We don't see them because we're surrounded by the cave. What we do see is merely the shadows of what is really out there.

That's the new paradigm of science. Science is no longer starting out with a subject matter and finding out more about it. Instead it starts out with some theory about what's really out there. Then see where you can apply it, see where you can get mileage out of it. It doesn't start out with a subject matter. It starts out with "I've got this kind of theory" or "I want this kind of theory". Let me see where I can use it to good advantage.

(?) You said the notion of "use it". Sometimes I wonder whether science has simply been co-opted by business and has become technology rather than science, because there's so much money, there's so much power in the business community, that they rule science and turn it into technology.

Ossorio: Well, yeah, except you might say that's the "Evil Empire" version. [laughter] If you think of science as an effort to increase our behavior potential, that's what technology is. And any increase in behavior potential, that's legitimate, independently of how you can misuse it and how you can subvert it. It's legitimate to try to increase our behavior potential. And that's still present in the present paradigm. You say, "Where can I apply it effectively?" "What mileage can I get out of it?" "Can I apply it here? Can I apply it there? Can I apply it there?"

The contrast is that you don't start with something you want to find out more about. You start with a theory and see what you can do with it.

(?) Pete, I don't know if the history of science bears out that trend. I think that may be your version of pessimism about science.

Ossorio: It's not pessimism. I'm just saying it's changed.

(?) Well, but it seems that there are two trends that certainly have occurred. One of them is that science has diversified, and it often includes the study of ever more complex systems and many different approaches, some of them reductionistic, some of them holistic, some of them more empirical, some of them more theoretical. It would seem that at the same time, because of our social interest in solving problems of concern to our society - environment, health, and so forth - and because of our increased computational power and increased observational power, we have studied ever more complex systems, which have demanded perhaps more interdisciplinary collaboration than ever before. So there are two trends. One toward greater diversification, the other towards greater unification, and the one thing you can say is that science has "complexified". Whether there is really a trend toward more theoretical work is an interesting issue.

Ossorio: I didn't say that there was a trend toward more theoretical work. I said that there is a change in the paradigm of how you use theories and what the theories are.

(?) But there are many paradigms.

Ossorio: I'm saying this is the kind of change that has occurred.

(?) It's one of the kinds that has occurred.

Ossorio: This is the kind of change that has occurred. I'm not saying that *no* other change has occurred.

(?) But it's biased to think that it's representative of the changes in science.

Ossorio: No. I'm saying that this is the *important* change that has occurred. [laughter]

(?) Well, for sure the Ten String Theory bears out that this has happened. Any time you event a mathematical theory, then you to the physicists... [inaudible]

Ossorio: This really has nothing to do with complexity. It would happen anyhow. It could apply anyhow.

(?) So you think science has become disembodied?

Ossorio: No. It's just *different*. It's just a natural sort of change.

(?) Do you think it's more hypothetical/deductive rather than inductive?

Ossorio: I'm not even sure of that, although I'd be inclined to agree.

(?) That's certainly been a trend as physics has become more mathematical.

Ossorio: I said that I'd be inclined to agree, although I don't have strong evidence one way or the other.

(?) But that hasn't been true in the biological sciences which have become ever more concrete.

Ossorio: I'm not sure of that either...

(?) Could I try to take a crack at this? We attempted in the Advanced Life Support Program to do a categorization of things for our Factor Space Indexing. I don't know how many of you folks know what that is... But you say "Let's think about what we're going to study here." We say we're studying ecology. We're studying evolution. We're studying the diversification of plants. We're studying biology. We're studying biochemistry. We're studying all these things. How can we create a hierarchy of things on behalf of our Factor Space study?

And you get into some crazy things when you start working with Process Descriptions. Is ecology a Process Description under evolution or the other way around? Is biology a Process Description under science? You can go on and on like this, and it really is interesting. The thing that I have to agree upon is maybe as Larry says, you've got an awful lot of different sciences all of a sudden having to work together to make sense out of something you might call evolution, as a Process Description, not as a belief system. In other words, can you write down a process that would show how evolution could occur. Or what do we mean by ecology? How does that occur. And so on. It was interesting. It showed the diversification that's existing more than unity.

Ossorio: One reason why I said that the change I noted was the important change - I think that if we were able to give a set of necessary and sufficient conditions for the classic science, that all of these other changes would fit, and we would say that science has not essentially changed. Whereas what I've described, I would say "This is an *essential* change. This makes it something *different* from what it was."

(?) I'm not sure I'm following you with "The Allegory of the Cave". It struck me that psychology has been that way for a long time, imposing theories about the concept of a person. Is that an example of the change in science?

Ossorio: That has aspects of both. Remember that psychology, although it's been around a long time, there have only been a lot of psychologists for a short time. So that most of the action in psychology is recent, even though it has a long history as a science. The familiar psychological theories have the aspect of the new paradigm, namely that they're talking about something else other than what a person visibly is. On the other hand, they have aspects of the old paradigm in that there is a subject matter, namely persons, they're about. There's no two questions about it. They were interested in persons. So like I say, they have important aspects of both. (?) Can I ask another question about that? Are we running out of time? It's 10:30 p.m.

Ossorio: Let's take a few more.

(?) I was wondering if you'd address the causal model in psychology. I keep reading over and over in various areas of cognitive psychology talking about nailing down the causes of human behavior and human thought. It seems to come from a long trend of wanting to see human beings as part of the natural world subject to all the laws and canons and all other things. I was wondering if you could address that, if you felt like it.

Ossorio: Can you say it again quickly?

(?) Just the idea of believing that as a science, we've got to find out the causes of human behavior - that whole approach of looking for causes instead of understanding the person.

Ossorio: Okay. Let me triangulate on that. Number one, psychologists have almost never been what you might call original scientists. To put it very polemically, they've been flunkies [laughter], following the prescriptions of the philosophers of science about what science has to be like. I think that's unquestionable. It's public knowledge. This is what modern psychology was about. They were following the prescriptions about what you had to do to be a science.

The paradigm used by the philosophers of science was physics. If there ever were a science, there it is. From that, you get the clockwork model, the Newtonian model. Everything is clockwork. The whole universe is a big clock. Every piece of it is a smaller clock. People are little such clocks. This is the controlling model.

In that model, you have a different notion of behavior, namely that behavior is movement. There's hardly any psychological theory which doesn't equate behavior with movement.

(?) Ticks, not tocks. [chuckles]

Ossorio: It makes sense to ask "What's the cause of a movement?" It doesn't make the same sense to ask "What's the cause of a deliberate action?" So part of assimilating to the model is that you tailor your notion of behavior itself to the model. In that model, it does make sense to say "What are the causes?" But you are no longer studying behavior. Small price. But you're being very "scientific".

One of my polemic, hip pocket arguments with former colleagues who say "We need a really scientific approach to persons and behavior." I used to say "Look. Think about baseball. Think of taking a really scientific approach to baseball. What could that science tell us about baseball that's more important than what we already know about it?" And you know what the answer is.

If you think of people as generally in this ballpark like baseball, and not in this ballpark like clockwork, then number one, you have to be skeptical about what classic science could tell us about it. Mainly what it could tell us is how to beat the game. It can tell us a lot of empirical things that will help us technically accomplish things. But it doesn't substitute for the rules of the game themselves.

If you took a scientific approach to chess, you could figure out how to psych out your opponent, what sort of learning, etc., but none of that substitutes for the fundamental knowledge of what chess is and what the rules are. And it won't necessarily make you a better chess player.

So that's one of the - it's not a paradox, it's not a puzzle, it's just a difficulty - with the notion of having a science of behavior, a science of persons. You can do it using either model of science, and the difficulty is "What could you possibly expect? What could you hope for?" Clearly you could expect something and you could hope for something, and it's worth putting effort into. But it's also worth putting effort into learning how to *play* the game. And that's what we're up to when we socialize our kids. That's what makes them persons. And that's not part of psychology. So psychologists are in a peculiar position. I don't envy them. [laughter]

(?) [inaudible] as the model for psychology sounds like you sold your soul to the devil so you can in good conscience buy groceries.

Ossorio: Indeed. A Faustian bargain.

(?) So how can psychology become more scientific?

Ossorio: I think the answer is "That's the wrong question." How can we learn more about people? How can we learn what we really want to know about people? How can we *be* the way we really want people to be?

(?) You weren't quite audible there.

Ossorio: I said instead of saying "How can we have a science of persons?", the important questions about persons are not that. It's "How do we want to move? How do we want to become? How do want to be as people?" Not "How can we further our purposes more efficiently?" It always helps to be able to further your purposes, but those aren't fundamental questions.

(?) The usual attack on that is "Oh, that's just arm chair philosophizing. People disagree about those things. That's not being a good psychologist."

Ossorio: I would hope so.

(?) That's not going to satisfy them.

Ossorio: There are counter-polemics for every polemic. And the counter-polemic for that is "So is physics."

(?) What? Say more about that.

Ossorio: You can say exactly the same thing about physics. A bunch of guys writing down equations and doing this and that. Occasionally they go out and make an observation. Same with psychologists. Occasionally they go out and do an experiment. [laughter] Every piece of data is replicated a thousand times and spread around. You could say, "Well, what good have they done us? What have they done for us lately?" [laughter] Polemics are polemics.

Okay, I think it's time to close it. [applause]