ADVANCES IN DESCRIPTIVE PSYCHOLOGY

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Foreword

Volume 8 marks my return to editing *Advances* and it has been a labor of love. To have Ray Bergner as a co-editor is a particular pleasure for several reasons. First, in the case of his own papers, he wrote and got them finished in a timely manner. Second, he has become a master editor, sensitive both to an author's intent and yet mindful of how to sharpen and focus his or her presentation. Lastly, he has mastered the details of APA Publication Manual—that much hated but necessary guide to the preparation of manuscripts for publication in the *Advances* series.

This volume has taken at least one year longer than we anticipated. Some of this was due to the complexity of the reproduction process for two of Peter's oral presentations, but most of it arose from the multiple commitments that I had made and which, when I was reduced to minimal working status by illness this spring, brought the editorial work to a standstill. Despite its delay, I am proud of this volume. It contains papers that will long be cherished by members and appreciated by others as they become known more broadly.

Let me take this opportunity to acknowledge persons who read and provided constructive critical feedback to authors of papers in this volume. They include Laurie Bergner, Ana Bridges, T. F. Davis, H. Joel Jeffrey, Niyati Kanitkar (whose extensive reference research was vital to Greg Colvin's paper), Ned Kirsch, Tony Putman, Mary K. Roberts, Jeff Schatz, Wynn Schwartz, and the students of my graduate course in organizational behavior.

Keith E. Davis
Columbia, SC
June 2005

Part I

Introduction

Raymond M. Bergner and Keith E. Davis

The first section of this, the 8th volume in the *Advances in Descriptive Psychology* series, is devoted to addressing four fundamental questions:

1. Just what is this strange, unique, and difficult to grasp entity that is "Descriptive Psychology?"

2. Why, unlike many other sciences, has the science of psychology thus far been unable to arrive at a single, widely accepted, unifying framework, and thus remained in a highly fragmented state?

3. Is it possible that one day the science of psychology will be replaced entirely by that of biology? Is it possible, in other words, that all of the phenomena that we currently explain by recourse to notions like "reason", "belief", and "emotion" will be better explained by ones like "synaptic event", "action potential", or whatever the then current biological construct system proffers?

4. Where does our freedom lie? In what respects do we enjoy human freedom, and what are the limitations on this freedom?

In this introduction, we hope to orient the reader to some illuminating answers to these questions that the discipline of Descriptive Psychology, perhaps uniquely in all of psychology, has to offer.

Chapter 1: In a World of Persons and Their Ways

In this chapter, Peter Ossorio provides the most recent, and perhaps the most accessible, answer to the fundamental question, "What is Descriptive Psychology?" The chapter represents a highly condensed treat-

ment of this matter and contains numerous brief presentations of many basic Descriptive ideas. Thus, rather than attempting to provide a condensation of what is already highly condensed, I shall adopt the strategy here of using one of Ossorio's own images to orient the reader both to this chapter and to Descriptive Psychology itself.

The image is that of playing baseball. Consider a strange, hypothetical situation in which people all over the world had been playing this game for many centuries, but somehow no one had ever stepped back from the enterprise and articulated the *concept* of baseball (which would be substantially but not entirely equivalent to a statement of the rules of the game). Not born with a knowledge of baseball, these people had to learn to play by participating in the game in the course of growing up, and had evolved precisely the same game with the same universal set of rules all over the globe. They possessed, by virtue of having the overall concept of baseball, a knowledge of a whole network of systematically related concepts ("run," "hit," "error," "inning," etc.). In our hypothetical, then, all of these people knew how to play baseball and were in fact playing the game successfully, but somehow no one had ever articulated the concept of "baseball" itself. (Compare: many people speak grammatically correct English, but if asked to step back and state the grammatical rules they are following, they would be unable to do so.)

Consider some further features of this hypothetical "baseball world":

1. What would fundamentally make a baseball player a baseball player would be his or her *ability to actually play baseball* -- to *act* on the concept of baseball. The player would know when to go to bat, when to run to first base, how to strategize about how to get a run across, and so forth.

2. What would be *universal* across all players (paradigmatically) would be this ability to act on the concept of baseball.

3. The concept of baseball would articulate all of the possibilites of what could possibly happen in a game of baseball. It would be *pre-empirical* in this sense. What actually happened

in a specific game would be an empirical matter, and could only be discovered through (direct or indirect) observation. But whatever happened, if it were a baseball happening, would fall within the "world" of baseball -- it would be a run or a hit or an error or an out, etc.

4. Their sharing of the concept of baseball would render players able to understand the behavior of other players. They would not as a rule find the behavior of these others mysterious but quite intelligible. When an opponent bunted with no outs and a man on first base, or tried to steal second base, for example, the observing players would understand the behavior. This is not to say either that they could predict the behavior beforehand, or that they would never be mistaken in their understanding. Understanding implies neither prediction nor infallibility.

5. As masters of the game, players would speak with confidence and authority on matters pertaining to the game. With essentially no doubt or uncertainty, they could if needed declaim that, "It's three strikes and you're out," or "After three outs, the team at bat takes the field and the opposing team takes their turn at bat." Other players hearing such statements would not judge the speaker as arrogant or grandiose or beset with a delusion that they "had a pipeline to the truth."

6. Although historically all of the baseball players we have observed have been human beings, it is not out of the realm of possibility that we might observe aliens or robots some day playing the game. And, if they did so, we would count them baseball players. Thus, we cannot equate being a baseball player with being embodied in a certain way, or make claims such as, "Well, what is universal here is that all baseball players are organisms, and the key to understanding what they are doing lies in understanding this organism." If robots (perhaps on the order of Star Wars' C3PO) some day play baseball, they

> will obviously be *nonorganismic* players. And when computers play chess today, they are obviously nonorganismic players.

To conclude our hypothetical, at some historical point, an individual comes along and says, "I can see how all of this hangs together. I comprehend the concept of baseball. I see the network of concepts and how they relate one to another--the rules that dictate and constrain how the game is played. I understand that what is fundamental here is *acting on the concept of baseball*; after all, you have been doing it for centuries. But permit me if you will to set forth the *cognitive content of the concept*."

Peter Ossorio is an individual who has come upon the historical scene and done something analogous to our baseball explicator. He has discerned that there is a vastly complex, all-encompassing concept, the concept of a "Person." What happens (paradigmatically) is that, like our hypothetical baseball players, we human beings learn this concept growing up, which means primarily that we learn, not a cognitive content, but *how to be a person in a world of persons*. Ossorio's fundamental task in the creation of Descriptive Psychology has been to articulate this *pre-empirical concept* of "Person", as well as the extraordinarily complex network of systematically related concepts that comprise it. In the end, keeping our baseball explicator in mind, one can say that what Ossorio has done is articulate the rules for operating as a person in a world of persons.

While there are many further detailed ideas and elaborations in Ossorio's chapter, this brief analogy will hopefully serve as a helpful aid to understanding what Descriptive Psychology and this chapter are all about.

Chapter 2: An Open Letter from Isaac Newton to the Field of Psychology

This chapter presents a Descriptively-based thesis regarding why psychology has thus far been unable to arrive at a single, widely accepted, unifying framework, and thus remains in a highly fragmented state. This thesis concerns psychology's broadly held implicit assumption that science is 100% empirical, and its consequent inattention to many critical pre-empirical matters essential to the creation of successful scientific

frameworks. In the chapter, the device employed for communicating this thesis is that of adopting the voice of Isaac Newton, who illustrates in a "letter" to contemporary psychologists how his own celebrated unifying framework embodied numerous very famous pre-empirical elements, and how it was only by virtue of these elements that he was able to achieve the empirical unification that he did. Along the way, Mr. Newton makes a number of positive recommendations for the construction of a unifying framework for psychology, and notes how these are already embodied in the discipline of Descriptive Psychology.

Chapter 3: Can Psychological Science be Replaced by Biological Science?

A fundamental slogan in Descriptive Psychology is that "Things are what they are and not something else instead." Raymond Bergner's chapter, "Can psychological science be replaced by biological science?", is an elaboration of this basic tenet and therein an extended refutation of any biological reductionist position. In brief, Bergner contends that concepts such as "reason," "knowledge," "belief," and so forth -- in short, the construct system of psychology -- are valid, useful, and nonreplaceable ones for describing and explaining human behavior. They are *not*, the author contends, prescientific placeholder terms for what are "really, when we get truly scientific about the matter," biological states of affairs.

In chapter 3, Bergner argues this general thesis in the following manner. First, he assembles a substantial body of evidence that a specific biological reductionist thesis (viz., that our current psychological forms of description and explanation will one day be replaced by biological ones), while not universally held, is wide-spread and highly influential in both the scientific community and the broader culture. Second, he articulates the enormous highly destructive consequences for our concept of a "Person," for numerous human institutions, and for our very way of life should this thesis ever become broadly accepted. Third, he argues at length (a) that the reductionist thesis is not currently established but remains entirely a promissory note, (b) that it is impossible in principle to replace psychological *concepts* with biological ones, and (c) that it is

further impossible in principle to replace psychological *forms of explanation* with biological ones. Thus, Bergner concludes, while biology has had and will continue to have many extremely valuable and illuminating findings, it cannot and will not *replace* psychological concepts and explanations in our understanding, scientific and otherwise, of human behavioral phenomena. At the end of the day, in other words, there is no reason to conclude that "it's all really biological.

Chapter 4: Where Does My Freedom Lie?

In this chapter, Paul and Carolyn Zeiger address questions having to do with human freedom. In Descriptive Psychology, such freedom is embodied in the fundamental concept of "Deliberate Action," in which a person "engages in a given behavior, B; further, he knows that he is doing B rather than other behaviors which he distinguishes and he has chosen B *as* B from among a set of distinguished behavioral alternatives as being the thing to do" (Ossorio, 1985, p. 154). While the question of determinism vs. freedom is a metaphysical one, the postulation of an all-encompassing determinism in human behavior has been argued elsewhere within Descriptive Psychology as amounting to an unsuccessful (and indeed self-annihilating) degradation ceremony (Ossorio, 1978, pp. 130-137). In this ceremony, the making of the claim itself, like the "utterance" of a tape recorder, must amount to the only next thing that the stating "organism" could have uttered given his or her stimulus inputs, biologic states, history, circumstances, or whatever other deterministic forces operated upon him or her. Thus, in making the claim of determinism, the claimant in effect declares himself or herself not a *person* capable of *truly considering* alternative conclusions and *deciding* the matter based on evidence and arguments, but in effect a certain kind of *robot* emitting a wholly determined output. With this as Descriptive background for their work, the Zeigers begin from a starting point in which human freedom is regarded as a given.

Where then does our freedom lie? That is to say, in what spheres of our worlds do we enjoy such freedom, and what are the limitations on this freedom? Building upon the fundamental state of affairs cap-

tured above in the notion of Deliberate Action -- our ability to select from among distinguished behavioral options -- the Zeigers develop an extensive list of places where our freedom lies. For example, as Actors (within an Actor-Observer-Critic framework), we have the ability to *give value* to states of affairs in our worlds (in drinking the lemonade when I am thirsty, I give it the status and the value of "thirst quencher"). As a centrally important special case of this broad ability, we can "cast" other persons in certain roles or statuses in our worlds such as friend, lover, mentor, or financial advisor (whether they accept our status assignments is, of course, one of the limitations on our freedom). We can change our relations to them (initiate, enhance, destroy, etc.) by acting in accord with the *Relationship Change Formula*, and maintain such relationships via the *Relationship Formula.* We can *assign* highly varied, and more or less impoverishing or enriching, *significances* to actions, events, and objects (the simple action of a teacher instructing his or her pupils may be assigned significances as varied as "making a buck," "making the world a better place for coming generations," and/or "fulfilling God's mission for me in the world"). We can choose to enter different communities -- familial, religious, organizational, athletic, civic, etc. -- each providing us with arenas for action and for the meeting of our basic human needs. Writ large, in our behavior and its status-assigning and value-giving aspects, we *construct* in our human freedom entire behavioral worlds for ourselves in the manner so well described previously by Roberts (1985). Finally, we can choose which reality constraints (e.g., bodily infirmity, discrimination, unrequited love) whose incursions on our freedom we will attempt to resist.

In summing up, the Zeigers employ an excellent metaphor. Our human condition insofar as freedom is concerned may be compared to playing a game of basketball. While there are constraints within which we must operate (cf., the boundary lines of the court), within these constraints lie vast opportunities for deeply satisfying, enormously varied, and creative human participation.

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In A World Of Persons And Their Ways

Peter G. Ossorio

What I am going to do today is try to give two talks in one. The first part is something that you might think of as an introduction to Descriptive Psychology, and a large part of that will be to provide some if not definitive answers, at least state of the art answers to some of those old familiar questions like, "What is Descriptive Psychology?" "Why do you guys talk in these weird ways?" [microphone adjustment]

As I said, I want to try to provide some state of the art answers to some of the questions that keep bothering us, and a good part of that first talk will be that kind of thing. The second thing is to take some of the ideas in the first part and connect them to either the existing formulation or to some topics that are of interest. The first part I think is going to be a little over an hour.

An Introduction to Descriptive Psychology

Okay, let me begin by going way back. When I was writing "An Overview of Descriptive Psychology" in the early 1980's, I tried to reconstruct the spirit of the enterprise in which the first work in Descriptive Psychology was undertaken some twenty years before that, and I came up with four slogans. I noted at the time that slogans are apt for saying what you live by, and that that is quite different from what you happen to believe or even what happens to be true. The four slogans are these:

> *1. The world makes sense, and so do people*. They make sense *now*.
>
> *2. It's one world*. Everything fits together. Everything is related to everything.
>
> *3. Things are what they are and not something else instead.*
>
> *4. Don't count on the world being any simpler than it absolutely has to be*.

What I am going to say today can be regarded as an elaboration on these and very particularly on the first one, the one that says, "The world makes sense and so do people. They make sense *now*."

Keep in mind that at the time I had a number of years of experience at making sense of the world and of people both with and without scientific theories and findings, psychological theories and findings, psychological tests and measurements, and a variety of clinical techniques. It seemed to me at the time that although all of these were of some value, there was some important sense, as yet unspecified, in which they were, if anything, a handicap or a liability rather than an asset. Saying "They make sense *now*" is an affirmation of that. (In thinking about it, I probably should have said, "They already make sense to begin with," because I don't mean that they make sense now but there was a time when they didn't.)

Saying that people make sense is a good way to raise eyebrows. What you hear on every hand is how mysterious people are, how irrational they are, how emotional they are, how difficult it is to understand. And that is true, but this is a clear case of that maxim that says, "Values distribute across the possibilities". We focus on those things about people that are mysterious, on those things that we don't understand, but this is against a general background of understanding.

One of the closest things to a brute fact that we have is that people are not inherently mysterious to people. It is true that there are lots of things that we do not understand about a given person and lots of things that we do not know about a given group. But still, you know that meeting a stranger on the street is not like encountering a little green man from Mars, nor is it like turning the corner and encountering an inscrutable mobile artifact where anything, even the inconceivable, might be the result of that encounter. And having lunch with my Uncle Ben is not like meeting a stranger on the street either. With people, it tends to be I and Thou.

That people understand people is surely one of the most fundamental things about people. And though that is hardly open to question, there are questions one might ask. Probably the most natural question is, "How

come? How is it that people are not mysterious to people?" You could go in all kinds of directions from that. Fortunately there are a couple of quite mundane considerations that limit the possibilities of good answers. Let's call these two considerations (1) the *acquisition* consideration and (2) the *universality* consideration.

The acquisition consideration goes like this. Infants are not born with the characteristics that are paradigmatic of human beings, and we have experience with feral children that says that it is not just a matter of the maturity of the organism either. Rather, as we know, these characteristics are learned as the infant grows up.

So being human in the sense of having paradigmatic human characteristics is something that is acquired. It is acquired as a result of participating as a person among persons in a world of persons and their ways.

What is acquired in this way is primarily a general kind of ability rather than, for example, some kind of knowledge. Operating as a person among persons is something one *learns how* to do. It is something that one *knows how* to do. It is an ability that one comes to have. Among the various powers that persons have, arguably this is the most fundamental.

To digress, to be sure more than that is required in order to be a person. What is required in addition to having the ability to operate as a person among persons, is a history of actually doing that. And, secondly, what it is required is that the person does that directly rather than indirectly, which is to say that operating as a person among persons is not something you accomplish indirectly by actually doing something else and having this be a consequence. It is something that you do directly. You might say that is where you begin from, not where you end up.

What does *not* happen is that we first (somehow) acquire a theory or a definition about persons and then apply it to a set of individuals that we (somehow) select as appropriate subjects and observe the result. If we did that, then what we would acquire is primarily knowledge, and it doesn't happen that way. That is the *acquisition* consideration.

Now for the *universality* one. It is a truism that what is fundamental

to persons is common to (all) persons. That is a pretty reasonable sort of statement. As it happens, it is not true. However, it might as well be true. What we need is some way to keep that truism honest and as soon as I say that, I hope that half of you are thinking Paradigm Case Formulation. And indeed that is what it takes is a Paradigm Case Formulation. That's why I say that it might as well be true.

Now to digress again, just for a minute, this notion that what is fundamental is common is almost certainly responsible – largely responsible – for the near universal tendency for psychologists and other people to think of persons as essentially organisms. You can just hear the wheels turning, "Well, gee, we can't find anything common to all people, but at the very least they're all organisms, so organisms are what they must fundamentally be."

What is *not* common to all persons is any matters of fact. People are known to disagree about matters of fact from the most trivial to the most profound. (And of course, they disagree about what is trivial and what is profound.) There is no body of statements that would draw universal assent. There simply is not.

If we were going to turn philosophical, we would ask, "What are the grounds of the possibility of this?" Well, we won't do that. Instead we will ask, "How can they do that? How can people disagree all over the place like that?" If we approach it that way, there is at least one answer that is quite clear. We can only disagree about matters of fact if we share the concepts in terms of which those facts are formulated. For example, we could not disagree about whether "the cat is on the mat" if we did not share the concepts of "cat," "mat," "on," and so forth. If we did not share those concepts, we could only misunderstand each other in connection with that matter, but we could not disagree about whether the cat is on the mat.

Although misunderstanding is far from uncommon, we do routinely take it that our apparent disagreements about matters of fact are real disagreements and not merely misunderstanding, and there is a good reason for that. By and large the concepts that are involved in the facts or

purported facts that you and I disagree about are the very same concepts that are involved in other facts that we do agree about. So if we were to dismiss our apparent disagreements as being illusory because in fact we did not share those concepts, we would also have to dismiss our apparent agreements because we did not share the concepts. And nobody is going to stand still for that kind of conclusion.

Given all of that, concepts emerge as the kind of thing that might, after all, be common across (all) persons. That is the *universality* consideration.

How do these things help? Well, I said a minute ago that they restrict the range of possible answers. We may agree that people's understanding of people is primarily a matter of ability rather than knowledge, but what we want, perhaps not entirely legitimately, is knowledge about that state of affairs. *What is it* for people to not find other people inherently mysterious? *What* ability is involved? *How* is it exercised? And so on.

Because we are so truth oriented and knowledge focused, we are tempted to ask, "What is it that everybody knows about everybody that makes them not inherently mysterious?" But the answer to that would have to be "Nothing." There is nothing that everybody knows about everybody that makes them not mysterious. Both considerations point in that direction. It's *not* a matter of knowledge. It's a matter of competence. Just in passing, you might expect that if there were something that everybody knew about everybody, it ought to be easy to say what that was. After all, it's something everybody knows. But there isn't anything of that sort. Whatever there is to say about it is not simple.

Those two considerations – concerning acquisition and universality – have the further virtue that they suggest a formally viable alternative, and that can be outlined in six bullet points. Here they are:

> 1. The ability that people have that enables them to understand people is the ability to use, or act on, a certain concept. That concept is designated as "the Person concept" or, interchangeably, "the concept of a Person".

2. Mastery and use of this concept is what is universal across persons, and that of course is subject to our Paradigm Case Formulation.

3. It is universal among persons because mastery of that concept and the routine, spontaneous exercise of that mastery are what makes a person a person.

4. The concept of a Person can be articulated as a structure of interrelated component concepts and their component concepts, etc. If we do that, we will then also have articulated the ability to act on the concept of a Person as a structure of interrelated abilities to act on the component concepts. The overall concept corresponds to an overall ability. If you analyze the concept into component concepts, you automatically have analyzed the ability into component abilities.

5. The structure of interrelated component concepts is the "cognitive content" of the Person concept. This is as close as there is to being a "knowledge" aspect of the matter.

6. A delineation of this cognitive content will provide a ground level elucidation of what there is to understand about people and what it is to be a person.

Of these several points, I think that probably only the third one needs some elaboration, and to do that we can make use of the analogy of games. Consider. Mastery of the concept of baseball is universal among baseball players. That is so because mastery of that concept and the exercise of that mastery are what makes a baseball player a baseball player. A baseball player as such is not inherently mysterious to another baseball player. Even though his actual behavior might have been unpredictable and its rationale inscrutable, still it was already a possibility within the game. It was already a systematic possibility within the game of baseball. They were systematic possibilities because the conceptual structure of baseball creates (out of nothing) a logically self-contained universe of possible actions, interactions, relationships, and states of affairs, all of

which hang together and make a certain kind of sense – baseball sense.

Now the parallel. Mastery of the concept of the Person is what is universal across persons. What makes a person a person is the mastery of the Person concept and the routine exercise of that mastery. An individual person, as such, is not inherently mysterious to another person. Although his actual behavior may have been unpredictable and its rationale inscrutable, still it was already a systematic possibility within the Person concept. It was already a systematic possibility for the life of a person. This comes about because the conceptual structure of the Person concept creates a logically self-contained universe of possible actions, interactions, relationships, and states of affairs, all of which hang together and make a certain kind of sense – human sense. Common sense. This self-contained universe is what we commonly call "the real world", and there is nothing, absolutely nothing, that lies outside its scope.

It might seem grandiose to be talking about something that "nothing lies outside its scope", but in fact, it's not only not grandiose, it's not even original. People have been remarking on this kind of thing down through the ages. For example, there is an old Spanish philosopher who said, "Human life is a peculiar reality in that every other reality, effective or presumptive, must in one way or another find a place within it."

Articulating a concept that has that kind of scope is obviously neither simple nor easy, but neither is it impossible. And, of course, this is the main task addressed by the conceptual work in Descriptive Psychology – to articulate the Person concept. In terms of articulating it into components, the four major components of the Person concept are the concepts of (a) Behavior, (b) Individual Person, (c) Reality, and (d) Language.

Okay, now at this point with this kind of rationale, you might say, "We're in a position just to go ahead and do it." And indeed we have. But, as you know, it raises certain questions. Questions like: "Why do you guys talk like you have a pipeline to the Truth?" "Who are you to say that this is how things are?" "What is Descriptive Psychology?" "What is it that Descriptive Psychologists do?" So let us address some of these issues. The first thing is to set the stage by introducing some basic distinctions.

Persons and Human Beings et al.

There is an old Spanish saying that before the Spaniards discovered the Fulanese, the Fulanese did not know that they were speaking Fulanese. They thought they were just *speaking*. [laughter] Such things are not necessarily historically accurate, but they do have a point to make. In the present case, the saying directs our attention to an important phenomenon, namely that when we have empirically available only one kind of example within a general category of things, we may fail to make the relevant distinctions between the generic and the specific. Much may hinge on how we succeed or fail at that.

For example, in 1915 all the airplanes that we knew of consisted of a wooden frame covered with cloth, held together with wire, and with a motor-driven propeller in front. We did not at that time define airplanes in those terms even though it was empirically universal. All airplanes were of that sort. Had we done so, progress in aeronautics would very likely have consisted of building bigger and better airplanes consisting of wooden frames covered with cloth, held together with wire, and driven by a motor-driven propeller.

Similarly, in 1947 every computer that we knew of consisted of a supportive frame hung with vacuum tubes and relays and an overlay of control structures. That was empirically universal. Every computer was like that. We did not at that time define computers in those terms. Had we done so, progress in building computers would very likely have consisted of building bigger and better computers consisting of supports, relays, control structures, and vacuum tubes.

In 1990 all of the persons of whom we had public record were individuals who were specimens of Homo sapiens. In contrast to the case of computers and airplanes, in general psychologists *did* define persons in those terms because, as I mentioned, it was empirically universal. The conceptual frameworks and conceptual fragments which supported most of the efforts of clinical and research practitioners either (1) "defined" persons as organisms, or (2) made the *a priori* assumption that persons were organisms, or (3) simply addressed "organisms" as their subject matter.

On this basis, one could expect that progress in the field would consist of more extensive and detailed assimilations of the activities of human beings to the processes that are characteristic of organisms. And you think over the last ten years. I leave it to you whether that expectation has been borne out.

As in the case of airplanes and computers (and just about everything we can think of) there are good reasons for not confounding persons and organisms. As it happens, the alternative to this confounding is exceptionally easy. For this purpose we can introduce the following definitions immediately, and without preamble, because the logic is perfectly straightforward. Even though the first definition needs to be elaborated, that is not relevant to the present task.

So let me give you the four definitions that many of your have heard before.

> 1. A Person is an individual whose history is, paradigmatically, a history of Deliberate Action in a dramaturgical pattern.
>
> 2. A Human Being is an individual who is both a Person and a specimen of Homo sapiens.
>
> 3. An Alien Being is an individual who is a Person and has a biological embodiment other than Homo sapiens.
>
> 4. An Authentic Robot is an individual who is a Person and has a non-biological embodiment.

These are all straightforward because it is clear that our concept of a Person allows for at least these three subcategories, and that this does not at all depend on whether there actually are any alien beings or authentic robots, or whether we actually ever encounter any. Our concept of a Person already allows for these possibilities. After all, a generation raised on science fiction portrayals of human-like robots and aliens could have no illusions about that. "What's the big deal?"

Of the four concepts defined, it is clear that the fundamental concept is that of a Person, since that is what is common to human beings, aliens,

and robots. The definitions provide the basic guidelines for not confusing persons with human beings, and not confusing human beings with organisms.

Let me say that the best way to lose your way before you take the first step is to either confuse persons with human beings or confuse human beings with organisms. So this is a preliminary for not going wrong in one of the ways that we can go wrong.

"The Grammar of Operating as a Person among Persons"

The next one has to do with "What is the nature of this task? You mentioned articulating the Person concept as a structure of interrelated component concepts. What the hell is that?" In clarifying the nature of the enterprise, we can use the familiar and relatively transparent notion of the grammar of a natural language. I will use English rather than just talking about natural language.

Consider. Infants are not born speaking English. Rather, speaking English is something that they acquire the ability to do. They acquire that ability by learning to operate as an English speaker among English speakers in a world of English speakers and their English speaking ways.

That much is undeniable, but we are not content to leave it at that. Instead we ask, "*What* is it that they (all) learn? *What* is it that they now have that constitutes their being able to speak English? *What* is it that they know how to do when they know how to speak English? What was there for them *to* learn?" And so on.

Prompted by such concerns, we have generally distinguished the grammar and the lexicon of the language as constituting the language. Then we say, "To say something in English is to speak in accordance with the grammar and the lexicon of English."

In this context, it is the grammar of English that is the most problematic. It is the notion most closely associated with the idea of what English *is*. The complexity and difficulty of the task can be indexed by the fact

that an entire academic discipline has not succeeded in turning out the definitive grammar of English, even though they are close and for many purposes we can say, "Yes, we know what the grammar of English is."

Of course, the absence of a finally definitive grammar has never prevented us from teaching the grammar of English to schoolchildren who are native English speakers, using such devices as diagramming sentences, distinguishing parts of speech, and so on. It is instructive that some speakers who routinely speak in accordance with the grammar of English have an extremely difficult time learning to say what the grammar of English is.

These aspects of language are most informative because there is a thoroughgoing parallel between them and the issues we already noted before in the connection with the Person concept. In both cases the central task is that of moving from simply knowing how, to an articulation of *what* it is that one knows or has when one knows how (knows how to speak English, knows how to operate as a person among persons), and that transition is hazardous.

There is a reason why we raise those questions so insistently in regard to language and in regard to persons, whereas we are not much inclined to raise those questions when it comes to knowing how to draw a circle or knowing how to throw a ball or things like that. We raise those questions because there is clearly something systematic going on here. This is shown by a couple of features.

(a) One is that the various achievements that result from the exercise of that know-how have significant logical relations to one another.

(b) Second, the number of distinct possible achievements that are attributable to the same competence is indefinitely large or literally infinite.

The most attractive conclusion in such cases is that what we learned when we learned how is how to work some kind of system. This explains why from a finite set of learning experiences we acquire an ability that accounts for an unlimited number of distinct achievements. Thus, the task quickly resolves itself into the task of delineating the system that is

involved. And that can be done in a number of ways.

An explicit grammar for a natural language is a set of rules or conceptual procedures for "doing it right" or "doing it", where "it" is "speaking the language". In a similar vein, we can think of a "grammar" of the Person, or equally, a grammar of operating as a Person among Persons. This would be a set of rules or conceptual procedures for "doing it" or "doing it right". Articulating the Person concept is essentially that kind of enterprise. It is essentially the kind of enterprise involved in writing a grammar. It is specifically the "grammar" of operating as a Person among Persons.

There are some differences. I said *essentially* that kind of task. There are several differences that we need to recognize. The first one is that, whereas grammars are done in terms of rules, the articulation of the Person concept is done in terms of concepts, and that is for reasons that we will get to pretty quickly. The second one calls for a little more development. It will not have escaped your notice that it is not merely a parallel or a similarity between the tasks of specifying what it is that one "knows" when one knows how in regard to persons and in regard to language, since, as I mentioned, the concept of language is one of the major components of the concept of a Person.

The notion of a language consisting of a grammar and a lexicon is admittedly incomplete. It is lacking an essential connection to the real world. Traditionally, this connection is supplied by verbal performances that are historically situated and context-dependent. Thus we have the language, represented as grammar and lexicon, and we have this historically situated act of speaking, or speaking in that language. Correspondingly, linguists speak of a theory of competence and a theory of performance. The theory of competence is essentially the grammar. The theory of performance is a theory about the speech act.

For linguists, a theory of linguistic performance is a very different thing from a theory of linguistic competence. Whereas the one – the theory of competence – is a matter of delineating a logical structure, the theories of performance have leaned heavily on the notion of persons as

organisms and of linguistic competence as being partially "wired in".

I said that the concept of language is admittedly incomplete. It is not just practically incomplete. It is conceptually incomplete. The concept of language is a conceptual fragment that is inherently unintelligible except as a fragment of a more comprehensive conceptual structure. Let me go through a couple of moves here.

> (a) It is a truism that verbal behavior is a form of behavior (a special case of behavior). Without behavior, there is no linguistic behavior either. Therefore, to speak of language is to presuppose the more general concept of behavior.
>
> (b) Second, it is probably too obvious even to be a truism that every behavior is someone's behavior. *A fortiori*, every linguistic behavior is someone's linguistic behavior. Without speakers, there is no language. Language conceptually requires speakers who have something to say. It requires the concepts of individuals who engage in both verbal and nonverbal behaviors. Thus, there is a conceptual structure extending across language, persons, and behavior.
>
> (c) I mentioned that acts of speaking (like all behaviors) are historically situated within a real world context and that it is this connection which makes language real. It follows that the conceptual structure that extends across persons,
>
> behavior, and language encompasses the real world as well.

Notice that just by coincidence if you follow these simple things, what we have done is reconstruct the four major components of the Person concept, which are Person, Behavior, Language, and Reality.

The contrast between the linguists' strategy and a Descriptive approach is illuminating. The linguists develop grammars as "theories of linguistic competence" and then switch to separate, qualitatively different, empirically oriented "theories of performance" to deal with the conceptual requirements concerning speakers, behavior, and real world con-

text. In contrast, the Descriptive approach retains a single non-empirical, 'grammatical' treatment of competence with respect to the entire domain that encompasses persons, behavior, language, and the real world. It is essentially the same kind of thing as a grammar or as the "rules of the game", but it has a much broader scope. So that's the second difference – the scope is much broader than language.

The third difference I will just mention, and that is this: Grammars have to be written language by language. There is no universal grammar. There is no single grammar that applies to all languages. In contrast, the Descriptive approach to the Person concept, there's only one. It does apply to all things. What correspond to grammars of particular languages are descriptions of particular cultures. And the Person concept addresses *all* cultures, not just *a* culture, and it addresses them systematically, not just ad hoc, one by one. So that's the third difference between a Descriptive approach and the notion of a grammar of a natural language. But still, it is essentially that kind of enterprise – writing the grammar of operating as a person among persons in a world of persons and their ways.

Speaking with Authority

Okay, enough for that. Let's go on to, "Why do you guys talk like you had a pipeline to the Truth?" Start with this consideration. If I am a competent player of a game, I probably will not be able to sit down and write down a set of rules which are the rules of that game (unless, of course, I learned the game by first learning the rules). After all, knowing how to play the game is different from knowing that these are its rules.

But then again, I might be able to sit down and do just that. I might be able to sit down and write you out the rules of the game. After all, who should know better than me? What we can say is that if I could do that, that calls for some other competence in addition to just knowing how to play the game. One can also say that, if you are sitting down to write down the rules, knowing how to play the game is a fundamental and irreplaceable asset.

What could confidently be expected of me as a competent player of

the game is that given a hypothetical action in the context of that game, I would be able to say that it was in accordance with the rules or that it wasn't. That you can have confidence in. Why should I be able to do *that* when I should not be able to just write down the rules, (but I can tell you if something is in accordance with the rules)? Well, the reason is that, that is the kind of judgment that I have to exercise in order to play the game. When I play the game, I have to be confident that the action that I take is in accordance with the rules, and I have to be able to recognize violations of the rules and challenge them. If I cannot do that, I am not a competent player of the game.

The rules of the games are something that we assent to and accept the responsibility of enforcing as a condition of there being such a game at all. They are not facts independent of us or antecedent to us that could be established independently of us. Neither divination nor systematic observation, scientific or otherwise, could do that job. The rules are normative, not empirical, and its being the case that they are normative is also normative, and not empirical. The only thing that is empirical is that particular people do particular things and not others.

So, when *as a baseball player* I say, "It's three strikes and you're out", I speak with authority, and I speak for *us* (us baseball players). I do not offer it as a personal opinion, or as a guess, or as a highly probable hypothesis, or as a part of a theory, nor yet as the outcome of an investigation. Rather I speak with authority as one who knows how to play the game. I am saying, "*This* is how you do it", and who should know better than me?

Any competent baseball player speaking as such would speak with the same authority. Each of us is in a position to speak for all of us.

Just in passing, there is a parallel thing in linguistics. It is a well-accepted conclusion in linguistics that the ultimate criterion for whether a given expression is a sentence in English is what they call "native speaker intuition", namely the judgments made by competent speakers of the language. It is not something that you can establish independently of what the speakers say or think. Of course the same would hold for persons.

The ultimate criteria for whether an individual is a person would be judgments by full-fledged persons.

Okay, this is the basic state of affairs which is complicated by, but should not be obscured by, certain auxiliary considerations. There are three of these.

> 1. First, as in any human enterprise, people differ in their degree of mastery, in their level of competence, and so their judgments often differ. However, partly because people learn to appraise their own level of capability, the absence of dead level agreement in judgment does not undermine the viability of the enterprise. It is no accident that we have *Webster's Dictionary*, *Hoyle's Book of Rules*, *Roget's Thesaurus* and other trusted repositories of judgment and competence. We settle many disputes by reference to those.
>
> 2. Second, I can be wrong. If I say "In baseball it's four strikes and you're out", my judgments can be readily impeached because there will be no "us" who play baseball that way. Now if the error is particularly egregious as in "four strikes and you're out", not only my judgment but also my standing as a competent baseball player can be impeached. After all, could I really play baseball if that's what I think?
>
> 3. There can be genuine disagreements, and these can be negotiated. If the negotiation ends in a standoff, we come to conclusions such as the following: "Well, it looks like you learned to play a different game than I did." Or, "You learned a different variation than I did." "I guess we speak different dialects of English." "Obviously, your concept of *x* is different from mine (ours)." And so on. Appropriate adjustments are then fairly easy to make.

If the negotiation ends in agreement, we will not have resolved a question of observational fact. We will not have *discovered* the answer to a factual question. What we will have done is to settle a question of how

we are to proceed.

In short, speaking authoritatively in this way, speaking for *us*, is not the same sort of enterprise as reporting an observation or a factual discovery. Nor is it the same sort of thing as arguing for a philosophical theory or a psychological one. It has its own hazards and reality constraints, and treating it as observational, factual or theoretical would be as egregious as saying "In baseball it's four strikes and you're out", and it would have the same consequences.

Okay, that is why we speak as though we had a pipeline to the Truth. It is not a matter of truth at all. We are speaking with the authority of somebody who knows how to do it. Anybody who has that competence can speak with that authority. It just sounds strange because we are so focused on truth that we automatically take that viewpoint on things and then it looks like we are being grandiose.

The Trouble with Concepts

Okay, now there are a number of questions having to do with, "Why do you do it the way you do it?" And one of them is: "Why do you do it in terms of concepts rather than rules?" I think I raised that question earlier.

Both games and grammars are defined by distinctive sets of rules and we use these heuristically all the time. We use them to clarify the nature of the problem that arises when we try to say what we know when we know how to do something like playing baseball or speaking English. Yet we're going to do this larger job in terms of concepts, not rules. Why?

To begin with, the two idioms – namely concepts and rules – are conceptually so highly overlapping that they are almost totally interchangeable and convertible into one another. So you could say, "Well, it is not that much of a difference."

Consider the notion that she knows the meaning of an expression (i.e., has the concept) if she knows how to use that expression correctly in the language games in which it has a place. That is a statement in terms

of concepts.

Now compare that to the notion that she knows the meaning of an expression if she knows the rules that govern its use in the various language games in which it has a use. It is the same idea in terms of rules. Notice how very similar they are. Both idioms direct our attention to a certain kind of selectivity, a certain principle of selection or rejection in regard to various cases, instances, actions, etc. It is the kind of selectivity that we saw earlier is necessarily exercised by a competent player of the game.

Some of the convertibility between the two idioms stems from the fact that (a) mastery of a concept involves, in part, the ability to act on that concept in some normative ways. And (b) acting in any of those ways can always be described as following a rule (i.e., the rule of "doing" whatever the action was). Conversely, following a rule (for example, writing down the positive integers in order or driving on the left side of the road) can be described as acting on a concept (for example, the concept of driving on the left side of the road). So it is very easy to move from one to another because they are so highly similar.

On the other hand, because the correspondence is not that one of them is a simple mirror of the other, the two idioms, in practice, show a different range of convenience. When a single isolated rule is in question (for example, driving on the left side of the road) stating the rule is clean, quick and generally preferable. Conversely, many of the concepts we use, perhaps the great majority of them, are cases where we can't specify all of the rules we follow when we act competently on these concepts though we don't doubt that it's a rule following kind of situation. (Remember the case of grammar, how difficult it is to set down all of the rules that are involved in something that a three-year old can do easily.) In such cases, talking in terms of concepts and acting on concepts is clean, quick and indispensable.

Notice that in such cases, as "generate the series of positive integers" or "drive on the left side of the road", the phrase not only specifies the rule that I follow and the concept that I act on. It's also a straightforward ordinary language specification of my behavior – it is what I actually *do*.

There is a strong link in ordinary language between acting on a concept and simply acting, and as you know, the parametric analysis of behavior shows this.

There is a second consideration, which, by itself, is probably decisive for the choice of concepts rather than rules as the preferred idiom for this effort.

Wittgenstein once commented substantially as follows. He said, "A game is not everywhere demarcated by the rules. For example, there is no rule in tennis concerning how high I have to throw the ball when I serve."

Think of the implications of that. It implies that there is more to mastering the concept of tennis than learning to follow all the rules. It implies that there is more to the concept than is encompassed by all of the rules. And that implies that doing it in terms of the rules would not be enough – that you would leave something out, that you would be missing something. The tennis example also brings out why acquiring concepts is fundamentally a matter of practice and experience. (After observing and participating in a few games of tennis, how high to throw the ball when you serve is probably not a big deal.)

Both considerations lead to the same conclusions, namely, that the way to do it is in terms of concepts and not in terms of rules even though it's a great temptation. It would be simpler, it would be more understandable, it would be more communicable, and it would be insufficient. It is fortunate that there are good grounds for doing it in terms of concepts because when we do it in terms of concepts, our troubles are just beginning. There is a variety of problems – not merely in actually presenting concepts, but also with the idea of presenting a concept, and, indeed with the idea of "a concept". That's a pretty heavy load to be carrying.

So let's review some of these troubles with concepts.

1. What is a concept? A very natural question, and a bad one. It is like asking, "What is a whenever?" There's no such thing as a whenever. There's no such thing as a concept. To para-

phrase a well-known architect and teacher, "If a concept were a something, it would have to be a very *peculiar* something." But a concept is not a something, and it's not something peculiar. Instead, what you do is you introduce a conceptual frame for making the notion of a concept intelligible. The basic frame is this, "P uses concept C in engaging in behavior B", or equivalently, "P acts on concept C in engaging in behavior B." Concepts are an aspect of behavior. They are not things.

Concepts don't come in singletons. They don't come one at a time. They come in pairs or larger sets. So "P acts on the concept C" is the same thing as "P acts on the distinction of C versus C1, C2, C3 and other alternatives." Information theory makes clear why this would be so. If there were no contrasting set of alternatives, no information would be carried by 'distinguishing' C. ("Distinguishing it from what?" you would ask.) In that case, no basis for acting in one way or another would be provided, and we would say that no real distinction was being made.

Remember the maxim that says, "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." Notice, too, that when we talk about acting on a concept, that is you might say thriftier than talking about acting on a distinction. Why? Because it requires less knowledge on our part. If we say that he acted on the concepts of "cat" and "mat" and "on", we can say that without having to know what the contrasts were. We do not have to know what he was distinguishing "cat" from or "on" from. So we can carry it off in situations where we don't know these things, and mostly we don't know those things. (To be sure we might be missing something important but that is the chance we have to take.) Okay, second consideration.

2. Concepts can't be told. If I am trying to present you with a concept, I can't just tell you. I can't draw you a picture of one

either. So how do I present a concept? What is this notion of presenting a concept?

Mostly, we tell each other things. I tell you a fact or a purported fact by making a statement. Statements require concepts (so do beliefs). If I make a statement that "The cat is on the mat", as you know there are at least three concepts involved. Concepts don't require statements. They don't require beliefs. They don't require anything else.

Acquiring concepts is associated fundamentally with practice and experience. So the notion of presenting a concept to you, in a way, is illegitimate. If you are going to acquire that concept, you ought to acquire it by practice and experience. If I try to enable you to acquire it by some form of presentation, either it is because the presentation gives you the right practice and experience, or I'm hoping and guessing.

3. Statements (and theories and beliefs) have truth value. Concepts do not. If I tell you that "The pigs are rooting for truffles", what I say may be true and it may be false. But if I say "pigs", what I say could not possibly be true or false, nor could the concept "pigs" be true or false. Concepts don't have truth value. Because concepts don't have truth value, they can't have assumptions either, or presuppositions. Nor could there be any evidence for them or against them. Nor could there be any arguments for them or against them. Nor could they be believed or doubted. In short, concepts have none of the familiar truth-oriented features that we are all so sensitized to and that we spend roughly *all* of our time dealing with. Okay. Next.

4. Concepts are acquired by practice and experience. The relevant practice and experience is participating in some of the social practices that involve using the concept in question. Historically our criteria for having acquired the concept include the following – and there are three.

(a) First, having the ability to recognize instances of the concept, if it is the kind of concept that has recognizable instances.

(b) Second, having the ability to relate the concept to other concepts appropriately. (This includes reasoning in terms of that concept.)

(c) And third, having the ability to act appropriately on that concept in some paradigmatic ways.

The salience of particular criteria will vary from concept to concept because concepts including conceptual structures vary among themselves. For some complex concepts, for example "arithmetic", "science", "chess", "cure", and the like, the third criteria is salient. The paradigmatic way of acting on the concept of arithmetic is to do some arithmetic. Someone who cannot do arithmetic but recognizes when somebody else is doing it, or just has a general description or definition of it, will be judged to be seriously lacking in respect to mastery of the concept. In contrast, for other concepts such as "red", recognizing instances is salient, and that is probably because if you can recognize instances, the other two criteria are not a big problem.

The Person concept is much more like "arithmetic" than it is like "red". The third criterion is salient.

5. Concepts are related to other concepts. When multiple relationships are involved, we speak of conceptual structures or conceptual systems. Patterns of conceptual interrelationships can be presented by means of:

(1) Schemas, diagrams, etc.

(2) Paradigm Case Formulations, parametric analysis, calculational systems, and definitions

(3) Discourse which connects concepts to concepts.

As it turns out, we need all of these, including the "etc." A key consideration here is that although concepts cannot in general be shown pictorially, relationships among them can be indicated pictorially or schematically. And since conceptual structures involve interrelationships among concepts, portraying conceptual structures is not hopeless. That is why we use all kinds of diagrams and schemas and this, that, and the other because when you have interrelationships those can be represented pictorially or schematically.

When conceptual relationships are portrayed by means of discourse, pragmatically the most natural discursive form is that of prescription, injunction, instruction and the like. You say, "Notice this … feature." "Look at the difference between this one and that one." "Use the concept in this way, namely…" "Consider a structure of the following sort." "Use *x* as the conceptual frame for understanding P." And so on. That is how you would naturally do it.

Equally pragmatically, however, this works only in short stretches, for the most part. Extended discourse in these forms is almost certain to be forced and unnatural and consequently, ineffective. The danger is that declarative sentences, which is the main alternative, are likely to be taken as statements when in fact they are not. Fortunately (since declarative sentences do predominate in Descriptive analysis) such an error is not inevitable, and some advanced warning helps. A student once commented to me, "Now I see why it's not a theory. Everything you've been telling us for the last six weeks is like one long definition instead of a lot of different statements that may or may not be true." And that was right on.

Connections to Existing Formulation or Topics of Interest

Okay, that is the "Introduction to Descriptive Psychology". Now what I want to do is take some of the ideas that appear here and connect them to some of the existing formulation or some topics that are of interest.

There are three things that I want to pick out from that, and here are the three:

1. First, "a baseball player is not inherently mysterious to another baseball player. Although his baseball behaviors may not be predictable, they were already *systematic possibilities within the game*." And it is that notion of "systematic possibilities within the game" that is the crucial notion here.

2. Secondly, the notion that what an infant acquires as he grows up to be a normal adult is a certain kind of competence – namely the ability to "operate as a person among persons in a world of persons and their ways."

3. Third is the case of the Fulanese. Remember "the Fulanese didn't realize they were speaking Fulanese. They just thought they were *speaking*."

Deliberate Action and Social Practices

Now the first application is to an existing formulation that has to do with Deliberate Action and social practices. The current canon is that, to engage in a Deliberate Action is to participate in a social practice. I am not sure where this appears in print, but, at a minimum, it appears implicitly in the definition of a pathological state. Remember that definition says, "When a person is in a pathological state, there is a significant restriction (a) in his ability to engage in Deliberate Action and, (b) equivalently, his ability to participate in the social practices of the community".

Let me digress here. Notice that this is not a definition. We call it a definition. We use it as a definition, but it is not a definition. It is a simple implication. It is a one-way implication, and it mirrors the same structure for the general notion of "state." That one says, "When a person is in a particular state, there is a systematic difference in his powers and/or dispositions." Again, a one-way implication, not a definition. The reason is simple prudence. It is not obvious that the opposite implication holds. To do that you would have to rule out all other explanations for being in that restricted state or the systematic difference in powers or dispositions, and it is not obvious that you can rule them out. So being of a prudential nature, when I did this, I was noncommittal. But I am confident in the

one implication and that is all we need for most purposes.

I think that the equivalence – saying that to engage in a Deliberate Action is to participate in a social practice – has always seemed to be stretching a point a little bit. It is just that there was no obvious reason to reject it. But our notion of the range of possible individual actions, at face value, seems to cover more ground than our notion of patterns of behavior. You might say, "Why should every individual behavior be part of a pattern?"

To put it differently, the only way that you could know that every individual behavior *is* part of a pattern is if you knew that it *had* to be (because you are certainly not going to establish that empirically). And there did not seem to be any necessity in this picture. There did not seem to be any grounds for saying that it *had* to be. Well, there was a necessity, but it was implicit. And, guess what? It came from the notion that people are not mysterious to people. That notion goes back a long time. Remember that slogan ["The world makes sense and so do people. They make sense *now*."] was intended to reconstruct how things were back in the early 1960's. So it goes back at least that far.

The necessity in the picture comes from the idea that just as there isn't and couldn't be a private language, there isn't and couldn't be a private behavior. (Private language would be a special case of private behavior.) Since social practices are essentially public and social and, therefore, necessarily intelligible to multiple persons, the equivalence would guarantee that individual behaviors were also public and social and therefore inherently intelligible to other persons. That is why the equivalence was there in that definition. It is to serve as an explanation for how come people are not inherently mysterious to people.

Now, I'm not prepared to give it up either. I am not convinced that it's not true. But now I could. The notion that it was already a systematic possibility within the game does two things. (a) First, it supports the equivalence. It makes it less of a stretch. If that seems obscure, try it with baseball. How could any behavior, any baseball behavior, not be a participation in a social practice? After all, baseball *is* a social practice. So how

can any baseball behavior not be a participation in a social practice? (b) Secondly, it provides an alternative explanation for how it is that people are not inherently mysterious to people. It's an explanation at a more fundamental level. It is systematic rather than ad hoc, and it has further implications that would be difficult or impossible to draw from the social practice formulation. So it represents an advance in that sense.

Okay, that is the first application to an existing formulation.

The Ability to Operate as a Person among Persons…

Now there is another one that is a little more complicated. Let's now refer to the notion that what an infant acquires as he grows up to be a normal adult is the ability to operate as a person among persons in a world of persons and their ways.

Empirically, one of the first principles of competence is that learning with respect to any task of significant difficulty brings forth significant differences in competence. Wherever there is a kind of competence, there is variation among persons in their degree of competence. So the brute fact is that, whatever the task is, whatever the competence, some people are going to be better at it than others and some people are going to be worse at it than others.

Apply this to the notion that there is something that is the ability to operate as a person among persons. What sense can we make of the notion that some people are better at it than others and others are worse?

Let me get rid of a red herring here first. It is not a matter of degrees of being a person. Being a person is an all-or-nothing thing. Being a person or not being a person is a matter of status. How good you are at it is a matter of competence. Now the reason that there is confusion here is that there are many, many statuses that are assigned on the basis of competence. You have to achieve a certain level of competence at chess before you qualify as being a chess player. You have to achieve a certain level of competence at speaking English before you acquire the status of an English speaker. And there are many others that work the same way. So it's easy to confuse the competence aspect with the status aspect. If

we get rid of that, then we can just now look at the competence aspect. What sense can we make of the notion that some people are better at being a person than other people are?

It is not the kind of thing that we normally think of in those terms. Normally it is a status thing. You are a person or you are not. And it is easy to think of you as being better at this or this or this, but better at being a person? What is this?

The developmental path from infancy to adulthood provides us with an appropriate orientation. We get better at being a person as we move from infancy to adulthood.

How do we do it? Through practice and experience in all of the nitty gritty of living a human life. Remember Sonja [Holt]'s talk ["The Competence Paradox in Moral and Ethical Judgment", presented right before Peter's]. Nitty gritty like establishing and participating in various relationships and interactions; entering into projects long term, short term, large scale, small scale; observing, appraising, and making judgments in regard to ourselves, others, situations, groups, relationships, events, and so on. Things like betraying and being betrayed; admiring or being admired; helping or being helped; attacking or defending; nurturing or being nurtured; and on and on and on. All of the little detail that is involved in living a human life.

Following that line of thought puts us in touch with at least some of the source of deficiencies that one might expect and the grounds for such deficiencies. If competence is acquired through practice and experience, then an obvious ground for deficiencies in that competence is a limitation in the amount and kind of practice and experience. For example, a tennis player might be a good tennis player, but if the only games he has ever played have been against left-handers on clay courts in the daylight, we would say, "This guy has some serious deficiencies as a tennis player". A baseball player who has learned how to play baseball, but has only participated in baseball games that are no-hitters is also going to have serious deficiencies.

There's an old German poet who said it very well. What he [Goethe] said was:

> Wer nicht von dreitausend Jahren
>
> Sich weiß Rechenschaft zu geben,
>
> Bleib im Dunkeln unerfahren,
>
> Mag von Tag zu Tage leben.

Cleaned up and translated, it comes out, "Anyone who cannot give an account of three thousand years, remains in the darkness of inexperience and can only live from day to day."

Let me focus on that notion, the 'darkness of inexperience'. That assimilates to the transition from infancy to adult. The infant lives in the darkness of inexperience. The normative adult does not.

The Case of the Fulanese

Now let's revisit the Fulanese. To repeat, the Fulanese didn't know that they were speaking Fulanese. They thought they were just *speaking*. As it happens, the Fulanese were right, and we are all more or less in that position.

When we learn how to do something from people who are already doing it, we learn to do it in the particular way that it is done. [break in tape] However, saying what I have to say is what I'm up to. Speaking English is *not* what I'm up to. It's not my Deliberate Action. It's not my behavior. If you were to diagram my Deliberate Action, there would be nothing about speaking English in the K [Know] value. There would be nothing about speaking English in the W [Want] value. Speaking English is not something that I have chosen to do. It is not something that I know I'm doing. The only place for it is in the Achievement parameter and the Performance parameter, and that would have to be supplied by

someone else who knew that I was speaking English. Those of you who remember the Oklahoma chair… Speaking English is like sitting in the Oklahoma chair. It is an unintended and unknown achievement, not an action.

If the case of speaking English seems questionable, turn the screw another notch and think of speaking with a Brooklyn accent. If I grow up in Brooklyn and everyone around me is speaking English with a Brooklyn accent, then, guess what? What I learn is to speak English with a Brooklyn accent.

If I'm young and innocent, I don't know that I am speaking with a Brooklyn accent. I'm not trying to speak with a Brooklyn accent. It is not something I choose to do. In that sense it's not part of my behavior. What I am doing is speaking, just like the Fulanese.

Move from just speaking with a Brooklyn accent, and now think about my thinking and judging and acting from a Brooklyn perspective, and then from a middle class Brooklyn perspective, and then from my family's middle class Brooklyn perspective. In effect, I'm a creature of my time and place. Why? Because when I learn how to do something from people who are already doing it, I learn to do it in the particular way that it is done. And that provides us with that same issue of the generic and the specific and the difference between them.

Now we can recapture the first part of that poem. "He who cannot give an account of three thousand years remains in the darkness of inexperience." Generally, one's own life experiences are not enough to develop beyond being parochial, provincial, naïve or something of the sort. Apparently we need exposure to other lives in other times and other places, and to other possible lives in other possible times and places in order to develop what you might call an exemplary level of competence at operating as a person among persons. Short of that, we are like the tennis player who has only played left-handers on clay courts.

Let's put this conclusion back into the context of the notion of "the systematic possibilities within the game." Apparently, it takes being ex-

posed to and impacted by a more or less representative sample of human lives and human situations (or at least a sample that is not strategically non-representative) in order to develop a normative or exemplary level of sensitivity and judgment with respect to "What are the systematic possibilities within the game?" – within the Person concept.

If we compare a normative or exemplary level of competence to operate as a person among persons, then we can contrast with a lower level of competence, which you might call a journeyman level (which means that you manage). That is the basis for talking about deficiencies in being human or being a person.

One example of marking a deficiency of this kind is the concept of "performativeness". Performativeness is a significance deficiency on the model of color blindness. One of the salient characteristics of performativeness is the wide range of human phenomena where it makes a significant difference. It makes a difference from raising developmentally delayed children, to sexual stereotyping, to I-Thou relationships, and possibly to schizophrenia and the acculturation of refugees, and many others. Just as it takes a broad range of experience and exposure to develop the relevant competence, deficiencies in the relevant competence make a difference in a comparably broad range of human phenomena. The performative person does indeed live "in the darkness of inexperience".

Q. Could you say just a little more about performative? Some of us may not understand.

PGO. It's analogous to color blindness. It's significance blindness. It's being unable to see the significance of the behaviors that you observe. In clinical talk, it's called "being concrete".

So the notion of "the systematic possibilities within the game" connects now to our notion of what's the archetype, what's the ideal, what's the highest level of aspiration for being a human being.

Let me drop that one and apply it to a different topic. I've mentioned more than once that by the early 1970's, I had concluded that faculty members in the humanities departments of the university were, by and

large, demoralized and had lost faith in the legitimacy of their disciplines. My diagnosis was that, that was because the successes of science and technology seemed to imply that scientists had – or in the long run would have – all of the answers and that made the arts and humanities outmoded, quaint, and irrelevant, with nothing important to contribute. The notion of a liberal arts education as an essential preparation for the responsibilities of citizenship seemed equally outmoded. What would be needed in the future were technical skills based on scientific research.

The phenomena was clearly a "God is dead" reaction. They had moved from simple demoralization and depression to a *Lord of the Flies* kind of existence that we commonly tag as "political correctness".

When we developed this notion – that acquiring competence to operate as a person among persons is essentially acquiring the judgment and sensitivity to deal with the systematic possibilities of human lives – we have articulated in fresh form the basic rationale for liberal arts education and for the arts and humanities departments at the university level. It is literature and the arts and the histories and languages and philosophies that take us beyond the darkness of inexperience, beyond merely being creatures of our time and place. To paraphrase our old Spanish philosopher, "Human life is a peculiar reality in that every other reality, scientific or otherwise, must in one way or another find a place within it."

Let me do one last thing, and that is to come back to Bob [Brill]'s talk ["Contrasting Empirical and Pre-empirical Approaches to Psychology: Historical and Epistemological Perspectives", presented earlier in the afternoon] and Ray [Bergner]'s response and Paul [Zeiger]'s response. Remember the issue was how do you go from the nonempirical to the empirical. Again, apply this notion of the systematic possibilities within the game. It is the non-empirical that generates the systematic possibilities. What is empirical is *which* of these possibilities actually occurred. That is why the pre-empirical comes first. You have to first generate the possibilities in order to go out and look and see which ones of those are actual. So we do have a framework for dealing with the issue of what's the relationship and how do you get from one to the other. And I think

that is a good time to stop. [applause]

PGO. Any questions or comments?

Q. A quote came to mind from the end of the *Tractatus*, where he [Wittgenstein] says, "When all the questions of science have been answered, the fundamental questions of life will have been left untouched".

Q. So Pete, what *is* Descriptive Psychology? [laughter]

PGO. Descriptive Psychology is the discipline that is engaged in the task of writing the grammar of operating as a person among persons.

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Can Psychological Science Be Replaced by Biological Science?

Raymond M. Bergner

Abstract

This paper examines and finds wanting the thesis that psychological concepts and forms of explanation will, with advances in scientific understanding, one day be supplanted by biological ones.

> "...our common-sense psychological framework is a false and radically misleading conception of the causes of human behavior and the nature of cognitive activity. (It)...is not just an incomplete representation of our inner natures, it is an outright misrepresentation of our internal states and activities. Consequently, we cannot expect a truly adequate neuroscientific account of our inner lives to provide theoretic categories that match up nicely with the categories of our common sense framework. Accordingly, we must expect that the older framework will simply be eliminated, rather than be reduced, by a matured neuroscience"
>
> --Paul Churchland, 1988, p. 43

The hypothesis that our current psychological forms of description and explanation will one day be replaced by biological ones, while not universally held, is widespread and highly influential in the scientific and philosophical communities (Churchland, 1988; Churchland & Churchland, 1994; Freud, 1959; Gold & Stoljar, 1999; Shermer, 2004). Further, if one listens to assumptions and assertions made in the media and

in general conversation, it becomes clear that this view--that "when you get really scientific about the matter, it's all really at bottom biological"--has made substantial inroads into the thinking of the broader culture.

The purpose of this paper is to examine this hypothesis. It will be argued that, while biology has had and will undoubtedly continue to have many extremely valuable and illuminating findings, it cannot and will not *replace* psychological concepts and explanations in our understanding, scientific and otherwise, of human behavioral phenomena.

The paper will be organized in the following way. First, a sketch of the scientific outlook at issue will be drawn. Second, the enormous implications of acceptance of the biological reductionist thesis embedded in this outlook will be detailed. Third, a series of arguments will be presented to the effect that, not only is this reductionist thesis at present wholly unestablished, but it is *in principle* impossible that it could be established coherently in the future.

The Scientific Outlook at Issue: "It's All Really Biological"

Let us begin with a brief sketch of a widely shared contemporary scientific outlook. The view has three aspects. Some of these pertain to matters of established scientific fact and procedural strategy, and are in themselves nonproblematic. Others pertain to matters of scientific admissability and philosophy, and will be shown to be highly problematic in any number of ways.

Aspect #1: Scientific facts. All of the following propositions are long since scientifically demonstrated, and almost universally accepted within the scientific community. (1) As homo sapiens brains developed via evolution (as well as individual maturation), the bearers of these brains exhibited consciousness and, over time, ever more sophisticated mental and behavioral accomplishments (Dennett, 2003; McGinn, 1999). (2) When these brains sustain certain sorts of damage, or undergo certain sorts of chemical or other alterations, we observe resultant changes in the mental and behavioral functioning of their possessors (Bickle & Mandik, 2002). (3) Different patterns of neural activation, as recorded by means such as positron emission topography and magnetic resonance imaging,

are associated with different mental functions, both normal and pathological (Bechtel & Mundale, 1999; Bickle & Mandik, 2002; Schwartz, 2002). Finally, (4) direct stimulation of certain brain sites results in reports by the stimulated party of experiences such as memories, images, and sensations (Penfield & Perot, 1963).

Aspect #2: Scientific strategy. Historically, science has had many documented successes at explaining the properties and functions of various entities by analyzing their physical structures and processes (Bickle, 1998; Churchland & Churchland, 1994; Searle, 1984). By this general method, for example, the property of heritability has been found to be attributable to the sequencing of DNA elements in genes, the solidity of matter to the lattice configuration of atoms operating at low energy levels, and the electrical conductivity of certain materials to the ability of electrons to move freely through them.

Aspect #3: Metaphysics and scientific admissability. Finally, the overwhelming modern consensus is that dualism is long since dead, and deservedly so. On this view, while Descartes had it right when he spoke of a material substance, he was decidedly wrong when he alleged the existence of a spiritual one. Accordingly, in the minds of many scientists (and nonscientists), there is an unreflectively assumed equation between being real and being physical (Ossorio, 1998). On this view, biological phenomena such as neurons, synapses, neurotransmitters, and action potentials, being physical states of affairs, meet this requirement for reality status most admirably, and thus are eminently scientifically admissable. On this equation, however, phenomena such as motives, beliefs, intentions, and traits, lacking all physical dimensionality (mass, locatability in space, electric charge, etc.), and seeming far more intangible, elusive, and difficult to measure and quantify, are suspect with respect both to reality status and scientific admissability.

Conclusions. On these and further bases, many have concluded that psychological phenomena such as thinking, remembering, imagining, learning, and acting to bring about envisioned outcomes, if they are to be granted reality status at all, are best understood scientifically as the

causal products of bodily (and especially brain) structures and processes (Armstrong, 1999; Bickle, 1992, 1998; Churchland & Churchland, 1994; Kandel, 1998; Searle, 1984; Shermer, 2004). This being the case, there is some presumptive reason to believe that such phenomena will prove explicable through physical analysis of the biological organism that is a human being. In the minds of the more radical proponents of this view, once these biological structures and processes are well understood, we will be able to discard our current psychological concepts entirely from the scientific vocabulary as valid descriptive and expanatory categories (Churchland, 1988; Churchland & Churchland, 1994; Freud, 1959; Gold & Stoljar, 1999; Shermer, 2004). In the minds of the less radical, these concepts may be retained as that which is to be explained, but not in their explanation (Bickle, 1992, 1998; Clark, 2001; Dennett, 1991, 2003; Fodor, 1987). Thus, for example, we may always have a biology of "memory" or of "cognition," but the explanation of these phenomena will be entirely in biologic terms.

Implications of the Present Reductive Hypothesis

The Death of Psychology

Adherence to the reductionist thesis articulated above calls into serious question the very legitimacy of psychology as a science. If such phenomena as thinking, remembering, learning, perceiving, believing, and acting to achieve envisioned purposes -- in short, the vast bulk of the subject matter of psychology -- just are, and are nothing over and above, the causal products of brain and other biologic phenomena, and are completely describable and explainable as such, it follows that psychology will in time disappear as a science. A type of reduction known as "theory reduction" (Teller, 1995) will have occurred in which an earlier theory, with its attendant construct system and modes of explanation, will have been replaced by a newer one embodying different constructs and explanations. In this scenario, psychological explanations and theories will pass into the scientific relic room with the likes of alchemy and Ptolemaic cosmology.

The Death of Science

Psychology is but one science among many. A further logical implication of the present reductionist thesis is that it would undermine, not only psychology, but the entire institution of science. Why is this so?

Science, as we have long understood it, requires and presupposes an ability to do such things as examine relevant empirical evidence, reason about its implications, and create theoretical structures that are consistent with and account for this evidence. Newton, as we commonly understand the matter (see, e.g., Berlinski, 2000), surveyed a vast body of terrestrial and celestial findings, and finding all current theories insufficient, created a new theory of universal gravitation that accomodated and unified all of these findings. Darwin examined a panoply of species, considered the possible implications, and concluded that a process of evolution must have occurred. Hubble observed the ongoing expansion of the universe, and conjectured that there must once have been a "Big Bang."

On the more radical version of the thesis articulated above, however, any phenomena described in terms such as "examining" empirical data, "reasoning about" its possible implications, "drawing appropriate conclusions," "formulating" theories that account for it, and even "knowing" the truth, are all riddled with invalid, prescientific, psychological "mind-talk" and can have no scientific legitimacy. In other words, our whole historic conception of scientific activity is undermined, and a subterranean biological process of wholly unknown (and unknowable) epistemic status proffered in its place.

Broader Cultural Implications

The effective annihilation of the science of psychology and of science itself are of course already enormously significant consequences. However, the matter does not end with them. The third highly significant implication of acceptance of the present reductionist thesis is that what we now take to be *persons* must be reconceived as nothing more than a certain type of organic, deterministic mechanism --as, in E.O. Wilson's phrase, a "marvelous robot...wired (neuronally) with awesome precision" (1999, p.

53). If explanations in terms of synaptic events, hippocampal structures, neurotransmitters, and so forth, come to be regarded as the *only* scientifically admissable explanations of human behavioral phenomena, the very concept of a "person" --i.e., of an individual who paradigmatically selects and implements from among a set of understood behavioral options--must correspondingly disappear (see Ossorio, 1982, for a delineation of the conceptual requirements for saying of any candidate X--X could be a dolphin, an ape, a computer, or an extraterrestrial--that X is a person).

With the disappearance of the concept of a person must come a corresponding disappearance of the conceptual apparatuses of our current seminal social institutions (e.g., the family, the judicial system, religion, and the educational system) and of many other disciplines aside from the scientific ones (e.g., ethics, law, and history). While entire books and articles have been written on this topic (see, e.g., Holmes, 1991), let me attempt here only to make this point in a very shorthand way. If we dismiss the categories of "choosing," "intending," "acting for a reason," "acting deliberately," and so forth, as designating legitimate, scientifically acceptable states of affairs, then consider the following statements. From law: "Murder in the first degree, implying the *planned, premeditated act* of killing another, ought to be punished more severely than manslaughter." From ethics and religion: "The concepts of moral 'right' and 'wrong' (as well as the latter's religious counterpart, 'sin'), conceptually imply the ability of an individual to *choose from among understood behavioral option*s; a completely determined movement on the part of a person, such as falling when one is tripped, is ineligible for such attributions." From history: "The primary *reason* that Truman *decided* to drop the atomic bomb was to force the enemy to surrender." And finally, from everyday life in academia: "The professor (who, by the way, was a biological reductionist) was infuriated at his chairperson because he *believed* the latter had *deliberately* discriminated against him in his tenure recommendation."

If we accept the reductive views articulated above, all of these propositions, logically presupposing and necessitating the concept of a person and its logical sequelae, become inherently defective attempts to account

for what can only legitimately be accounted for biologically. Further, all of those around us--our spouses, children, friends, coworkers, and others--must be reconceived as "marvelous robots," to be regarded and treated accordingly. I think it very difficult to imagine the general consequences on our total worlds if psychological constructs and forms of explanation were ever to pass entirely from the scene in favor of biological constructs and explanations. (Incidentally, I do not know of a single biological reductionist who does not practice a sort of Orwellian "double-think" of the sort suggested in my final example above. In the classroom, there are no choices, thoughts, or intentions; there are only "action potentials" and the like. Outside the classroom, in the vital affairs of their lives -- their marriages, families, professional relationships, economic dealings, and more -- they utilize the concept of a person and psychological constructs no differently than others do.)

But What If It's True?

In concluding this section, let me raise a final and different kind of "so what" question. It might be argued that, if the biological reductionist view articulated above some day represents the most cogent, evidentially established scientific position on this issue, then all talk of "what difference it makes" will be beside the point. We shall just have to live with whatever difference it makes, just as the adherents of certain religious viewpoints have had to live with Copernican cosmology and Darwinian evolutionary theory, and just as the adherents of certain scientific outlooks have had to live with such paradigm-shattering findings as those involving action at a distance without benefit of physical medium and the indeterminacies of sub-atomic particles.

The key question thus becomes: Are there strong reasons to conclude that the present reductionist view of psychological phenomena *is* in fact, or is highly likely to become, the most cogent, evidentially established scientific position? Or are there powerful considerations that render it a highly problematic and dubious position? In the following three sections of this paper, respectively, I shall (a) issue a relevant reminder having to do with the current scientific state of affairs in biology and psychology;

(b) argue that psychology's construct system is *in principle* not replaceable with biology's; and (c) demonstrate, building upon the previous point, that psychology's explanatory forms are similarly non-replaceable.

Reductionist Thesis Not Currently Established

Let us begin simply by noting the current state of affairs. Despite the many advances witnessed in biology, our psychological construct system remains. We have not, either as scientists or as everyday describers of behavior, dispensed with categories such as cognition, memory, learning, motivation, reason, intentional action, and so forth. For the most part, in fact, biologists *both accept and use* these categories. Thus, for example, they speak of "the biological basis of *memory,*" "the neural substrates of *cognition*," "the neurochemistry of *depression*," and so forth. Indeed, even the Churchlands, the most outspoken critics of what they consider prescientific "folk psychological" categories, have been unable to avoid such concepts as "perception," "cognition," "conceptual change," "moral knowledge," and even "theory of the world" as categories of explananda in their work (Bickle & Mandik, 2002).

Not only do we continue to employ psychological concepts to describe and to designate categories of empirical phenomena, but we also, and equally clearly, continue to *explain* human behavior in terms of these concepts. The cognitive model of psychopathology, for example, remains alive, well, supported by much empirical evidence, and widely and effectively used (Beck & Weishaar, 2005). Acting as scientists and clinicians, we continue to employ forms of explanation such as those in terms of schema activation (e.g., "She was depressed because the divorce brought to the fore her old, core belief that she was personally unloveable and would never have a successful relationship"), and expectation of reinforcement (e.g., "He used cocaine again, expecting that it would produce the same euphoric feelings that it had in the past"). Acting as everyday explainers of behavior, we make claims such as, "He moved his queen there in order to put his opponent in check," "she voted Democratic because she believed the Democrats would work harder to advance the

cause of civil rights," and "he became angry because he saw the remark as an insult and not as a joke."

All of this is in no way meant to deny the validity of apt biological explanations of mental and other behavioral phenomena. We also see them both in scientific accounts ("Alzheimer's disease causes memory impairment.") and in everyday explanatory ones ("Those three martinis caused him to feel more relaxed and less inhibited."). It is only to say that, after several thousand years, psychological concepts and explanations have scarcely been replaced (cf. Horgan & Woodward, 1985). Rather, they have survived the long struggle of the survival of the fittest, and continue to do so, constituting what the evolutionary theorist Richard Dawkins (1990) has characterized as "memes."

Thus, at this point in time, the contentions of the biological reductionist have the status of IOU's and not of "cash on the barrelhead," a point that is admitted even by its most ardent supporters (Gold & Stoljar, 1999). They do not state what has already been demonstrated, but are promissory notes issued for the future. This being the case, the burden of proof is clearly on the proponents of this point of view. However, notwithstanding the fact that the goods have yet to be delivered, the reductionist can continue to proclaim, "Someday, you'll see!" Are there any reasons to conclude that, no matter what scientific advances are made in biology or related areas, there are *in principle* reasons to believe that psychological constructs and explanations will remain with us? Let us proceed to an examination of these questions.

Can Psychological Concepts Be Replaced?

As noted previously, a crucial aspect of the view that psychology will be replaced by biology is that psychology's *construct system* will be replaced. On this view, where now we talk of "reasons," "motives," "thoughts," "emotions," and so forth in describing and explaining human behavior, one day this allegedly "prescientific" language will be replaced with the language of biology, and especially that of neuroscience. Thus, we will

describe human behavioral phenomena in terms of brain and other biological processes, and do so in the language of neurotransmitters, synaptic events, action potentials, or whatever the then current biologic construct system dictates. There are strong reasons to conclude that such an outcome may be impossible *in principle* (cf. Davidson, 1970; Horgan & Woodward, 1985: McGinn, 1999; Ossorio, 1982; Searle, 1984) In this section, I shall set forth what I consider to be the foremost of these reasons.

Language as Primarily Pragmatic and Not Representational

In the beginning was the word, and the word drew a distinction that had implications for human action. As many philosophers (most notably Wittgenstein, 1953; see also Harman, 1987; Hospers, 1997, pp. 11-12) and psychologists (Ossorio, 1982) have noted, language is not confined to, nor is it even primarily concerned with, assigning labels to objects and to providing a picture of how things are in the world. While these are certainly common uses, one has only to observe how language is in fact used by people to see that this is so. One can, for example, simply pay attention to any conversation, read any tract such as a novel or a news report, listen to any political discussion, or attend any drama, and track the kinds of things that are said. Language, as Wittgenstein (1953) famously pointed out, is used in an enormous variety of ways. Writ large, it is, as many have expressed it, a set of "tools" that people use for a wide variety of human purposes -- to give orders ("Stop!"), to apologize ("I'm sorry"), to ask questions ("What is a gerund?"), to express disbelief ("I doubt it"), to exclaim ("Hooray!"), to degrade ("You're a liar!"), to convey emotion ("I'm sad."), to criticize ("Too abstract"), to express metaphorically ("...for all the history of grief, an empty doorway and a maple leaf"), to provide a picture of how things are in the world ("The cat is on the mat."), and many others.

Within this pragmatic "tool" view of language, Ossorio (1982) and functionalists such as Fodor (1981) and Armstrong (1999) have pointed out that, even in those cases where our focus is on language used in

reference to physical objects, countless numbers of these objects are what they are based on the *functions* they serve. Their names refer neither to their physical makeup nor to the mechanics of their physical functioning. Thus, as Ossorio (1982) has noted, "computer" is not defined, as it might have been in the 1950's, as a machine assembled from vacuum tubes, air conditioning, and other parts. "Airplane" is not defined, as it might have been in the 1920's, as an assemblage of covered wooden struts and propellers. A "rook" is not defined by the onyx (or wood or ivory or plastic) that it is made of. "Money" is not defined as a piece of metal or paper with certain distinctive markings. Rather, all are defined by their *function*--by the *role* they play in human social practices. The computer computes, the airplane transports us by air, the pawn has certain move eligibilities when we play the game of chess, money is a means of exchange, and so forth. While their physical realizations change over time and at any given time may be enormously various, what makes each of them what they are remains constant: the roles or places they serve in our ways of life.

This being the case, two things follow. The first is that one could never dispense with the original concept (e.g., "computer" or "rook") and substitute for it all of the myriad physical realizations of that concept. Not only would this be completely unmanageable, but, once dispensed with, if someone inquired as to why one had grouped all of the objects together (e.g., the objects previously termed "rooks"), there would simply be nothing to say (cf. Bickle, 2002; Fodor, 1981; Putnam, 1988 on "multiple realizability"). Second, the concepts in question have an inescapable reference to the broader social practices at issue--playing chess, exchanging money for goods, performing computations, and so forth. And since these relevant social practices in each instance are much larger than the property-bearing object in question, it would seem in principle impossible ever to reduce what that object is to its physical characteristics (Teller, 1995). One could look for years at a rook -- one could take it apart and examine its molecules, atoms, and quarks -- and never discern that it is eligible to capture the queen.

Much the same is true of behavioral concepts. If we consider, for

example, the commonplace behavior of "making a promise," it is easy to see that, like objects, it is multiply realizable and not identifiable with any single constellation of physical movements, processes, or sounds. First of all, these movements can and do differ considerably from occasion to occasion. People will say "I promise," "I swear," or "I do," raise their hands in certain distinctive ways, sign their names to certain kinds of documents, and make promises in an indefinitely large number of other ways. Making a promise is essentially making a particularly solemn and binding pledge to another to do or not do something -- and can assume the form of an indefinitely large number of internal and external physical movements and utterances that might be realized on any occasion in so doing. The same can be said of such actions as "criticizing another," "greeting a friend," "avoiding a danger," "doing arithmetic," "telling a joke," and so on ad infinitum.

Further, as Ossorio (1982) has pointed out, on any given occasion, to merely describe the physical processes and movements of a person -- however completely and at whatever level of molarity from gross bodily movements to synaptic to atomic events -- is only to describe one parameter of that behavior and not the whole behavior, which requires making descriptive commitments to other parameters. If I merely say, for example, "Pat raised his arm," this is not enough to inform another whether Pat just "greeted a friend," "signalled the child not to cross the street," "took an oath," or what. To know what behavior Pat engaged in, we need at a minimum knowledge about what Ossorio characterizes as the "Want" parameter--that is to say, we need to know what Pat is trying to accomplish.

Finally, for behaviors as for objects, there exists an inescapable reference to a broader context of social practices. When the duly appointed minister, for example, utters the words "I now pronounce you man and wife," to the young couple during the marriage ceremony, this action is only intelligible in the far broader context of the cultural social practice of "conducting a marriage ceremony" and the cultural institution of marriage. Anyone who does not understand these things -- a visiting Martian, for example, who dropped down and tried to analyze it on the basis

of the collectivity of biological events just observed -- simply could not understand the minister's behavior.

Thus, for the most part, both objects and behaviors are what they are by virtue of their place in our social practices and ways of life--in our "language games" as Wittgenstein (1953) would have it. Given their indefinitely large number of different physical realizations, their changing realizations over time, their adequate description requiring more than a commitment to the physical events involved in them, and their inescapable context dependency, *it would be impossible to substitute language about this physical realization for language about what object or action it is*. This would remain true even if, on any given occasion, a relation of strong supervenience (Kim, 1993) obtained between an individual's (token) mental acts and physical states of affairs. That is to say, even if it be granted (as the author is inclined to do) that each and every specific mental event depended on physical events in the senses (a) that the mental could not have occurred if the physical had not occurred, and (b) that the mental would have been different if the physical had been different, all this remains true.

Since our primary interest is in the scientific legitimacy of the psychological construct system, the critical point here is that we could not replace such locutions as "she *perceived* it as a compliment," "he *remembered* her name," or "she *learned* her times tables" with descriptions of the biological events that transpired on any given occasion where these descriptions were apropos. Such descriptions could never serve the function in human communication that the locutions "perceived," "remembered," or "learned" perform in a language--the marking off of actions and achievements that occupy certain places in our way of life.

Argument: Psychological Concepts Predate Biological Knowledge

Concepts such as "learning," "remembering," "having a motive," and "acting for a reason" predate significant biological knowledge by thousands of years. They were *created and used* in the first place by persons

with negligible biological knowledge. Further, they are used competently today by children with virtually no biological knowledge. When William Shakespeare or the contemporary child says, "I just remembered the name of that beautiful Egyptian queen who enchanted Marc Antony," and then proceeds to demonstrate that this is so by stating, "It's 'Cleopatra'," they illustrate that they have a mastery of the concept. Even though we all assume biological events occurred at their respective moments of recollection, and even though we believe that knowledge of the biology of memory is of the utmost importance in understanding our physical functions and conquering diseases such as Alzheimer's, what is clear is that *the individual has the concept, and that having the concept requires nothing in the way of biological knowledge.* Indeed, we might imagine the opposite situation, that in which Shakespeare or the child knew exactly what just transpired in their brains, but lacked the concept of "remembering." In such a circumstance, we should have to say, "They have no idea of the significance of those brain events *unless* they can say that they are the brain events involved in remembering -- lacking this, they know only that some brain events of uncertain import just occurred."

Argument: Emergent Phenomena

It is a commonplace of human experience and of science that, when matter becomes configured in certain ways, new properties are exhibited by the resultant entity that are neither identical to nor inferrable from the properties of its individual physical constituents (Broad, 1925; Kim, 1999; Teller, 1992). Thus, Leibniz notwithstanding, atoms do not so far as we know have consciousness, although when billions of them become configured as homo sapiens, this property is exhibited by the individuals so embodied (McGinn, 1999). Bits of metal and silicon do not have the property of computation ability, but when assembled into the whole that is a computer, that holistic entity does. In such cases, the lexicon or construct system of the parts does not contain the concept of the emergent property, a feature that represents one instance of what Kuhn (1970) has famously described as the "incommensurability" of construct systems

(see also Ossorio, 1982). A different language -- different concepts -- are required to make the necessary distinctions to capture the phenomena at the more complex, emergent level.

In discussions of the biology of humans -- of synaptic events, hypothalamic functions, alpha brain waves, cerebral blood flow, etc., one does not find predicated of these biological structures and processes such properties as motives, understandings, beliefs, memories, emotions, and so forth. Even though the whole that is an embodied person, when such person has been socialized into and is participating in a human community and its ways of life, exhibits these phenomena, they are not contained in the construct system of biology. A different, far older, and indispensable vocabulary is needed: the vocabulary of psychology.

Conclusion

Overall then, the conclusion must be drawn that, even though we are embodied beings, and even though our actions inescapably involve and require the transpiring of biological events and processes, we cannot replace the language of psychology with that of biology. Even at a stage far advanced from our own of (for example) knowledge of the biology of memory, it will always remain the biology of "memory," since no description of a biological state of affairs can replicate the highly functional distinction drawn by this concept.

Can Psychological *Explanation* Be Replaced?

If we take it, per the arguments above, that psychological concepts are not replaceable by biological ones, the question still remains of whether or not psychological *explanations* might be replaced by biological ones. Clearly, there are countless cases where psychological states of affairs are correctly attributed, in whole or in part, to biological ones. Scientific findings attest that certain memory problems are attributable to Alzheimers disease, learning disabilities to brain dysfunction, positive feelings to

the presence of endorphins, negative moods to neurotransmitter deficits, and much more. All of these examples, it may be noted, retain psychological concepts in their specification of what is to be explained, but employ biological concepts in their explanations of these states of affairs. The question becomes one, then, of whether or not we will one day be able to explain all psychological phenemona in this fashion.

There are reasons to believe that this cannot ever be the case. In this section, some of the more compelling of these will be related.

The Possibility of Theory Reduction

If one examines the going variety of behavioral explanations, both in our most prominent behavioral theories and in everyday human attributional activity, one can see that they fall for the most part into explanations in terms of five types of factors. The first of these is *cognitive* factors: persons' behaviors, emotions and more are explained by reference to their beliefs, interpretations, and knowledges (e.g., "He was angry because he perceived her remark as demeaning"**).** The second is *skill or competency* factors ("She was successful in resolving the dispute due to her excellent negotiation skills."). Third is *motivationa*l factors ("He cheated in order to win the game."). The fourth is *dispositional* explanations ("She had a hard time making new friends because she was so shy."). The fifth is biological factors ("He is unable to inhibit rage due to a brain injury that he sustained.").

The notion under consideration in this section that *all* psychological explanation may be supplanted by biological explanation has to do with a certain kind of reductionism, one referred to by Teller (1995) as "theory reduction." Applied in the present instance, this sort of reductionism would have it (at least) that the four types of psychological explanation cited above (cognitive, skill, motivational, and dispositional) all reduce to biology and will one day be supplanted by biological explanations. That is to say, for example, that where we might now say, per Beck and his followers, that "Jack became depressed after losing his job because it

reactivated his old core beliefs in his intrinsic inadequacy," we would in future explain Jack's depression in terms of what transpired biologically on this occasion, and would be able to dispense with the cognitive type explanation.

Some reports to the contrary notwithstanding, reductionism is neither dead nor a dirty word in science. Many prominent philosophers of science (Bickle, 1998; Churchland & Churchland, 1994; Searle, 1984; Teller, 1995; Toulmin, 1963) have made the observation that science has successfully utilized reductionistic explanations many times in its history. Searle (1984), for example, cites the example of how all of the phenomena explainable by reference to the old gas laws were shown to be better accounted for by the theory of statistical dynamics. In cases such as this, what is retained is the original description of the phenomena to be explained (e.g., "heat" or "pressure"). What is changed is the nature of the theory and the construct system utilized to account for these phenomena.

This being the case, the question becomes one of when, or under what conditions, such reductionistic moves may be considered scientifically successful ones. Before offering a positive answer to this question, I should like to dwell briefly on what I take to be a common (and mistaken) basis for making reductionist assumptions, including the assumption that human behavior is wholly explicable by reference to biological factors.

The lure of "ontological superiority." The basis I refer to is perhaps best labeled the assumption of "ontological superiority." To express the matter in its starkest terms, the notion is that some phenomena are more real than others. The particular version of this belief that is most pertinent here is that *only physical states of affairs may be considered to be "really real."* On this view, what "really" exist are physical objects, processes, events, and states of affairs (Ossorio, 1998). To allege otherwise can only be to posit the existence of spiritual substances--entities akin to ghosts and souls and Platonic ideas--and this is of course a decisively deficient scientific move. (NB: There is a second popular version of the ontological superiority belief, namely that "smaller is realer"--that what there "re-

ally fundamentally *are*" in the world are electrons and gluons and mesons and the other ultimate particles of contemporary particle physics. I shall not consider this view since (a) it is not the reductionist move at issue here, (b) the biological reductionist does not subscribe to it in most cases since, on this view, some of the grosser, more molar, and thus *less real* phenomena that come under fire are things like brains and synapses and neurotransmitters; and (c) the general notion that smaller is somehow realer, when generalized, would commit us to making absurd claims like "the cornerstone is more real than the building.")

What is wrong with holding that only physical states of affairs are really real, and does its denial involve us in an unscientific spiritualism? If one backs off from any commitment as to what specific phenomena should be counted as real, one can ask the more fundamental conceptual question, "What is it to say of any object or state of affairs that it is 'real'?" When we, the community of language users who have agreed to use words consensually, use this locution, it would seem that its meaning is well captured in the notion that *reality is whatever in fact is the case*. To say of some X that it is "real" is to say that it is in fact the case. It is to assert, to express the matter negatively, that X is not fictional, or imaginary, or illusory, or in any other possible sense *not* the case.

To claim that only physical realities can be taken to be real, from this vantage point, is to expand the definition of "real" to the following one: "Reality is whatever in fact is the case *so long as 'it' has physical properties* such as mass, location, extension in space (if an object); or directionality and magnitude (if a force) . . . etc. On this definition, carried to its logical conclusion, all of the following statements are *not about anything real*:

> 1. A *rule*, or *operating principle* of science, is that one ought to subject one's theoretical contentions to empirical test.
>
> 2. American blacks and women have striven vigorously in recent times for equal *rights* and *opportunities* with white males.

3. Raising one's middle finger to another has a different *significance* in America than it has in the outback of Australia, and, consequently, engaging in this behavior is likely to have different consequences.

4. Mutual *mistrust* between the Arabs and the Israelis is a major obstacle to peace.

5. Einstein's *concept* of relativity revolutionized physics.

None of the states of affairs italicized in these sentences has physical characteristics. Rules of science, human rights and opportunities, significances, mistrust, and concepts cannot sensibly be said to have mass, extension in space, location, charge, or any other physical property. Do we really want, on this account, to deny them *reality status*? Could we seriously look at each of these sentences and declare, "The italicized words denote nothing real whatsoever"? Further, denying them reality status, would we want to take the next logical step and conclude that therefore none of them could in principle have had any influence whatsoever on the scientific practices, social movements, interminable armed conflicts, and scientific revolutions mentioned in these sentences?

These are the implications of holding to a position that only physical realities are "really real," and of denying the validity of a definition which states that reality is simply whatever in fact is the case. Finally, it may be noted that in attributing reality status to such phenomena as rules, operating principles, relations of mistrust, significances, and concepts, I am not speaking in the least of spiritual substances or entities such as ghosts or souls. I am speaking of everyday, garden variety, empirically discriminable realities.

Thus, claims of ontological superiority, and especially the claim that some states of affairs alone are entitled to be regarded as real because they are physical states of affairs, cannot seriously be carried off. Therefore, they cannot serve as successful rational bases for preferring theories couched in physicalist terms.

What does justify theory reduction? On what basis, then, is it scien-

tifically permissible to make the particular reductive move that is replacing one theory, expressed in one construct system, with another expressed in a different construct system? The answer to this question is a commonplace of scientific understanding: *A new theory is to be preferred to an old when it does a better job of accounting for the empirical phenomena in question* (Kuhn, 1970; Searle, 1984; Toulmin, 1963). It is to be preferred, for example, when it explains the phenomenon better, when it generates better predictions, when it is more parsimonious, and/or when it is able to subsume more phenomena than its predecessor. In effect, the justification here is the same as the traditional and universal one for any theory, reductive or not, that purports to supplant another: it must quite simply do a better job than the theory it replaces. Reductionistic theories, then, may be scientifically successful, not on the basis of some alleged ontological preeminence, but only when they meet this requirement.

The non-replaceability of psychological explanation. Above, it was demonstrated that psychological concepts cannot be replaced by biological ones. It follows logically from this, first of all, that *any explanation posed in psychological terms cannot be translated into, and thereby replaced by, one posed in biological terms*. If, then, the theorist, clinician, or person in the street gives a cognitive, motivational, skill, or dispositional explanation, the precise discriminations captured in such explanations (e.g., "because he wanted to win," "because she perceived it as an insult," "because he is shy") are not translatable into biological ones. As demonstrated above, there are no concepts in the biological lexicon that do the precise work -- that draw the precise discriminations -- that these psychological concepts do. Further, as noted previously with respect to the notion of making a promise, their indefinitely large number of physical realizations, their changing realizations over time, their adequate description requiring more than a commitment to the physical events involved, and their inevitable context dependency, all argue strongly against any isomorphic correspondences between any such psychological explanations and any biological state of affairs.

But, as noted from the outset of this paper, some reductionists would say, "We do not wish to *replace* these explanations by translating them,

we wish to *discard them entirely*!" On this view, captured in the opening quote of this paper, the entire enterprise of psychology, concepts and explanations alike, represents the remnants of a prescientific "folk psychology," and is woefully scientifically inadequate. Thus, there would be little point in translating it or "reducing" it into biological terms--of substituting a biological description, for example, of what was going on physiologically when a person "pondered" or "perceived" or "remembered" something, for a psychological description. Rather, what one as a scientist ought to do is to abandon entirely this traditional system of constructs and explanations, and to replace it with that of neuroscience (see Churchland, 1988; Churchland & Churchland, 1994, on "eliminative materialism").

Let us examine the plausibility of this project by considering a concrete example, one that exemplifies (and will stand proxy for) the common situation of explaining psychologically the behavior of a person who is participating in an existing social practice, and whom we would take to be acting for reasons that are intelligible within that practice. The example involves an observation that could be made by any interested observer many times over on any summer afternoon. In a baseball game, a situation exists in which there is a runner on first with no outs. The batter bunts. Asked later why he did so, he gives a psychological account of his action, one that focusses primarily on the motivation or purpose behind it: he was "trying to advance the runner into scoring position."

Can we count this a good explanation? If one understands baseball, it certainly accounts for the batter's behavior, and is highly parsimonious. Generalized, the proposition that baseball players will engage in behaviors designed to place their teammates in scoring position would be highly predictive. And since, per our previous argument, we are not required to regard the likes of "motives" and "understandings" and "rules" as somehow unreal or scientifically invalid, we seem to have a sound, usable explanation here.

Can neuroscience, or even biology in general, offer us a better one? Clearly, not at the present time, but what of the future? Let us say it is

a hundred years from now, and we are in a position, via computers and highly advanced biological tracking devices, to record every biological event occurring in the batter. Baseball has survived in its present form and, watching a game one afternoon, we observe the runner on first, no outs, bunt sequence. As eliminative materialists and neuroscientists, we are restricted to giving a *completely* biologic account--i.e., one expressed completely in terms of the neuroscientific (and other biologic) events that transpired in the batter on this occasion. We cannot introduce anything having to do with his or her "motivations," "perceptions," or "knowledge," since on our account, there is literally no reality such as having a motive, acting on one, following a rule, understanding a strategy, and so forth. These psychological notions are nonsense--they belong to a failed, scientifically invalid explanatory system. So, the sequence occurs, but there is literally *no such operative reality* as "being motivated to advance the runner into scoring position." When the sequence does occur, as it does countless times each summer afternoon, and there can be no recourse to such a notion, what *can* the eliminative materialist say about what just transpired? It would seem that it could only be some statement of the following general form: "The constellation of biologic events X_1 through X_n just occurred, with causal connectons C_1 through C_n obtaining between certain of these events."

However, it would seem completely inconceivable that this sequence of events culminating in the bunt *would have occurred at all* were there no such operative realities as "knowledge of baseball rules and strategies" and "a motive to advance the runner." Compare: Martians in the future visit post-apocalyptic earth. In the rubble, they encounter a strange device, but one that we earthlings today would recognize as an electric clock. The Martians, being highly electronically advanced, examine it and understand completely and perfectly its physical structures and processes. However, in their culture, they do not (however improbably) have the concept of "time" or the related cultural activity of "telling time." One must ask: Would this device, whose physical processes we have stipulated are understood completely and perfectly by the Martians, *even exist -- would it even have been invented --* had there never been such things as the

human concept of time and the social practice of telling time? Paralleling this, we must also ask: would the bunt *have occurred at all* were there no social practice known as "baseball" and no such intelligible motive within it as that of "advancing the runner to scoring position"? The answer to both of these questions would seem to be a decisive "no."

What is abundantly clear is that at the present time there is no serious possibility of replacing apt psychological explanations of human behavior with biological ones (cf. Davidson, 1970; Horgan & Woodward, 1985; Ossorio, 1982). That is to say, there are no neuroscientific or broader biological accounts that begin to approach apt psychological ones (such as "in order to advance the runner") in usability, parsimony, and predictive and explanatory power. And, in light of all that has been said above, it would seem impossible in principle that there ever will be

Conclusion

Overall, then, there is no reason to believe that psychology will be replaced or subsumed by biology. Indeed, it appears extraordinarily unlikely, if not impossible, that this could ever be the case. For on numerous grounds, we have seen how neither psychological concepts nor psychological forms of explanation are replaceable by biologic ones. Rather, it appears that the latter must take their place alongside of, and often in concert with, such explanations. At the end of the day, there is no reason to conclude that "it's all really biological."

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An Open Letter from Isaac Newton to the Field of Psychology

Raymond M. Bergner

Abstract

This paper articulates a thesis regarding why psychology has thus far been unable to arrive at a single, widely accepted, theoretical framework, and thus remains in a highly fragmented state. This thesis concerns psychology's historical inattention to many critical pre-empirical matters essential to the creation of successful scientific frameworks The device employed for communicating this thesis is that of adopting the voice of Isaac Newton, who illustrates in the present "letter" how his own celebrated unifying framework embodied numerous pre-empirical elements, and how it was only by virtue of these elements that he was able to achieve the empirical unification that he did. Along the way, Mr. Newton makes a number of positive recommendations for the construction of a unifying framework for psychology.

To All Members of the Community of Psychologists:

I have been following the course of your intriguing field with great interest over this past century and more (I should like to tell you how I have done so, but it is not my business here to delve into matters metaphysical). I had said in my lifetime that I seemed to myself only a boy, playing on the seashore, and directing myself in now and then, finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me. I had also said that, if I have been able to see further, it was only because I stood on the shoulders of giants. I still believe these statements to be true and so it is with some modesty

that I address you today. Perhaps, it must be said, that I would not have been so presumptuous as to do so had I not heard so many of you, and on so many occasions, lamenting that you were "still in search of your Newton." I hope that my thoughts may be of some service.

My Hypothesis Regarding Your Central Difficulty

To lament that you have not found your Newton is, of course, to state what seems widely agreed in your day: that your young science has not to date arrived at any manner of broadly accepted, comprehensive intellectual framework that accomplishes what I accomplished with my *Principia*. In that work, you will recall, I created the framework of the system of the physical world, a system of rational mechanics that both comprehended a vast array of hitherto disorganized empirical phenomena and that provided the overarching theory that dominated natural philosophy for centuries thereafter. Looking upon your own field of psychology, the prevailing state of affairs seems akin to that which I encountered when I arrived upon the scene, one of fragmentation. One scientist investigates cognition, another emotion, another personality, another psychopathology, but all in the absence of any manner of comprehensive framework that might lend unity and coherence to all of these disparate enterprises. In the thinking of one Mr. Kuhn in your own time, lacking same, you remain in a stage of development that he characterized as disorganized "pre-science." In this regard, I found of interest the observation of one highly intelligent university student upon entering his General Psychology classroom one Monday morning. Turning to a comrade, this young man exclaimed, "I wonder what entirely different subject we will study this week."

At the risk of offending, I should like in this letter to offer my principle hypothesis regarding why your field has not to date arrived at any manner of broadly accepted, unifying theoretical framework, and has not for this reason realized the scientific potential, importance, and respect it would rightly possess. In brief, I believe this reason to lie in the fact that *you have attended insufficiently to the pre-empirical matters essential to so much good science*. You have understood aright the basic truth that sci-

ence is ultimately concerned with how things are in the empirical world. However, you have neglected the further truth that often, as in my own case, much nonempirical work must be undertaken if we are to achieve our glittering empirical triumphs. With this central thesis in mind, permit me to present some reminders of how this was so in my own case, and respectfully to proffer some suggestions that may be of benefit to you in your own field of endeavour.

My Own Experience

In my twenty third year, I was forced, as were all of my fellows, to abandon my studies at Cambridge for fear that I would contract the plague that was then ravaging England. I returned to my family home in Woolsthorpe and soon thereafter found myself quite taken up with the task of seeing what contribution I might make to the then central problems of natural philosophy. Withdrawing to my chambers, I determined to see if I might unify the fragmented, disorganized state of this field. Looking about, I found the conclusions of Galileo regarding the motions of terrestrial objects, the contention of Copernicus that ours was a heliocentric universe, the regularities captured in Kepler's laws of planetary motion, and many another theory and observation strewn about the landscape of natural philosophy.

In taking up my task of constructing a theory that might comprehend all of this, I found it necessary to abandon the dogged empiricism of Aristotle--his absolute abhorrence at uttering a single proposition not in the closest accord with immediate physical observation. I found, in contrast, that I must attend to many matters pre-empirical if I were ever to become able to succeed at those empirical. Indeed, during those sixteen months at Woolsthorpe, I performed not a single experiment nor undertook a single observation in mechanics. Rather, I set about to create the pre-empirical conceptual, mathematical, and theoretical law structures that would prove integral elements in the basic fabric of my ultimate creation: the framework of the system of the physical world.

Some Familiar Reminders

In considering the place of the pre-empirical in science, some familiar reminders are perhaps in order at the outset. The first of these concerns a decidedly nonempirical discipline that is inextricably woven into the fabric of my own and of most science, that of *mathematics.* On all learned accounts, in my own time and in your own, mathematics is not itself deemed a science. It is comprised in its entirety, not of empirical, but of a priori propositions. There can be no sensible question of subjecting "2 + 2 = 4" or any other mathematical proposition to empirical test. And yet, this entirely a priori system is of inestimable value in countless scientific enterprises. In my own case, at that time when in the prime of my age for invention I retired to Woolsthorpe, I minded mathematics above all else. In creating my system, I employed Mr. Euclid's geometry, Mr. Descartes' invaluable coordinates and analytic geometry, and an entirely new system that I (and not Mr. Leibniz!) created precisely for my purposes, the method of fluxions (what you have come to know as the "calculus"). Without these entirely logical and wholly nonempirical elements, the accomplishment of my task would have been quite simply impossible.

Beyond mathematics, but highly related to it, is *logic*. Like mathematics, logic in all its forms is by common consensus not an empirical science, but is entirely a priori in its structure. Thus, for example, the famous principle of contradiction, "For any proposition *p*, *p* and not-*p* cannot both be true," could never sensibly be the subject of empirical inquiry. Despite its nonempirical nature, however, the employment of valid forms of inference and argumentation is of the utmost familiarity and centrality in science, so familiar indeed that we easily fail to mark its presence. In this connection, it may be recalled that I never *observed* that gravity extends to the orb of the moon in the manner that I observed, for example, that my famous apple fell to ground. Rather, I *logically inferred* that, if the acceleration of (and thus the force of gravity upon) terrestrial bodies falling to earth were identical to the centripetal acceleration of the moon moving in its orbit, this would constitute *logical* grounds for concluding that the forces responsible for these accelerations were one and the same. It was importantly by virtue of a logical conclusion, then, that

I made my celebrated claim that gravity extends to the orb of the moon, and indeed to every object in the universe.

One final reminder touching both on the matter of logic and on the myriad pre-empirical elements interwoven, almost invisibly, into our scientific practices: this reminder concerns the matter of *scientific method*. It may be noted that such method, the very heart of what we *do* as scientists, *is in its entirety based on logic and not on empirical finding*. If I might illustrate this contention with examples from your own science, no empirical evidence has ever been adduced in support of propositions such as, "This investigation requires a double blind control condition," "Variable A must be held constant between experimental conditions," or "This design calls for use of statistical procedure X."

On the Matter of Conceptual Frameworks

In order to create the framework of the system of the world, it became apparent that some of the concepts at hand in 1665 would not suffice for my purposes. Thus it was that I set about to formulate a new system of concepts, all precisely defined and related one with another. In doing so, I determined that some of the then existing concepts were quite serviceable; "velocity" and "acceleration" come readily to mind in this regard. However, I found it necessary to formulate several new concepts. Thus it was that I formulated -- dare I say I *invented* -- the concept of "force." Further, I found it necessary to give new and different meanings to the concept of "mass" if it was to perform its needed function in my system. And so it was that I created, from parts old and new, a conceptual system that could draw the precise distinctions that I needed drawn to accomplish my objectives.

Now, it should be clear, to employ the idiom of some twentieth century philosophers (I have kept my eye on them too), that concepts are not "truth eligible." They are neither true nor false, neither verifiable nor falsifiable. One would no more do an experiment to determine, for example, whether a "force" is "any influence that causes a body to be accelerated" than one would to determine if bachelors have wives. Rather, the fundamental question one must always pose of a scientific concept is

whether or not it is apt and serviceable. That is to say, does it draw the precise distinction one needs drawn in order to serve the functions one needs served? And, the fundamental question one must ask of any *system* of concepts is one of coherency. Are the concepts well and logically and rigorously related one with another, and all of this in a way, again, that allows one to accomplish the ends one needs accomplished.

And so, bearing on this critically important matter of possessing the most adequate and coherent conceptual system possible, two brief suggestions, both proffered in the spirit of aiding your scientific enterprise. First, in my own case, I found it absolutely indispensable, not only to perform the propaedeutic task of formulating pre-empirically a system of precisely defined and interrelated concepts, but to see to it that they accomplished a most critical objective. They had to be able to *provide the means to distinguish explicitly all of the facts and possible facts concerning the motions of (then known) physical bodies*. They had to be capable of describing the motions and changes in motion of my famous apple, of Mr. Kepler's elliptical planetary orbits, of Mr. Halley's comet, and of all other bodies large and small, terrestrial and extraterrestrial, in the entire universe. A simple analogue of my requirement in this regard may be found in the science of colours, wherein the concepts of "hue," "saturation," and "brilliance" allow one both to describe and to distinguish the entire "universe" (if I may express it so) of colours and possible colours. Reverting again to your contemporary idiom, I required a "top down" conceptual system if I were to accomplish my task of providing a truly comprehensive and unifying framework.

My second suggestion: I believe you must devote greater diligence to the matter of defining your concepts (or otherwise articulating their meanings; e.g., by parametric analyses, as in the case of colours, or paradigm case formulations, as in the case of your mental disorders). It will not do to continue to say that you do not quite know what some of your central concepts such as "behaviour," "personality," or "psychopathology" mean, and then to go on about the business of claiming that that is what you are studying. In this regard, I was amused by an interchange between Mr. Lyons in your time and an emotion researcher who, when pressed for

a definition of "emotion," stated that "an attempt to define emotion is obviously misplaced and doomed to failure." To this, Mr. Lyons responded that, "One is tempted to say that the resulting situation must be like that of sallying forth to study rabbits while having no idea of what is to count as a rabbit". I could not agree more.

Bringing these points to bear on the science of psychology, my principle recommendation in this regard would be to resume what seems to have been abandoned on your part as impossible and perhaps even grandiose: the attempt to formulate a grand unified theory of the general domain of persons and their behaviour. And, if I may be so presumptuous as to put forth my own work as a model for such an endeavour, I should like to suggest that your first efforts in this regard might most profitably be devoted to the pre-empirical matter of creating a framework of carefully articulated and systematically related concepts--a *conceptual system*--and not to the formulation of empirical propositions of intended universal application. In surveying the contemporary landscape of your science, I have noted that a certain Mr. Peter Ossorio seems to have made a most promising effort in precisely this direction with the creation of what he has termed "Descriptive Psychology."

On the Matter of Theoretical Laws

If my reading of the matter be correct, it appears to me that it has become increasingly customary in your time to direct insufficient scrutiny to the matter of the nature of theoretical law statements. The prevailing opinion seems to be that such statements, or at least statements deducible from them, ought in every instance to be empirically "confirmable" or "falsifiable." However, permit me to direct your attention for a moment to my well-received three laws of motion, and ask you to note if they do not serve a rather different function than this. Then, in full knowledge that your subject matter differs vastly from my own, I shall urge you to consider whether or not this function might not provide some promising directions for the advancement of the science of psychology.

I shall use my first law, the "law of inertia," upon which all the rest depends, to begin to illustrate my point. Recall that it states that "Every

body continues in its state of rest, or of uniform motion in a straight line, unless it is compelled to change that state by forces impressed upon it." This statement, if regarded as an empirical generalization, is demonstrably false and contrary to all empirical observation (and as such is the last thing that the arch-empiricist Aristotle should ever have thought of saying). There are no perfect vacuums in the universe, nor is there perfectly empty space devoid of all gravitational influence. Thus, no object ever has, nor ever will, travel a rectilinear path at a constant velocity indefinitely. Notwithstanding, like the propositions of mathematics and of logic, this nonempirical statement is of inestimable value in the reckoning of physical events. It describes, not any actual event, but an *ideal* state of affairs which may, by accounting for deviations from it, be used to great effect in calculating the actual motions of objects.

My second law is also nonempirical, but in a way that differs from my first: "Change in motion is proportional to the motive force impressed, and is made in the direction of the right line in which that force is impressed." In this instance, it is clear that actual events do occur that conform to this description. However, the law is nonempirical in the sense that no empirical finding would ever be taken by the physicist as disconfirming it. As your own Mr. Popper might put the matter, it is not "falsifiable." For, should some body exhibit motion that was not expressible as the resultant of the known forces acting upon it, the physicist will never declare my law disconfirmed, but at every turn will insist that there must be some other force operative. Itself nonfalsifiable, such a conclusion has been the basis for countless empirical discoveries, including that in 1840 of a planet in our own solar system then invisible to the naked eye, Neptune. (Regarding my third law, the law of action and reaction, I shall only note that it is nonempirical in precisely the same way as my second: the seeming absence of an "equal and opposite reaction" on any given occasion would never be counted by the competent physicist as grounds for rejection of the law, but only for further inquiry into as yet unobserved physical forces.)

The foregoing being the case, it must be said that, rather than "discovering," it is more correct to say that I "invented" or "created" my three

laws of motion. As they are not empirical generalizations, they cannot of course have been empirical discoveries. Perhaps it is most accurate to say that they function as *prescriptions* to be followed by the physicist in describing and explaining what he or she observes. More precisely, they may be counted conditional prescriptions to the effect that the observed results must be described in accordance with the format provided by the formula. Where these laws themselves are concerned, the *empirical* question becomes one of where and how these laws may be followed in a non-trivial way and with effective results. In this regard, I am aware that, in the twentieth century, two most successful new paradigms, those of relativity and of quantum physics, have shown my laws no longer to possess effective application in cases of extremely small objects, as well as those moving at extraordinarily high speeds (if observed from outside the frames of those events).

In assembling these reminders of the nonempirical character of my own laws, it is not my intention to suggest that all scientific laws be of this character. Clearly, this is not so, Mr. Darwin's famous assertion being a case in point. It is rather, one might say, to loosen a certain blinder within your field in a manner such that old restrictions might be lessened and new possibilities for theorizing entertained. A brief example may be of use. During the twentieth century, a thesis was advanced within your young science to the effect that "frustration elicits aggression." This thesis, unreflectively regarded as a falsifiable empirical generalization, was ultimately abandoned. Much evidence had accumulated that, while sometimes conforming with observation, it often failed to so accord.

Consider, however, an alternative formulation regarding this same matter (one advanced by the selfsame Mr. Ossorio mentioned above): "Provocation by O elicits corresponding (i.e., proportional) hostility by P." Aside from what I regard to be a more linguistically sensitive rendering of the matter, this formulation was put forth, not as a disconfirmable empirical generalization, but as a non-empirical formula that, like my three laws of motion, may be used by scientists and others to explain empirical phenomena. On this formula, if provocation by O is followed by proportional hostility by P, this is straightforwardly intelligible. If it

is not so followed, this does not falsify the proposition, but directs the explaining individual to go in search of the other "forces." Unlike myself, Mr. Ossorio is explicit in stating his exceptive conditions or "unless clauses." Thus, his full rendering of the hostility formula is the following:

Provocation by O elicits corresponding hostility by P, unless...

1. P has another reason (or reasons) for showing anger toward O or for not showing anger toward O (this is the most straightforward analogue of my own "unless there is another [additive or opposed] force operating"), or...

2. P does not perceive O's behaviour as the provocation that it is, or...

3. P is unable to express his or her anger in that situation, or...

4. P believes that what he or she did in that situation was acorrespondingly hostile response, but in fact it was not, or...

5. some combination of the above states of affairs obtains.

In my own time, I observed the movements of bodies. Imposing my pre-empirical frame on the observed world, when such bodies moved in accordance with known forces, that was straightforwardly intelligible and required no further explanation; when they did not, my formulas directed me to search for what was unaccounted. Mr. Ossorio, if I read him aright, is saying: "When one observes anger or hostility that is proportional to the provocation observed, that requires no further explanation (the main clause that provocation elicits corresponding hostility holds without exception); when, however, such an angry response is either absent or represents an over-reaction or an under-reaction, this requires explanation, and one may have recourse to my unless clauses in determining what best fits the observed facts of the case." This formulation, relative to its historical predecessor, captures far more adequately the complexities of the phenomena at issue, and does not warrant abandonment in the face of empirical events inconsistent with its main clause. For these reasons, I hold it to be of far greater scientific merit. Finally, again it may be re-

called that what was empirical in my own case was the range of effective application of my theory. As noted previously, events in the twentieth century showed that it did not work either for extremely small objects or for those travelling at speeds approaching that of light. In the same way, it may prove that Mr. Ossorio's hostility formula encounters domains where, empirically, it does not prove effectively applicable.

On the Matter of Empirical Findings

In my own case, it was true in every instance that the facts I was able to discover were wholly dependent on the pre-empirical structures I was able to employ: the conceptual system I was able to create, the prescriptive laws I was able to follow, the logical principles I was able to utilize, and the mathematical methods I both invented and applied. Employing all of these nonempirical elements, and bringing them to bear on the empirical findings of Galileo, Brahe, Kepler, and others, I was able to determine that the force that causes the apple to be drawn to earth, and the one that holds the moon in her orbit and prevents her from flying off into space, pretty nearly reckoned, and so deduced that they must be one and the same force. By these same means, I determined the same to be true for other planets and arrived at the law of universal gravitation, demonstrated that the gravitational attraction of any body is proportional to its mass, and calculated that this same attraction is inversely proportional to the square of the distance between two bodies. Using these pre-empirical structures, further, Mr. Halley famously predicted the reappearance of his celebrated comet in 1758, countless others uncovered the existence of cosmic entities such as planets and black holes invisible to the naked eye, scientists in the 20th and 21st centuries determined precisely what forces and vectors would be required if their spacecraft were to reach their appointed destinations, and much more.

Conclusion

I hope that my account of my own case, wherein the pre-empirical was so seamlessly interwoven with the empirical, and so utterly essential to the success of my overall enterprise, has been of some interest and some use to you. It should be clear that history has reserved its highest honours

for those sciences that have achieved a state of maturity wherein they have developed an overarching paradigm, and for those individuals who have created these paradigms. If I may be so immodest as to include myself in this pantheon, scientists such as Mr. Einstein, Mr. Darwin, Mr. Maxwell, and myself are remembered, not so much as great experimenters, but as imaginative creators of these new paradigms. In closing, my wish for the science of psychology is that, whether in the person of Mr. Ossorio or some other, you may achieve success in "finding your Newton" and thus your "system of the behavioural world."

Your most obliged and obedient servant,

Isaac Newton

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Where Does My Freedom Lie?

H. Paul Zeiger and Carolyn Allen Zeiger

Freedom is generally considered a desirable feature of human life: its absence or restriction is often deplored. Yet under certain circumstances it may be considered a burden. What is the source of freedom in our lives? Where do the constraints on it come from? What attitudes might we adopt toward both our freedom of choice and the constraints on it? In this article the resources of Descriptive Psychology are brought to bear on the practical issues raised by these questions.

Where Does My Freedom Lie?

This article arose from the following personal contemplation: Here I am, living in a world that appears to be at least partly of my own making. Where did it come from? How much of it is my own doing? How much is someone else's? Whose? How can I change it for the better? What help can I expect? From where?

The scientific education of one of the authors did not equip him well for addressing such questions. The world as portrayed in the context of physical science is overwhelmingly deterministic, allowing little if any latitude for the representation, let alone the fact, of its being changed by the individual person (Holbach, 2002, Honderich, 2002). In contrast, the discipline of Descriptive Psychology (Ossorio, 1982/1998, Shideler, 1988) provides a different set of intellectual resources. The articulation of the Descriptive Psychology (DP) concept of person includes the concept of deliberate action -- behavior consciously *chosen*. DP also provides a concept of (behavioral) world -- the totality of states of affairs available to be acted upon. This concept will facilitate the task of dealing with the many different worlds of individuals and communities that are of direct relevance to our inquiry. (More about the concepts of person, deliberate action, and world later.)

Here is the plan for our contemplation:

1. Look at where my freedom lies and where it does not, thereby revealing what in my world is of my own making.

2. Look at the contributions to my world made by the communities to which I belong.

3. Explore the opportunities and challenges that arise from our ability, in today's world, to engage in multi-community behavior.

1. Where Does My Freedom Lie?

In DP, a central aspect of the concept of person is that the person stands in three important relationships to his behavior:

- That of Actor -- he engages in the behavior directly
- That of Observer -- he observes and describes the behavior
- That of Critic -- he judges the behavior as satisfactory or unsatisfactory, and makes adjustments accordingly.

Ossorio (Ossorio, 1982/1998, pp104-105) puts it this way:

"A person has a status in the world as an Actor, as an Observer, and as a Critic

a. For the Actor, the World is essentially an arena for action, and he treats it accordingly by incorporating it into his actions. Acting as Actor has several distinctive features.

1. His behavior is spontaneous; he does what comes naturally. (What he does is an expression of his character and is not directly problematic.)

2. His behavior is creative rather than reflective. His behavior and its products are a significant expression of himself and not merely a common or conventional response to a situation, though it may be that, too.

3. His behavior is value-*giving* rather than value-finding. Creating the behavior involves creating a framework of interrelated statuses (and their corresponding values) of which mundane particulars are embodiments.

4. His behavior is a before-the-fact phenomenon, since he creates it (he is not *finding out* what behavior he is engaged in—he is *doing* it).

b. For the Observer/Describer, the world is something to be recognized as being *this* way rather than some other way. Archetypally, the Observer/Describer acts as "one of us", since recognizing the world as X rather than Y paraphrases into "That's what *we call* 'X'." What behavior it is is known after the fact.

c. For the Appraiser, or Critic, the world is either satisfactory or unsatisfactory in a given respect. If it is satisfactory, it is satisfying. If it is unsatisfactory, it warrants a diagnosis of its being unsatisfactory in *this* way rather than *that* way. Even more important is the prescription given for trying to improve matters by acting *this* way rather than that. Failures in self control associated with poor critic functioning are at the root of many psychopathologies."

This picture of the A-O-C positions available to a person lays out her basic freedoms and opportunities for creation. In particular, item a.3 reminds us *that, in addition to the mundane particulars, the meanings and values acted out in the person's life drama are also part of the actor's creation.* For example, if I present a position paper at a town meeting, I am not choosing merely to present a paper, but also to take a personal position on a matter of public interest, to exercise my eligibility as a community member to do so, to risk generating disagreement, to value my position strongly enough to take that risk, etc.

What place do freedom and creativity have in the conceptual structure of DP*?* Note that right from the beginning, in A-O-C, freedom of choice

and creation of one's behavior are the baseline. They do not call for explanation. Things that *do* call for explanation are the constraints on (a) a person's freedom of choice and on (b) his ability to create his behavior, and along with it, his world.

Some explanation of the DP concept of world is in order. The word "world" does not mean the planet Earth, as it might to a geologist, or any planet, as it might to an astronomer, or even the physical universe, as it might to a cosmologist. Instead the usage is more accurately represented by "the world of baseball", or "the world of high fashion", or even "the world of science". In each of these worlds there are persons: baseball players and fans, fashion models and buyers, and scientists, respectively; in each of these worlds there are the "done" things; the values; the principles; and of course the physical objects: balls and bats, dresses, laboratory instruments. Each of these (behavioral) worlds contains all the concepts, logical distinctions, and facts that any of its participants might take into consideration when choosing his or her actions as a participant in that world. And so it is with individuals: my world is the one that has a place for me in it, and it contains all the concepts, logical distinctions, and facts that I might take into consideration when choosing my actions. If I were to write an historical novel about England's King Henry V, I would attempt to immerse myself and my readers in the world of Henry, to the best of my understanding of that world. But I could never live in that world myself: I can only live in my own 21st century world and look back on what little I could glean from the historical record of the world in which Henry actually lived.

How much of this world of mine lies beyond my ability to change? How much of our worlds do we get to choose, and how much is a given? For starters there are the physical constraints. Human beings cannot flap their arms and fly to the moon. Our planet, as lovely as it is, is racked with storms, fires, earthquakes, and plagues; human bodies are frequently crippled or destroyed by these natural events. We are stuck, as a race, with all the ills the flesh is heir to. The second great source of real constraints is our society. Each person has a certain position, consisting of a certain set of eligibilities. Eligibilities constitute the alternative behaviors in which I

have the option to engage. One's position does not "cause" or force one to do anything, but it does mark how one's behavior will count — both to the self and to members of one's community. Actions attempted without the requisite eligibilities, e.g. "I now pronounce you husband and wife", when spoken by someone without the appropriate authority, do not count. Attempts to evade social constraints by becoming a hermit fail because the freedom gained by not bumping into others is more than cancelled out by the lack of opportunity to engage in human social practices. ("A person requires a community in order for it to be possible for him to engage in human behavior at all" — Ossorio, 1998, pp.75-76) Furthermore we choose our actions taking into consideration our worlds *as we see them*, and we sometimes make mistakes, such as under or over estimating a physical limitation, misperceiving a relationship, misunderstanding community norms or practices, etc.

The physical and social limitations and the shortcomings of our perceptions are, in the short run, inescapable. Over time, though, both kinds of constraints are subject to change, albeit perhaps slowly, through a variety of mechanisms. Ways that these constraints can be changed, deliberately or otherwise, include:

- Physical world: empirical discovery, inventions
- Personal history: education, experience, training
- Embodiment (one's body): aging, accidents, diet, exercise
- Communities: accreditation or degradation, joining, participating
- Misperceptions: hard knocks, education, psychotherapy

For example, some physical constraints can be removed over time. Mountaineers can condition themselves to breathe more effectively at high altitude, persons with aging bodies can undertake hatha yoga to preserve and enhance strength and flexibility, many disabilities can be countered with prosthetics such as glasses and hearing aids. Social constraints can often be modified through application of DP's relationship change formula.

The *Relationship Change Formula* is stated: *"Relationships follow behavior. That is, if a person C, has a relationship, R, to Z, and if C's behavior with respect to Z is such that it violates R and expresses RR, then C's relationship to Z will change in the direction of RR"* (Ossorio, 1982/1998, p68). That is, if I were to act *as if* a certain relationship were the case, things would move toward making that relationship indeed the case. One's relationship is changed when the respect or trust of another is earned or destroyed. People can learn new competencies and thereby qualify for new eligibilities, as when a lawyer passes the bar exam and gets to practice law. And the relationship change formula applies even to one's way of *seeing* things. My relationship to spiders or snakes, for example, might be changed by eliminating fear through desensitization. This example reveals the possibility of even changing an emotional reaction through a process of experiential education. The removal of misperceptions via psychotherapy is also noteworthy. As a simple example, a person who is preoccupied with what it takes to make more and more money might discover in the course of therapy that there is more to life. That would constitute an expansion in his world, and with it a larger arena for action. See (Bergner, 1998) and (Roberts, 1985).

But wait! Let's not get too preoccupied with constraints. They are, after all, like the boundary lines on a tennis court—something we need to stay within—not something that prevents one from making an almost infinite variety of shots in the game. There is still the court itself, the arena where we get to play. You are still the *author* of your own life. *We all do a lot of creating that is not noticed just because it is so commonplace.* Simple example: facts that you get to make true just by pronouncing them. E.g., "This sketch is of Winston Churchill" (whether or not it be an accurate likeness) or "I intend to be a musician" or, as a boss can say, "You're hired." This last case exemplifies both a constraint (you need to be the boss to do it), and the freedom of choice (you can hire or not).

To get a feel for the depth of the domain in which personal authorship is exercised, we have the concept of the *significance of one's actions.* In Descriptive Psychology, the significance of a behavior is given by answering the question: "What are you doing by doing that?" For example, by eat-

ing lunch I might be keeping my body functioning well, by keeping my body functioning well I might be preparing it for service in some cause, and so on. Thus associated with any action we can generate a *significance series* of descriptions, in which you move up the series by asking "What are you doing by doing that?", and down the series by asking "How?" Any time one embarks upon a course of action, the action chosen includes the entire significance series. If the significance of my eating lunch were different, for example to schmooze with a business associate, that would make it a different action, one that involves a business relationship in addition to nutrition.

Although the physical particulars of an event are subject to public scrutiny and scientific verification, even the first step up in significance often involves a less visible choice, the actor's and other's, and, as we proceed higher in significance, it often becomes more and more of a private matter. (That is why, in the popular literature, "inner", as in "inner life" or "inner wisdom", often equates to "higher significance".) Understanding someone's behavior, whether in a story or a play or in real life, typically includes being able to elaborate the significance series of the behavior some steps in either direction.

An example, from Shakespeare's "Julius Caesar", of the freedom to assign significance is the funeral oration for Julius Caesar following Caesar's assassination by Brutus and his co-conspirators. The assassination was public knowledge: Its significance was not. Was it the removal of a despot, or an act of despicable treachery? In his oration, Caesar's friend Marc Antony did not attempt to change any of the events surrounding Caesar's death. Nevertheless he did, through his skill at oratory, sway his listeners from whatever their views were of the significance of the event to his own: that it was a case of treacherous murder. This example is illuminating: The physical particulars of an event are often indisputable matters of public record. What the participants were doing by doing what they did is open to creative interpretation by commentators, and to first hand authorship by the participants themselves. In other words, *When choosing an action, you get to choose all its levels of significance, not just its mundane particulars.* For example, when you choose to walk around a large expanse of grass

repeatedly hitting a little white ball into one hole after another, you are not just choosing these mundane physical actions, you are choosing to play golf, and if the game is with your boss, you are choosing something of additional significance. If one intentionally loses at golf to one's boss, it is a different behavior than if one tries one's best to win.

An important special case of assigning significance is the *casting* of individuals into roles in our world: friend, enemy, lover, mentor, colleague, etc. Creation of actions, their significance, and the story of which those actions are a part is world *creation* because "a Person's world equals the totality of all states of affairs that person is prepared to act on" (Ossorio, 1982/1998, pp. 25-26), and the casting of individuals and the authorship of the story implicitly creates such facts. In the course of life:

- You discover the constraints,
- you create the behaviors and all that goes with them—significance, coherence/wholeness, elegance of the story,
- via the relationship change formula (and other phenomena) the facts and constraints change, and
- this process continues lifelong.

An interesting feature of creating your own story or life drama is that, just as you cannot *not* act, you cannot *not* give value, nor refrain from assigning significance either. Whatever you refuse to do is itself a choice that involves values and assignment of significance, and contributes to your personal story. We are indebted to Jim Holmes for the following poetic perspective on this last principle:

"Jose Ortega Y Gasset coined the phrase 'compulsory freedom.' What he said went something like this: Every moment of every day (waking moment?) you must choose what it is that you are to do. There is no way out of choosing since even choosing to stand still is to choose what it is you are to do. You have to choose to stand up, get a drink, scratch an itch, ride a bike, make love, argue a point, and so forth. The compulsory part is that you must choose. The freedom part is that there is nothing that

says what that choice has to be. One may choose death before dishonor. In that freedom, lies the creativity of persons in how they construct their histories. And in that freedom lies the ultimate, terrifying and yet awesome responsibility that persons have for their lives. It is also out of that freedom that persons can change their histories." (J. Holmes, personal communication).

As Yogi Berra might have put it: *"You can't get away from freedom."*

2. What do Communities Contribute to My World?

The baseline is the Maxim E1 quoted previously: "A person requires a community in order for it to be possible for him to engage in human behavior at all." (Ossorio, 1982/1998, pp. 75-76). Thus a community provides the potential for action. In the light of our discussion so far, you have a great deal of latitude in the creation of your own actions, relationships, significances, and personal story. This latitude is still bounded by whether you can, in some community, successfully treat the world in the new way.

For example, these observations provide at least a logical antidote for someone "stuck in victim." Whatever the current or even the past physical or social calamity, it is grist for a drama that is still being written (or rewritten), and subject to assignment, even ex post facto, of a significance that is newly created. As an extreme example, consider Dr. Viktor Frankl (Frankl, 1959). After being sent to the death camps of the holocaust, where he was one of very few members of his family to survive, he became one of Europe's leading psychiatrists. His innovations in psychiatry were based on his experiences in the camps, where he had been forced, day by day and against the worst possible odds, to create meaning in his life sufficient to survive.

3. What Opportunities and Challenges Arise from Living in Multiple Communities?

A person's world is always subject to reformulation. This may happen in a small way by acquiring a new fact or in a sweeping way as in a religious conversion. In the same way, a shared world is also subject to refor-

mulation, but only with the consensus of the community. Considerable latitude in the creation and subsequent reconstruction of one's world is the birthright of every person. This birthright may well bring with it "insurmountable opportunities." Various communities offer the individual pre-packaged worlds, with room for customization, and perhaps facilities for connecting with the worlds of other communities. For example, most religious communities offer a variety of spiritual practices: prayer, meditation, sacraments; many choice principles: non-violence, charity, mutual support; and several positions for the individual: parishioner, usher, minister, monk. Within broad limits, it is up to the individual to choose her mix of practices, how to embody the principles, and to which positions to aspire.

Now we must ask: What are the basic challenges each individual faces in acquiring and maintaining a world that she wants to live in? What negotiations are needed in order to provide for compatibility among potentially competing communities? What are the implications for multiculturalism? These issues are particularly pressing with respect to communities that have a stake in ultimate significance—religions. "People construct and maintain worlds that give them behavior potential, and routinely try to reconstruct those worlds in ways that give them more potential." (Roberts, 1985, pp.50-51). In other words:

Individuals and communities create worlds (including behaviors, social practices, and significances) in which meaningful and satisfying lives are possible, given the reality constraints faced by those individuals and communities.

There are many examples of this sort of creation: The human race inhabits a planet that features volcanoes, earthquakes, floods, fires, and epidemics. Sudden death or injury from these events has always been a possibility. Our communities have therefore created worlds, including practices and significance, with which the community can embrace these disasters and go on. Similarly, we as individuals are confronted with the physical constraint of our own death, and are called upon to create our worlds in such a way that eventual death does not negate the significance

of what we are doing day to day. Certain cases of depression and other pathologies can productively be viewed as perceived failures at this creative task (Bergner, 1998).

Certain cultures have been created in the presence of daunting physical environments: the Sahara desert, the highlands of Tibet, Patagonia, the Aleutian islands, and northern Greenland. Indeed, if you are born into one of those cultures and learn the normal social practices and values of that culture, your physical environment, hostile to others, becomes friendly to you (Stefansson, 1969). These examples show how far a culture can go in helping its members to create a behavioral world that is in harmony with their physical environment.

Historical developments also influence what a culture or society contributes to the worlds of its members. The United States in the 21st century is in some respects unique in history in its success as a large-scale multi-cultural society.

To some degree or another, social groups meet a person's basic human needs. As a reference point for further discussion, consider the following typical (not exhaustive) list of basic human needs (Aylesworth and Ossorio, 1983, pp 45-94).

1. Physical Health
2. Safety and Security
3. Self-esteem and Worth
4. Love and Affiliation
5. Agency and Autonomy
6. Adequacy and Competence
7. Identity
8. Belonging and Acceptance
9. Disengagement
10. Order, Understanding, Predictability
11. Personal and Social Legitimacy

12. Meaning, Hope, Significance

A *culture* is a community that meets the additional requirement of comprehensiveness: it provides a rich enough array of statuses and social practices that its members have the opportunity to meet *all* of their basic human needs. A *religion* is a community, often extending over a long time and a wide geographical range, all of whose members and activities are in principle infused with spirituality (Shideler, 1992, p.29), thereby addressing the needs for self-esteem and worth; identity; order, understanding, and predictability; and meaning, hope, and significance. A *society* is typically a community that controls a politically distinct geographical area, and whose mission is harmonious life together, mutual defense, and allocation of natural resources (Lubuguin, 1998).

Early in human history, primarily due to geographic isolation, all societies were also cultures. A distinctive feature of the United States as a society is that it took a minimalist approach to basic human needs, probably to encourage immigration, minimize government, and preserve religious freedom. This minimalist approach addressed the needs for physical health; safety and security; agency and autonomy; adequacy and competence; and personal and social legitimacy; and explicitly avoided some of the others, especially meaning, hope and significance (Gaustadt, 1993). The up side of this choice was that it made a multi-cultural society *possible* although not necessarily easy. The down side was that it made one *necessary.* That is, *each citizen needed one or more other communities to provide the statuses and practices for meeting the remaining basic human needs*. Indeed, United States society has taken a good deal of flak for crassness and sterility, i.e. not strongly supporting those other basic human needs, especially those involving meaning and significance. It might be defended on the grounds that it was never designed to do this. (These historical considerations may shed some light on the higher level of religious commitment and activism is the United States compared to Europe. Societies with stronger grounding in a single religion provide (a) fewer unmet needs for the individual to confront, and (b) a clearer authority against which to rebel.)

Since the society of the USA does not automatically meet the basic

human needs for self-esteem and worth; identity; belonging and acceptance; disengagement; order, understanding, predictability; personal and social legitimacy; and meaning, hope, and significance; its citizens need to look to those community memberships and individual actions in those communities that can fulfill those needs. One obvious broad-scope attempt at a solution is to join a religion. Let's look in more detail at the role of religion in meeting the basic human needs of individuals.

Shideler (1992) has approached spirituality from the point of view of DP, and has given it a particularly broad characterization as that domain within the lives of persons that has to do with totality (e.g. of one's world), ultimacy (especially ultimate significance), and boundary conditions (i.e. how one deals with the logically possible infinite regresses, such as those of causation or significance). This domain, then, includes questions like: "Why am I here?", "Where did I come from?", "What matters in life?", "What are the foundations of morality", as well as questions about the legitimacy of those very questions. Everyone has the possibility of questions and issues in this domain, and everyone gets to make at least some of their own choices about them, if only to ignore them.

It is possible in principle to make all of one's own choices about spirituality without any help or agreement from the outside. It is also astronomically difficult to do so, and the effort is fraught with pitfalls. The main obstacle is that any intentional action takes place within the context of some community. (Again we look back to Maxim E1: "A person requires a community in order for it to be possible for him to engage in human behavior at all" [Ossorio, 1982/1998, p75]. Consequently, the person with an inclination toward certain choices in the spiritual domain will need at least a friend or two with similar inclinations with whom to act on his spiritual choices.

Shideler defines a *religion* as a community all of whose members and practices are, in the paradigm case, infused with spirituality (Shideler, 1992). Therefore the mission of such a community typically includes:

- Supporting the spiritual domain in the lives of its members,

- making community membership available to those currently outside the community seeking such support,
- preserving the organization in order to similarly support members in the future, and
- promoting general harmony in the world at large (so that the first three are not disrupted).

These, then, are the supports one can reasonably expect from his religion.

Another possibility, contrasting with that of depending on one's community for the bulk of one's basic needs, is to piece together a life out of membership in a variety of communities, each of which provides for fulfillment of a relatively small number of needs; hobbies and membership in clubs or volunteer organizations are of this sort. This approach features a major risk that something important will be left out; it is significant that the construction of the major cultures and religions took a long time and a lot of trial and error. Moreover, trying the cafeteria approach—selecting your favorite pieces of the real worlds of several communities—is likely to leave you with a real world full of holes and logical inconsistencies. Nevertheless as the world grows smaller many of us find ourselves in the presence of multiple cultures, with opportunities for taking the best of many worlds, and the challenges of dealing with persons of a different culture than the one in which we grew up.

Perspectives explored earlier in this article reveal why communication across cultures is difficult: different cultures have different worlds. Those different worlds can have different concepts, languages, principles, ethics, esthetics, and practices. Yet cooperation across cultures often goes well enough, especially in the context of business deals. Why does it so often go badly? Well, the small success, say, of closing an initial business deal may blind one to the depths of one's ignorance of the other and his culture. Another, more general, explanation is that it is so easy to forget you are operating across a cultural boundary that you neglect the skills for doing so successfully. And if you neglect those skills, a vicious cycle of

mutual misunderstanding and mutual devaluation can easily result. Here is a sampling of those skills derived, in part, from the differences listed above:

- Meeting the other person half way, e.g. by learning some of her language
- Expressing things in the other person's language
- Appealing to the other's principles
- Seeing another's perspectives and behavior as a successful adaptation to an environmental niche, rather than as a pathology.
- Bearing important cultural differences in mind *all the time*
- Giving the benefit of the doubt
- Keeping in mind what you are trying to do together, and avoiding trying to convert anyone on questions that are not relevant to the task at hand
- And perhaps most important: treating another as a *member in good standing of a different community*, rather than as a *defective member of your own community*

And finally, a principle that perhaps should go hand in hand with treating the other person as a member in good standing of a different community*: Treat mutual cross-community insults as symptoms of a social disease, the disease of absolutism, that error of confusing our way of life with the way of life. And then set about finding out how the life in the community "those people" are members of makes sense: their practices, their values, and their world* (Zeiger and Jeffrey, 2000). In the words of noted biologist Ursula Goodenough:

"Thus there is no such thing as the 'fittest' kind of organism. We can only talk about how an organism propagates in a given niche, how its life strategies have become adapted to that niche. It is no more or less fit than another kind of organism that has adapted to some other niche" (Good-

enough, 1998, p78). Communities are like that too.

4. Conclusion

Thus, each of us in today's world gets to exercise Ortega y Gassett's compulsory freedom in (at least):

- Creating our actions at all levels of significance, and at all scopes, from minute-by-minute to lifelong
- Choosing which physical and social constraints to push back against
- Casting of friends and acquaintances in roles in our world
- Choosing communities in which to participate
- Choosing roles in each community

That is a lot of freedom!

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Part II

Introduction

Keith E. Davis and Raymond M. Bergner

One of the joys of editing for *Advances in Descriptive Psychology* is working with persons who are ready to take on truly challenging intellectual issues—ones that are often treated as intractable or unspeakable within academic discourse. In this section, we have eight chapters that range in their focus from profound questions, such as "Where do thoughts come from?" "What implications do thoughts have for actors in life's drama?" "How are the having of thoughts and one's ability to engage in construction and reconstruction of one's world related?" to more practical but equally important concerns. Among the latter are questions such as "How does one defend and justify therapeutic practices and interventions when one has not already engaged in the numerous empirical studies 'required' for their validation?" Or just how many types of stalkers are there and how should they be managed?

Ossorio's "Out of Nowhere" is an extended discussion of the nature of thoughts, their origins, and their relations to action. At Peter's request, we have retained the informal, presentational style, including the audience questions and comments, where we can discern them. One of the interesting and puzzling features of thoughts is that, at one time, one has not had the thought and then one has. "I remember that I wanted to pick up something at the store." "I can see that the square root of X is a specific number." Formally thoughts are event or achievement concepts—not outcome or process concepts—and as such, they do not come from anywhere. Still to say that thoughts come out of nowhere seems unsatisfactory. In summary, Ossorio says that thoughts "come *from* me *to* me," and this insight provides the connection to the Actor-Observer-Critic functions. If thoughts are generated by A-O-C activities, then thoughts may be verbalized A-O-C activities. In this presentation, Ossorio significantly elaborates the concept of A-O-C by engaging in four transformations of the paradigm case. In the original case, A-O-C is a sequential set of statuses or functions engaged in a negative feedback

loop. After Ossorio's four transformations, A-O-C includes not merely the Actor's behavior but also his imagined courses of behavior. The scope of A-O-C extends beyond the scope of the actor's behavior to anything that the Observer or Critic may take note of—in principle anything in the world. And A-O-C functioning can be not merely sequential but also simultaneous. This is a dramatically enhanced version of A-O-C, and Ossorio uses its power to elucidate the following issues: (a) How it is possible that I engage in deliberate action without first having thought of it or described it? (b) Why language is not essential for the making of decisions among courses of action but is essential for distinguishing which actions one has engaged in. And (c) How the grounds for changing my world are acquired. Ossorio ends with (surprise) an empirically testable theory of what kinds of thoughts we tend to have, which he describes as an "economic model" following the principle of minimal "interference" among potential thoughts.

One of the pleasures of having Ray Bergner involved with the editing of an *Advances* volume is that he will write interesting, creative papers on a variety of topics. He has two very important contributions in this section. The first, "Beyond empirical validation: Justifying therapeutic judgment and action," is an essential defense of the rationality of thoughtful clinical practice and by implication of educational and organizational interventions. Because the "scientific elite" within psychology is so wedded to the primacy of "empirically validated interventions," it is often difficult to get a hearing for an alternative point of view. In this paper, Bergner identifies six levels of justification varying in their degree of certainty from analytic, a priori knowledge to anecdotal, intuitive evidence. He shows, convincingly, that psychotherapy, while benefiting from knowledge of empirically validated procedures, rests on many other secure foundations. To my mind this paper provides the most extensive and most soundly reasoned alternative to the one size-fits-all model of empirically validated therapies.

Bergner's second contribution may seem far afield from his normal interests. In "Underlying cognitive processes or private social practices," he takes issue with the dominant model for theorizing about memory,

problem-solving, and thinking in psychology. There are several versions of this model, but they all take it for granted that the act of remembering something "must be" reconstructed from an underlying process that consists of three stages: encoding, storage, and retrieval, each of which is a distinct process. Bergner shows that there is no "must be" to such reconstructions and that indeed if one looks at the procedures used to enhance or degrade memory, they may all be described as observable social practices that can then be engaged in privately. Thus overt rehearsal of material can be done privately—to good effect. Organizing information into meaningful clusters or hierarchies—an observable social practice--can also be done internally. Indeed, it is questionable what is added by the hypothetical underlying encoding, storage, and retrieval processes. Bergner thus encourages us all to take a fresh look at a central domain of psychology, academic or not—and to think about how a genuinely Descriptive Psychological formulation would transform the significance of current data, suggest new practices, and new research topics.

Someone who thinks about and takes on truly challenging questions is Paul Zeiger. His two contributions to this volume of Advances—one with his wife Carolyn—are examples of his fearlessness. In "Toward a rapprochement of religion and science," he tackles one of the most obdurate issues of the modern era: In what sense do science and religion conflict and compete and in what senses do they address different issues and domains? He identifies five distinct positions held by persons on these issues. Then he uses the resources of Descriptive Psychology to show how these five could exist and, without being pejorative, he shows how one does not have to hold all aspects of the original positions to maintain one's integrity and participate in a dialogue between religion and science. His view of how one might more profitably handle the conflict between the teaching of evolution in the schools and the teaching of creationism is a model of constructive new insights. His view is that religious pluralism is possible and that, in most respects, science and religion address different, hence non-conflicting worlds. It is perfectly rational to be a practicing Muslim and a practicing scientist. His treatment of what each, the determined scientist and determined religious practitioner, would have to

give up to participate in a dialog is very suggestive. His paper invites an appreciative response and each of our efforts to further this dialogue.

In "Descriptive Metaphysics: On science, religion, and wisdom," Greg Colvin takes on issues related to Paul Zeiger's paper, but his concerns are different. He aims to show that, although both physics and religion propose descriptions of the entire universe, their descriptions are rooted in different ultimates, boundary conditions, and limiting conditions. And indeed on many accounts of modern physics, it does not provide a deterministic account of its world. Any apparently conflict between these two world views is just that—apparent. Wisdom, in his view, resides in recognizing what is properly allocated to each worldview.

Mary Roberts shares a reading of *The Odyssey* that accomplishes two things. She illuminates the world view of an entirely different era and culture—one in which gods and goddesses spoke to men and intervened in human affairs. A grasp of this different aspect of Ancient Greek culture is central to one's understanding of the significance of many specific aspects of the tale of Odysseus's long battle to return to Penelope. The second contribution of her paper is that she extends her analysis of the conditions under which modern imaginary companions come into being. In her 1991 paper, "Companions of uncertain status," she showed that three parameters were relevant to whether or not a person constructs a world with an imaginary someone in it. These were (a) the extent to which real world requirements for the systematic connectedness of everything press upon the person (by which she meant states of affairs such as being a stranger and warrior allow one to imagine treating things differently than a settled member of a community might). (b) The degree to which circumstances facilitated the creation and maintenance of a companion (by which she meant the degree to which uncertainty about very important [life and death] decisions were operating along with a ready-made cultural tool for the creation of such—namely a goddess-protector. (c) The gain in behavior potential by having such a partner in his world at the specific times of her visitations. Her chapter simultaneously contributes to one's appreciation of both *The Odyssey* and of the power of the world constructive tools of Descriptive Psychology for understanding individual cases.

A particular pleasure for us has been coaxing the notorious team of Peek and Heinrich, whose thoughtful and original presentations at the Society's Annual Meetings are legendary, into fashioning a comprehensive analysis and narrative of their 20-year efforts to achieve meaningful integration of medical practice and mental health practice in the Minneapolis-St Paul area. Their chapter, "Playing the person game in healthcare," is a profoundly original and instructive discussion of the true challenges of changing institutional and organizational cultures—and one which offers insights into how to achieve such changes. In an important sense, their chapter has three different papers contained within it. First, is the analysis of the dissatisfaction among all participants in the current healthcare system. Second, is a historical report of their attempts, including success and failures, in achieving a level of integrative health care in important healthcare settings in the Twin Cities. Third, is an analysis of the apparent requirements for successful culture change. Although, they build on the work of other scholars of organizations and the diffusion of innovations, this analysis is genuinely innovative in making use of the metaphor of introducing a new game and creating the conditions under which participants in the current culture would come to want to participate in this new game. One is immediately interested in taking their analysis in one of two directions: Seeing if it can be applied to other cases involving major cultural and institution changes, and taking it as a prescription for living one's life in a world that one can reconstruct as a better place if one can show others how and why to play the new game.

The final chapter is Davis's "The stalkers world: Varieties of stalkers and their worldviews." In this chapter, Davis uses the DP tool of Paradigm Case Formulation to bring some order to the study of stalker types and then to integrate these findings with (a) an illustration of doing world reconstructive therapy with one type of stalker and (b) with the synthesis of advice about the case management of stalkers within the criminal justice and mental health systems.

Out of Nowhere

Peter G. Ossorio

Jim Holmes' tutorial was described in the program as "a light-hearted tour through 30 years of Descriptive Psychology". Think of this afternoon's presentation as a light-hearted tour through half a dozen Descriptive concepts, old and new. In order to give it some kind of shape, I've organized it around a single question having to do with thoughts. That question will guide us as we go through and encounter various phenomena and concepts, and we will eventually answer that question.

[Topic Outline]

1.0 Phenomenon of interest is thoughts that cross my mind, as against A, B, C, D.

2.0 My thoughts seem to come *to* me and they seem to "come from nowhere".

3.0 "Come from nowhere" is unsatisfactory. So is "come from somewhere."

4.0 "Come from nowhere" is necessary.

5.0 The question is *not*, what explains why we have the thoughts we have.

6.0 Another feature of my thoughts: they also seem to come *from* me.

7.0 Review of A-O-C and extension via PCF

8.0 Two questions about A-O-C per se Communication among A-O-C

I have to know what I do ahead of time or I can't do it on purpose.

9.0 Language and Concepts

10.0 How can I know what I do without thinking or talking about it?

11.0 "Reading Off the Features": Facts in my world are immediately available.

12.0 How do I select which facts to act on?

13.0 A-O-C and world reconstruction

14.0 Review of dreaming and world reconstruction

15.0 Deliberate Action as drama

16.0 Casting and status assigning

17.0 Status assigning and social practices

18.0 Drama as a vehicle for world reconstruction

19.0 How does it happen that only some A-O-C activities appear as thoughts?

20.0 How does it happen that I have any thoughts at all?

21.0 Why do thoughts "come from nowhere"?

22.0 (Optional) Where did *that* come from?

1.0 Now the question is about thoughts, and I got onto it at the very end of last year's conference. I'm not sure what the conversation exactly was like, but either I or the person I was talking to commented that "Thoughts seem to come from nowhere." We went round and round on that for about five minutes and got no closure on it, and then we noticed something else: Thoughts seem to come to us. Even though they are our thoughts, we experience them as coming *to* us rather than coming from us. And that's certainly a little bit strange. So we begin with these two features of thoughts – that they seem to come to us rather than from us, and that they seem to come from nowhere.

Now a little bit of parsing and clarification. When I say, "They seem to come from nowhere", I mean that one moment they're not there, and the next moment they are. When you have a thought, that's the way it works. One moment it's not there, the next moment it is there, fully formed. Secondly, the kind of thought of which this is true is one of several phenomena that we call thoughts, so I want to distinguish this kind

of thought from four other kinds, and that's why your handout says "A, B, C, D". There are four other kinds of things that I want to distinguish this from.

The kind of thought I have in mind is the kind that crosses your mind, the kind that occurs to you at a given time and place and then is gone. Now the first thing that contrasts with is thoughts that are essentially equivalent to beliefs. If I say "I think that Kilimanjaro is in Africa", I've used the word "think", but I could just as easily have said "believe". That's not the kind of thought I want to deal with here. I don't want to deal with thoughts that are beliefs.

Secondly, thoughts that I have when I'm working on a problem. This is probably the most familiar context for psychologists talking about thinking, i.e. problem solving. I don't want to deal explicitly with those thoughts, although I have a strong suspicion that those thoughts in the end are going to be no different from the thoughts that I will deal with, that they are not inherently different. I also don't want to deal with internal conversations. It's easy to talk to yourself, and talking to yourself in your head is so little different from talking to yourself overtly that it doesn't have that much interest for our topic.

So what we're concerned with are the thoughts that cross your mind on a given occasion and are gone. Examples of such thoughts are: I'm sitting in a meeting and after I've been there almost an hour, the thought crosses my mind, "Is it time?" Or somebody gets up, has breakfast with a friend, comes home and starts doing housework, a little of this, a little of that, enjoying it, and the thought crosses her mind, "This is a good day." Those are the kind of thoughts I want to talk about.

2.0 There is obviously something fishy about the notion that thoughts come from nowhere. The obviousness shows in the fact that nobody wants to leave that one alone. One of the things people do is to think up and invent places for thoughts to come from. The kinds of places that people have thought of are not going to surprise you. "They come

from God." "They come from the Unconscious." "They come from my Brain." These are probably the three most popular genres.

Notice that all of these are transcendental. The mark of a transcendental principle is that there is an implicit introductory clause that says, "No matter how it seems to us…" "No matter how it seems to us, our thoughts come from God." "No matter how it seems to us, our thoughts come from our Unconscious." As a general principle, be wary of transcendental explanations. The reason is that there is no way to find out if they're true or not.

3.0 Being dissatisfied with the idea that thoughts come from nowhere is not unreasonable, and it probably reflects an intuition – a very classic intuition – that says, "From nothing, nothing comes." That goes back to the Greeks. "From nothing, nothing comes." That puts pressure on you. If that's the case and thoughts come, then they can't come from nowhere. They've got to come from somewhere.

You can encapsulate a lot of this stuff into a model that I think is probably due to Irving Goffman. It's the Onstage-Backstage model. This is the model that I had in mind when I said, "One moment it's not there and the next moment it is there, *fully formed*."

Now follow this reasoning: That thought is a complex construction because it is clearly the product of a syntactic system. It clearly has the structure of an English sentence, so it's not just something that you pluck out of nowhere. It's got to somehow have been processed in an English language way. Now because it's a complex construction, there must have been a complex process of construction. You don't do complicated things in simple ways. Because we don't observe that process, it must take place somewhere else where we can't observe it. And only after it's completed, only after that thought is fully formed, then it moves Onstage where it can be viewed by an audience of one. The various theories about where thoughts come from, you can think of them as simply theories about what is the nature of Backstage. You can clearly have different answers as

to what the nature of Backstage is.

Now if Lewis Carroll were here, he might very well say: "You know, Nowhere must be a pretty busy place because all thoughts come from there." [laughter] Which is to say that, although it's natural to resist the notion that thoughts come from nowhere and to suggest places for them to come from, there's something wrong with that.

If we take seriously the idea that thoughts come from somewhere, two main questions arise, both of which are highly problematical. Number one is the one I've mentioned, "What are the candidates for where thoughts could come from?" I would suggest that none of those candidates are particularly plausible.

It gets even worse if you say, "How does it get from there to here? If it comes from any of these places, what's the pathway? How does it get from there to here?" If you follow that, you say, "Is there any assurance that it gets to the right place?" [laughter]

Q: Could I have *your* thought? [laughter]

PGO: Yeah. If the thought that was supposed to wind up in Tony's head winds up in mine, is it really still his? Or is it mine? Or whose is it? You can see you can have a lot of fun.

Q: And explain a lot.

PGO: Sure. A lot more than you wanted. The question of "What's the pathway?" is even worse because there are no candidates. Nobody has ever described such a path.

4.0 Now just to simplify matters, there's also a counter argument to the supposition that my thoughts come from somewhere else. The argument is simple and it's this: No matter where a thought comes from, transcendental or otherwise, if it doesn't come from me, it's not *my* thought. And yet we're talking about *my* thoughts. If it came from anywhere else, then it wouldn't be my thought. I would just be the vehicle for its trans-

mission, the way a CD player is. I would not be the author of that thought. So the simple conclusion is that my thoughts don't and can't come from anywhere else except me. And so you might say if I'm going to have any thoughts at all, they've got to "come from nowhere". Because if they come from anywhere else but nowhere, they're not mine.

So the conclusion is, however puzzling it might be substantively, coming from nowhere is merely the formal mark of the fact that *my* thoughts *originate* with *me*. What could be more simple? My thoughts originate with me.

5.0 I've gone through this argument with a number of people, and it will probably surprise you what the primary reaction is. The primary reaction is "Yeah. Yeah. Yeah. But you're shooting a fly with a cannon here. Saying 'Where do my thoughts come from?' is just an innocent metaphor. It's a way of asking, 'What accounts for why we have the particular thoughts we do?' It's not really a question of where they come from."

Now, it's true that if I say something and then you say in that special tone of voice, "Where did *that* come from?" yeah, I would take it as an inquiry as to how come I said what I said. So one can't reject that suggestion out of hand, but one can reject it quickly.

First off, if the question is, "Why do we have the particular thoughts that we do?" one answer is that we already have a perfectly good system for giving answers of that sort. For example,

> (1) The reason I thought, "I've got to go to the store" is that I was getting hungry and I needed some potatoes to make dinner with.
>
> (2) The reason he thought, "I'll invest in the Swiss Francs" is that the opportunity arose and he thought it was a sure thing.
>
> (3) The reason she thought, "I've got to get out of this job" is that the work she was assigned just wasn't challenging

enough.

(4) The reason she thought, "This is a good day" is that nothing but good things had happened that day and that was unusual.

Now, aren't those the kind of explanations we do give for thoughts of those sorts? So we already have a system for answering questions about why we have the particular thoughts that we do. And since we do, why bring in some transcendental theory to do that job?

Let me here introduce you to what will I think become a new Descriptive concept, namely the Weather Prediction Problem. As you all know, predicting the weather is a problem. Predicting local weather is a problem. Predicting weather long range is a problem. Predicting weather any way you look at it is a problem. Now you face the same sort of issue when you try to push the question of "Why did he have that thought?" Your first cut at it is the kind of explanation I've given. But you can always raise more questions: "Why did he have it now?" "Why didn't he have this other thought instead?" And there are answers to those two. But in general what you will find if you push it just a little, is that there is so much particularity involved, that we're never going to get the answer. We'll never know. The more you push it, the more you're asking for an impossibly precise answer. And that's exactly what you find with weather prediction, and that's why I call it in general the Weather Prediction Problem.

Next, on the issue, any explanations of why I have the thoughts I have, is beside the point. Whatever that explanation might be, it doesn't address the issue at hand, which is one moment it's not there and the next moment it is there. That issue is not at all touched by explanations for why I have the thoughts I have. That's the issue we're pursuing, so that question is simply irrelevant.

6.0 Now let's enrich the mixture. I mentioned two features of thoughts. One is that they "come from nowhere". The other is that they

seem to come *to* me rather than from me. The third feature is that my experience of a thought is generally of a voice voicing that thought, and it's my voice. In this respect the thought does seem to come from me. So now we have a situation where the thought both seems to come *from* me in one respect and seems to come *to* me in another respect.

$$_{P}R_{M} \qquad _{P}R_{P}$$

What sense do we make of the notion that the thought comes from me to me? Well, we could go into a five-minute discussion of reflexive relations. Let's do it in two minutes. [writing on board]

Take a two-place relationship, call it R, that holds between P and M. R is a reflexive relation if this is possible [pointing to R on the right], if you can have a case of P having the relation R to P. Most of these cases are straightforward; either you can or you can't. If R is "shaves", then it is reflexive because you can have "P shaves P." On the other hand, if R is "taller than", then it's not reflexive because you cannot have "P is taller than P."

Now, how's this for an intermediate case: "P tells M that Q is the case." Then try it "P tells P that Q is the case." Well, it's intermediate because it's clearly not illogical. It's not a contradiction. On the other hand, what sense does it make for somebody to tell himself that something is the case? If he knows it in order to tell himself that, then he doesn't need to hear it from himself in order to know it. What all of that suggests is that you're not just dealing with a reflexive relation. You're dealing with something substantive here.

Now we have one of our $64 questions: Where in the domain of human behavior do you have a phenomenon of the sort that we've described, where P tells P that something is the case? Where do you have a phenomenon where you have a message from me to me? When you put it that way, they're not very many candidates, are there?

Q: I keep a calendar or notebook. That's a message from me to me.

PGO: Remember we're talking about thoughts here.

Q: I thought you wanted a message.

PGO: I do. Thoughts are like that. If I say, "It's a good day today", that's a message.

Q: When we're trying to convince ourselves?

PGO: Right. But notice now that that falls within one of the cases that I said I wasn't going to deal with, namely talking to yourself.

Q: I suspect reassurance falls in the case of talking to yourself, but dreaming has some of the qualities of…

PGO: Which?

Q: Dreaming.

PGO: Yeah, but it doesn't have enough of a message quality.

Q: For some people it has a message quality.

PGO: Think generally, not special cases.

Q: Hallucinations?

PGO: That doesn't have enough message quality either. A hallucination can be anything.

Q: How about pain? I stub my toe. Is that a message from me to me?

PGO: No. That's not a message from you to you.

Q: When you bring something to mind?

PGO: Which?

Q: When you bring something to mind, like when something… There's a big difference between what you know and what you have in mind at any given time. And … bringing it back could be a message from you to you.

PGO: I'm not sure I got that.

Q: Well, it would be in your #3, problem-solving. You'll be thinking about something and you won't be getting anywhere and then you'll remember something. It will come to mind when you need it. That would be the message.

PGO: Could be. I think that qualitatively it fits. It's not representative of the general run of these things. One of the things is we're looking for the generality. I'm interested in what happens with people day-to-day, everyday, usually, not in very special phenomena. I'm looking for general principles, general phenomena.

Q: How about if I'm reluctant to see something?

PGO: That's background. What would the message be?

Q: [inaudible]

Q: Noticing you're thirsty?

PGO: You shouldn't have said that. [taking a drink] It's a good message from you to me. [laughter]

Q: Recalling something?

PGO: It might be, except that would probably be talking to yourself also.

Q: [inaudible]

PGO: An affirmation?

Q: [inaudible]

PGO: That's either talking to yourself or talking to somebody else.

Q: How about self-critic?

PGO: Self-critic. That's a good one. Now that we've gotten that far, let's go the rest of the way: Actor-Observer-Critic.

Q: You all know how sometimes that you don't really know what you're talking about until you can tell someone else who can figure it

out. Would this be an internal version of … in order to know what you're really saying. That's related to the self-critic function.

PGO: It's also one of those exceptional phenomena.

Q: … in the grocery store, getting various items that I need for a complicated recipe… but I didn't know it until I saw the ingredient… A recognition…

PGO: That doesn't have enough of a dual message quality. Notice that Actor-Observer-Critic fits what I said. It's a very general phenomena, something you're doing day in, day out, all the time. Because remember, thoughts not only come from nowhere. They come any time, any place. So they can't be something that only comes when you're doing something special or when something special is happening. It's got to be part of your normal, everyday apparatus.

Q: If self-criticism is one of those, wouldn't it be subsumed under simply world observation and analysis, such that…

PGO: Well, it may work out that way in the long run, as you'll see.

Q: I'm sorry. I couldn't hear.

PGO: It may work out that way in the long run, as you'll see. Okay. Let's move ahead with this.

7.0 Part of the enterprise, I don't know if I explained, was to clean up some of the concepts, clean up loose ends, tidy them up a bit, so that they can do better the job we've been using them to do all along. Actor-Observer-Critic is one of these. So let's do a quick review of Actor-Observer-Critic.

Number one: Actor, Observer, and Critic are not homunculi. [laughter] What they are is jobs. They're statuses, but generally we describe them and discuss them as jobs. Mastery of these jobs is essential to being a person. That's why these are important.

Now job descriptions: As an Actor, I act. I do my thing. I follow my inclinations. I express myself. I pursue my projects. I do what comes naturally. I am spontaneous, creative, and expressive. All of the things that you've ever heard of that come under the heading of "Be yourself" belong to Actor. If you think that's easy, think twice. Doing a good job of being an Actor is no easier than doing a good job of being an Observer or a Critic.

Q: Why is that?

PGO: Because it requires just as much learning, just as much self-knowledge, just as much general learning, and just as much self-discipline. That's why. How many people do you know who do a bad job of being themselves? It's not something that if you just didn't interfere, you'd do it perfectly. It's not that kind of thing.

Q: There would be no psychologists. [laughter]

PGO: As an Observer-Describer I merely take note of things. That's all I do. I notice. What I notice is how the behavior is going.

Q: How the behavior is going?

PGO: Yeah. As an Actor I act. I do something. As an Observer I notice how that's going.

Q: The critical perspective seems to be slipping in there.

PGO: How?

Q: "How is it going" has a ring of evaluation.

PGO: It may have a ring to it, but it's not necessarily there. [laughter] Just take the how literally. It's got to be going some way or another, and you notice which way it's going.

Now as a Critic, I evaluate how things are going, based on that Observer description. And as a Critic, I do a couple of other things. If things are not going well, I evaluate the situation, including the behavior, in terms of how it has gone wrong and what might be done to improve

matters. Being clinicians, we usually call that a "diagnosis" and "prescription": what's wrong and what can you do to fix it. That's the Critic's job.

Now these job descriptions are too narrow. Just in the ordinary usage we've already begun to slop over the edges fairly substantially, so it's time to clean up the act. The way we do this is to elaborate this notion of Actor-Observer-Critic, and the way to do that – the way I've done it – is with a Paradigm Case Formulation.

Paradigm Case Formulation of Actor-Observer-Critic

I. Paradigm Case

As an Actor I engage in a course of behavior. As an Observer-Describer I notice how the course of behavior is going. As a Critic I evaluate how the behavior is going and (a) if it is going well enough I leave well enough alone, but (b) if it is not going well enough I generate a "diagnosis" and "prescription" for the Actor.

II. Transformations

T1. Change the Actor's course of behavior to an imagined course of behavior.

T2. Extend the scope of Actor-Observer-Critic beyond the Actor's behavior.

T3. Change A-O-C functioning from sequential to simultaneous.

So we'll start with the Paradigm Case, and the Paradigm Case is essentially what I've just been through, the narrow Actor-Observer-Critic. It goes like this: "As an Actor I engage in a course of behavior. As an Observer-Describer I notice how the course of behavior is going. As a Critic I evaluate how the behavior is going and (a) if it is going well enough I

leave well enough alone, but (b) if it is not going well enough I generate a diagnosis and prescription for the Actor."

That's your Paradigm Case. Now let's introduce some transformations. Transformation one: *"Change the Actor's course of behavior to an imagined course of behavior."* So instead of actually doing it, I simply imagine doing it. Then as an Observer I have to imagine how it's going to go. Then as a Critic based on the Observer's description of how it's going to go, then I have to evaluate that.

Now this is a standard stage in child development. A very young child will do it overtly, pure trial and error more or less. He'll do it and find out the hard way what works and what doesn't. After a while he begins to think ahead of time, "If I did this, what then?" And lo and behold, it works almost as well. It works well enough to give him substantially increased behavior potential and keep him alive at the same time. So that's the general thrust of this first transformation, that you can do it in your head. And you often do. As an adult you do a lot of that.

The second transformation is to *"Extend the scope of Actor-Observer-Critic beyond the Actor's behavior."* Remember in the original narrow version, it was all centered on the Actor's behavior. How is it going? Is it going well enough? What can you do about it? So the second transformation is to get beyond the Actor's behavior but retain the same apparatus. As an Actor, I extend the notion of my own behavior to something that meshes with other people's behavior and with the world in various ways. I think in terms of "our" and "their" behavior.

The real increase comes with the Observer. As an Observer, I note *everything*. How things are going, not just how that behavior is going but how anything is going. What goes on – no limit there. How things work. How things usually happen. Noting everything includes noting normative, statistical, law-like, and theoretical generalizations, as well as situations that have nothing in particular to do with me, and historical facts that have no special bearing on my behavior. So this is a tremendous extension in the scope of that Observer and Observer activity. It extends it from my behavior to the whole world.

As a Critic I move beyond evaluating how my behavior is going. I develop my potential for evaluating anything and everything in whatever respect in light of whatever standard. That's pretty broad, too, but notice you're keeping the same apparatus. You're still keeping the Actor-Observer-Critic apparatus.

Okay. The third transformation is *"Change A-O-C functioning from sequential to simultaneous."* This is pretty much required. Once you have the first two of these, you pretty much have to have the third. One reason for making a point of it is that in the original version, in the narrow version, Actor, Observer, and Critic paradigmatically form a negative feedback loop. You start with Actor, you go to Observer, you go to Critic and back to Actor. That calls for a specific A-O-C *sequence*. Under this generalization, for any given behavior, you still have the A-O-C sequence. But since you're doing a number of things at the same time here, each of the A-O-C jobs becomes a full time job and in general, at any given time, Actor, Observer and Critic activities are being carried out. So they are being carried out simultaneously.

For the rest of the presentation, unless I say differently, when I say A-O-C, I mean this new version with these extensions.

8.0 Now having identified A-O-C as a place to look in connection with thoughts, we do some cleaning up on A-O-C per se. We've just done the first one, which is the Paradigm Case Formulation, but they're a couple of other loose ends, too. One is easy and the other is not easy. The first question has to do with communication. How do Actor, Observer, and Critic communicate with one another? How does Critic communicate with Actor? How does Observer communicate with Critic? Let's deal with that one right now.

This one is easy because either there is no channel of communication and you don't need any, or else there is one and it's the Person. Let me remind you: Actor, Observer, and Critic are jobs, not homunculi, so when we talk about communication among them, it's not like me communicat-

ing with you. You have a Person in the picture who is doing those jobs, and the person knows what the person knows. What the person knows as a Critic he also knows as an Actor and as an Observer. And since he does, there is no problem of how a Critic communicates with an Actor or an Observer. There simply is no problem with communication, because all you have in the picture is one Person who knows all of these things. So as I say, either there is a channel and it's the Person, or you don't need one. Either way works.

Okay. The second issue with Actor-Observer-Critic is that there is an asymmetry. There are a couple of them, but one of them is particularly important. I've described it in another context by saying that Actor is "before the fact" and that Observer and Critic are "after the fact". What I mean by that is that an Observer or a Critic has to wait for the behavior to occur in order either to observe it or evaluate it. In contrast as an Actor, I have to know the behavior ahead of time. I have to know it before the fact.

The reason I do is simple, obvious, and fundamental, namely, I have to know it ahead of time in order to do it on purpose. I have to distinguish it ahead of time in order to do *it* on purpose. And whereas the argument that it has to be that way is pretty clear, it's not nearly as clear how can you do that. How can you know ahead of time what it is you're going to do? How can you know ahead of time with the level of certainty and the degree of generality that we do? And as a matter of fact, there is the question of "How do you know at all?", much less ahead of time.

Answering the question "How do you know ahead of time?" takes some preparation here. Two cautions, two things that it's not going to be: Knowing what I'm going to do ahead of time is not a case of having a thought about it ahead of time. Nor is it like having a description ahead of time.

Notice, by the way, it could have been different, maybe. It might have been that when we do things, we always have the thought of it just before we do it. Over a wide range of behaviors, that's possible. But that isn't our experience of the matter, so we rule it out not on logical grounds but

on empirical grounds. It simply doesn't look that way.

As I said, this is going to require some preparation. One technique on something like this is to first plant the flag. And if we do that here, it comes out sounding like this. "I have the general and specific power, or ability, to select a course of behavior which is multilevel (i.e., has a significance/implementation structure) and which fits an identifying description, D, without that description having figured explicitly in the creation of the behavior."

How's that? Just a flat statement to the effect that I *do* have the power to do that. So I have the power to select a behavior that fits a description, even though the description was not involved in the selection of the behavior. Now I call it "planting the flag" because it's simply a flat statement that the result we want is there, and then you have to back it up. That's partly what's at issue. How do you do this? How do you select a course of behavior that fits a description so that after you've done it, you can describe the behavior, what it was, with no slop – it just fits – and yet you never used that description in generating the behavior?

Q: [inaudible]

PGO: You need some reason to give a description, but in general you can give a description and in general the description fits.

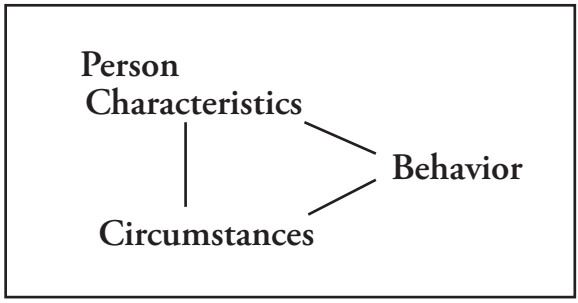
9.0 Okay. Where do we go from there? Where we go is a little closer look into the relation of language and behavior. Given that a description of the behavior is available after the fact, we need an account of *why* the description of the behavior is dispensable in the creation of the behavior. After all, if language is essential to the making of distinctions and if behavior involves the making of distinctions, why isn't there a verbal component to all behavior, or at least to Deliberate Action, which is what we're interested in? That's the kind of question that arises. And the answer is "Not so fast." The relation of language to making distinctions is not that, and it's not a simple one, and it's not just *one* relation. All of which says, "Slow down and let's take it step by step."

The first step is language is not at all necessary for the making of distinctions. You just had it wrong right there from the beginning. All "higher organisms" and perhaps all organisms make distinctions and act on them, yet only one species is known to have a language. There simply is not any kind of general dependency on language for making distinctions and acting on them. A rat does not need to have a language in order to distinguish the red triangle from the blue square and jump to the red triangle. He simply doesn't, and that's demonstrable in any laboratory that has rats. The cat does not need to have a language in order to distinguish the sound of thunder from the sound of wind or rain or to distinguish light from sound, and so on.

What language is essential for is to distinguish *which* distinctions these are. Without language, yes, I can distinguish the red triangle from the blue square all right, but I can't know that that's what I'm doing. I can't know that *what* I'm distinguishing is the red triangle from the blue square, and I also can't know that what I'm doing is *distinguishing* something from something. Now if I can't distinguish doing one thing from doing another, then I also can't do it on purpose.

So these are issues that are "behind the scenes" so to speak or backstage when it comes to Deliberate Action. Without language, I *can* distinguish the red triangle from the blue square and jump to the red triangle, but I can only do it in the presence of the red triangle or the blue square. That is, I can only distinguish them if they are there to be distinguished, whereas with language I can distinguish them anytime, anyplace I want. That's the kind of difference that language makes. That's the kind of relation that language has to behavior and distinctions.

10.0 Let's move on and simply introduce a standard schema of Descriptive. The schema is known as the Person Characteristics-Circumstances (PC-C) Model.



It's a general model for explaining behavior, and it's the model that underlies probably ninety percent of psychological theories. "This Person in this Circumstance would engage in that behavior." If we think of a person just in his normal milieu, doing ordinary things, we can say, "Well, the behavior consists of this person doing what a person like him would do – that is, a person with his characteristics – in light of his circumstances." Like I say, it's a perfectly sound, general model for explaining behavior.

Now Person Characteristics involve one category that's of interest right now, and that's the category of Knowledge. The category of Knowledge as a category of Person Characteristics is defined as "the set of facts or concepts that the person has the ability to act on". This one has been around for a long time, and I would bet that when you hear that or use it, you have something like this in mind: This is a fact which I acquired somewhere, somehow, and I have the ability to act on that fact. This is another fact that I acquired somewhere, somehow, and I have the ability to act on it, and there are some number of these. And the category of Knowledge simply refers to this set.

That's not the way it works. The thing is, we've never said that. All of the formal formulations and presentations involve this, but what nobody has said is that it doesn't work that way. What you have instead of a discreet set of facts, what you have to act on, is a world, not a list of facts. And that world has structure, that world has a lot of disparate things in it.

It has all kinds of facts, all kinds of relationships, all kinds of ambiguity. It's a much more complex thing than simply a set of facts. So from here on in, whenever you're dealing with that particular Person Characteristic, just think "world".

That was a digression. Now back to language. As I was saying, I can learn about red triangles and blue squares and things like that, and about sight and sound and danger and safety and so on. The important thing is that once I've learned about these, in general I will act on them, and with a little practice, I reach the point where I almost always perceive the world and think about the world in those terms.

For example I learn about red, the red triangle, etc. When I see a magazine cover, I see – I *see* – the magazine cover as red. I don't see it some other way and then interpret it as red, or draw conclusions about it and conclude that it is red. I see it as red. So the distinctions that are built into the language, once I've acquired those distinctions and used them, those are the distinctions that then appear in my experience. In some ways you can say, "That's just a consequence of ordinary learning", but I think it's problematic enough so that lots of theorists have had a go-round of one sort or another with the question. I don't know anybody who would deny it these days. There just seems to be general agreement.

Now this is the vehicle – this is the mechanism – as to why when it comes to my behavior, I can see my circumstances in just those terms that I later am able to describe. I engage in a behavior that later I can describe, because all of these are in the language, you might say. All of the behaviors, all of the circumstances, the descriptions of them are in the language, and so those were what I used at the time of the behavior. So later on they're still there. I appeal to them in telling you about the behavior. So the linguistic influence has been there all along creating a background of normative distinctions that I appeal to at the time, during the behavior, afterwards in telling you about it.

Q: You have input in three different … [inaudible]

PGO: Beforehand, during, and after.

That gives us a kind of answer to "How can I know what I do without thinking about it in advance, without describing it in advance?" And that's half of what we need to understand. We need to understand how we can know about it. We also need to understand how we can know about it *in advance*. So far we have simply shown how we can know about it.

11.0 Let me introduce now a new… something like an image but not quite. The name of it is

"Reading Off the Features". The context for that is think of a classroom and think of a philosopher who holds up something like this [holding up a glass] and says, "Now when I say it's crystal and it's transparent and it's round and it's a glass, what am I doing? Am I hypothesizing? Am I adding something to what's there? Am I making something up? Or am I just reading off the features of what is actually there?" That's where "Reading Off the Features" comes from.

Here's how it works. The first thing that happens is that I acquire some grounds for changing my world. And it doesn't have to be a spectacular change. It can be a very mundane change. But I acquire some grounds for now taking it to be different from what I took it to be before. And paradigmatically that happens because I hear it from a trusted source. A trusted source is usually a parent, a teacher, some kind of authority figure. So I acquire grounds for changing and *I simply do that*. I simply change it. Since it comes from a trusted source, I don't question it. I don't test it. I don't wait for conclusive evidence or anything like that. Instead, it is simply the case that from there on out, I take it that that is the case. I take it that that's how things are and I will act accordingly.

For example, suppose that my father tells me, "Wolves are dangerous." Well, I just make that change. From here on out I take it that wolves are dangerous. No ifs, ands, or buts or questions or tests or whatever. My

world has changed. And if somebody asks me, "Are wolves dangerous?" without hesitation I say, "Yes." I'll say "Yes" without having to remember or reconstruct how I found that out or what the evidence is. And if somebody asks me about wolves and I start telling them, it won't be very far down the line before I say, "Wolves are dangerous." So on all counts, what has happened is I have simply made the switch in my world. I have simply changed it to conform to the information I got from the trusted source.

Once I have it, it is now part of my world. It now occupies a special niche among all of the rest of the multitude of facts that I'm dealing with. You might say, "How do I access it? How do I access that fact in order to act on it?" Because of the complexity of the world, you would expect that that would be a complicated matter, wouldn't you? You wouldn't expect it to be as simple as "He stuck in his thumb and pulled out a plum." But in fact it's pretty much that way.

One of the peculiar things about my world: All of the facts in that world are directly and immediately available to me for action, as grounds for action. There is no retrieval. There is no process. It's all there. If it isn't there, it's not part of my world. In effect I simply "read off the features of my world". That's how worlds work.

Now as I say, this is extraordinary.

Q: The absence of a process seems a little strange to me, especially since I'm getting to the age where it often takes me several minutes to retrieve the name of a friend I just walked into on the street. It feels as if something is going on.

PGO: It is, but it's not a retrieval process.

Q: I'm sorry?

PGO: It's not a retrieval process. What you try to do is put yourself in the frame of mind where it is part of your world and then you don't have to work at having it available. You don't go through a retrieval process in the information sense. You don't go through a process of lo-

cating that information. You simply put yourself in the right headset and if you're lucky, you then remember.

Q: Okay.

Q: It comes to you.

PGO: Yeah. It comes to you.

Q: To push your metaphor a little bit, just because you can "read off the features" here, it doesn't mean that your eyesight is acute enough to be able to see the monogram.

PGO: Also, remember I emphasized how many different things there are in the world as against just a list of facts. Let me read you what I have here. "My real world encompasses logical, causal, empirical, explanatory, historical, human, and spiritual facts, among others. It also offers a multitude of implied facts, intuited facts, inferred facts, suspected facts, forgotten and half-forgotten facts, temporarily unavailable facts, relational facts, relativistic and absolute facts, summary facts, actual and possible facts, past, present and future facts, and so on." All of that is contained when you speak of "my circumstances" or "my world". So what you're dealing with is simply one of the complexities. You're dealing with temporarily unavailable facts.

Now as I say, the fact that you "read off the features of your world" is extraordinary, and it tells you something about the logic of person and world and world construction. You don't have that kind of equivalence for nothing. What it tells us is a far cry from the cliches of "Here we stand on a nondescript planet in the midst of billions and billions of galaxies."

In the past, in emphasizing the radical difference between the notion of Deliberate Action and the usual run of psychological concepts of behavior, I have had occasion to comment that the logical scope of a single Deliberate Action is identical to the logical scope of the entire universe. Briefly, this is because formally the K parameter of a behavior (K for Know) could have as its value a description of the past, present, and fu-

ture history of the universe. You could have such a behavior. So universe and behavior are on a par more or less there. That's what I mean by saying, "This is a far cry from 'Here we stand on this little mud ball in the midst of all of these galaxies.'" Here we're on a par logically.

We get a weak version of that sense when we talk about "acting under the aspect of eternity", which is a well-known turn of phrase in the classic literature. You can approximate that phenomenologically that way.

12.0 Now, one could say that each of my behaviors reflects my entire world and that all of the facts it contains are relevant. It's just that some are more relevant than others. What we commonly *do* say is that the behaviors that I in fact engage in, each involves acting on only a small number of the facts in that world. You don't get anything for free. If you're going to talk that way, then you have to explain "How do I select which facts to act on? How do I pick out which facts in the world I'm going to act on?" if you want to say I only act on some of the facts in that world.

To answer it, it's probably neater and simpler to deal with two cases. The difference is this, the difference between behaviors that are evoked by circumstances and behaviors that come primarily from me.

Case I.

Examples of the first kind, you're very familiar with some of them. The lion walks in the room. I run out the door. That's one of the behaviors that is elicited by circumstances because had the lion not walked in, I would not have done what I did. Let's take that and ask first, "What are the circumstances?" Well, mainly it's the lion coming in the room. That's the circumstance that generates my behavior.

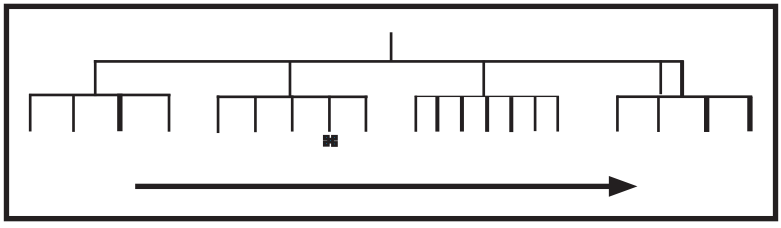
Why do I act on *this* circumstance and not some other? After all, running out the door is no part of any plan I had. How come I pick that circumstance to respond to and respond? The answer is given by a maxim and the maxim says: "A person values some states of affairs over others and acts accordingly."

I value being safe over being in danger and I act accordingly. So when that lion walks in the room, I am sensitive to that kind of fact. I'm sensitive to facts that are relevant to values that I have. I'm always looking at the world in those terms. The term for that is "appraisal". When I meet up with such a fact, the connection you might say is already there. There is that value already in place. The connection is there and that's all it takes. Then the maxim comes into play. I do what I do because I value some states of affairs over others, and I'd rather be safe than in danger so I run out the door.

In summary, in this kind of case the facts that I act on are relevant to a high priority value that I have and to the behaviors that implement such values. Now this is the minor case. Most of my behavior is not of that sort. Most of my behavior is the kind that I would say comes from me. So let's go through that exercise.

Case II.

Recall that to engage in a Deliberate Action is always to participate in a social practice and almost always, if not always, to participate in a larger unit of organized social practices for which the technical term is "Institution". Social practices don't just come one by one. They come organized in various ways, in units of various sizes. So things like farming, education, earning a living, raising a family, etc., are institutions. They are organized sets of social practices. So at any given time what I'm doing is participating in this hierarchy of social practices. One of the things that the hierarchy gives me is a time span. [drawing hierarchy of social practices on board]



In general, social practices and institutions are organized hierarchically. So that if you're doing this, by doing this you're doing this, by doing this you're doing this, and so on up the ladder. That's a significance hierarchy.

But as I said, when you get hierarchies like that, you also have a time thing here [adds arrow at bottom]. So that suppose you knew that I was doing this, and you had all of the possibilities laid out, and you picked out at random the behavior I'm doing *now*. It's going to fall somewhere in here. Say right here [adds x]. What you can say now is that I'm in the middle of something. I'm in the middle of this; I'm in the middle of this; I'm in the middle of this; and I'm right here.

The time aspect is basically what allows me to anticipate at this point, that at a later time I'm going to be doing this. As I move through, either I change and do this one instead, or I rule out more and more of the possible reasons for not doing it. And by the time I get to here, there's no question in my mind of what I'm going to do. So I know ahead of time that I'm going to do this, because that's what the pattern calls for. I'm in effect already doing something that calls for this behavior here.

Notice this is not a matter of *predicting* my behavior. I couldn't tell you five minutes ahead of time what I'm going to do, but by the time it comes time to do it, I can tell you.

Again, there are two angles to this. One is "How do you know?" and that's how you know. The other is "How can you be sure?" Remember philosophers will always ask, "How can you be sure?" In this case we have an answer to them. Mostly the answer is "You can't, damn ya", but in this case we can be sure. To bring that out, let's go back to an old image. And the image is "The Picture of Winston Churchill". It goes like this.

"The Picture of Winston Churchill"

Imagine that I approach you and pull out a glossy 10x12 photograph. I show it to you and I say, "Hey. Who is this a picture of?" You take

one look at it and say, "No mistaking that face. That's a picture of Winston Churchill." And I give you a beady eye and I say, "Wait a while. How do you know that this is a picture of Winston Churchill and not of somebody else who looks exactly like this?" That's pretty reasonable, so you hem and you haw and do this and that but eventually you have to concede that it could be a picture of somebody else who looks just like Winston Churchill. So you say, "Okay. You got me. It could be somebody else."

Then I take out a piece of paper and some crayons and I say, "How about drawing me a picture of Winston Churchill?" So you sit down there and make your marks and in five minutes you say, "Okay, I've got it. Here it is." And I go through the same schtick with you. I say, "Look. How do you know that what you've drawn is a picture of Winston Churchill and not of somebody else who looks exactly like what you've drawn?" And this time we go round and round, but finally you get it right. And what you say is, "No. No question about it. I know that this is a picture of Winston Churchill because that's what I produced it as, and that *makes* it a picture of Winston Churchill. And that's why there's no question whatever that that's what it is."

In the past in presenting that image, I often as a little additional tidbit say, "This applies to behavior, too." What makes my behavior the behavior it is, is that that's what I produced it *as*. That's the vehicle for being sure. That's how you can know for sure what your behavior is going to be. Because, since you're not blindly going through a timeline – you are participating in these – you know what behavior it is that the thing calls for. So by the time you get here [pointing to the x in the hierarchy of social practices on the board], you know that you're going to do it, and you can be sure that that's what you're going to do, because that's what you're going to produce it as. And if that's what you produce it as, then by God that's what it is.

So now we have an answer to how come as an Actor you can know ahead of time what it is you're going to do. By the way, if you go back to the first case you still have a structure of practices. It will be a different

structure, but it works the same.

That completes the cleaning up on the A-O-C. Remember we got into it because of the feature of thoughts that they seem to be both from me and to me, and I identified A-O-C as the one place where that sort of thing happens. Then I said A-O-C needs a little cleaning up, and we've done that now. Now we're back to thoughts.

Q: [inaudible]

PGO: How much time are we taking?

Q: [inaudible]

PGO: Well, that's what I was wondering. But I think we've taken up so much time, we might as well just barrel on.

Q: I think there's a groundswell for a break…

PGO: Just a quick show of hands. How many want a break right now?

Q: How much more time do you have?

PGO: I could go on for three hours. [laughter]

Q: Let's take a break.

13.0 Let me anchor us back. Recall that the questions about Actor-Observer-Critic entered our picture because that seemed like the one readily identifiable place where you have this – messages coming *from* me *to* me. That was suggestive because thoughts seemed to have this feature. In fact we have more than a hint in Actor-Observer-Critic. As Walter noticed, I generally *hear* from my Critic. I don't *talk* to my Critic. [laughter] To be sure that suggests that thoughts are generated by A-O-C activities. On the other hand, we may need more than a suggestion and we might want to look around and see what else supports that.

We could ask, "Why would there by any interesting connection be-

tween occurrent thoughts and A-O-C activities?" And the answer in a word is "the world", that total structure that codifies my behavior potential. That's the link that holds everything else together. That world is what those thoughts are about. That world or my position in it is what the thoughts are about. That world is the world that I construct, reconstruct, and maintain through my behavior and the corresponding A-O-C activities. So in brief, there is a basis for connecting this notion of thought to A-O-C.

I'm going to skip a sizable section on world reconstruction and just give you a flavor of how it fits into the bigger picture here. To begin with, outside of Descriptive Psychology, reference to world construction, world maintenance, and world reconstruction is not unlikely to meet with a bright smile and a disclaimer, like "You must be speaking metaphorically. *Surely* you don't mean, *literally*, world construction, maintenance, and reconstruction." The appropriate answer would be, "No, it's not a metaphor, and, yes, I mean *literally* world construction, maintenance, and reconstruction." And then you would get questions along the lines of how could one do that, why would one do that, what guarantees that we've done it right, and all the other questions.

When it comes to world reconstruction and these others, we can sometimes use poets as a source of ideas. We seem to have a favorite poet in the Society. That's our friend the tentmaker who said,

"Ah, love, could you and I with Him conspire

To change this sorry Scheme of Things entire,

Would we not shatter it to bits, and then

Remold it nearer to our hearts' desire?"

There's world reconstruction with a vengeance, and it's what I would call brute force world reconstruction. [laughter]

Now when people look askance when you say, "No, I mean *literally* world construction," I suspect they're thinking of something like this. They think that we're referring to some Godly exercise of power as is

implicit in the poem. As I say, that's a brute force approach, and it is not open to us. We can't "shatter it to bits and then remold it nearer to our hearts' desire". Unless we can. [laughter] I suppose putting a freeway through an industrial area comes closest. [laughter] But you can see that that's not the kind of thing we are going to be interested in.

So the question is "How then? What then? What is this world reconstruction? What mechanism, what procedure, what agency could make it possible?"

There is a general alternative that I want to just call your attention to, and it's introduced here by the quote that I gave last night from Stanley Cavell. Remember he said, "For Aristotle, to speak the truth is to say of what is *that* it is. In this new way of talking, to speak the truth is to say of what is *what* it is." Very briefly, in creating worlds and in reconstructing worlds, we don't do it by creating stuff and moving it around. Rather, what we create is its being what it is.

Q: Will you repeat that?

PGO: Yeah. I say that in creating worlds and in reconstructing worlds, we don't do it by creating stuff and moving the stuff around. Rather, what we create is its being what it is. I seem to recall saying something very similar to that in the *Ex Post Facto* paper some years ago.

The rest of this long section is devoted to expanding on that notion of how through your ordinary behavior you accomplish this reconstruction of "What is this world of mine?", that the reconstruction is along the lines of this saying. You change your view of what it is, and in changing your view of what it is, you change your views of what opportunities it offers and all of the rest. So if we consider that done, we can move on.

Q: Sure, Pete.

PGO: We can move back to the thoughts. One of the end results of that section is that thoughts are verbalized A-O-C activities. That's what they are. Now we pick up…

Q: Did you say that thoughts are verbalized?

PGO: Verbalized A-O-C activities.

Q: Do they have to be verbalized?

PGO: Yeah. Remember the only way you know you have a thought is that you hear your voice saying it.

Q: Could you visualize them?

Q: What?

PGO: No. One of the other things that you want to distinguish the thought from is the experience you have at the time when you have the thought, which is quite different. And the reason that it's important to distinguish them is that there can be a relation between them. You can have the image that serves as the vehicle for the thought, but that same image could serve as the vehicle for any number of different thoughts. That's why the image is not the thought.

To give you an example, suppose I told you that I was thinking about the meeting that I was setting up, and somebody had just told me that a group of people were not coming, and I had an image of one of them looking at me disapprovingly. But I don't tell you that. I said, "It crossed my mind that maybe they misunderstood me." And I say that on the basis of that image. The image was the vehicle for that thought and I know what the thought is. I can translate it. I can say it in English.

Q: [inaudible]

PGO: Hold on. Thoughts not only come from nowhere. They take no time. So the thought couldn't consist of actually saying something because saying something takes time. Whereas an image – you can use an image as a marker for the thought and then say what the thought is. Like I say, you need to distinguish the experience you have when you have a thought from what the thought is.

Q: So is a thought essentially…

PGO: No. Actor-Observer-Critic. You're doing one of those things.

Q: That something is so…

PGO: Yes, but with elaborations. The elaborations appear in the classic philosophical literature under the heading of propositional attitudes. Remember with propositional attitudes, you never have a statement of fact or proposition. You have what they call attitudes toward the same proposition, namely "I hope it happens", "I wonder if it happens", "Will it happen?" All of these are variations around the same proposition. Well, all of these variations are also subjects for thought, not just statements of fact. In effect you're carrying over that piece of language whole. That's why it's not just about facts. But it is about the world, because it's either about the world per se or about my relation to some fact or possible fact, and that's what the propositional attitudes are.

[Sections 14.0 – 18.0 on the Topic Outline were skipped]

19.0 Now, you start with the notion that thoughts are, in effect, verbalized A-O-C activities. Like I say, you don't get something for nothing. Every time you make a move that gains you something, you're always faced with some questions, which you then have to provide answers to or you're still dangling. Here the question is "How does it happen that only some of these A-O-C activities are verbalized?" It's a natural question.

Q: Is that saying, "How come it is that you don't say aloud all of the thoughts that you have?"

PGO: No. "How come we don't have a separate thought for every A-O-C activity that we engage in?"

At this point I'm going to surprise you and take an empirical approach. [laughter] Somewhere I have a list of actual thoughts. I asked people, "Give me a couple of thoughts that you've had in the last day or so," and I just wrote them down.

Q: For a long time?

PGO: For a couple of days. I had all kinds of strange responses to that question you wouldn't believe. [laughter] And all I wanted was a couple of thoughts.

Q: Yeah, but when *you* ask people that…

PGO: Well, anyhow, I checked those as to whether you could reasonably classify them as reflecting either A or O or C and found that it works out pretty well. That was one of the reasons that I wanted an actual sample. When I looked at the sample, I came up with some generalizations. Here they are.

(1) The A-O-C activities which we experience are those that are closest to being overt behaviors. By that I mean here's an A-O-C activity that you could have done openly as a Deliberate Action, except that apparently something else took priority and you did it covertly. But it could just as well have been an explicit Deliberate Action, and that's the kind that you find a fair amount of.

(2) The A-O-C activities that we experience are those that have high priority. These are the important ones. Surprise, surprise.

(3) The A-O-C activities we experience as thoughts are those that are closely related to the overt behaviors that we do engage in. You think about what you're doing.

(4) Conversely, we also experience as thoughts A-O-C activities which are so unrelated to the overt behaviors being engaged in that they don't interfere with each other. You're all familiar with doing a routine task that is so simple that you can do it and think about something else. You have those cases.

That's all I have. So those, looking at the list, look to be the main kinds of A-O-C activities that get reflected in thought. When you look at that summary, somehow it doesn't look surprising. At the same time,

it's not easy to parse it real neatly. But you can generate a sort of a general model if you will, some kind of picture of what's going on. And it's an economic picture.

You begin with the notion of overt Deliberate Action. That Deliberate Action may be an Actor activity, an Observer activity, or a Critic activity. As soon as we introduce the notion that these are not just sequential, but that you're always doing all three at the same time, we raise the problem of interference. You can't do them all as overt behaviors simultaneously. Something has to give. As soon as you also introduce the notion of doing it overtly and covertly, then you've got a way out, because you can distribute the three among the overt and the covert.

The covert will include… It will include certain kinds of verbal behavior and A-O-C activities and thoughts. All of that is a way of distributing these things so that they don't interfere. And the notion of interfering with each other is the key. That's why I call it an economic model here.

Q: Did you say the lion's share of that activity then is covert?

PGO: Yeah. Two out of three. [laughter]

Interesting enough, verbal behavior shows up again. The reason is that verbal behavior is overt behavior, but it's the kind that you might say would interfere minimally with most other overt behaviors. You can be doing lots of different things and be talking at the same time without undue interference. So now you can spread these things around over three things, namely overt non-verbal, overt verbal, and then covert.

As I say, it's hard to come out with a clean model, but it's easy to see in economic terms. If you approach it in terms of what interferes with what, or what could interfere with what, then you'll see that the kinds of thoughts that occur reflect that kind of consideration. Namely, the thoughts that occur reflect a system in which interference is minimal. Generally speaking, these things don't interfere with each other.

Q: This model can also cover things like inspirations, ideas… How do you account for these … other than by A-O-C activities that are

going on all the time?

PGO: That sounds like a perfectly good example of the kind of thoughts I'm talking about. "It suddenly occurred to me that…" "It crossed my mind that…"

20.0 The next question is "How does it happen that I have any thoughts at all?" After all, the way I've described them, there doesn't seem to be any necessity. Why would I have any thoughts? It seems like we just do. Probably the best approach to answering that is to answer the question of why thoughts come from nowhere.

21.0 Remember the State of Affairs Transition Rules, the ones that deal with objects, processes, events, and states of affairs. Transition Rule #6 says, "An event is a direct change from one state of affairs to another." Rule #9, I think, is one that says, "The beginning and end of every process is an event."

One of the things I think I skipped, way at the beginning: It isn't just thoughts that come from nowhere. It's judgments, decisions, conclusions, behaviors… Essentially your entire mental life comes from nowhere. It has exactly the same feature as thoughts.

If you look at some of these others – judgments, decisions, conclusions – you say, "Hey. These are achievements." One of the central features of achievements is that they are events. Achievements are events, and events are direct transitions from one state of affairs to another. Guess what? All events come from nowhere. All processes come from nowhere, simply as a result of that logic.

So having a thought both is an achievement, and it marks an achievement of an A-O-C sort. As an achievement, those are events, and as events they come from nowhere.

Q: The events come from nowhere?

PGO: One moment it's not there, the next moment it is, because it's a direct transition from one state of affairs to another. Nothing in between. A process does have something between the beginning and end, but an event has no duration.

Q: But we can see circumstances that give rise to the event…

PGO: Yeah. The important thing is that the nature of events is such that they have no duration so they're going to have this feature. What you have then is your A-O-C activity. Remember what A-O-C is for. It's to make your way in the world. And some of your A-O-C activities mark strategic points where you reach a certain position vis-à-vis the world or some part of it. Those are the ones that are going to be marked by thoughts.

Q: Say that again.

PGO: Those are the ones that are going to be marked by thoughts, when you reach some strategic point vis-à-vis the world.

Q: And of course… [inaudible]

PGO: No, you may not. Think of the one where I'm sitting there and I have the thought, "Is it time yet?" The thought occurred about five minutes before I had to get up and leave. That makes it strategic. I didn't think of it as strategic. I just thought, "Is it time yet?" In effect, even at the thought level, you can operate unreflectively. It's only when you reflect on that that you would say, "Hey. This is strategic."

Q: For that person having that thought, it was not a strategic happening. But in time he might look back, or another person describing it…

PGO: No. For that person it *was* strategic. That's why he had the thought. But he doesn't have to see it as strategic.

Q: So your cry should be, "Trust your thoughts, too." [laughter]

PGO: Somehow I think there's a hidden flaw in that one.

Q: [inaudible]

PGO: No, just some kind of importance. Remember how much ground is covered by A-O-C and all the various kinds of possibilities. That's about as close as you can get with a single description: "Somehow it's strategic." Because there are all kinds of ways of being strategic.

Q: [about advice from a trusted source]

PGO: It all depends. If you get the rest of things right, then having that kind of advice that improves your Critic judgment would improve your behavior. But if other things are not right, then it won't necessarily improve your behavior.

As I said, one of the things about thoughts is not only do they come from nowhere. They go nowhere. One moment they're there, the next moment they're gone. I think we've about reached the point where we want to be gone.

Beyond Empirical Validation: Justifying Therapeutic Judgment and Action

Raymond M. Bergner

Abstract

Psychotherapy, well and carefully undertaken by competent individuals adhering to certain practice guidelines, while it can and should benefit from scientific research, rests on many other epistemic foundations, some of which are more certain than the necessarily probabilistic outcomes of psychological research. In this paper, a scale of justified belief is presented. This scale rates the degree of certainty of propositions yielded by different sources of knowledge, and thus the confidence with which we may believe and act upon them. Following the presentation of this scale, an analysis of the degree to which each of these knowledge sources enters into the practice of psychotherapy is developed. In the end, what is proffered here is a view of psychotherapy as a distinctly rational and empirical activity whose judgments and decisions rest, not only on scientific research, but on many further secure foundations.

Beyond Empirical Validation: Justifying Therapeutic Judgment and Action

A colleague of mine a few years back was admitted to one of the premier clinical psychology programs in the country. On her first day as a student there, she attended an orientation address delivered by the head of the clinical area. Condensed and paraphrased, this address stated the following position: "We, the clinical faculty, do not believe that you or anyone else should be doing psychotherapy for the next fifty years. Quite

simply, we do not believe that the scientific knowledge base exists for doing so in a responsible and effective manner. Rather, we believe that the next fifty years would best be devoted to clinical research so that at the end of that time we would have assembled a broad array of empirically validated theories and therapies, and would thus be in a position to offer to the public truly scientifically-based forms of treatment."

The foregoing is a very extreme statement of a general position that, in more moderate form, is widely held by scientifically oriented psychologists. This position has it that only the scientific method can yield truly well-justified knowledge about persons, their disorders, and their effective treatment, and therefore it alone can serve as a secure foundation for the conduct of psychotherapy (American Psychological Association Task Force on Psychological Intervention Guidelines, 1995; Chambless, Sanderson, Shoham, Johnson, Pope, Crits-Cristoph, Baker, Johnson, Woody, Sue, Beutler, Williams, & McCurry, 1996; Grawe, 1997). On this view, further, psychotherapy, characterized typically by a single psychotherapist, acting in the privacy of his or her office, relying heavily on the self-report of clients, and proceeding without any manner of formal measurement or control to guard against personal biases, cannot provide such a foundation. Indeed, in the eyes of some authors, those proceeding without benefit of scientifically established findings may be regarded as "crystal ball gazing" (Wollersheim, 1974) or as engaging in a "mere trial and error" procedure (Barlow, 1993).

However, to a very large degree, practicing psychotherapists *do* rely heavily on knowledge derived from clinical practice in making treatment judgments and decisions. When polled regarding what they read professionally and what works have influenced them most in their practice of psychotherapy, they report that it is the books and articles by clinicians whose knowledge base is primarily or exclusively that of clinical practice (Barlow, 1980; Cohen, 1979; Morrow-Bradley & Elliott, 1993). Historically, this would include countless highly influential and famous psychotherapists such as Freud, Erickson, Yalom, Kohut, Minuchin, and Ellis, as well as their own professional colleagues. Conversely, they do not report substantial reading of the scientific clinical journals, nor that these

have had any great influence on what they do (Barlow, 1980,1993; Cohen, 1979; Morrow-Bradley & Elliott, 1993). Finally, these practitioners rely on their own therapeutic experience of observed clinical patterns and of interventions that have worked for them in the past, in effect treating themselves and their own experience as reliable sources of procedural knowledge (Morrow-Bradley & Elliott, 1993).

Thus, serious questions are raised. Are psychotherapists justified in behaving as they do? Are they disproportionately trusting information gleaned via their own and others' psychotherapeutic observations to guide their therapeutic judgments and actions? Are they problematically preferring this to knowledge gained by adherence to the scientific method, and thereby (perhaps even unethically) compromising the soundness, quality, and effectiveness of the services they are delivering to their clients?

The central thesis of this chapter is the following: *Psychotherapy, well and carefully undertaken by competent individuals adhering rigorously to certain practice guidelines, while it can and should benefit from scientific research, rests on many other epistemic foundations, some of which are more certain than the necessarily probabilistic outcomes of psychological research.* In the pages to follow, this thesis is developed in two parts. In part one, a "scale of justified belief" is presented. Drawing upon mainstream epistemological thinking (Hospers, 1997; Solomon, 1989), this scale rates the generally acknowledged degree of certainty attributed to propositions yielded by different knowledge sources, and thus the confidence with which we may believe and act upon them. In part two, an analysis of the degree to which each of these knowledge sources enters into the practice of psychotherapy is developed. This paper has its roots in an intellectual framework known as Descriptive Psychology (Ossorio, 1978, 1995, 1997).

Preliminary Considerations

Regarding certainty. Perhaps it goes without saying that "justified knowlege," whether one is referring to findings obtained via scientific or clinical methods, rarely means *absolutely certain* knowledge. Rather, it covers a range of knowledges varying in the degree of certainty with

which they may be believed. What is implied by the term "justified" is that the level of certainty be such that a person might reasonably and with warranted confidence act on that knowledge.

What is "psychotherapy?" In talking about "psychotherapy" in this paper, I do not mean to designate anything that goes by that name. Like science, psychotherapy can be well or poorly done, can concern itself with trivialities or with truly consequential matters, and can be honestly or dishonestly reported. Therefore, just as one would not hold up the dishonest, conceptually muddled, shoddy, biased, and trivial scientist as a reasonable model for scientists, so I shall not here hold up the psychotherapist beset with the same limitations. Rather, while a fuller portrait of this will emerge in the pages to follow, I will employ as my model the competent, meticulously observant, careful therapist who adheres to certain practice guidelines, and who employs generally accepted rules of evidence in arriving at his or her judgments.

Is science itself "empirically validated?" In this paper, broadly speaking, I will be rejecting the position that empirical scientific validation is the *sole* legitimate justification for therapeutic knowledge, and affirming the position that it is but one epistemic foundation for such knowledge. The third and final reminder here is that precisely the same contention applies to scientific knowledge itself. Science is far from being 100% empirical or "empirically validated," much of it being logical and pre-empirical in character. For example, consider the following well known but rarely noted facts about science. (1) Scientific *methodology*, what we *do* as scientists, is in its entirety based on *logic* and *not on empirical finding*. No empirical evidence, for example, has ever been adduced (or could be sensibly adduced) in support of propositions such as, "To ensure that treatment X is effective, it is necessary to employ control conditions"; or "To guard against experimenter bias, this investigation requires a double blind control condition." (2) Science involves and requires *concepts* and *conceptual relationships* (Ossorio, 1981) the propositional articulations of which are all perforce logical tautologies. "A vertebrate is a creature that possesses a backbone or spinal column" states a tautology, as does the Newtonian "A force is any influence that can cause a body to be acceler-

ated" (Hewitt, 1977, p.47). No scientist would do an experiment to support or disconfirm either (what would we make of a reported finding that vertebrates lack spinal columns?). And, no scientist could possibly function in his or her field without possession of its conceptual set: the zoologist lacking the concept "vertebrate" could not discriminate, much less study, real world instances of the concept. (3) Finally, science rests on the employment of valid forms of logical inference. Newton, for example, never *observed* gravity. Rather, he *logically inferred* that, if the acceleration of (and thus the force of gravity upon) terrestrial bodies falling to earth were identical to the centripetal acceleration of the moon moving in its orbit, this correspondence would constitute *logical* grounds for concluding that the forces responsible for these accelerations were one and the same (Berlinski, 2000). It was importantly by virtue of drawing a logical conclusion about the relationship between empirical findings, then, that he made his celebrated claim that gravity extends to the orb of the moon, and indeed to every object in the universe.

A Scale Of Justified Belief

The following scale, developed for purposes of this paper, is relatively noncontroversial and consistent with what most philosophers who study such matters assert (see, for example, Hospers, 1997, pp. 39-128; Pecorino, 2001; Solomon, 1989, pp. 117-271). Ranked from most certain to least certain are propositions yielded by the following sources.

Level 1: Analytic, A Priori Knowledge

Mathematics and logic. True propositions of mathematics, both self-evident (e.g., "1 + 1 = 2") and proven (e.g., "there exist an infinite number of twin prime numbers") are by common consensus entirely a priori in nature. When true, they are universally regarded as *necessarily* true, and subject neither to rational doubt nor to empirical disconfirmation (Hospers, 1997, p. 133).

Like mathematics, logic in its various forms is by common consensus not an empirical science, but entirely a priori in its structure (Hospers, 1997, pp. 50-59). This is true for (a) propositions that are self-evident-

ly true (e.g., Aristotle's principle of noncontradiction: "Nothing can be both A and not-A"); (b) those that follow deductively from self-evident propositions (e.g., "If all A is B, and all B is C, then all A is C"); and (c) those that are tautologically true by virtue of the fact that the subject of the proposition conceptually implies that which is predicated, and the negation of the proposition would be self-contradictory (e.g., "All bachelors are single").

In general, propositions of the foregoing kinds are regarded as necessarily true and certain. Further, when applied in real world contexts with valid premises, the deductive conclusions of their employment are also regarded as necessarily true. If there are 3 marbles in the box, and 2 more are added, it follows necessarily that there are 5 marbles in the box. If all men are mortal, and if Socrates is a man, it follows necessarily that Socrates is mortal. However, here we must note the stipulation that necessity is upheld *when there are valid premises.* Since such premises will often take us into other, less certain levels of knowledge (especially empirical knowledge), we shall have more to say about them in conjunction with those levels.

Level 2: Empirical Observation and Inductive Generalization

Next in the order of confidence with which we may entertain propositions are those that derive from empirical observation. These include, first of all, reports of unaided sensory observations such as "the apple fell from the tree" and "the cat is on the mat," as well as instrumementally assisted ones such as "the surface of the moon has mountains" and "the cell just divided." Further included here are propositions that report the well-documented empirical observations of others. While these pertain to many areas of life such as history, biography, and news reportage (e.g., "Abraham Lincoln was president of the United States during the Civil War"), an important special case of such propositions are those pertaining to highly established empirical findings of the sciences. "Planets prescribe elliptical orbits about their suns." "DNA is composed of four distinct elements arrayed in a double helix configuration." "Light bends in the vicinity of a strong gravitational field." And so forth.

Notwithstanding its high degree of certitude, the consensus here is that empirical observation contains a distinct element of uncertainty--that empirical observation is not infallible. We mistake Mary for her twin sister Susie. It looks as if there is water on the horizon when in fact it is a mirage. The intoxicated or psychotic individual hears a voice or sees a vision when there is no reality basis for these. In the scientific realm, it is "observed" for centuries that the sun revolves around the earth, that planetary orbits are circular, and that the earth is flat: all of these observations ultimately prove incorrect.

Nonetheless, we assign very high degrees of confidence to propositions arising from empirical observation. Indeed, for the scientist, such observations are universally regarded as the ultimate evidential bedrock for the adequacy of his or her conclusions. Further, though famously questioned by David Hume, we assign such confidence to empirical generalizations that we form via inductive inference from such observations when these prove highly reliable. "Unsupported objects will *continue* to fall to earth." "Light will *continue* to bend in the vicinity of a strong gravitational field." And so forth.

Finally in this regard, in addition to assigning high degrees of confidence to propositions arising from empirical observations, we further assign considerable confidence to those that are strongly *deducible* from such observations. Thus, integrating Level 2 with Level 1 knowledge, when we proceed from premises that are empirically sound, and employ valid logical forms of deduction, the products of such argument may be entertained with great confidence. For example, if objects are pulled from a straight line course in the vicinity of a strong gravitational field, then it follows that, if I am a rocket scientist, I must make allowances for this if I wish to send a probe to the far reaches of the solar system.

Level 3: Established Non-probabilistic Scientific Theory

Theories such as those of relativity, evolution, and the Big Bang are by consensus never regarded as closed issues immune from being superceded by newer and more successful theories. Further, they are perceived as having different likelihoods of being successful theories. Thus, evolutionary

theory is currently regarded as very strongly supported by vast amounts of evidence (Gould, 2002), while superstring theory is regarded as far more provisional (Greene, 2002). Accordingly, the theoretical propositions generated by the most established of these scientific theories fall next on our scale of confidence. Examples here would include, "Individuals possessing characteristics advantageous for survival in a given environment will constitute an increasing proportion of their species in succeeding generations," and "The universe originated billions of years ago with the explosion of a hyperconcentrated matter-energy singularity."

Level 4: Established Probabilistic Scientific Findings and Theories

Sciences such as psychology, economics, and sociology characteristically issue their findings in probabilistic terms. "The likelihood of the observed association between X and Y being due to chance is less than 5 in one hundred." "Treatment Z is successful in the treatment of disorder A in 70% of cases." "On average, although there was a substantial overlap between the two experimental groups, group A exhibited a higher group mean on dependent variable Y than did group B, suggesting that independent variable X has a varying but on average greater effect." Such being the evidential base, propositions generated by these sciences as discrete findings, as theoretical law statements, and as pragmatic implications are less certain and must always be couched in probabilistic terms: "The secural of a reinforcement will be followed by repetition of the behavior... *with such and such probability."* "Mary may be treated successfully for her dysthymia with cognitive therapy...*with such and such probability*."

Level 5: Cultural Knowledge

A less systematic subset of empirically derived knowledge is what may be termed "cultural knowledge." Derived primarily from a lifetime of observation, I allude here to a relatively standard knowledge, held to varying degrees by most persons in a culture, of such things as the language, institutions, social practices, choice principles, folkways and significances of events in that culture (Ossorio, 1983). Persons holding such knowledge would understand the dominant language of the culture, and would comprehend its institutions such as marriage, the family, the educational

system, religion, and more. They would, further, have a knowledge of the standard social practices of the culture--of how it is appropriate to conduct oneself in a romantic relationship, parental relationship, educational or work setting, social gathering, funeral, religious service, and so forth. Finally, they would have a knowledge of what would count as a violation or a failure with respect to social practices and institutions, and of the significance of same. Thus, they would recognize such things as marital infidelity, neglect or abuse of a child, failures to honor obligations toward others in relational and work settings, irreverance at a funeral or other solemn occasion, and much more as violations and as having certain significances--and they would have terms characterizing persons who habitually behave in such fashion (e.g., "philanderer," "unfit parent," "slacker"). Thus, propositions such as "Sexual infidelity represents a betrayal of the marital relationship," "Abusing or neglecting one's child represents a failure of parenting," and "Failure to implement one's job responsibilities represents dereliction of duty as an employee," although they are *relatively* low on our scale, are all statements that may be made with high degrees of assurance. While they document neither logical conclusions nor rigorously established scientific findings, they nonetheless embody important, well-established, knowledge--indeed, knowledge essential to anyone wishing to live within and to participate in a culture.

Level 6: Anecdotal Generalizations

Propositions based on anecdotal observations fall next to last on our scale of justification. They state non-systematically made empirical generalizations of a single or of a few persons, and lack the strong justificatory basis of the propositional types listed above. Falling into this category are assertions such as, "I've often noticed that people who are initially attracted to their spouses because the latter possess certain characteristics frequently complain later about these very characteristics."

Level 7: Intuition, Hunch, and Impression

Beyond anecdotally based propositions are ones that express intuitions, hunches, impressions, and the like. Since the term "knowledge" conceptually implies a certain degree of assurance that something is the

case, it is perhaps fair to say that propositions based on these epistemic sources cannot be fully accorded the status of "knowledge" (which is not to say that they would necessarily prove without merit on any given occasion). These propositions would accordingly be lowest on our scale of justification when considering them as bases for action.

What Do Competent Therapists Act On?

With the foregoing scale in mind, let us examine the various knowledge bases upon which therapeutic judgments and actions rest, and in doing so the closely related matter of how well justified therapists are in thinking and acting as they do. The reader will have noticed that, on a scale containing seven levels of justification, knowledge derived from psychological science falls on but the fourth of these levels. Thus, it will be argued that, while such knowledge can be invaluable, it is not the most firmly grounded or justified of the bases on which clinicians act.

Level 1: Logical Truths in Psychotherapy

Rigorous clinical thinking, like rigorous scientific thinking, embodies the correct application of valid logical forms of inference and argument. Since one cannot apply what one does not first *know*, this implies that the clinician, like the scientist, must have a strong command of such logical forms. Such knowledge often goes unnoticed and unremarked. A scientist conducts an experiment and reports his or her findings. What goes unnoticed is that the design embodies a pre-empirical logical form: "If between two experimental conditions, everything is held constant except for one factor, and one manipulates levels of this factor, differences in outcome may be attributed to differences in this factor." Had the scientist not possessed a knowledge of this logical truth, he or she could not even have designed, much less carried out, the experiment performed.

Turning to the clinician, the same applies. If his or her thinking is logical and rigorous, then it presupposes an (at least implicit) knowledge or command of logical truths such as (a) "if p implies q, and q implies r, then p implies r", (b) "if all A belongs to (set) B, and all B belongs to C, then all A belongs to C; or (c) "that all A belongs to B does not imply that

all B belongs to A." Examples of the *application* of such forms to empirical phenomena will be discussed in the next section. In concluding this section, suffice it to develop one example of logical truths in psychotherapy, and to reiterate the point that, just as the practical business of doing one's taxes requires a working knowledge of truths that are themselves purely mathematical, so the practical business of doing psychotherapy requires, embodies, and presupposes a working knowledge of truths that are themselves entirely logical.

Some logical truths in psychotherapy. At the heart of the therapeutic enterprise lie a series of truths that, though historically and universally considered empirical, are in fact logical in nature. As psychotherapists, clearly, we are heavily in the business of explaining behavioral disability and of treating it. Indeed, we have come increasingly to define the terms "disorder" and "pathology" in terms of such disability or "dysfunction" (Bergner, 1997; Wakefield, 1992, 1999). Accordingly, we wish to know why our clients are unable to behave or to function in certain ways--to negotiate conflicts with others, to make love, to grieve lost loved ones, to carry on successful romantic relationships, etc.-- and how we might intervene most effectively to address such disability. Historically, we have created numerous theories--cognitive, behavioral, psychoanalytic, systemic, and so forth--to explain such matters and to provide rational bases for proceeding therapeutically. And, we have taken these theories to be empirical much in the manner that Darwin's or Hubble's theories were empirical.

However, at the core of the explanatory and remedial enterprises lie two overarching *logical truths:* (1) If the enactment of a given behavior (or set of behaviors) requires something that a person does not have, that person will be restricted in his or her ability to engage in that behavior. (2) That individual's restriction in ability will be correspondingly ameliorated if this something is acquired (Ossorio, 1985/97; Bergner, 1997).

To clarify the matter of how these propositions are logical and not empirical, consider the following nonclinical example: "Chess involves the game pieces 'king' and 'queen' (their respective roles in the game,

their move and capture eligibilities, etc.). This proposition qualifies as a logical tautology insofar as (a) the subject of the sentence conceptually implies that which is predicated, and (b) its negation ("chess does *not* involve kings and queens") is a patently false and self-contradictory statement akin to alleging that "not all bachelors are single." If more need be said in defense of the logical (vs. empirical) nature of this proposition, we may note that it would make no sense whatever to undertake an empirical investigation into the matter of whether or not chess involves kings and queens. Now, a logical extension of our first proposition: "Therefore, a complete *knowledge of* chess would imply a knowledge of kings and queens." A second logical extension: "Therefore, if a given individual *lacked* a knowledge of kings and queens, that individual would, by virtue of this deficit, be restricted in his or her ability to engage in the behavior of playing chess." A final logical extension: "If this individual subsequently *acquired* a knowledge of kings and queens, his or her disability would be correspondingly ameliorated."

On the present analysis, if one sums up the core of explanation and remediation in psychopathology, and does so by citing those types of factors that historically have been the subject of virtually all theoretical attention, it would seem to come down to the following proposition: "If a given behavior calls for certain *cognitive* wherewithal (knowledge, concepts, beliefs), or certain *skills or abilities*, or certain *motivations*, or certain *biological states*, and a given individual lacks one or more of these to a significant degree, that individual will be restricted in his or her ability to engage in the behavior." For example, if the behavior of making love requires certain *knowledge and beliefs* (e.g., that is is safe to do so, something that a rape trauma victim might lack), certain *skills*, certain *biochemical and other physiological states* (e.g., functional genitalia or minimal levels of testosterone), and certain *motivations* (as opposed, for example, to the lack of desire characteristic of disorders of desire), and P lacks one or more of these to a significant degree, P will be correspondingly limited in his or her ability to engage in the behavior of making love; further P's limitation will be correspondingly ameliorated if his or her specific relevant deficits are removed. When we explain in this fashion, and set out

to assist our sexually dysfunctional client by removing or reducing his or her specific deficits, the *framework* we are acting on is logical, not empirical. We do not stand in need of fifty years of research to know that the overall logic of what we are attempting is sound. To be sure, the matters of what precisely may be required for certain behaviors to be enacted and of how we might most effectively intervene to assist our clients are largely empirical matters, but the logical framework is not.

Level 2: Activity Based on Direct Therapist Observation

As the scale of justification above implies, scientific *theories*, being the less certain, must always be anchored in *empirical observation*, the more certain. Newton's theory must be anchored in the fact that the apple fell from the tree, and not the other way about. In the present context, the implication of this is that certain facts about my client -- e.g., that he is here in my office, that he sits leaning forward on the front edge of the chair, that he makes repeated statements of an intensely self-hating nature, and that he expresses despair at the possibility of gaining relief from his longstanding depression -- are all matters of greater certainty to me than any scientific theory. This is so even though I entertain very little doubt with regard to many of these theories.

To a very large degree, competent therapists are thoroughgoing empiricists and operate on the basis of careful firsthand observation. They listen to the content of the client's report. They note verbal nuances contained therein (e.g., the client said "I *think* I still love him, not "I still love him"). When working with couples and families, they observe the consistency of the different members' reports one with another, as well as their actual behavior toward each other. They observe the bodily postures and other metacommunications of clients. They observe the behavior of the individual toward them within the hour, be it attentive, considerate, obsequious, hostile, negativistic, or whatever. They observe disparities (e.g., the client says her marriage is fine and she is not unhappy, but then reports significant problematic behavior on the part of her spouse). They monitor the internal consistency of all of their observations (thus employing, like most scientific verification, a coherency criterion of truth).

Overall, like chess players immersed in a match, competent therapists are carefully observant of the actions of the other person, and base their own behavior on the specific "moves" of this other.

Applied logic in psychotherapy. Level one knowledge, as noted previously, comprises truths (a) that are themselves logically true, such as the truths of mathematics and logic, and (b) that involve the application of valid logical forms to valid premises, most of which will involve empirical phenomena. The first of these--in particular the truths of logic--was discussed above. The second, since it involves the application of these truths to empirical phenomena observed in the therapy hour, takes us into level 2 (empirical knowledge) considerations. Let us discuss this first by simply citing some actual clinical examples.

1. In response to careful probing, a client states: "It is not that I want her back; after all, I left her a year ago; what has thrown me into an incredible emotional tailspin is the thought that she has a new lover and I have now been replaced in her affections." One of several logical implications here is that this client will be relieved if he believes he has not been so replaced (logic: if A is causing B, and A is removed, B should be correspondingly removed). Strong subsequent evidence showing this was in fact the case resulted in a complete alleviation of this client's intense turmoil; while hardly an ideal outcome, it nonetheless carries the present point.

2. A bereaved client, speaking shortly after the death of his wife, states: "In losing her, I have lost my whole world." This statement carries the logical implication that he can currently envision no viable life for himself, and this in turn the implication that (at least in this regard) he sees little point in living (logic: "if p implies q, and q implies r, then p implies r"). This implication, though not stated explicitly by the client, was explored due to its obvious relevance to suicide, and it was determined that the man in fact was experiencing considerable temptation to commit suicide.

3. A client came to therapy reporting an "addiction" to pornography. In exploring his situation, it became clear that he entertained both serious misgivings about his own bodily and sexual desirability, and strong religiously based beliefs that he was sinful and degraded for even harboring

sexual desires. In fantasizing to pictorial materials, he always selected a very wholesome appearing young woman, and created a scenario in which she issued lavish reassurances to him regarding his body, his adequacy as a lover, and his very acceptability as a sexual being. Upon completing each masturbatory episode (often 4 times per day), he reported a sense of strong emotional satisfaction, but one that was soon replaced by a sense of guilt, self-recrimination, and serious doubts about his moral and sexual status. The client's fantasies seemed to the therapist best understood as "accreditation ceremonies" in which an eligible (because pure and wholesome) woman would accredit him as an acceptable, desirable, and satisfying lover. The central thrust of therapy, accordingly, became that of helping this man to accredit himself in these regards, and to realize that his history with women was one that in fact bore ample testimony to his acceptability in all these regards (logic: if the needs for self-regard satisfied by imagined sexual scenarios could be satisfied in some other, more personally acceptable way, the client's resort to fantasied sexual scenarios would diminish or cease). This course of endeavor proved successful in the client's cessation of his excessive pornography use.

It may be noted that situation-specific logical judgments such as these, given their infinite variety, would be impossible to cover with general scientific findings. While it is valuable to know, for example, that cognitive therapy and systematic desensitization are effective forms of psychotherapy for certain problems, such general findings cannot guide us in the making of these countless, moment by moment, highly situation specific judgments that we are called upon to make as psychotherapists. At such moments, clear, logical, on-the-spot thinking is absolutely indispensable.

Examples of the application of logic in psychotherapy could be multiplied ad infinitum. To cite but a few more examples, when clients brand themselves with self-denigrating labels, these often carry logical entailments pertaining to their personal eligibilities in the world. Thus, to believe oneself "irrational" is to appraise oneself as ineligible to render logical, well-grounded judgments and decisions; to believe that one is "stupid" is to appraise oneself as ineligible to tackle anything in life that

would require significant intelligence; to believe that one is "unlovable" implies that one is ineligible for the love of another person. Each of these perceived ineligibilities would be vast in its behavioral implications--i.e., in what persons would feel confident in pursuing and securely maintaining in their lives. Finally in this regard, rigorous clinical judgment involves the avoidance of logically fallacious forms of thinking such as "assuming the consequent" (e.g., that my client's grief is eased by medication does not necessarily imply that grief is a biologic disorder) or that captured in the proposition, "That all A is B does not imply that all B is A" (e.g., that most abusers have been abused does not imply that most abused persons will become abusers).

In the end, suffice it to say that competent clinical judgment requires the correct application of valid logical forms to empirical phenomena. This is not, of course, to claim that all competent therapists employ impeccable logic on all occasions. It is only to say that logically valid thinking is part and parcel of good psychotherapy, and that when such thinking occurs, and is based on valid premises grounded in careful observation, its conclusions may be held with high degrees of confidence.

Therapists create empirical theories and test them. We enter here into the matter of what competent therapists *do* with their first hand empirical observations, and it should be said before proceeding that doing this necessarily involves both level 2 and level 4 knowledge, and thus a reduction in certainty from pure level 2 knowledge. Aside from a few recent therapeutic approaches that eschew much inquiry into matters of problem description and explanation, the majority of approaches advocate that the therapist formulate diagnostic "hypotheses," "theories," or "individual case formulations" (Bergner, 1998; Colapinto, 2000; Persons, 1989; Segal, 1991). Therapists are urged to gather careful observations of their client and, on the basis of these, to formulate a tentative theory regarding (at least) the nature of, and the factors currently maintaining, the client's presenting problem(s). Such a theory, if it includes a DSM diagnosis, extends well beyond it (e.g., it would contain not only the observation that the client is dysthymic, but a hypothesis regarding *why* he or she is dysthymic). If the therapist succeeds, this theory, like a success-

ful scientific one, is consistent with and ties together all of the observed facts of the case (Bergner, 1998; Persons, 1989; Schact, Binder, & Strupp, 1984). Competent therapists, finally, *test* these theories or hypotheses against further observations. They monitor continually whether further incoming information supports or fails to support them. Most importantly, they undertake interventions based on them and observe the outcome of these interventions. While acknowledging that what they are doing amounts essentially to a single subject AB design that lacks the controls and thus the assurances of a well-conducted experiment, they nonetheless have strong reason to conclude that some positive changes in the client may be due to factors other than their interventions (e.g., the client goes on medications or experiences some very positive life event), while others seem highly connected to their interventions (e.g., after productive work at identifying and modifying core maladaptive beliefs, the client reports relief from longstanding depression, and there is no other plausible causal factor in the picture). If the current formulation and interventions are proving successful, competent therapists maintain the same course of endeavor; if not, they change course and, if the evidence so indicates, gather new data and revise their theories. In any event, careful empirical observation and hypothesis testing are at the very heart of the therapeutic enterprise.

How credible are clients as "subjects?" One of the things one observes directly as a therapist is clients' self-reports. Although the content of these reports may be directly observed, thus constituting Level 2 knowledge, their accuracy is far less certain. Problems with the accuracy of self-reports have long been a source of concern for researchers and clinicians (Seligman, 1995). Persons reporting about themselves may deceive, may be subject to inaccuracies of memory, may be unaware of relevant factors, may be defensive, may distort their portrayal of reality in socially desirable directions, and may in other ways provide a less than veridical picture of reality.

In assessing how much credence we might place in any given self-report, whether we are acting as researchers or as psychotherapists, we might fairly raise the following questions, all of which were formulated

by the author in his role as an empirical scientist (Bergner, Delgado, & Graybill, 1994). Do the reporting individuals have clear and present reasons to tell us the truth to the degree that they are able, or do they lack such reasons? Do they seem competent, able reporters about the matters in question? Are they willing participants in our encounter, or is their participation given under some measure of pressure or coercion? Do they have any relationship to us that would give them good reason to trust and to cooperate with us? Do they believe that we are acting in good faith, or perhaps deceiving them in some way? Do they view the giving of their report as a fair exchange in which they are asked to make certain efforts and divulge certain matters, and in return will receive something of equal value, or does it seem to them that they are called upon to give far more than they will get in return? Do they view the matters that we inquire about as unfairly invasive or disturbing? Do they have any agenda that is antithetical to the giving of accurate information (e.g., if a psychotherapy client, might the presence of their spouse in the session inhibit them from being honest; if a research participant, do they feel used, deceived, coerced, manipulated, or invaded, and thus disinclined to cooperate)? Finally, if the individual is unable or unwilling for whatever reason to report certain matters accurately, do we have any means at our disposal to detect this?

Let us be clear: in neither the therapeutic nor the experimental situation is there any question of anything approaching certitude with regard to such matters. However, they are worth raising in considering how we may create conditions that maximally assure that both our research participants and our clients give us the best possible information (Bergner et al., 1994). That said, there are strong reasons to conclude that the typical therapy situation is one that embodies many of the favorable conditions stipulated in these questions. Typically, clients initiate psychotherapy voluntarily. They come to it as a rule in very painful and debilitating emotional states (e.g., depression and anxiety), and confronted with serious life dilemmas (e.g., failing marriages, important personal losses). Thus, in most cases they are powerfully motivated to do what it takes to find a solution to their pain and their problems, including providing the

therapist with the best possible information that they can. In most cases, they form positive, trusting, personal relationships with their therapists. Most often, there is no discernible ulterior motive for coming; and when there is, as in the case of a person attempting to placate an angry spouse, to manipulate the legal system, or to secure an insurance settlement, this is often detectable. They view therapy as a fair exchange in which they will receive something of considerable value to them in return for their efforts and expenses. Most clients admit negative things about themselves such as socially undesirable feelings, blameworthy actions, self-loathing, and personal weaknesses, and are clearly not subject to some sort of blanket social desirability motive. In short, while there are exceptions to this picture--some clients do lie, omit important materials, distort reality, and/or fail to observe and report well--in the main therapy clients might be regarded as relatively good "subjects" or "participants" (Indeed, I wish that my experimental subjects, most of whom have been college students, were on average as good). Thus, in the majority of cases, a reasonable degree of credence can be placed in their self-reports.

Levels 2 and 3: Therapeutic Activity Based On Well Established, Non-probabilistic Empirical Findings and Theories.

As noted above, level 2 knowledge includes the well documented, non-probabilistic empirical findings of others (e.g., "DNA is composed of four distinct elements arrayed in a double helix configuration."), while level 3 pertains to highly supported and established scientific theories, such as the those of relativity or of evolution, whose theoretical propositions are non-probabilisitic in nature. At the present historical juncture, it is not clear that any psychotherapeutic activity is based on either of these two sources.

Level 4: Therapeutic Activity Based on Probabilistic Scientific Findings and Theories

Many competent therapists act on the basis of probabilistic scientific findings and theories. They utilize the results both of studies that articulate the intelligibility and/or etiology of clinical problems, and of those documenting the effectiveness (or lack thereof) of various forms of psy-

chotherapy. Further, many conduct their therapies on the basis of empirically supported theories such as the cognitive (Beck & Weishaar, 2000), social-learning (Bandura, 1986), cognitive-behavioral (Wilson, 2000), and attachment (Worden, 2002) theories. For example, many would be conversant with, and would act upon, a body of work that indicates that cognitive therapy for depression, relative to chemotherapy, is likely to provide roughly equal emotional relief but a lower likelihood of either relapse or dropout (Jacobson & Hollon, 1996). The premises for action yielded by these findings and theories, expressed as propositions, are at the present historical juncture always probabilistic in nature: "If I employ exposure therapy X with this phobic patient, research suggests that my probability of being successful is N%."

Level 5: Therapeutic Activity Based on Cultural Knowledge

Psychotherapists, like everyone else, are persons socialized into a culture (and, ideally, are familiar with other cultures in which their clients have been socialized). In the course of their developmental histories, they have learned its language, its idioms, its choice priniciples, its institutions (marriage, the family, the educational system), its social practices (dating, playing games, taking classes, etc.), its norms for what constitutes appropriate and inappropriate behavior, the normative significances that attach to any given behavior (e.g., what it would mean if one spouse routinely cheated on the other or a parent neglected his or her child), and the dispositional terms that apply to persons who have a tendency to behave consistently in certain ways (e.g., "philanderer," "shy," "aggressive") (Ossorio, 1983). The degree to which this sort of knowledge enters into psychotherapy (and into research) would be difficult to overstate (Ossorio, 1987/1997). Correspondingly, the degree to which *lack* of such knowledge would handicap a therapist would be staggering, a fact that is underscored by our ever-increasing emphasis on multiculturalism in psychotherapy. Acting as a therapist within my own culture, I understand the language of my English-speaking clients. I know their idioms--what it means, for example, when they say that someone "worries twenty four seven" or "is obsessed with climbing the corporate ladder." I know the normative significance if my client says that his or her spouse is having

an affair, or refusing to look for work, or avoiding intimacy. I know my clients' behavior is socially inappropriate (and thereby often maladaptive) if they report such things as constantly exploding angrily at others, boasting about themselves, breaking promises, or exploiting others. Further, as these examples attest, culturally informed therapists know all of this with a substantial degree of confidence. Finally, they know that, without this incredibly vast and rich tapestry of contextual knowledge, they could not begin to understand their clients (Ossorio, 1987/97).

Levels 6 and 7: Therapeutic Activity Based on Anecdote and Intuition

Therapists at times act on the basis of anecdotal evidence and on intuitions. For competent therapists, all ventures initiated on such bases are undertaken tentatively and with a keen observational eye to the outcome of the venture, so that they may withdraw safely from it should it prove off the mark, ineffective, or counterproductive.

Knowledge Types in Psychotherapy That Are Difficult to Classify

Conceptual knowlege. The competent conduct of psychotherapy involves and presupposes *conceptual knowledge.* It requires command of a lexicon of concepts, and in doing so requires knowledge of what is true, not empirically, but by definition. Since my observation has been that this point is widely misunderstood, a brief elaboration seems in order. By common consensus among philosophers, *concepts* are not "truth eligible" (Ossorio, 1978, 1981). That is to say, they are neither true nor false. The *concepts* of "force" or of "vertebrate" or of "helix" are not true or false, and thus are neither "verifiable" nor "falsifiable." Only *propositions* about such phenomena (e.g., "the gravitational force is weaker than the electromagnetic force") can be true or false, empirically verifiable or disconfirmable. When Newton stated that a "force" is "any influence that can cause a body to be accelerated" (Hewitt, 1977, p.47), he was not reporting an empirical finding; he was drawing (indeed, inventing) a distinction that subsequently proved extraordinarily useful in empirical matters. Obviously, one would no more do an experiment to empirically determine if forces accelerate bodies than one would to empirically determine whether

bachelors have wives.

In this regard, the competent and intellectually rigorous therapist must have a strong command of concepts such as "pathology," "anxiety," "depression," "reason," "preemptive motive," "avoidance," "mistrust," "jealousy," and countless others *to be able to discriminate, and thus to respond to*, observed states of affairs in clients. Like Newton, whose empirical conclusions required and presupposed his pre-empirical construct system ("force," "mass," "acceleration," "intertia," etc.), the psychotherapist must have a knowledge of a vast construct system embodying myriad concepts and conceptual relations--must have a vast body of systematic conceptual knowledge. (NB: As in the case of science, it may be noted that what *is* empirical here are which concepts--which of the distinctions one might draw and act upon--will prove most apt and useful [Ossorio, 1981].)

Now, one might fairly object, there seems a drastic fall-off in certainty here from most of the knowledge types discussed above. Notoriously, for example, person A (whether he or she be clinician, research scientist, or both) might have one definition of "mental disorder" or of "anxiety" or of "manipulation," while person B has quite another. What sort of certainty is *that*? This objection is well taken, especially in a field such as psychology where conceptual confusion and disagreement seem the rule rather than the exception.

However, an important point remains. Conceptual knowledge is a kind of knowledge. Clinicians, like scientists, of necessity possess and act upon a lexicon of concepts. However much disagreement may reign, it is an indisputable fact that persons in general have "construct systems" that, as Kelly (1955) noted half a century ago, constitute the lenses through which they discriminate and interpret reality. While there exists a critical need for psychology to settle on a far more orderly and consistent conceptual system (Ossorio, 1978, 1995), the manner in which this might occur is beyond the scope of this paper. Suffice it to say here that, as in science, so in clinical work, an enormous knowledge base, and one that is involved in the most intimate way in what a given clinician will discriminate and act upon, lies in his or her operative construct system. Thus,

to omit this from our discussion of the clinical knowledge base would represent a very serious omission.

Therapeutic Activity Based on Pre-empirical Prescriptions. Above, it was asserted that psychotherapists do not act on the basis of well-established, non-probabilistic empirical generalizations or theories. In response to this, it is tempting to disagree and to state that there are instances where they do so act. For example, where they see provocation (e.g., a client is clearly being abused, cheated, insulted, or otherwise mistreated), they expect to see anger. Further, they do not see the relationship between the two as one where an observer would sensibly raise the question of whether or not such anger was due to chance: "Upon being insulted, do you suppose that her angry outburst was merely a coincidental chance occurrence?" Thus, the therapist seems to be using a lawlike proposition along the lines of "provocation elicits hostility," and this seems to be an inductively-derived empirical generalization (cf. "frustration elicits aggression").

However, upon closer inspection of how therapists actually think in such circumstances, a different picture emerges. The logic of this thinking has been well captured by Ossorio (1981), and it is to his analysis that we now turn. Since I must introduce an admitted "odd duck" here in terms of a ground for therapeutic action, let me briefly cite as precedent for this a famous example from the history of science. The example is that of Newton's second law and its mode of usage by physicists down through the centuries. This law states in effect that the direction and acceleration of a body will be the resultant of the forces imposed upon that body (Berlinski, 2000). While this sounds like an empirical generalization, it has never in the history of science been treated as such (Ossorio, 1981; Toulmin, 1956). For, should some body *not* accelerate in the direction predicted from the known forces, the physicist will never declare Newton's second law disconfirmed. Rather, he or she will conclude that there must be other operative forces as yet unaccounted for, and may on this basis conduct a search for such forces. The utilization of Newton's law in this fashion, rather than as a disconfirmable empirical generalization, has resulted in countless scientific discoveries over the centuries, such as that

of the planet Neptune in 1848 (Berlinski, 2000; Toulmin, 1963).

What, technically, has Newton provided here if it is not to be considered a disconfirmable empirical generalization? What he has done, in Ossorio's phrase, is to provide a "nonempirical prescription to the effect that the results obtained must be described in accordance with the formula given" (1981, p. 44). That is to say, it is a *prescription* or *directive* to the physicist that says in effect: "In relevant circumstances, *use* this prescriptive formula to explain and/or to predict the phenomena in question."

What has this to do with psychotherapy? Ossorio (1981) has proposed a set of what he terms "emotion formulas," all of which function in a manner identical to Newton's second law. The formula for anger, for example, is the following:

Provocation by O elicits corresponding (i.e., proportional) hostility by P, unless...

> 1. P has another reason (or reasons) for showing anger toward O or for not showing anger toward O, or...
>
> 2. P doesn't perceive O's behavior as the provocation that it is, or...
>
> 3. P is unable to express his or her anger in that situation, or...
>
> 4. P believes that what he or she did in that situation was acorrespondingly hostile response, but in fact it was not, or...
>
> 5. some combination of the above states of affairs obtains.

Ossorio, like Newton, is here offering a pre-empirical prescription: "When one observes anger or hostility that is proportional to the provocation observed, that requires no further explanation (the main clause that provocation elicits corresponding hostility holds without exception). When, however, such an angry response is either absent or represents an over-reaction or an under-reaction to the provocation observed, this requires explanation, and one may have recourse to the unless clauses in de-

termining what best fits the observed facts of the case." This formulation captures well the thinking of competent therapists in the not uncommon therapeutic situation in which clients exhibit levels of anger that seem disproportionate to their circumstances (e.g., they are not angry when they have good reason to be, or extremely angry in circumstances that appear not to warrant this). Relative to its historical predecessor, the simple and now largely abandoned empirical generalization that "frustration elicits aggression," the formula captures far more adequately the complexities of the phenomena at issue, and does not warrant abandonment in the face of empirical events inconsistent with its principle clause.

Finally, touching upon matters empirical, what was empirical in Newton's case was the range of effective application of his laws. Events in the twentieth century showed that, while they continued to be highly applicable to large objects (e.g., they are still employed by all space programs), they did not work either for extremely small objects or for those travelling at speeds approaching that of light (Berlinski, 2000). In the same way, the empirical question for Ossorio's hostility formula would seem to be whether or not there exist domains where, empirically, it does not prove effectively applicable.

The hostility and other emotion formulas are not isolated examples. For an extensive list of such nonempirical prescriptive formulas employed by behavior describers in general, and by psychotherapists as a special class of such describers, see Ossorio (1982/98).

Knowledge derived from clinical practice. Finally, many clinicians base their therapeutic judgments and actions on knowledge derived largely from clinical practice. Since on the present analysis this informational source comprehends all of the knowledge bases delineated above, it is not classifiable in terms of any single one of them. As noted previously, therapists employ heavily reports from other clinicians who have confined themselves to using clinical observation as an informational source and have not undertaken any manner of formal scientific investigation of their conclusions (Barlow, 1980,1993; Cohen, 1979; Morrow-Bradley & Elliott, 1993). Therapists also act on the basis of their own clini-

cal experience (Cohen, 1979; Morrow-Bradley & Elliott, 1993), which on the present analysis is simply a special case of acting on the basis of knowledge derived from the clinical situation. With respect to utilizing these reports and personal experiences as bases for therapeutic action, it must be left to the individual clinician's judgment to determine in what measure the clinical findings provided by any author or colleague (e.g., Shneidman's [1984] conclusions from his treatment of thousands of suicidal patients) conforms methodologically to those described in this paper, and in what measure such conformance assures the credibility that might be assigned to this finding (cf. Cronbach, 1975, on "intensive local observation").

Summary

In this paper, a portrait of the justification of clinical judgment and intervention has been drawn that attempts to detail its many epistemic foundations. These have included knowledge (a) of valid logical forms of argument and inference; (b) of how to apply such logical forms to empirical phenomena; (c) of a system of relevant constructs or concepts; (d) of findings from direct, firsthand empirical observation of clients; (e) of empirical truisms; (f) of how to create and test empirical hypotheses regarding clients' problems; (g) of relevant scientific findings and how to apply these; (h) of cultural institutions, social practices, and behavioral norms; and (i) of ideas based on intuition and anecdotal evidence. On the present view, all of these epistemic sources are indispensable. We simply could not get on successfully if we abandoned, for example, the use of logic or of cultural knowledge or of concepts. Finally, all but the last of these represent epistemic sources that, in the hands of highly skilled, knowledgeable, and meticulous clinicians, may be assigned, albeit at differing levels, substantial credibility. Thus, in the end, a portrait of therapeutic judgment and action emerges that shows such judgment and action to rest, not only on scientific finding, but on many other secure epistemic foundations.

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Underlying Cognitive Processes or Private Social Practices?

Raymond M. Bergner

Abstract

This paper presents a critique of cognitive psychology's underlying cognitive process program, as well as suggestions for a more scientifically and pragmatically viable approach. The paper proceeds in the following sequence. First, the mainstream point of view of contemporary cognitive psychology is outlined. Second, its program of searching for nature's "underlying," "unconscious," and in principle unobservable cognitive micro-processes is criticized. Third and finally, cognitive science's neuropsychology program is discussed, not with respect to the considerable value of what it has and may discover in future, but with respect to the interpretation that would appropriately be placed on its findings. Throughout this discussion, an alternative position, namely, that cognitive processes are best viewed as private or mental versions of human social practices, is advanced.

Underlying Cognitive Processes or Private Social Practices? A Critique of Cognitive Psychology's Micro-Process Program

"Both the cognitive and behaviorist perspectives view organisms as machines that respond to environmental input with predictable output... behaviorists view the mind as a black box...the cognitivists have filled the box with software--mental programs that produce output."

--Drew Westen (1999, p. 20)

"Don't say what must be--look and see what is."

--Ludwig Wittgenstein, 1953

The origins of this paper lie in an experience I had some years back. A young cognitive psychologist, highly regarded and the recent graduate of a prestigious university, was applying for a job in the psychology department where I work. The young man, a memory researcher, presented his research on micro-memory processes. In his conclusion, proffered in the spirit of scientific discovery about "how the human mind and human memory work," he posited the existence of underlying, unconscious, unobservable "filing" and "backward search" cognitive micro-processes. On the basis, not of direct observation of such processes, but of reaction time data, he inferred that his subjects must have "filed" in short term memory the items they had memorized, and subsequently "searched" for them in reverse order from that in which they had learned them.

My immediate reaction to this presentation was not in accord with the researcher's own conclusions. At worst, it seemed to me that the young man, not on the basis of observation, but solely on the basis that a certain number of milliseconds had on average elapsed between the presentation of stimuli to subjects and their making of a response, had drawn a highly speculative conclusion about what must have occurred in that time interval. At best, it seemed to me that even if, despite this lack of compelling evidence, he were correct in his surmisals, that what he had done was to take a relatively simple memory task, one amenable to a certain obvious preferred solution, and given this to his subjects. What they had done, in turn, was to employ this obvious solution. He, being a well enculturated individual, had come to his experimental work with a knowledge of the very familiar forms of public human behavior known as "filing" and "searching," realized that his experimental task was amenable to strategies that lent themselves to being described (albeit metaphorically) in these terms, and had baptized them accordingly. However, even if this were an apt analogical description of his subjects' behavior, this did not strike me as being the discovery of anything universal about "how the human mind works," or of "nature's software," or anything of the sort. Rather, it seemed at best to show nothing more than that subjects had employed a sensible and obvious problem solving strategy. They had engaged in certain private, mental, analogical versions of familiar, learned, general

social practices--filing and searching--and had done so with considerable rapidity.

This paper, grounded in an intellectual framework known as Descriptive Psychology (Ossorio, 1966/95, 1978, 1981), will have the following structure. First, I will articulate more formally the mainstream point of view and program of contemporary cognitive psychology regarding underlying cognitive micro-processes. Second, I will critique this point of view. To anticipate, I will argue that the primary problem is with a critical part of what might be termed its "software program"--in particular, its attempt to discover nature's "underlying," "unconscious," and in principle unobservable cognitive micro-processes--as opposed to its "hardware" program that concerns itself with the biological structures, processes, and events involved in various kinds of human mental acts (cf. Ossorio, 1982; Jeffrey, 1998). Third and finally, I shall comment on the latter program, cognitive neuropsychology, not with respect to the considerable value of what it has and may discover in the future, but with respect to the interpretation that would appropriately be placed on its findings.

The Mainstream Cognitive Psychology Point of View

In cognitive psychology's mainstream view, a person, if not literally a computer, is at least analogous to one. A person is an organic, information-processing machine that paradigmatically takes in sensory stimuli (input), performs operations on this input (processing), and behaves in various ways (output) on the basis of this processing. The processing may occur via a central, serial symbol crunching program, a more parallel processing, connectionist one, or some combination of these (Clark, 2001; Johnson-Laird, 1988, Barsalou,1992). (NB: When it is said that the new metaphor for cognitive psychology is the brain and not the computer, the only apparent difference seems to be that the preferred form of program is connectionist; for all that, it is still very much a program.) To relate this to concrete human affairs, consider the following hypothetical situations:

1.Teacher: "Johnny, take the square root of 16, add 6, and divide by 2." Johnny pauses reflectively for a moment, then says: "5."

2. Game show host: "The fourth planet from the sun; from its name, you might think it was made of candy." Contestant: "What is Mars?"

3. Politician, in a speech to his supporters: "It is said that if you have politics in your blood, the only thing that can ever replace it is formaldehyde."

Audience: laughs.

4. Baseball game; team at bat has a runner on first base with no outs.

Manager: signals the batter to bunt.

In the mainstream cognitive view, when one considers everyday phenomena such as these, it is abundantly clear that, if one were unable to understand the nature of what occurred in the cognitive processing of these four individuals, one simply could not understand how, given the stimulus inputs, their respective behavioral outputs could have come about. One could not understand, for example, how one could conceivably get from the stimulus situation of the baseball manager observing a runner on first with no outs, to his or her behavioral response of signalling the batter to bunt. One could no more understand it than one could the relation between the input and output of a computer if one regarded it only as a "black box," as the now largely discredited and abandoned radical behaviorist program attempted to do.

The first task of cognitive psychology, then, is in essence the old one of discovering "how the mind works," conceived here as discovering the underlying mental processes behind such phenomena as remembering, reasoning, recognizing, and so forth. It is the task of discovering the "software"--the underlying mental algorithms or "programs," be they serial or parallel in nature, that explain the relationship between input (e.g.,

"Was item X on that list you memorized?) and output ("Yes, it was."). Since much of this processing is extremely rapid, automatic, and unobservable to either the cognizing individual or to the scientist, the method for answering these questions cannot be via the old and largely discredited method of introspection, but must be *inferential* in nature. This method is *experimental* and consists essentially in designing experiments where subjects are given certain inputs, mentally process these inputs in some way, and yield outputs. From the data so obtained, which is frequently average response times, the underlying nature of the mental program that produced the observed outcomes from the observed inputs may be inferred. The situation confronted by the cognitive psychologist, then, is highly analogous to what one would confront if one had to explain the inner workings of a computer or a robot--the algorithms contained in its software--but could not look inside the computer at the software itself, and so was forced to infer what was in there from the observed relations between observed input and observed output.

A second, highly related critical task of the broad field of cognitive science is that of understanding the "hardware." The task here is the neuroscientific one of determining the neurophysiological structures and processes involved when a person implements a cognitive task such as reasoning, remembering, or calculating. Such cognitive activities are believed to *supervene* on the physiological events (Kim, 1993). That is to say, the cognitive activity in question could not occur if the relevant neural events could not occur, and could not be the same as they are if those underlying events were different ones. Thus, for example, I would be unable to remember my automobile accident if the brain states necessary to do so had been prevented or impaired by the blow to my head sustained in the accident.

A Critique of the Underlying Micro Process Program

Let us begin here with our own hypothetical, one that for the moment we shall let stand proxy for a vast range of human cognitive phenomena. The example involves empirical phenomena that human beings can indubitably and even trivially accomplish. A high school mathemat-

ics teacher says to her class: "I want you all to square the number 25 in your head." She pauses a moment, then says, "Okay, who got 625 as your result?" Most of the class raise their hands. The teacher then says, "Someone tell me how you did it." Johnny: "Well, I multiplied 25 times 10, then doubled that to get 500. Then I multiplied 25 times 5 to get 125, added this to the 500, and got 625." Teacher: "Very good, Johnny, did anyone do it a different way?" Suzie: "Yes teacher, I used a shortcut where you take the first number, 2, square it, and then add it to itself to get 6, then tack on 25 to the end--625!" Teacher: "Very good, Suzie, did anyone do it yet a different way?" Joey: "Yeah, well, I thought of it as 25 x 5 x 5, so I multiplied 25 times 5, got 125, then multiplied that by 5, and got 625."

What these students describe can certainly be described as "cognitive processing." Each of them took the teacher's "input," performed operations on it, and on the basis of these operations generated "output." What can we say about the nature of these operations? What sort of account do the students give? Well, in effect, each is saying: "I engaged in a private version of a widely recognized shared social practice--doing mathematics--a social practice whose many logics and algorithms I learned in school. Everything that I did in solving this problem was a case of engaging in this practice--adding, multiplying, etc. So, at the end of the day, you could fairly say that *I was engaging in a private--'mental' if you will--version of a social practice*" (see Ossorio, 1978, for a thorough technical explication of the use or process descriptions for representing social practices in a scientifically useful way).

What else can we fairly say?

1. These explanations work very well. Each does quite a good job of describing how these students, given the teacher's "stimulus input," "processed" this input to bring about their respective correct "outputs."

2. The accounts are light years beyond the current state of the art micro-processes promulgated by cognitive psychology, all of which are putative underlying processes suitable for handling the likes of subjects who memorize 5 or 6 numbers and then have to identify "probe" items

as either present or absent from the memorized list--processes like "scanning," "searching" "filing", "retrieving," "storing," "encoding," "decoding," "spreading activation," and the like (cf. Jeffrey, 1998). None of these begins to approach a level of handling complexity that the simple explanations given above do.

3. The processes described here, far from being underlying, unconscious, unobservable, mysteries of nature, are already well understood (Jeffrey, 1998). We know a lot about them. Indeed, mathematics instructors in the students' school likely taught them the relevant algorithms. There is no presumptive reason to think that, when one discerns them, one has discovered something like "the architecture of the human mind" or "naturally occurring, underlying human cognitive algorithms" in the same way that, say, Darwin or Newton discovered something about the workings of the natural order.

4. In our hypothetical, we are able to *observe*. We do not need to infer the existence of something ineluctably hidden from view, much less speculate about what might have happened in the differential response times exhibited by Joey as opposed to Suzie.

5. The example illustrates a simple, easily observable fact. Many cognitive tasks are amenable to *multiple algorithms*. Clearly we see this all the time in everyday life. How can one get crosstown to store X? How can one capture the opponent's queen? How can the politiciancommunicate his or her desired message while skillfully evading the hostile implications of the reporter's question? Many different algorithms--many different "softwares"--will do the job.

6. Finally, building upon the previous point, it may be noted that, where uniformities of result are found (and here we shall give the benefit of the doubt to the proposition that data such as *average* response times can in fact yield such uniformities), these could easily be attributed to the creation of tasks that lend themselves readily to a single strategy. For example, a famous result indicates that, when subjects memorize a short list of very simple items such as 5 numbers, and are asked soon thereafter if a certain item was or was not on this list, they uniformly seem to

scan all of the items and not merely to scan until they reach the probe item (Sternberg, 1966). But, for example, suppose subjects were told to recite the prime numbers in order from small to large, or to determine the number of games in a single elimination athletic tournament involving 16 teams. It is likely that virtually all subjects would utilize the same relatively obvious strategies. But this would tell us nothing whatsoever about a uniformity in "nature's software."

Objection 1: This is Introspection and Folk Psychology, not Science

The objection. It may be objected that all of the considerations in the previous section amount to a collection of armchair arguments, folk psychological points, and introspective reports. Certainly, they do not document findings from carefully undertaken experimental studies. As such, they are not science, and indeed one might even contend that they are scientifically objectionable.

Reply. This objection amounts essentially to an argument from source, an argument of the form: "because it came from source X, it has no scientific legitimacy." But surely, source is irrelevant insofar as the *origin of scientific ideas* is considered. Kekule famously got his successful hypothesis for the structure of benzene from a dream. Einstein got many ideas from thought experiments about the implications of even highly fanciful events such as leaving earth riding a beam of light. Newton conjured up an ideal event, one that could never happen in the universe--an object moving indefinitely at constant velocity in a Euclidean straight line in a frictionless universe--and used this as an "ideal of natural order" (Toulmin, 1963), exceptions from which could be used to explain the motions of all actual physical objects.

Now of course it might be objected against this that Kekule, Einstein, and Newton subsequently had their ideas subjected to empirical test via scientific methods, and that I have not done so here. This is true (though only in a certain peculiar sense in Newton's case--see Toulmin, 1963). However, it must be asked in the present case why we would

conduct such tests since there seems nothing to be proved here. Could we reasonably doubt (a) that many persons can perform these and countless other mathematical operations mentally, (b) that the students' explanations work, (c) that their respective algorithms yield correct answers in the present instance, (d) that these algorithms are learned ones and not naturally occurring processes like, for example, a digestive or a circulatory process, or (e) that there is in fact more than one algorithm that solves this, as well as countless other human problems? Could one seriously undertake an experiment to verify any of these propositions? To do so would seem to border on the fatuous.

Moving from our specific hypothetical situation to a more general and actual level, it is instructive to consider how most expert systems programs are currently constructed (Jeffrey, 1998). In their construction, the experts--the oncologists, stock pickers, engineers, and so forth--are first asked how they make their respective judgments. These persons essentially lay out the logic of their thinking, *not in terms of putative micro-processes* such as "serial scanning" or "spreading activation," but in terms of the actual molar discriminations made and conclusions drawn ("this is what I look for to determine if a cancerous process exists..."). The attempt is then made to capture this molar logic in the form of a program for use by others. In other words, the attempt is made *to replicate the social practices*--the teachable, learnable, doable, observable activities--of medical diagnosis, of stock selection, or bridge construction (etc.) as implemented by an expert in that field (see, e.g., Jeffrey & Putman, 1983). While one might argue that this is technology, not science, and so cannot serve to make a scientific point, it is suggestive to note the indubitable truth that no expert system could conceivably be constructed from the hypothetical, unobservable micro-processes of contemporary cognitive psychology that could compete in predictive power with those designed in the present, far more social practice oriented, manner.

By way of final reply to the objection that this is not science, it may be reiterated that, however one might care to classify them (e.g., as "folk psychology" or "everyday, garden variety mathematical problem solving"), the students' explanations of their behavioral output work very well.

They provide successful accounts of how, given the teacher's input, they performed operations on this input and achieved correct answers. Since our standard scientific assumption is that, if any theory or explanation A is to supplant an existing one, B, theory A must meet the simple requirement that it *offers a better account of the empirical phenomena at issue* (Kuhn, 1970; Searle, 1984; Toulmin, 1963). To date, there is nothing in the cognitive micro-process literature that even approaches the adequacy of the students' explanations (cf., Clark [2001] and Fodor [1987] on the very considerable and currently unsurpassed predictive power of "folk psychology").

Objection 2: Cognitive Processes are Often Unobservable

The objection. Even if it be granted, in the hypothetical case of the mathematics students, that introspective reports were given that proved valid, clearly in countless other cases this is not and cannot be the case. It seems the rule and not the exception that people do not and cannot report how they process input to produce output. They cannot explain why they said "she performed well" rather than "she performed good," how precisely they "got" the speaker's joke, or how they remembered that the Maid of Orleans was Joan of Arc. They can only say, in the face of such achievements, that "I just did it...just remembered it...just understood it; I don't know how ." We can only conclude from such facts that many cognitive processes are unconscious, therefore unobservable, and therefore discoverable only through inferential procedures, preferably those associated with the scientific method.

Reply. First of all, we might note that the widely acknowledged unobservability of these putative cognitive processes constitutes a distinct scientific *disadvantage* for the mainstream underlying cognitive process program. That said, it is true that there are many human accomplishments where the most that persons can say is, "I don't know *how* I do (or remember or understand) that--I just do it." Some of these are cognitive and some not (e.g., few persons could report how they stand up from a seated position). It is further true that, while introspection might have

provided valid explanations in our hypothetical case, it cannot work in the cases just cited and in countless others, since nothing is in fact observed in such cases that could be reported.

However, while our hypothetical involved three students giving introspective reports (and we have already commented on this as a potentially valid source of information), *our point here was never one about the introspective method*. We freely grant that it may sometimes, as in the case of our three students, prove a source of valid description and explanation, and at other times prove not a possible source at all.

Our central point, rather, is one mentioned previously: what are termed "cognitive processes" are far more profitably viewed simply as *engagement in versions of social practices*. By way of a further example of this, consider the case cited of someone saying, in the context of an ongoing stream of conversation, that another person "performed *well."* Likely, the speaker never had any conscious thought about selecting this word. So here, one might conclude, we are left with two choices as explainers of this utterance.

First, we might adopt the mainstream underlying cognitive process point of view. Its claim at this historical juncture would have to be an IOU to the effect that there are underlying, unconscious cognitive micro-processes at work here, which must, given the current state of our scientific knowledge, be the subject of future scientific inquiry. These processes, given their in principle unobservability, can only be inferred, and inferred on the basis of theorizing about what must have happened during extremely brief intervals of time.

Our second option, which is not an IOU, is to take the following position. There is a long-established core human activity, namely speaking a language, that is an inextricable part of a vast range of human social practices such as negotiating differences, writing letters, giving speeches, telling jokes, and indeed, doing science. This activity, verbal behavior, is governed by syntactical, grammatical, and usage rules. Competent, well-schooled, socialized users of a language, through long practice and use, are extraordinarily adept at following these rules with great automacity and

rapidity. In the English language, one of these rules is that one ought to modify a verb with an adverb and not with an adjective. The reason our speaker said "well" was that she, possessing knowledge of this rule and the ability to follow it, simply did so. Indeed, linguistically competent persons are clearly and obviously capable of uttering long strings of words, in some cases for hours on end, very rapidly and with great correctness. That is a satisfactory, successful, and wholly non-mysterious account of why she said "well" (Ossorio, 1982; Jeffrey, 1998).

What of the example of someone "getting" a joke? Above, an example was described wherein a politician told the joke that "It has been said that, if you have politics in your blood, the only thing that can ever replace it is formaldehyde." This example documents an actual incident, one in which the joke was told at a political rally and was met with immediate and widespread laughter from the audience. Again, we can issue an IOU to the effect that cognitive psychology will one day provide a correct analyis of what must be the underlying, unconscious, unobservable "mindware" (Clark, 2001) processes involved in getting this joke and subsequently laughing. Or we can say, per Littmann's (1983) analysis and empirical study of the social practice of telling jokes, that what is involved in humor is a juxtaposition of a serious frame for something and a nonserious one, the appreciation of which is what allows a person to understand or "get" a joke. Here, the serious frame, "here is the only way, if you are caught up in politics, to rid yourself of this obsession," is suddenly juxtaposed with the nonserious one--you have to die! A further competence in this case would be that of understanding a metaphorical use of language--that "in the blood" stands as metaphor for an intense preoccupation. Again, the burden of proof is on the cognitive scientist to come up with a better explanation than this.

Examples could be multiplied ad infinitum. Our basic point, however, is that persons involved in cognitive activity may most profitably and intelligibly be understood as engaging in private versions of what are paradigmatically learned, public social practices, and as employing the countless well known rules, algorithms, customs, and so forth embodied in the different versions of these social practices.

Objection 3: But You Still Haven't Shown <u>How</u> We Can Do This!

The objection. The author of this paper contends that people are competent to do such things as utilize mathematical and grammatical rules, employ and understand humor, reply tactfully to other persons' queries, and so on. In general, they are able to exhibit rather complex and molar behavioral phenomena rather skillfully, rapidly, and often automatically. And the claim is that they are able to do so because, through their socialization, they have acquired an understanding of, and an ability to participate in, these social practices. Well, granted that observationally people are able to do so, but what the author has not really addressed is the question of *how* they do so -- of how this is possible? Both we mainstream cognitive theorists and the author grant that biological events transpire in the case of all human actions. We are not at odds here. But, on his description, it is as if persons, because they have been socialized in a culture, have gone to school, have learned a language, and so forth, can somehow produce these amazingly complex feats without benefit of some more microscopic cognitive processes. It is as if the computer could square the 7 digit number without first engaging in the micro-level, Turing-computable operations specified in its software--converting Arabic numbers to 1s and 0s, implementing a step-by-step algorithm for the operation "multiply," and so forth. It is these sorts of micro processes that we as cognitive psychologists are trying to discover at the present, admittedly early, historical point in our science. What you suggest, however, would seem to border on the magical--"Voila! The 7 digit number has been squared. Joan of Arc has been identified as the 'Maid of Orleans.' The joke has been gotten. No further questions please."

Reply. While this may have seemed the present position, it is not in fact so. Again, let us return to our example of the students squaring 25. Each of these students, in outlining his or her solution strategy, specified a series of simple steps. For example, Suzie stated that she first separated out the 2, then squared it, then added it to itself, then tacked 25 onto the result. Her final answer, though the whole episode may have taken but a few seconds, was the result of a series of "micro" steps, and could not

have taken the form that it did had any of these been different. It is true, however, that these simple achievements were not analyzed into more molecular cognitive processes. Per Wittgenstein (1953), explanation (or description) must come to an end somewhere, and in the present analysis it comes to an end with these simple *achievements*, and not with any *processes* that might be decomposed further into subprocesses (cf. Ossorio,1982b; Jeffrey, 1998). When Suzie or I "just know" that 2 x 2 = 4, that 4 + 2 = 6, and so forth, no process is observed, but only what could be called an "event" that is also in this case an "achievement" (e.g., I recognize that the answer is 4). Similarly, in our case of the person getting the political joke, clearly the observed result, that of understanding the joke and laughing, could not have occurred in any given instance if, along the way in the telling of the joke, a listener did not recognize that "in the blood" is a metaphor for obsession, that formaldehyde is what undertakers use to preserve cadavers, and so forth.

Thus, there is no denial in the present position of more simple achievements, and certainly no claim that a human being could do anything comparable to squaring a 7 digit number without benefit of mental achievements and acts of a simpler nature. The complex includes, requires, and may be decomposed into the simple, although when one stops to observe what actually happens, the speed with which the complex is achieved by humans can seem stunning indeed. This is true both for normal persons composing sentences or getting a joke, or for geniuses and idiot savants capable of solving complex mathematical problems in mere seconds.

At this point, then, what divides the present, Descriptive Psychologically based, social practice position from the mainstream underlying process approach? Both camps acknowledge that biological states of affairs must obtain for any person to do these things (Ossorio, 1982a), and both agree that complex human mental acts may be decomposed into simpler mental accomplishments (Jeffrey, 1998). The issue becomes one, then, of where one is to draw the line; i.e., of what are to be the ultimate "simples" or "logical atoms" here. On the present view, it is those cases in which the person might be said to "simply know or remember or understand"--

where the person knows "right off" what his name is, that 2 + 2 = 4, that he should say "well" rather than "good," or that the word printed on the page is "butter." Where cognitive psychology would go further and ask, "what underlying processes must be involved in his remembering or knowing or recognizing such things?", we are inclined to stop here at this level of simple achievement (Ossorio,1982b; Jeffrey, 1998). The whole project of trying, on the basis often of no more than what might have happened in the milliseconds between input and output, to claim that an inherently unobservable, unconscious encoding or scanning or spreading activation process must have occurred, and that that process must be a unique, universal one illuminating "how the human mind works," seems to yield little of value. It seems only to be taking what are demonstrably *achievements* (the subject remembered X or recognized Y or calculated Z) and trying to make them into *processes* (Jeffrey, 1998). It seems only to be saying, "We suspect, but cannot observe or demonstrate, that even finer grain mental processes are really happening deep down behind these basic achievements." It seems only an exercise consisting in positing things we already know people do in appropriate circumstances--search and scan and file--to exist in analogical micro-versions occurring at an unobservable level. Is anything gained from such speculation? Anything universal? Anything about "how nature works" or "how the mind works?" Anything that can be used in expert systems or in educational, therapeutic, or other applications (Jeffrey, 1998)? If we accept cognitive psychology's ultimate "atoms," the underlying micro-processes, must we then decompose these into "quarks," and if so, where ought we to stop if we are to avoid infinite regress?

Objection 4: Only Micro-processes Can Link Biology and Cognition

Pursuing the previous objection further. In the objection stated in the previous section, the example of Turing-computable processes was mentioned. In the functioning of a computer, one of the things such processes accomplish is the linking of software and hardware operations. One might say (albeit arguably) that the "mind-body" connection--the

"missing link" between mind and body in the case of computers--is established here in intelligible form. The Arabic number problem "4 + 11 = ?" is entered into the computer, the software then directs physical operations wherein these Arabic numbers are converted to 1's and 0's (or "ons" and "offs"), an algorithm for the operation "add" is implemented, the result is converted back to an Arabic number, and this number is displayed as output. The dream of many cognitive scientists (see, for example, Clark, 2001) is to someday possess a comparable understanding of human brain-behavior relations: What precisely and in detail happened in Suzie's brain when she was given that mathematical input--what biological and algorithmic software operations--to permit her to come up with her output? This dream seems to beg for further, very fine grain descriptions of cognitive micro-processes, analogous to those in Turing computable programs, than the author of this paper allows.

Reply. While this objection might be considered from a number of vantage points (see, eg., Ossorio, 1982a), I shall consider it here within the traditional scientific outlook in which it is conceived. Looked at from this vantage point, and going back again to the previous objection, it can indeed seem magical to say that, "Well, of course, biological events transpired in Suzie when she added 2 plus 2 to get 4, and she 'just knew' that that was the answer, but there is nothing of value to say about what occurred at a more molecular cognitive level *to link* the biological and psychological levels." Here is where "brain meets mind," where we go from propositions like "brain processes X, Y, and Z occurred in Suzie" to ones like "Suzie mentally calculated the correct answer." And, despite centuries of difficulty, we are inclined to say that surely modern science can and will tell us more about this mind-body connection business.

However, at the present historical juncture, science has *not* answered this question; it remains a mystery (Chalmers, 1996; Clark, 2001; McGinn, 1999, 2003). Virtually everyone agrees that, in the totality of any given cognitive event, events of a "brain sort" occur--synaptic transmissions, action potentials, and the like. And virtually everyone agrees that events of a "mental sort" occur--Suzie calculates the answer "in her head" and the like. And, we know more and more about what physiological processes

empirically co-occur with cognitive activities, with raw feels, and with consciousness itself (Clark, 2001). However, to date, no one has jumped what Levine (1983) has termed the "explanatory gap" here--no one has solved the perennial problem of the mind-body relationship (Chalmers, 1996; Clark, 2001; McGinn, 1999, 2003). No one has successfully described a sequence analogous to the Turing computation one above wherein all of the hardware and software operations from input to output are seamlessly specified and linked.

That said, perhaps the first thing to note is that the cognitive psychologist who utters propositions like, "the subject, faced with the probe, reviewed all the memorized items," is surely no closer to linking the biological with the cognitive than one who says "Suzie just knew that 2+2 equals 4." Involved in the first utterance, by inference, are implications like "the subject *just knew* that the second item on the memorized list was 23." The gap remains.

The term we have for such gaps is "strong emergence" That is to say, we have a situation in which, when matter or energy become configured in certain ways, new properties emerge that are not explicable in terms of the individual elements comprising the totality (Broad, 1925; Kim, 1999; Teller, 1992). Emergent phenomena, far from being rare, are encountered all over nature and all over science. Quarks and atoms do not possess properties such as life, self-replication, consciousness, emotionality, motivation, understanding, belief, or memory. But, when when trillions of them become configured in certain ways--as amoebas or frogs or homo sapiens--such properties are exhibited by the individuals so configured (McGinn, 1999). And while from time to time reductive explanations prove fruitful (Searle, 1984), the overwhelmingly common state of affairs is that we are left in such circumstances to say, "that's just how things are; when matter becomes configured this way, you get these properties; *why or how* you get them we do not know (Chalmers, 1996; Clark, 2001).

It is no different in the present instance. And, since we have an explanatory impasse for both the believers in cognitive micro-processes

and for those who would work at the level of social practices, the choice would seem to come down to what on *other scientific grounds* proves superior. And that, for reasons I believe I have already demonstrated, is the social practice point of view. That is to say, observable, intelligible, rule-governed, well-understood human behavioral patterns such as those involved in solving mathematical or logic problems, playing chess, or uttering grammatically and semantically correct sentences are to be preferred scientifically to inherently unobservable, unconscious, inferred, and often metaphorically labelled micro-processes. Finally, while space does not permit discussion of the matter here, Jeffrey (1998) has argued convincingly that, on *pragmatic grounds,* the social practice approach to human cognitive possesses distinct advantages over the mainstream view in applied enterprises such as expert systems design, education, and the remediation of cognitive deficits suffered by individuals.

A Note on the Cognitive Neuroscience Project

On the present view, as well as on the mainstream cognitive science view, there is a basic assumption that the mental supervenes on the physical. That is to say, for any given cognitive activity such as squaring numbers in one's head, having a daydream, or obsessing about being contaminated by germs, the activity in question could not occur if the relevant neurophysiological events could not occur, and could not have been precisely the same had those events been different (Kim, 1993). At present, a large body of scientific evidence supports the contentions (a) that damage or alterations to certain brain sites results in impairments in certain types of cognitive functions such as memorial and computational ones (Bickle & Mandik, 2002), and (b) that different mental activities are accompanied by activities in different parts of the brain (Bechtel & Mundale, 1999; Bickle & Mandik, 2002). Thus, both for reasons pertaining to the pure scientific understanding of that part of nature which is the brain, and for those pertaining to the finding of cures for diseases such as Alzheimers, Parkinsons, and many more, the cognitive neuroscience project is of the utmost value.

That said, on the current view, it is critical that the findings of cogni-

tive neuroscience be *understood in a certain way*...namely, that biological events are related to cognitive ones, not as "the correct scientific account of what is *really* happening when persons cognize," but as *part to whole*. While comprehensive argumentation to this effect is beyond the scope of this chapter (but see Ossorio, 1978, 1982a; Bergner, 2005), a few brief reminders are in order.

It was stated above that the mental supervenes on the physical. What is equally true is that the physical supervenes on the mental. That is to say, going back to our young students squaring 25, if it were not the case that Suzie squared 25--had she instead looked out the window and daydreamed when her teacher gave the problem--it would not be the case that the same processes occurred in her brain (Bechtel & Mundale, 1999; Bickle & Mandik, 2002). Further, looking more extensively into what is involved Suzie's behavior, had there not been an existing human social practice known as mathematics, and within it such elements as whole numbers and such operations as adding and multiplying, and if Suzie had not possessed the requisite knowledge and competency in these matters, it also could not have been the case that said brain processes would have occurred. Now, realities such as mathematics and Suzie's knowledge and competence are not themselves physical realities. Unlike stones and chairs and billiard balls, they do not meet the criteria or "assertability conditions" (Kripke, 1982) for physical realities such as the possession of properties like mass, spatial location, length, width, height, velocity, charge, and so forth (Bergner, 2005). Notwithstanding, we would be loathe to say of any ot them that they are fictional, illusory, imaginary, or in any other sense *unreal*. Finally, operations such as squaring 25 are multiply realizable on countless physical systems and via many algorithms and so cannot be identified with any single physical pattern of happenings. Any behavior--here, Suzie's squaring of 25--is a complex state of affairs encompassing many constitutive states of affairs, only some of which are physical states of affairs: persons making discriminations, attempting to bring about some outcome, utilizing certain competencies, bringing various physical states of affairs into play (from molar ones such as arm motions to molecular ones such as synaptic events), and more (Ossorio,

1981; 1982a; 1995). Understood top down, we observe this totality, we observe the various elements comprising it, and we understand that all sorts of relations such as supervenience may obtain between these elements. And, given such facts as multiple realizability and the nonphysical character of most of them, we realize that we cannot reduce the mental aspects to the physical ones, but must conclude that the physiological is but one aspect of behavior. It is related to behavior, not as "what's actually happening," but as part to whole (for extensive argumentation to this effect, see Ossorio, 1978; and Bergner, 2005).

Conclusion

In this paper, a point of view has been presented which maintains that cognitive processes are best viewed as private or mental versions of human social practices. When Suzie calculates a product, or Johnny utters a grammatically correct sentence, or Mary decides her next chess move, or Peter concludes that his child should be sent to his room, all are engaging in some version of some stage in the enactment of some social practice. The advantages, both scientifically and pragmatically, in understanding cognitive processes in this way are that such practices are observable, are well understood, and tap into a vast background of knowledge concerning intelligible human behavioral patterns. As such, they are to be preferred to inferred, inherently unobservable, unconscious, and often metaphorical micro-processes whose very existence rests on weak evidential grounds.

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Toward a Rapprochement of Religion and Science

H. Paul Zeiger

Ev'ry gambler knows that the secret to survivin'
Is knowin' what to throw away
And knowin' what to keep
Kenny Rogers, "The Gambler"

Abstract

In this article we will explore the domains of religion and science as areas of human activity and understanding. Where are they independent of each other? Where do they overlap, with the resulting opportunity for conflict? How might this conflict, when it occurs, be most productively dealt with, e.g. in ways that benefit both religion and science? The article begins with several currently popular viewpoints on the relationship between religion and science, all mutually (and dramatically) inconsistent. The next major goal will be to make it comprehensible that people living on the same planet could hold all these views, and to do it without putting down the holders of any of those views. Reaching this goal will be facilitated by the resources of Descriptive Psychology (DP), so the exposition will detour through a sketch of what DP is and why it is useful for the task at hand. With the above analysis in hand, the limits of religious pluralism and the overlaps between religion and science will be explored. I hope to convince the reader that (a) the apparent conflict between religion and science, as represented in the popular press, is less serious than might be imagined at first glance, and (b) some of the perceived problems boil down to finding

the protocols necessary for co-existing in an atmosphere of religious pluralism -- a problem that stands before us independent of any collisions between religion and science. The article will end with what I believe to be the bottom lines for what scientists and religious people must throw away in order for productive dialog to occur, and what they must keep to maintain their integrity .

Toward a Rapprochement of Religion and Science

I recently read a book review (Gopen, 2001) in which Dobzhansky's *Genetics and the Origin of the Species* (1937) and Schrodinger's *What is Life? The Physical Aspect of the living Cell* (1944) were put forward as examples of works that succeeded in leading scientists from warring camps to an appreciation and ultimately use of each others' methods. I would be delighted if someone would write a book that did the same for science and religion. However, in the wake of a failed attempt by Steven Jay Gould (1999) and a spectacularly failed attempt by E. O. Wilson (1998), I do not believe that the current states of either science or religion are ready for such a book. I do, however, think that some of the obstacles to such a book are ready to be breached, and that is my intention here (and the reason for "toward" in the title).

The last two books mentioned above were written with a popular audience in mind: so is this paper. Professional theologians and historians of religion concern themselves with finer points than those addressed here. I hope to convince the reader that (a) the apparent conflict between religion and science, as represented in the popular press, is less serious than might be imagined at first glance, and (b) some of the perceived problems boil down to finding the protocols necessary for co-existing in an atmosphere of religious pluralism -- a problem that stands before us independent of any collisions between religion and science.

Here is the program. To anchor the discussion in something real, I will sketch several currently popular viewpoints on the relationship be-

tween religion and science, all mutually (and dramatically) inconsistent. The next major goal will be to make it comprehensible that people living on the same planet could hold all these views, and to do it without putting down the holders of any of those views. Reaching this goal will be facilitated by the resources of Descriptive Psychology (DP), so the exposition will detour through a sketch of what DP is and why it is useful for the task at hand. Natural concerns about the neutrality and relevance of DP will arise for both scientists and religious people, so a section will be devoted to laying these to rest.

With the above (relatively value-free) analysis in hand, I will start putting some values back into the picture with the major goal of exploring the limits of religious pluralism (since this is a substantial political issue in the US these days). This will entail a brief discussion of some religious universals. The paper will end with what I believe to be the bottom lines for what scientists and religious people must throw away in order for productive dialog to occur, and what they must keep to maintain their integrity.

1. Five Positions

1.1 Hard Determinist

The essence of this position is that human beings are machines the motion of whose parts is determined entirely by deterministic (or probabilistic) physical laws, that free will is an illusion, and that the existence and sole value of religion -- as a set of beliefs and practices -- can be explained by its potential for enhancing survival. (Religion is just another product of persons as predetermined machines.) This position is well-explained in the chapters by Holbach (2002) and Honderich (2002) in *Reason and Responsibility* and by Richard Dawkins in *The Selfish Gene* (1998).

1.2 Naturalist

According to this view, pretty much everything that goes on in the world around us is determined by deterministic (or probabilistic) physical laws, but human beings somehow have freedom of choice and moral

responsibility. Furthermore this responsibility includes the crafting of religions to help them live good lives. Divine assistance in this crafting is excluded. These religions should take seriously the stories that science gives us concerning the origins of our universe and our species. (Religion and science are two of many important creations of freely responsible persons living in a natural world that includes them.). This position is put forward eloquently by Ursula Goodenough in *The Sacred Depths of Nature* (1998).

1.3 Non-Overlapping Magisteria

This position is taken in one book: *Rocks of Ages*, by Steven Jay Gould (1999). It holds that languages, concerns, and methods of religion and science are so disparate from each other that there is no possibility of either conflict or cooperation between them. (Religion and science are parallel and non-overlapping, totally different perspectives, neither of which trumps the other.) The main features of this separation will be discussed later.

1.4 Mainstream Western

I first heard this position given explicit description in a talk by Norbert Samuelson, a scholar of Judaism on the faculty of Arizona State University (Samuelson, 2001). He described it as the classical position taken by Judaism. I am identifying it as Mainstream Western because it seems to me nearest to consensus among Americans and Europeans. The ideas are: Much of the knowledge that is important to our behavior as moral human beings -- much of our guidance in right living -- does not come to us through science, but through other sources, including divine revelation, e.g. the Ten Commandments. The instruments of divine revelation are nevertheless fallible human beings. Science (and empirical methods in general) should be brought to bear as a check on the claims of those human beings. (Science provides a reality check on religion in the areas where their subjects do overlap, and may trump religious practice where there is a conflict.) Of course, this sort of check has been in operation for professional theologians for as long as theology has existed.

1.5 Fundamentalist

There are fundamentalists of many persuasions, but they have some characteristics in common. As source of the knowledge by which the fundamentalist lives, divine revelation, as preserved in scripture read literally, carries far heavier weight than the discoveries of science (or any other purely human process). Those discoveries are welcome as long as they do not conflict with scripture, but when they do, it is the discoveries of science and not the scripture that have to give way. (Scripture is the source of truth, and trumps science.) Furthermore some fundamentalists would redefine scientific method in such a way as to make their conclusions products of scientific method; more about this later.

2. What is Descriptive Psychology?

It would be possible to present all the arguments of this article without revealing the underlying logical resource that led me to many of them. But there is something to be gained by adding some length, and some exposition, in order to reveal portions of that resource. I hope that readers of this paper will be intrigued enough by the use of Descriptive Psychology here to look into some of its literature, and to use it in other contexts. Here is a teaser: The Descriptive Psychology maxims -- the basic rules for discourse among persons -- are presupposed by all philosophies. But each philosophy presupposes a great deal more, peculiar to itself, as well. Therefore Descriptive Psychology can provide a common basis for comparing philosophies.

Discussing philosophical positions as disparate as those listed above presents a substantial problem in finding a neutral place to stand. Professor Peter G. Ossorio (1966/1995) confronted a similar problem in the 1960s when comparing and contrasting available psychological theories. He found that each theory contained pre-empirical commitments that determined what would count as an empirical result, and which made the theory incommensurable empirically with other theories having different pre-empirical commitments. For example, Freudianism included concepts of id, ego, and superego as organizing principles for facts about human behavior, while Behaviorism started off with different basic con-

cepts -- stimulus-response, operant conditioning, etc. Ossorio's response to this situation was to separate the process of creating pre-empirical commitments from that of theorizing, and to create his own set of pre-empirical commitments, a sort of logical minimum, that would have to be presumed by *any* reasonable theory. These commitments took the form of "maxims", which look a little like mathematical axioms, but are better thought of as protocols or linguistic constraints on how we talk and write about human behavior (Ossorio, 1982/1998, Ossorio, 1971/1975/1978). For example, consider the very simple Maxim B2 from *Place* (Ossorio, 1982/1998): "If a person wants to do something, he has a reason to do it." This maxim constitutes a promise to provide some explanations ("reason") of behavior in terms of **motivations**("wants").

Descriptive Psychology (hereafter DP) refers to Ossorio's maxims, some related descriptive formats, and to the competence in using them that was developed by Ossorio, his students and colleagues, and scholars from disciplines where DP has been applied: computer science, applied linguistics, and theology. Part of Ossorio's genius was to see that the world and person's behavior was already coherent and that the task was making that coherence explicit and systematically related. In DP he accomplished this with the articulation of four fundamental concepts - *intentional action, individual persons, language*, and *the world* -all of which are essential for describing and understanding human behavior. In some respects, DP has the general flavor of common sense arranged in a tighter logical structure. I believe that this logical structure is tight enough for DP to play the same role for the social sciences that mathematics does for the physical sciences. DP is represented, albeit not very prominently, in the open literature. (Bergner, 1993, 1995; Shideler, 1985, 1988, 1992) I plan to use it here to give me that needed neutral place to stand in order to understand the five contrasting positions.

For the most part, I will not expound on DP, but simply use it. This is in line with the observation that protocols, in contrast with facts, are not eligible for truth value, but are valued according to their *usefulness*. Usually my use of DP will merge seamlessly into common sense arguments, but occasionally it will have a surprising impact. In those cases I

will offer an exposition or a pointer to the literature or both. The first of those expositions is coming up now.

Since the first priority for DP was the description of human behavior, it takes the words "person", "intention", "behavior", "significance", and many others, as logical primitives. They are not *defined* via simpler terms, but *articulated* by delineating their relationships to other terms, as wants and reasons are related in Maxim B2: "If a person wants to do something, he has a reason to do it." (Ossorio, 1982/1998). This is similar to how primitives are dealt with in symbolic logic, and it is the reason why maxims play a role similar to mathematical axioms. This approach may not sit well with the physical scientist, who is accustomed to different and much smaller sets of logical primitives, for example Euclid's axioms for plane geometry. But nothing is lost in descriptive power, since all the physical scientist's primitive concepts are in there too (Ossorio, 1971/1975/1978, pp 38 - 70) although not all of them may be primitive in DP, and they may hold a different place in the logical structure than the physical scientist was expecting. The advantage for this exposition, and for behavioral science in general, is that with DP many things can be described much more succinctly and informatively and in language much closer to the vernacular. And, more importantly, useful descriptions can be given that have no practical translation into the language of physical science at all.

2.1 What difference does DP make?

Most experimental psychologists and quite a few philosophers take an approach to the pre-empirical commitments of behavior description very different from DP. They take it that the only legitimate forms of explanation are those imported from neurophysiology, cognitive structures, and perhaps behaviorism. For them, concepts like intention and significance inhabit a kind of limbo where they await precise definition in neurophysiological terms. This pre-empirically commits them to determinism, since the only forms of explanation available to them are in terms of deterministic processes. And this leads to all kinds of debates about whether freedom of choice could exist and if so how. Arguments over pre-empirical commitments are far more difficult to settle than those over empirical

results (which are either verified or falsified): disputants have to consider the whole frameworks of commitments, and appraise their relative worth on pragmatic grounds.

DP provides an alternative that preserves the necessity of having some clear set of pre-empirical commitments delineating the range of possible empirical facts, while avoiding the downside of a pre-empirical commitment to determinism. It widens the window on what constitutes an explanation to include explanations in purely non-physical terms, as one would naturally use to explain why, in Shakespeare's *Othello*, Iago, passed over for promotion in Othello's army, went to such lengths to turn Othello against his wife Desdemona. At the same time, it places no obstacles in the way of empirical investigation of any correlations between neurophysical events and behaviors commonly described non-physically (intentions, emotions, ...). In fact, it may make such research better focused by relieving it of the load of suggesting pre-empirical commitments (to get the non-physical concepts out of limbo), and leaving it entirely empirical -- showing the measured correlation is consistent with an existing DP articulation of, say, an intention or an emotion. In any case, an important reason for using DP in this article is to avoid committing to reductionism and determinism pre-empirically.

2.2 What Reservations Might Scientists and Religious People have about Descriptive Psychology?

For scientists, a main concern might be that DP is so person-oriented, while science is supposed to focus on what is "out there" beyond the personal. A mild-mannered answer, for the purposes of this article, is that we are not so much concerned about the *content* of science, but with the interactions of what scientists do with what other people do, and for this, DP is entirely appropriate. A more aggressive answer is that conventional scientific language is deficient in resources for talking about persons as a subject matter, about scientists (as persons), and about scientific principles as human creations, while DP has plenty of resources for talking about not only persons, and scientists as a special case of persons, but also what is out there beyond the person .

Religious people may have a reservation similar to the scientists about the person-orientation of DP. In this case the reaction might be: "My religion is about God. I don't want the language used to be biased away from God and toward mere humans." The answer here is roughly the same: we are concerned in this article less with theology and more with the relationships between different communities; for this DP is well-suited. And here too there is a more aggressive possible answer: Everything that we know about God comes through persons of one sort or another, and our language for talking about the impact of that knowledge better be rich in descriptive resources for human behavior and for the characters of those persons. Furthermore, DP provides ways of talking that are informative, yet neutral with respect to the various religions (and science).

3. How Can The Five Contrasting Views Exist?

There is an old teaching story about five blind men who approached an elephant. One, who felt the trunk, reported that an elephant is like a large, strong, snake; the second, feeling the tail, reported that it was like a broom; the third, feeling a leg, said it was like the pillar of a temple, while the fourth, feeling the side contended that it was like a slightly curved wall, and the fifth, who felt a tusk, said the elephant was like a stout spear. The homely wisdom embodied in this story is that your appraisal of a phenomenon depends on the angle from which you approach it, your perspective on it. So perhaps an examination of differences in perspective might shed light on how those five views could be so disparate. And we might look at different perspectives on the two parties to the relationship, religion and science. We start by driving a stake into the ground regarding each of those parties.

3.1 What is Science?

DP, with its roots in the description of human behavior, gives an immediate first step: Science is what scientists do: propose theories, design and conduct experiments, analyze data, publish papers, review papers, teach students, supervise graduate studies, attend conferences, engage in scientific arguments, and so on. But for most of us, this answer leaves more to be said, something like "but what are they doing by doing all

those things?" That leads us to another concept from DP, the significance series. The significance of an action is a different action: the answer to: "What am I doing by doing that?". For example, I am sitting and typing at a keyboard, by doing that, I am writing an article on science and religion, by doing that I am trying to reach potential readers with some new ideas, and by doing that I am attempting to smooth the path toward a more productive dialog between science and religion. So what are scientists doing by doing all those things listed at the beginning of this paragraph? Some candidates for answers, like "seeking truth" fall short by being too narrow (excluding practices from the list above). Others, like "learning to predict and control more and more phenomena" fall short in some ways and cover too much in other ways -- e.g. the part of the domain of engineering, which is concerned with predicting and controlling practical matters of little interest to scientists as scientists .

My provisional proposal for what the scientists are doing is enhancing the collective knowledge and competence of the human race with respect to the natural world. I include competence as well as knowledge, because the advance of science produces not only knowledge embodied in books and papers, but laboratory procedures, ways of thinking about things, new approaches to problems, and many other items of competence embodied in scientists, technicians, and students. By "natural" I mean built up from the building blocks common in the scientific disciplines: quarks, electrons, protons, atoms, molecules, plasmas, chemical compounds, polymers, cells, branches leaves organs, ...

Now why "provisional"? Because I had to choose between a description that agreed with common usage (of both scientists and non-scientists) and one that included the behavioral sciences within science. I chose the former. The issue here is just that explored in section 2.1, where the first position described is the conventional one: behavioral science with pre-empirical commitments imported from neurophysiology, and the second position is science with DP as its pre-empirical base. The first position makes behavioral science unduly difficult (and a second-class citizen), the second avoids those problems but lacks consensus to say the least. I realize that in making this choice I am giving short shift

to the social sciences, especially history, but for the purpose of capturing the popular conception of science as it impacts religion, I think we can make do with this choice.

If I were to use the second position, I would instead propose that what the scientists are doing is enhancing the collective knowledge and competence of the human race with respect to the real world. Such a definition would include the social sciences. It would also force a perhaps lengthy discussion of the DP concept "real world". For now, note that our real world contains all the states of affairs graced with the status of scientific truth, plus a lot more states of affairs upon which we act without questioning them (Shideler, 1988, pp 135 - 148, Zeiger, 2004).

3.2 What is Religion?

Just as we did with science, we can here make some simple connections with human behavior that turn out to have substantial implications. Without trying to give a comprehensive definition of religion, we can make headway simply by looking at the place of religion in the worlds of religious people. Religion is what people do to deal with the ultimates in their lives: ultimate cause, ultimate inclusion (i.e. all there is), and especially ultimate significance: what they do to terminate the significance series described above. (Shideler, 1985, 1988, 1992). Religious behaviors include *appreciating* the grand scheme of things (and particular elements, including God, prophets, great beings, and other people); perceiving and celebrating one's place in that scheme, and recovering from degradations that may have damaged that place (confession and absolution, repentance, forgiveness, ...); finding guidance in right living; and finding support in coping with hard times. Please note that here I am proposing a working definition that attempts to catch the essence. Of course for many religious people there are many other considerations (such as dietary restrictions), but I would hold, along with Shideler (1985, 1988, 1992), that these considerations all derive from other considerations of higher significance.

3.3 A Closer Look at the Five positions

Now we are positioned to take a deeper look at the five positions. Lets start with the middle one: Non-Overlapping Magisteria. It is easy to see why there is a large area of non-overlap. In the American Heritage Dictionary (Second College Edition) "science" is defined as "The observation, identification, description, experimental investigation, and theoretical explanation of natural phenomena." The words and their corresponding concepts in this definition are close to everyday experience and non-controversial with two exceptions: what constitutes a legitimate experiment and what constitutes an explanation. Consider the concept of *explanation* in two kinds of contexts. On the one hand there is the physical science context, the context that physicists and chemists use when speaking professionally. Their language features certain kinds of objects, processes, events, and states of affairs, but not persons, intentions, communities, or significance. Explanation in such contexts typically has a reductionistic flavor: if you ask a physicist "why" you will get an elaboration of the laws of physics applied to the case at hand to imply that the observed behavior was the only one possible. Contexts of this sort are Newtonian Physics, Relativity, Quantum Theory, and Evolution.

On the other hand, there are contexts in which human behavior takes center stage, as in the worlds of the politician, the businessman, the playwright, and the clergyman. In these worlds, person, intention, community, and significance all play leading roles. If you ask a playwright "why" you will get an explanation involving intention, community, and values that elucidates the significance of a certain action in the life of a character. In these contexts, deterministic explanations are rare: no matter how tight a spot a person gets himself into there are almost always several moves still available to him. Behavioral worlds include the possibility of creation. Only persons are eligible to create, and persons include homo sapiens (if you are not a determinist) and God (if you are a theist). On the face of it, there is little connection between the two kinds of worlds, and there are even linguistic and conceptual dangers in confusing the two different approaches to answering "why".

Religion operates mostly in the behavioral worlds. *Science does not even have a concept of significance, so in the area of ultimate significance, a main concern of religions, religion has the field to itself.* Thus religion and science have nothing to say to one another: that's Non-Overlapping Magisteria -- first cut. Incidentally, **scientists** get to make their own choices regarding ultimate significance, just like the rest of us.

Now for the Hard Determinist position: for hard determinists, nothing is real unless it is built up from elementary particles. Concepts like intention and significance occupy a shadowy existence, embraced by the vernacular, but waiting in a kind of limbo for science to give them a characterization in terms of elementary particles. Existing vernacular definitions or articulations of these terms exist only in order to be replaced.

The Naturalist position is similar to the Hard Determinist except that the Naturalist's world starts from the Hard Determinist's world and makes some pre-empirical additions that include freedom of choice. Such an addition is spelled out in detail by Ossorio on the role of a person as Actor: (Ossorio, 1982/1998)

> • "His behavior is spontaneous; he does what comes naturally. (What he does is an expression of his character and is not directly problematic.)"
>
> • "His behavior is creative rather than reflective. His behavior and its products are a significant expression of himself and not merely a common or conventional response to a situation, though it may be that, too."
>
> • "His behavior is value-giving rather than value-finding. Creating the behavior involves creating a framework of interrelated statuses (and their corresponding values) of which mundane particulars are embodiments."
>
> • "His behavior is a before-the-fact phenomenon, since he creates it (he is not *finding out* what behavior he is engaged in -- he is *doing* it)." (pp.104-105)

This notion of person, common to all the positions except the Hard Determinist, includes the above commitments and with them the challenges of moral behavior. In other areas the Naturalist position retains the commitments of the Hard Determinist position regarding science and its empirical method as the ultimate arbiters of what is real.

The Mainstream Western position expands on the above two positions by admitting other knowledge, including that from divine revelation, to that from science and its empirical method. I will use here a distinction, made in everyday conversation and articulated in DP: true versus real. What is real for me is that which I am willing to act on, what is true for me is that which has been proven to me, or at least strongly enough supported, by adequate evidence. Both of these concepts vary with individual and culture, but there are two anchors for commonality: Science has very well agreed-upon standards for truth, even across cultures, and everyday language presumes, and DP articulates, there is one real world out there, regardless of how different our individual perspectives on it may be. The conceptual distinction between true and real is very important, and beyond the scope of this article, but we do need to go into one aspect of this distinction.

In DP, the concept of knowledge is carefully articulated to avoid any commitments with respect to its sources: science, divine revelation, or something else. In fact Ossorio observes that evidence is <u>not</u> marshaled in most of our judgments of what is real; the point is important, and I quote at length from Ossorio, 1982/1998:

(Maxim) A8 --A person takes it that things are as they seem unless he has reason enough to think otherwise.

> "P takes it that X" is an evaluatively non-committal form of locution. It is applicable in cases where we ordinarily say "P knows that X" or "P believes that X" or "P has a gut-level feeling that X" or "P has the mistaken conviction that X" or "P perceives that X" or "P supposes that X," and so on very nearly ad infinitum. All of these normal ways of talking reflect an appraisal of P's assigning X the status of being the case. In

contrast, "P takes it that X" reflects no such appraisal. Specifically, nothing about the basis or the legitimacy of the status assignment is implied.

Without this principle or an equivalent one, knowledge, even of the most ordinary sort, would be impossible. There is potentially an infinite regress problem here. Suppose that I always need an extra something in addition to how things seem in order to conclude legitimately that things are as they seem. Presumably that extra something would be in the nature of proof, additional evidence, a successful test, or something of this general sort; since it doesn't matter what the extra something is, let us call it, simply, "X." On a given occasion, then, it will not suffice that there seems to be a telephone on my desk. Rather, I will need an instance, XI, of that extra something, to give me the assurance that things *are* as they seem and there Z's a telephone on my desk. But then, I will have to admit that it only *seems* to be the case that I have XI, and I shall now need a new instance of X, call it X2, to give me the assurance that I really do have XI. But then, with respect to X2, I will have to admit that it only *seems* to be the case that I have X2, and I shall now need a new instance of X) call it X3, to give me the assurance that I really do have X2. However, with respect to X3, I will have to admit that it only *seems* to be the case that I have X3, and I shall now need....

Methodologically, one of the major consequences of this principle is that neither the intractable foundation problems which beset *dolce academica* nor the corresponding problems of skepticism are generated within Descriptive Psychology. Formulating this principle represents a refusal to deny, as philosophical and psychological theories often do, implicitly or explicitly, that knowledge is possible for persons and that the acquisition, testing, integration, and use of information by persons is a finite task which, paradigmatically, can be accomplished by persons. It does not, of course, offer any assurance that any

> given thing that we take to be the case actually is the case.
>
> Psychologically, a major implication is that the boundary condition (not foundation) for knowledge is competence, not some peculiar knowledge such as the indubitable deliverances of Experience or of Revelation or Intuition. How things seem to me will be an expression of my competence, and this will be the case whether it is the original matter at hand, some test or evidence, or a final review that is in question. At all points, what I take to be the case is governed by competence. And, of course, what qualifies as reason enough to reject or question an initial impression will be a matter of competence and other personal characteristics. (pp. 29-30)

So much for "real". Regarding truth, it is worth noting that scientists constitute a very truth-oriented community, and its standards for truth are quite uniform across cultures and highly respected by other communities. It has not, however, entirely cornered the market on standards for truth: There are competing standards in at least the legal and political arenas.

And that brings us to the Fundamentalist position. It is like the Mainstream Western position except that it gives scientific truth a lower ranking, and scripture a higher ranking, in determining ultimate truth. (It remains in the cases of these last two positions to explain, in the light of the third--Non-Overlapping Magisteria--position, how the claims of religion and science could ever be enough about the same things to either agree or disagree. This will be taken up in the next section.)

To summarize: Five mutually inconsistent positions about the relationship of religion and science have been outlined, and the differences between them have been shown to lie almost entirely in the realm of pre-empirical commitments. *Thus we cannot expect arguments among these positions to be settled by any empirical discoveries, since the significant differences all lie in the area of what counts as empirical in the first place.* Differences among sets of pre-empirical commitments are critiqued on criteria other than experiment, namely utility and consistency.

3.4 Where Are the Clear Areas of Overlap and Non-Overlap of Science and Religion?

So where might we look for ways of resolving differences among these positions? Recall that pre-empirical commitments are like protocols: diplomatic protocols, business protocols, communication protocols. Protocols are supposed to give people of differing perspectives some ground rules under which they can interact safely and productively. Protocols can be critiqued on at least the two bases of consistency and utility. An inconsistent protocol clearly has something wrong with it, and, all others things being equal, the more useful of two competing protocols is to be preferred.

Let's start with position 3, Non-Overlapping Magisteria. For all its usefulness in pointing out the ways in which science and religion are independent of each other, this position goes too far. In the DP articulation of the common sense concept of person, the person has a body. (And the person has lots of other things, like a history of intentional actions, intentions, knowledge, competence, person characteristics, etc. DP remains neutral on the question of whether all these other things can be mapped into states of affairs in the body.) That body is subject to natural law, which places many constraints on intentional actions, including religious practices. We cannot flap our arms and fly to the moon, or even levitate, so those actions are not eligible to be religious practices. Physical constraints on the body provide a rich source of overlap between religion and science. Another source comes from critiquing the consistency of religious practices in the light of scientific discovery. For example, the moral teachings of most religions prohibit killing people. But what if some originally accepted religious practice is shown by scientific discovery to kill people? This happened to the indigenous people of Borneo, whose ritual eating of the brains of their dead spread Kuru, a fatal disease. In the face of this evidence, they replaced the religious practice with something less lethal.

So the magisteria overlap after all, DP provides a protocol in which facts from both science and religion can interact, and it is possible to

use scientific inquiry to test the reasonableness of religious stances, as anticipated by the Mainstream Western position. But there are limits to this interaction set by the fact that (physical) science has no concepts of intention, significance, etc., and hence nothing **ultimately** to say about religious principles. I like to put it this way:

*Science cannot be used to **generate** moral or religious principles, but it can be used to **critique** sets of moral or religious principles with respect to:*

- Feasibility for human bodies as currently understood, and
- Consistency of the principles with each other, and
- Costs and benefits of groups of people acting by the principles.

This observation has some consequences: The Naturalists have no **source** for, say, moral principles within their own domain, but they can astutely appraise principles imported from traditional religions. (For a beautiful example of this, see Goodenough and Woodruff, 2001) The critiques generated via science come down to appraising religious principles with respect to other religious principles, never on an absolute basis. For example, any critique, with an absolute moral conclusion, of a conventional religion by a Hard Determinist must be grounded in some accepted principle from outside the domain of the Hard Determinist.

The above considerations might give some comfort to religious people: when pressed by some argument from the sciences, they could always respond by asking what moral or religious principle from outside science grounds the argument. This, though, is hardly ever enough for the Fundamentalists: they look to scripture for facts from the material world and natural history that others are happy to leave in the realm of science. This is a case of relativism of worlds: what is real in the world of the Fundamentalist is different from what is real in the world of the Naturalist. And the differences are not to be resolved empirically because they originate in different notions of what qualifies as empirical. The Fundamentalists are not alone: what is real in the worlds of politics and jurisprudence also differ from what is real in the world of science. *These differences are not to*

be settled by the pursuit of truth, but by public negotiation and bargaining. That brings us to the next topic.

4. Where Do the Limits on Religious Pluralism Lie?

Early in the history of the USA, the founding fathers made, after much hot debate, the decision to avoid a state religion and to provide as much latitude as possible for each citizen to participate in the religion of his or her choice (Gaustad, 1993). There were dissenters to this decision at the time who did not believe that this degree of separation of church and state was possible or desirable, and there are many countries today following the same path as those dissenters. Nevertheless the USA has been fairly successful in the separation of church and state, even as boundary disputes continue over creationism, school prayer, polygamy, and the teaching of moral principles. What can the methods of this article bring to the respectful conduct of those boundary disputes?

4.1 There Definitely Are Some Limits

To my knowledge, no religion practiced today is permitted rituals involving human sacrifice. It is generally accepted that the state can impose ground rules necessary for people to live together in the same political entity and conduct peaceable relationships with one another. In this case the rules of the state take precedence by constraining the range of religious practices available (Lubuguin, 1998). On the other hand, since one's religion is about ultimates, for the individual, religious moral considerations trump the dictates of the state. This point was made eloquently by Mahatma Ghandi in his practice of nonviolent resistance. This involved disobeying unjust laws while hewing to his principle of nonviolence by submitting to the state's punishment for the disobedience (a delicate balancing act, rarely achieved since Ghandi).

4.2 The Role of the State

For a multi-cultural, multi-religious society, the findings of science are an important anchor because they represent the most culture-free large body of fact and practice available. Now any society needs some laws regulating the interaction of its members, and these laws have the gen-

eral form of moral principles. But by the argument made here, science is powerless to create moral laws; it can only critique those that come from somewhere else, and one obvious somewhere else is the world's religions. So it would be helpful to the multi-religious state if there were a core of moral principles common to all religions. With this core as the fulcrum and the lever of science, a legal system might be created or elaborated.

4.3 Some Religious Universals

There is some hope for such a program. If we look at what distinguishes the religions, three parameters stand out: their choice principles (morals), practices (prayer, contemplation worship, etc.), and stories. The greatest variation from religion to religion is in the stories, and these are of the least (but not zero) consequence to the laws of the land. Furthermore, a good story is often smoothly portable from religion to religion; I have heard one of my favorites from the Hindu Mahabharata told in Christian guise from a Christian pulpit. The next greatest variation is in the practices, and these impinge to some degree on the laws of the land (in choice of holidays, what can happen in private versus in public, etc.) but this impingement has been successfully worked around by many societies. The place of greatest overlap with the laws of the land, morals, is also the area of greatest agreement across religions. It is also the area where disagreements, when they occur at all, are the most hard-fought: consider abortion, gay marriage, etc. And this is where we see the greatest differences in the laws of the land between principalities having different religious compositions.

The state has a stake in morality. Murder, cheating, stealing, lying, all interfere with the smooth operation of the state, so the law of the land, in agreement with the major religions, prohibits them. But the multi-religious state faces a delicate tradeoff: the more morality embodied in the law of the land, the smoother the operation of society, but also the narrower the range of religions that are going to be welcome. As you expand beyond the small core of agreed-upon morals, the more variation among religions you run into. Thus lively debate is to be expected among the various religions concerning whose moral principles are to play what role

in the law of the land. And although science may be brought into play in such debates to critique different religious positions, as already discussed, these battles are never between science and religion, but between different religious or moral positions, with science appearing as an expert witness.

For example, the political scientist Sandy Muir (2001) has pointed out that a critical element in the functioning of the state is the limiting of the coercive power of individuals and groups. When these limits are absent or weak, you have the situation of remote California towns during the gold rush, inner cities today, and rural Afghanistan over most of its recent history. Muir pointed out the vicious cycles by which unbridled coercion reduces the humanity (in DP *behavior potential*) of both victims and perpetrators. Thus the rules necessary to restrain coercion are attractive candidates as part of a core from which to build up the law of the land, especially since these laws are implied by the ethical principles of many religions.

5. Value Judgments Regarding Religion (and Science)

The state also has a stake in the enhancing the collective knowledge and competence of its citizens with respect to the natural world, and therefore science is an important component of universal education. But some religious people have contended that science as taught in the schools, especially evolution, constitutes a state religion. What of this? Could science legitimately be construed as a form of religion? On the one hand science does consider <u>some</u> ultimates and totalities: ultimate cause, totality of the physical universe. Cosmologists, for example, are eager to take their calculations closer and closer to the big bang. On the other hand, approaching an ultimate while remaining within the regress is qualitatively different from ending the regress (Shideler, 1985, pp301-302). Evolution addresses the place of human bodies among the other creatures of the physical world. But then what about other ultimates: ultimate responsibility, ultimate significance, ultimate love? or the totalities of feelings and emotions? Religions are rightly expected to address these, and science doesn't. Religions have huge bodies of stories featuring fascinating moral dilemmas and exciting emotional challenges: science has

few of these. And as pointed out before, science does not generate moral principles, it can only be used to critique them. Anyone faced with an apparent impact of science on religion, whether in favor of the impact, as many Naturalists are, or opposed, as many Fundamentalists are, needs to dissect the logic of the apparent impact very carefully to determine what facts and relationships science is bringing to the table, and what parts of the picture are logically independent of anything science could possibly contribute.

Still, many people feel their religious freedom crowded by the science taught in schools. Part of this feeling may spring from a mistaken notion that the theory of evolution has moral implications. There was an effort a while back to draw moral principles out of evolution ("Social Darwinism") based on the premise that what our bodies are wired up to do is what we ought to do. But it foundered on the fact the we often had best not do what any particular (biological) theory says. Indeed, a large part of many conventional moralities is about when to go against the inclines of the flesh. Science has brought to this discussion information about the costs and benefits of going with or against the inclinations of the flesh, and that is an important part of its role as critical tool in hammering out moral and legal principles.

More of the contention against evolution in the schools, I think, comes from a desire to protect the stories of some religions. The position of the contenders is: "We have a perfectly good story about the origins of the human race and we don't want anybody else messing with it." Other citizens may not care much about which stories are true, but are sensitive to the rights of minorities to believe as they please. Here and in many similar situations there is a need for real public debate. Again, science is not one of the contenders: the contenders on one side are people in the Naturalist or Mainstream Western positions who accept science as a critical tool in appraising religious and moral principles, and the contenders on the other side are those who feel that treating their religious stories as historically critiquable or metaphorical is giving away the farm -- the certainty of literal scripture.

I want to be careful not to underestimate the importance of stories in the world of persons and their ways. Stories present to the listener a community's world, with special emphasis on values and choice principles. In this educational role they complement science, which does not speak to those things. Stories can also aid persons in developing competence in practices in which they have little opportunity to engage directly--losing themselves in the story can allow them to practice vicariously. Stories also speak to the significance of the actions of their characters, and encourage the listener to contemplate that significance. Given these important functions, it is not surprising that religious people might be resentful of scientists, especially cosmologists and historians, coming around and messing with their stories. I have three suggestions for reducing this tension:

For scientists: Treat people's stories with more respect: not just as myths to be explained or debunked, but as important social and educational resources that are separate from, and complementary to, science.

For religious people: Take a hard look at how relevant to their role in your community is the historical accuracy of your stories: it may not be particularly relevant. Presumably this advice will be anathema to fundamentalists but at least worthy of consideration to all others.

For both sides: Consider appraising stories for more than one kind of truth. Historical truth = closeness of correspondence with what actually happened as best we can figure it out; cultural truth = represents accurately and engagingly the values, choice principles, or practices of a culture. For assessing historical truth, you need some kind of scientist (historian, geologist, paleontologist, etc.). For assessing cultural truth, you need a wise person of the culture (statesman, religious leader, etc.). Achieving cultural truth with respect to the community of all persons generally earns a writer high regard--consider Shakespeare.

Much of the unproductiveness of the debates about what is being taught in the schools stems from the inexperience of the combatants with negotiating over conflicting sets of pre-empirical commitments as contrasted with determining what is true. A good slogan is: *Confront the*

political issues head on, don't try to hide behind science. For example, Creationists have argued for the presentation of Creation Science with equal status alongside Evolution in the schools. If both were theories vying for empirical support, this might make some sense. But they are both sets of pre-empirical protocols that create the frameworks inside of which the facts are to fit. As protocols for holding facts, they are analogous to languages, and asking the schools to explain natural history in both Evolution and Creation Science terms is roughly analogous to asking them to explain chemistry in both English and Vietnamese: not crazy, but subject to vigorous political debate. And this debate rests not on evidence of truth or falsity, but on the relative populations and statuses of the different linguistic communities, and upon on the expressive power and utility of each of the two languages. In an area heavily populated with Creationist families, it might make sense to teach the two protocols side by side, but not with identical status: Evolution would need to be identified as the lingua franca, and Creationism as the foreign language, freely usable in your own home or homogeneous community, but not for general commerce. (Note the similarity of these issues to those raised in the context of bilingual education.)

Another slogan: *Do not attempt to advance your cause by attacking the* ***statuses*** *of your opponents (even accidentally)*. This is what destroyed Wilson's *Consilience* and Dawkins' *The Selfish Gene* as productive contributions to the religion-science dialog. Dawkins even went so far as to embody the put-down in the title: "You may think you are something special, but you are really just a gene's way of making more, similar genes". I presume the insult was intended, to shake people up; it also got Dawkins a perhaps deserved reputation as a fundamentalist of Scientism. The same put-down in slightly less blatant form runs through *Consilience*, and I think this accounts for the outraged responses it got from, e.g., Wendell Berry (2000) and Huston Smith (2001). It is certainly possible vigorously to attack someone's ideas, claims, or theories without attacking the person's status, and to do so is normal practice inside the scientific community. For some reason, scientists writing in the popular press have been less successful at following this model outside the scientific community.

6. We are all in it together

To some degree, each of us is a scientist, if only in using empirical methods to make sense of our everyday surroundings, and each of us is a religious person, if only in deciding to embrace Atheism or Agnosticism. Furthermore, each of us is a citizen of some country. Therefore it is of interest to each of us to consider how these three different domains in our lives might contribute to each other, both at a personal level and at a social level. Let's review some of the possible contributions.

6.1 From Science to Public Education

Knowledge of the world around us is an important part of the education of each citizen, so various sciences are taught in the schools. Some, like biology (with evolution) are controversial, others, like mathematics, are not. As we have seen, the controversies often spring from differing pre-empirical commitments, analogous to differences in languages. Three cases arise: If there is consensus between the scientific community and the electorate, no problem; the subject gets taught (so long as it is relevant to citizenship). If there is disagreement even within the scientific community, no problem either; the various sides of the debate can be presented in class without the state taking sides. That leaves the case where there is consensus within the scientific community, but dissent from a significant portion of the electorate. This boils down to the example given above of teaching chemistry in the Vietnamese language. Such cases need to be settled by normal democratic process, including appropriate consideration to the rights of minorities.

6.2 From Science to Religion

Science can be useful to religion in understanding the characteristics of our bodies, and in understanding the interaction of religious and moral principles with those bodies. At the level of a society, it can help us understand the costs and benefits of the application of various religious and moral principles and practices. In some cases, this may motivate us to change our religious behavior, as in the case of the indigenous people of Borneo. In such cases it is not that science is dictating any religious be-

havior or belief; it is merely revealing formerly unsuspected relationships (sometimes conflicts) among our existing religious or moral principles, and letting us make our choices.

Science can also serve religion by providing a rich source of metaphors. For example, the unimaginable deep reaches of the universe, available to anyone in the form of the night sky, may be invoked to inspire humility. Similar metaphors have been heavily used throughout history by religious writers. ("Consider the lilies of the field ..." [Matthew 6:28]) These are very useful metaphors, and they are powerful, because the material world is right there in our faces. Their use, however, is not without risk, because they are vulnerable to changes in our understanding of the material world between the time of writing and the time of reading.

Finally, science does shed a certain kind of light on certain ultimates and totalities, specifically ultimate cause and totality of the material universe. This is the one place where science can impact directly knowledge that at least for some religions has historically been the province of religion.

6.3 From Religion to the State

The state has a need for principles and laws. Astute and creative statesmen may be able to create them out of whole cloth. (There is evidence of this in the US constitution.) Or, the statesman can look to the world's religions and try to tease out some common moral themes that would also serve the state (always being mindful of the rights of minorities).

The state, and especially its legal system, need a solid concept of "person". Although the soundest exposition of this concept that I know of is articulated in DP, it also is implicit in many religions and in jurisprudence, but not, I believe, in "hard" science.

6.4 From Religion to Science

What might religion have to offer science? As pointed out by Norbert Samuelson (2000), one of the reasons for the flowering of Jewish science in the first millennium was that science as a career was explicitly encour-

aged by the Talmud. Our religions speak to what is most significant for us, and if science ranks high in significance for lots of people, that is good for science.

Similarly, religion speaks to the places in our larger world of our various possible activities, including science, and as such may guide us in choosing which scientific endeavors are best to pursue. There has been some controversy over the possibility that proposed scientific explorations might be scuttled on moral grounds. Note that there is no possibility of avoiding this. Every funding decision for a scientific project, whether done by the government or the individual scientist, involves judgment calls about the best use of resources in the light of potential gains in enhancing the collective knowledge and competence of the human race with respect to the natural world. **In the absence of moral input to such judgments, we are left with only economic considerations, and here in the 21st century USA we know only too well what that looks like.**

6.5 From Religion to Religion

Throughout this paper there have been references to the value, to individuals, principalities, and even to science, of principles and practices that share wide support among the world's religions. That can be read as a call to ecumenical activity, and to negotiation toward common positions within the various wings of each religion. The more religions can agree on (and there is much agreement to start with), the more they can expect their views to be honored by governments and individuals.

There is another reason for ecumenism. Religions are similarly challenged by current events, from societal trends to scientific discoveries. In many cases the logic of an appropriate response is similar from religion to religion, so different religions may be able to support each other in responding to these challenges.

For an example comfortably far from home, let's reconsider the case of the tribesmen in Borneo who found out that their ritual of eating the brains of their deceased ancestor was transmitting Kuru, a fatal neurological disease related to Mad Cow. We can imagine their logic: Killing

people, especially ourselves, is wrong; this ritual leads to that; is there some other ritual we could substitute? What is the ritual doing for us (its significance)? Reminding us that we carry the legacy, in strengths, knowledge, and skills, of the deceased. Perhaps we can come up with a different ritual, having this same significance, to replace the one that had unintended, fatal, side effects.

The details are made up, but they suggest a useful pattern: Discover an undesirable consequence of an existing practice or belief. Trace upward in the significance series from that practice or belief until you get to an action, probably more abstract, that is free of the undesired consequence. Create new ways of enacting the action (moving down the significance series) until you get to something concretely doable and still free of the undesired consequences. Interested readers, as an exercise, might try this pattern out on the principles and practices of current religions surrounding human sexuality and reproduction. For example: The Abrahamic religions tend to prohibit all sexual practices that do not lead to reproduction. But reproduction is less desirable today than in Biblical times. And a sexual practice may have a significance other than reproduction that is still desirable from spiritual point of view, like bonding a husband and wife in a loving relationship. So one might make even a spiritual case for certain sexual practices other than unprotected intercourse.

7. What to Throw Away?

What might need to be thrown away, by scientists or religious people, in order to reap the greatest benefits from the synergies put forward here. Surprisingly little. For scientists: the pre-empirical commitment that the world of "hard" science is co-extensive with the real world, (DP provides a graceful and harmless way of backing away from that commitment.) and the bias against treating stories as a serious component of a community's education. For religious people: the reluctance to travel up the significance series from an existing principle or practice as a step in creating a new and more satisfactory one, (Of course, it takes some depth of understanding of your religion to pull that off.) and their tight grip on historical accuracy as a validator of their stories.

In the light of all this, the more extreme positions have the least room for participating in dialog. The hard determinist is short on vocabulary and conceptual structure for addressing the big issues in the human condition. Those devoted to literal scripture as ultimate truth are denied give and take over the nature of reality with those of other persuasions, and are reduced to political bargaining over the laws of the land. The good news, though, is that for everyone else there is ample room for productive dialog, and for growth in understanding and agreement, both as persons and communities.

Summary

I have here attempted to show (a) how apparent conflicts between science and religion can spring from pre-empirical rather than factual differences, (b) that some important conflicts are not between science and religion, but between different religious (or at least philosophical) positions, and (c) that negotiating and bargaining around these conflicts is more a matter of political action taken in good faith than it is a matter of right and wrong. I have further suggested where those of various religious persuasions do and do not have bargaining room, and have provided some hints about how that bargaining room might be well used. I hope that this article contributes in some small way to more productive dialogue among scientists and religious persons of various faiths.

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Descriptive Metaphysics: On Science, Religion, and Wisdom

Gregory Colvin

Abstract

Using the Descriptive Psychology concepts of Totalities, Ultimates, and Boundary Conditions, I will briefly survey modern scientific cosmology and physics. I will show that science does provide ultimate explanations for the totality of the physical universe that may seem to compete with the explanations of religion. But I will also review the Descriptive application of these concepts to theology and metaphysics to argue that nonetheless science cannot displace religion in a complete account of the world.

"Since we are seeking this knowledge, we must inquire of what kind are the causes and the principles, the knowledge of which is Wisdom."

- Aristotle (350 BCE)

In his Metaphysics, Aristotle concerns himself with First Causes, Being qua Being, and the Unmoved Mover. From today's point of view these concepts may seem archaic, speaking as they do to a more ancient time, and building on the ideas of yet more ancient Pythagorean and Platonic predecessors. Nonetheless, the quest for Wisdom is as pertinent now as it ever was.

Following Aristotle, I take it that wisdom is not to be found in detailed knowledge of particular domains, but in mastery of the "causes and principles" that give access to all domains of knowledge. Where Aristotle is concerned with causes and principles, a Descriptive Psychologist is

concerned with concepts, and following Shideler (1975, 1983) and Ossorio (1996), I find the most relevant concepts to be the transcendental concepts of Totalities, Ultimates, and Boundary Conditions (Putman, 1998).

Using these concepts I will briefly survey modern scientific cosmology and physics. I will show that science does provide ultimate explanations for the totality of the physical universe that may seem to compete with the explanations of religion. But I will also review the Descriptive application of these concepts to theology and metaphysics to argue that nonetheless science cannot displace religion in a complete account of the world.

I

First let me note that the transcendental concepts of Totalities, Ultimates, and Boundary Conditions are not just Descriptive Psychology jargon. As a check, I made the following search on the Google internet search engine: (totality OR totalities)(ultimate OR ultimates)("boundary condition" OR "boundary conditions"). Google found 347 pages, most all of them relevant to metaphysics, cosmology, or religion. Here are some of the titles that Google ranked as best matching my query:

Theology Today - The Mystic and the Theologian
Spiritual Experiences
The Soul
Quantum Metaphysics?
The Psychology of God
Religion and Science: History, Method, Dialogue
The Absolute Beneath the Relative
Immediate Experience and Existence
Christian Theism and Scientific Cosmology
Quantum mechanics: an Aristotelian interpretation
Multiscale Modeling of Plasticity and Fracture in Metals

The first title is a Descriptive paper by Mary Shideler (1975), and the second and third titles are talks given by Peter Ossorio at Descriptive Psychology conferences (1996, 1997). Most of the remainder are clearly metaphysical in content, and make no reference to the literature of Descriptive Psychology. I take the last title above (Miller, 2003) to be an exception that proves the rule, as it has nothing metaphysical about it. But even so its contents turn out to be a good example of the use of the transcendental concepts in the domain of materials science:

> "One can adopt the point of view that the 'exact' representation of material behaviour comes from the atomistic description insofar as the interatomic force laws accurately describe a real engineering material. Multi-scale approaches start from this viewpoint, eliminating any unnecessary atomistic degrees of freedom to the point that the model becomes computationally feasible. The ultimate reduction in atomistic degrees of freedom is a fully continuum approach, replacing the totality of the atomic degrees of freedom by a handful of continuous field variables. For general model geometry and boundary conditions, solution of the continuum equations must be achieved numerically using approaches like the finite element method."

Note the logic here: we have a totality of entities, a process for describing and re-describing the entities, an ultimate limit on that process, and boundary conditions at the limit. For materials science, the totality under investigation is the individual atoms composing a sample of material. That totality is made amenable to analysis by a process of reduction, the ultimate limit of which is a continuum. The direction of the applied forces and the shape of the material set boundary conditions on the solution of the field equations that describe the continuum. Note that the boundary conditions are specified from outside of the analytic model - that is to say, they transcend the model. Also note that the field equations make no reference to individual atoms: from the atomistic point of view they are a transcendental description. The logic of scientific cosmology is the same, except that the totality to be described is the entire Universe.

II

"For it is owing to their wonder that men both now begin and at first began to philosophize; they wondered originally at the obvious difficulties, then advanced little by little and stated difficulties about the greater matters, e.g. about the phenomena of the moon and those of the sun and of the stars, and about the genesis of the universe".

- Aristotle (350 BCE)

Traditionally, cosmology includes: Cosmography - the structure of the universe; cosmogony - the ultimate origin of the universe; and eschatology - the ultimate fate of the universe. And traditionally, cosmology has been as much a branch of theology as a branch of science. For example, orthodox Christian theology describes a totality of Immortal Souls on Earth, in Heaven and in Hell; Earth having been created *ex nihilo* by the Divine Creator, and prophesied to end on a future Day of Judgment. Many Christians still believe that Scripture reveals when the Creation occurred, and even when the Judgment will come. But, at least since the time of Copernicus and Galileo, scientific cosmology has challenged this particular theological view. The telescope has revealed a universe of planets and suns beyond this Earth, geology has pushed back the age of the Earth to long before the days of Genesis, and paleontology argues that Homo Sapiens, like all other species, evolved gradually from previous species, with no definite moment of creation. And at least since the invention of the atomic bomb the Final Battle at Armageddon has seemed more likely to arrive by human than divine agency.

All of these facts of science can be, and have been, reconciled to modern theology, but many people still believe that religion and science are at odds. And not just at odds over the facts - some contend that science provides a complete deterministic and materialistic account of the world: a world driven by impersonal forces; a world devoid of divine or even human agency; a world with no place for immortal souls. For myself, I do not believe that science requires or even supports such a view. The physical sciences choose to work, as much as possible, without explicit use of the concept of a person - it is in part that very choice that distin-

guishes them as physical sciences. But that choice is not at all binding on us as persons with needs and interests beyond the material, and making that choice does not in itself invalidate the choice to use other concepts. Moreover, we will see that even on its own terms physics has failed to give a fully deterministic account of the world.

III

"I want to know how God created the universe. I want to know His thoughts. Everything else is just details."

– Albert Einstein (Quoted in Clark, 1984)

Scientific cosmology describes the universe as a totality of material objects, ranging in scale from the smallest subatomic particles, though the molecules of cosmic dust, to comets, planets, stars, galaxies, and beyond. So, at one end we have the ultimately small, the world of subatomic particles and quantum mechanics, and at the other end we have the ultimately large, the entire universe. At large scales cosmologists model the universe as a four-dimensional space-time continuum, using Einstein's (1916) field equations of general relativity. Current theories describe space-time as expanding from a singularity, and depending on the geometry of space-time it will either continue expanding forever, or collapse back into a singularity.

In talking of singularities and geometry we are talking of boundary conditions. Einstein's equations have infinitely many solutions, and only by specifying boundary conditions can we derive particular solutions that can describe the actual universe. We start with Hubble's (1929) observation that at the largest scales everything in the universe is moving away from everything else. Given the observed rate of expansion we can calculate that some billions of years ago everything must have been in the same place. That place, that point, is the singularity from which began the expansion called the Big Bang. It is singular in the sense that there is only one such point, and more importantly, in the sense that is a point like no other: a point at which the equations of space-time break down,

just as the equations of ordinary arithmetic break down when you try to divide by zero. So the original singularity is not so much a point **in** space or time as it is the point **at which**, from our side of the boundary, space and time began.

In the cosmologists' description space is finite, but boundless. In three dimensions, you can imagine space-time as the surface of an expanding balloon. The area of the surface is finite, but being a closed curve it has no boundary. Extend the analogy to four dimensions and you can try to imagine the finite but boundless volume of the universe. The direction and degree of curvature is still unknown, but not unknowable. If the curvature is positive then Einstein's equations predict that the universe will eventually implode in a Big Crunch, collapsing into another singularity. We have already observed such singularities in the form of black holes, which are collapsing stars whose density is so great that not even light can escape their gravity. If the total mass of the universe is great enough, then it too may end as a black hole. If not, the curvature will be flat or negative, and the universe may expand forever. We cannot directly measure the mass of the universe, but we continue to refine Hubble's observations of galactic motion. Recent observations indicate that the expansion of the universe may even be accelerating, indicating that the curvature is not positive.

IV

"Had I known that we were not going to get rid of this damned quantum jumping, I never would have involved myself in this business."
– Erwin Schrödinger (1926a).

"Anyone who is not shocked by quantum theory has not understood it."
– Niels Bohr (as cited in Gribbin, 1984, p. 5).

"God does not play at dice with the world"
– Albert Einstein (1927).

"Einstein, stop telling God what to do."
– Niels Bohr (1927a)

Heisenberg's Uncertainty Principle (1927) states that the more precisely we measure one property of a physical system, such as the position of a particle, the less precisely we can measure a complementary property, such as its momentum, where Planck's constant quantifies the ultimate limits to precision. Planck-time is about 10^{-43} seconds, and Planck-length is about 10^{-35} meters: this is the smallest scale. At the smallest scale - the scale of subatomic particles and of the time just after the original singularity - physicists describe the universe with Schrödinger's (1926b) wave equation. When bounded by the conditions of a particular measurement this equation predicts the probability of observing a particular state of a particle of matter. Furthermore, until a measurement is made quantum theory denies that a particle has any particular position or state - or more accurately, the wave equation describes the particle as being in a superposition of all possible states. These superposed states are not just hypothetical: quantum computers can explicitly manipulate the superposed states of individual atoms to perform some calculations far more efficiently than classical computers can.

The quantum description of the world is fundamentally different than the classical description. Consider a device that emits a single particle. Schrödinger's equation, unlike Newton's, does not describe a precise trajectory for that particle. Rather, it describes a superposition of possible trajectories, expressed as a wave function that predicts the probability of observing an emitted particle at any particular time and place. An act of measurement is said to randomly "collapse the wave function" of the particle to one of its possible states. It is this notion of random collapse that so vexed Schrödinger and Einstein. They understood quantum theory, indeed they helped invent it, and they were shocked.

The problem of explaining - or explaining away - the collapse of the wave function is the problem of interpretation for quantum mechanics: the experimental predictions of the wave equation are clear, but it is not clear just what physical reality the equation describes. For classical

mechanics there was no such problem. The universe was described as being made of distinct particles of the ordinary matter that we see, at precisely observable positions, moving via the ordinary forces that we feel. Newton's laws of motion provided a precise, deterministic description of these forces. But quantum mechanics argues that precise measurement is impossible, and that the very notion of distinct particles may be incoherent. Thus the solid, deterministic world of Newton has been superceded by the vacuous, irreducibly probabilistic world of Bohr (1927b) and Schrödinger (1926).

V

"I don't want to be immortal through my work. I want to be immortal through not dying." - Woody Allen (Quoted in Lax, 2000, p. 183)

One way to avoid the vexing collapse of the wave function is the "many-worlds" interpretation proposed by Everett (1957). Rather than postulate a collapse of the wave function that gives a definite outcome to a quantum measurement, Everett denies that there is any definite outcome. Instead, he postulates that all isolated systems evolve according to the Schrödinger equation. Since the universe as a whole is by definition an isolated system it follows that all possible outcomes of any quantum measurement in fact occur, with the probabilities given by the Schrödinger equation, even though only one of the possibilities can be measured at a time.

How can this be? At each apparent collapse the universe is postulated to split into superposed parallel universes: one in which that particular quantum event occurred, and another where it did not. Which parallel branch our observations happen to take is completely random. A phenomenon called "decoherence" insures that we can usually observe only one of these parallel universes, as a multitude of random particle interactions cause initially coherent quantum states to rapidly diverge after each branch, but in carefully crafted devices such as interferometers and ion traps we can reduce the decoherence enough to observe the apparent effects of this quantum branching. Nonetheless, the description of the

universe as an evolving multiverse of constantly branching timelines is distasteful to many physicists.

To overcome this distaste a simple experiment can be done as an empirical test (Tegmark 1998). Consider a device that connects a small piece of radioactive material, a radiation detector, a switch, and a loaded gun. The sensitivity of the detector can be adjusted so that if the switch is pressed there is a fifty percent probability of the gun firing, and the radioactive element assures that the outcome is truly random. An experimenter can then place their head in the device and press the switch. What will happen?

Before pressing the switch, the wave equation for the experiment describes a gun that may or may not go off and a live experimenter. After pressing the switch, the wave equation describes a superposition of two possibilities: a fired gun and a dead experimenter, or an unfired gun and a live experimenter. The dead experimenter, being dead, cannot perceive the result of the experiment, but the live experimenter can, and so by the Everett postulate will. A sufficiently motivated experimenter can repeat the experiment as often as desired, with each repetition doubling the odds that the Everett postulate is correct. But only a surviving experimenter is likely to be convinced, as on the vast majority of timelines the experimenter will be found dead.

Whether the Everett postulate actually promises immortality is vigorously debated. Some object that our ordinary ways of dying are too unlike the experimental setup, but although the probabilities are different the principle still holds -- if there is any physically possible way not to die you will experience not dying. However this debate is resolved, the physical immortality implied by the quantum suicide experiment seems unlike the afterlife promised by any religion, although the indestructible quantum observer does resemble the immortal soul of theology.

VI

"Menu, choose one:

• Your consciousness affects the behavior of subatomic particles

• Particles move backwards as well as forwards in time and appear in all possible places at once

• The universe is splitting every Planck-time into billions of parallel universes

• The universe is interconnected with faster-than-light transfers of information"

- James Higgo (1999)

If, contra Everett, we insist on a single universe, then what? Einstein, Podolsky, and Rosen (1935) proposed an experiment that illustrates the difficulties. Consider a device that produces pairs of identical particles moving away from each other in opposite directions. Heisenberg's uncertainty principle tells us that we cannot simultaneously ascribe a definite position and a definite momentum to any particle. But what if we measure the position of particle A and the momentum of particle B? Since the particles were produced with equal but opposite momentum Einstein argued that we can deduce that if particle A is at position x when particle B has momentum y , then particle A must have momentum -y and particle B must be at position -x. This contradicts the uncertainty principle, so we have a paradox.

When variations on this experiment are actually performed, we find that measuring an attribute of particle A in fact makes the complementary attribute of particle B less certain, as Heisenberg would predict. This is true no matter how far apart the particles are, even if we delay the choice of which attribute to measure until after the particles are produced. The implication is that either Everett is right, or somehow the choice of which attribute to measure, or the fact of which attribute was measured, is transferred instantaneously between the two particles. But instantaneous transfer of information violates Einstein's (1905) special theory of relativity, so again we have a paradox.

The orthodox approach to these paradoxes, as championed by Bohr, is to refuse to resolve them, to just "shut up and calculate." Since the calculations have so far proven exceptionally accurate there is some pragmatic justification for this approach. Those who find this orthodoxy ontologically wanting can choose some variation on the above interpretations. Strange as they may seem, Higgo's menu items are in fact reasonable summaries of the views of some very reputable physicists. With choices like these it is little wonder that some of these physicists have retired to write frankly mystical books like *The Tao of Physics* (Capra, 1975), *The Dancing Wu Li Masters* (Zukav, 1979), and *Wholeness and the Implicate Order* (Bohm, 1980). It is as if the paradoxes of physics can serve as Zen koans, inducing a state of enlightenment in those who grapple with them.

What these enlightened physicists go on to say about metaphysics may well have value, despite the scorn of their less mystical peers, but what is more interesting to me is the following lesson: That science has failed, despite the best efforts of some of our best minds, to give a completely deterministic account of the physical world. Further, this failure appears in physics not just as a limit on our abilities to measure, but as a consequence of the irreducibly probabilistic nature of the physical world. So whatever other arguments may be made for and against determinism, it is simply not the case that physics has shown the world to be deterministic.

VII

"Nisi quatenus corporis essentiam sub specie aeternitatis concipit" (1)
– Benedict de Spinoza (1674, p. 214)

"Pluralitas non est ponenda sine neccesitate" (2)
– William of Ockham (1317, p. 247)

From the above it may seem that in modern times science has displaced theology in providing an account of the world "under the aspect of eternity." In scientific cosmology we find a consistent account of the ultimate origins, boundaries and fate of the universe, from the smallest

particles and most subtle energies to the largest galaxies, from the most ancient beginnings to the end of time. But the semblance is deceiving, for physics asks different questions than theology.

For physics, the questions and answers take the form of object and process composition and decomposition. We ask, "What is matter made of?" and answer "Smaller pieces of matter" until we reach the limit of Planck-length. We ask, "How does motion happen?" and answer "Through a sequence of smaller motions" until we reach the limit of Planck-time. And having arrived at the ultimately small we can ask "How does it all fit together?" and build up from quarks to atoms to molecules, through people and planets to the stars and beyond, until we reach the limits of all of space-time. The result is a consistent but incomplete description of the world, treating only of matter and energy, and not at all of loving kindness or the life of the spirit.

To say that scientific explanations are incomplete is not a criticism, but simply the recognition of a choice. Science has been guided at least since the fourteenth century by the principle of parsimony expressed above as Ockham's razor. Following this principle, scientists attempt to answer the questions that interest them with as few concepts as possible. Physical scientists, including cosmologists, have chosen not to use such concepts as motivation or consciousness in their descriptions of the physical world. So it is no surprise that there is no place for persons as such in the world of physics, and thus no way to ask or answer psychological or spiritual questions. For answers to such questions we must look elsewhere.

VIII

"What does it all mean, Mr. Natural?"

- Flakey Foont (cover of Crumb, 1971)

For theologians, and indeed for all of us as persons, the important questions are not the physicist's "What is it made of?" but rather such questions as "Who am I?" and "What does my life mean?" Whatever we do - for instance, "Moving a piece of marble on a wooden board" - we

can ask, "What am I doing by doing that?" And given an answer - like, "Moving a pawn one row forward" - we can ask the same question again, through answers like "Putting my nephew's king in check" and "Playing a game of chess with my nephew" to "Celebrating Christmas with my family" and, perhaps, beyond. Each question and answer is a move up the significance series, bringing in more context and higher significance until we reach the limit of ultimate significance. What we may find at that limit Shideler (1975, pp. 257-258) expresses well:

> When, in generating such a series, we have exhausted all the possibilities and so come to an end, which is a boundary condition, there remains the question: "What is the significance of all this - the ultimate significance beyond what we can assign to it?" That is a question we cannot answer, because on the hypothesis we have already gone as far as we can. And we cannot simply say that there is a super Person who assigns ultimate significance when we have run out of significances to assign. Something of the sort can indeed be said, and logically justified, but not simply.
>
> We can do so by pointing out that when we reach the boundary condition of our significance series - not stopping at some arbitrarily chosen place dictated by our circumstances or a priori commitments - what we have is our ultimate. Yet we want, and logically need, not so to be left dangling. For our significance series to make sense, we must have the notion of an ultimate significance, and this must be assigned by a person although it cannot be assigned by any limited person such as ourselves, or by all of us together.
>
> At a boundary such as this, we must make not simply a new move, but a new kind of move, from assigning significance to confessing our limitations. It is then a legitimate methodological move to introduce the concept of a Person who has enough of the characteristics of a human person to serve as an assigner of ultimate significance, but is not subject to our limitations, and who therefore can make significance assignments which are not arbi-

> trary, and are ultimately valid. Thus we achieve the conceptual and systematic closure we need. And it is fitting that we should name the Person who assigns ultimate significance to the ultimate totality, "God," describing this Person as "Judge."

This is not a proof of the existence of God, as not everyone will be so dissatisfied as Shideler was at being "left dangling" with no significance to life beyond what we persons can give it. All Shideler does is show a possible transcendental move to those who choose to make it.

IX

"Tat satyam. Sa Atma. Tat tvam asi." (3)
- Chandogya (600 BCE, p. 257)

In asking and answering the question "What am I doing by doing that?" we generate a series of questions, ultimately reaching a limit. At the limit we must transcend the domain of the question if we are to give an answer. As Ossorio (1997) articulated in his talk on The Soul, by asking and answering the question "Who am I?" we can reach a similar limit.

I can answer the question in terms of my appearance - balding hair, graying beard, myopic eyes, and so on. I can answer in terms of my skills - playing guitar, programming computers, breeding horses, and so on. I can answer in terms of my history - born in the fifties, survivor of the sixties, college student in the seventies, entrepreneur in the eighties, and so on. But most of all I answer in terms of my relationships. I am an uncle to my nephews, a brother to my siblings, a son to my parents, a parent to my sons. I am a student to my teachers, a teacher to my students, a peer to my colleagues. I am a resister of war, a seeker of truth, a wanderer in wilderness, a worshiper in silence.

Each additional answer places me in a larger network of relationships: relationships to other people, to the events of history, to the web of nature, and so on. But, in this finite world, I run out of answers eventually,

asking "But who am I ultimately, beyond whatever place I have in this world?" As with ultimate significance, we need not answer this question, but if we do it again makes sense to give a transcendent answer, to identify my ultimate self as Soul.

Note that this is no proof of the existence of Soul, just as Shideler's (1975) exposition is no proof of the existence of God. Neither do these expositions say what God and Soul are, beyond their place as transcendental answers to questions about ultimate significance and identity. The most we can do as Descriptive Psychologists is to offer an articulation of the sense these concepts make as boundary conditions on the Sacred. To those who recognize the Sacred asking for proof may be to miss the point entirely.

X

"Gate gate paragate parasam gate" (4)
- Siddhartha Gautama (500 BCE)

God and Soul serve as transcendental Ultimates to bound a domain of questions. Since each additional answer brings in more context, we also have a non-transcendental ultimate in the total context of "everything that is." But that still leaves a further boundary condition, as Ossorio (2001) explains:

> If you ask what is the source of everything that is, then it has to be a void, since if it is the source of everything then there is nothing left over. But it can't just be a void, since everything came out of it.

This realization, like so many others, is ancient. Circa 500 BCE Siddhartha Gautama, the Buddha, had "gone completely beyond" (parasam gate) the concepts of God and Soul to the Ultimate of *Sunyata*, translated as Void or Emptiness. As his Heart Sutra expresses it "Apart from form there is no emptiness; apart from emptiness there is no form."

For those who cannot see an account of the world that forsakes God and Soul for the Void as relevant to the life of the spirit, I can do no better than to further quote the Heart Sutra:

> Therefore, O Sariputra, in emptiness there is no form, no feeling, no volition, no consciousness; ... no ignorance, nor extinction of ignorance, no decay and death, nor extinction of decay and death. There is no suffering, no origination, no cessation, no path; there is no knowledge, no attainment, no nonattainment.
>
> Therefore, O Sariputra, by reason of his nonattainment, the bodhisattva, having relied on the Perfection of Wisdom, dwells serenely with perfect mental freedom. In the absence of impediments he is without fear, having overcome all illusions, and attains the unattainable bliss of nirvana.

Or as Jesus of Nazareth said to Didymos Judas Thomas (130, pp. 20,21) "…empty they have come into the world, and empty they seek to go out of the world again".

Unsurprisingly, quantum physics has hit a similar limit. Heisenberg's uncertainty principle allows for subatomic particles to appear spontaneously out of a vacuum so long as they disappear within a unit of Plank-time, and thus do not exist long enough to be observed. So the vacuum can be described not as empty, but as seething with particles and antiparticles, appearing out of nowhere and rapidly annihilating each other. But these virtual particles are not just hypothetical, as their existence explains the details of real particle interactions, and gives rise to a measurable vacuum energy. Some physicists even speculate that the entire universe is a single vacuum fluctuation. Aristotle might well have been horrified at this violation of the ancient Greek axiom that "Out of nothing, nothing comes."

XI

The magisterium of science covers the empirical realm: what is the universe made of? and why does it work this way?. The magisterium of religion extends over questions of ultimate meaning and moral value... Science and religion are not in conflict, for their teachings occupy distinctively different domains... I believe, with all my heart, in a respectful, even loving concordat."

- Stephen Jay Gould (1999, pp 6, 9)

It is a characteristic of all questions that we eventually run out of answers, and that the ultimate answer, if we give one at all, transcends the domain that gave rise to the questions. And so it is with the questions and answers of science and religion. It is not a failing of science that it cannot answer our questions about the life of the spirit. And neither is it a failing of religion that the answers it gives are not scientific. Each domain is properly limited in the kind of questions it can ask, and in the status of the answers it gives. Ultimately, it is each one of us who must choose what questions to ask, and what answers to accept. Speaking for myself, the person of Wisdom is one who respects these limits: who renders unto science what belongs to science, and to the Ultimate what belongs to the Ultimate.

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(Footnotes)

(1) "Nothing is contingent under the aspect of eternity."

(2) "Plurality should not be posited without necessity."

(3) "That is reality. That is Self. Thou art that."

(4) "Gone, gone, gone beyond, gone completely beyond."

Ancient Companions

Mary Kathleen Roberts

Abstract

Athena appears to Odysseus in seven episodes in *The Odyssey*. She is his goddess companion, very much like an imaginary companion of childhood, and she appears to him because the consistency requirements of his world are unusually relaxed, his circumstances are optimally conducive to her appearance, and his gain in behavior potential from their relationship is maximal. She is an extraordinary companion because Odysseus excels as a teller of tales and has a place for an exceptionally competent woman.

The Odyssey is an epic poem that tells the story of how Odysseus made his way home from the Trojan War. Along the way he formed personal relationships with three beautiful young women: the lustrous goddess Circe, the seductive nymph Calypso, and the feisty Princess Nausicaa. In spite of the powerful enticements each of these women offered him to stay, he struggled onward to rejoin his wife Penelope, who believed in him and waited for him for twenty years.

The poem has long been recognized for its extraordinary portrayal of man-woman relationships, and much has been written about the relationship between Penelope and Odysseus. But there is another woman in *The Odyssey* who was also Odysseus' partner for twenty years. This paper focuses on understanding the nature of that relationship and the behavior potential it offered Odysseus.

To set the stage for the analysis, we begin with an introduction to the powers of the gods and goddesses in the ancient Greek world.

Divine Statuses

In the Homeric world, gods, goddesses and daemons were eligible to intervene in the affairs of men and women. When people were in problematic situations, the gods could give them solutions or inspire them with the courage to act.

The Odyssey abounds with instances of divine intervention. When Penelope tells Odysseus how she fooled the suitors for three years by weaving and unweaving a shroud for his father, she confides that "a god from the blue it was inspired me" (19:153). When Helen recognizes the meaning of an omen, she tells her husband that "the gods have flashed it in my mind" (15:192).

People not only explained their own thoughts and behavior by reference to the gods. They also explained the behavior of others in this way, especially when their behavior seemed out of character or hard to understand. The suitors respond to a change in Telemachus by noting, "Only the gods could teach you to sound so high and mighty!" (1:441). They account for Penelope's stubborn refusal of their marriage offers by claiming, "She holds to that course the gods have charted deep inside her heart" (2:137-138).

Gods and goddesses were not limited to interventions that were good or positive. A god could just as easily plant a bad idea in a person's head or rouse a person to foolish action. At the extreme the gods could make people crazy. Penelope cautions her old nurse, "They have that power, putting lunacy into the clearest head around or setting a half-wit on the path to sense" (23:12-14).

Dodds (1966) writes that in the original Greek, if the outcome of a divine intervention were positive, the divine agent was usually called θεο′ζ, but if the outcome were negative, the agent was called δαι′μων. In both cases, however, he describes the agents as "vaguely conceived beings" (p. 11). When these agents were at work, people recognized that "one of them" was active, but they did not know *which* one.

Not all gods and daemons were undifferentiated in the Homeric

world. The world also had places for gods and goddesses as particular individuals with unique parts to play in the human drama. Zeus, for example, was the Protector of Strangers and Guardian of Guests. His job was to enforce a code of hospitality under which wanderers, beggars, and suppliants had to be welcomed and assisted. Having a particular god in this status helped to make travel possible in a seafaring world, where a person's survival depended on the kindness of strangers.

In addition to having unique job assignments in the human world, the more differentiated gods and daemons also had the ability to appear to people and talk with them face to face. They could take on any shape they desired, animal or human, to interact with mortals. Pallas Athena, the Giver of Good Counsel and Driver of Armies, frequently impersonated Mentor (Odysseus' friend since boyhood) and appeared "for all the world with Mentor's build and voice" (2:301).The individuation of the gods opened up new possibilities for relationship between immortals and mortals. If Zeus protected a particular stranger and let himself be known to that person, then Zeus might become a personal protector rather than merely "one of them". If Athena advised a particular mortal and the person recognized the goddess, then an I-Thou relationship might develop between them.

Odysseus was one mortal who had an I-Thou relationship with Athena. In order to portray what their relationship was like, we now introduce synopses of seven episodes from *The Odyssey*.

Two of a Kind

In the opening books of *The Odyssey*, we are told of Athena's love for Odysseus. Through the nine long years of the Trojan War, Athena stood by his side during the worst fighting, breathing courage into him and shielding him from harm. Nestor, who fought beside Odysseus in the war, declared, "I've never seen the immortals show so much affection as Pallas openly showed him" (3:251-252). But then she simply disappeared from Odysseus' life for ten years. Even though he prayed to her, she did not reappear to him until he was almost home from Troy.

Should I go to the queen?

Athena's reappearance occurred on the remote island of Phaeacia, where Nausicaa, the daughter of the king, found Odysseus naked and crusted with brine. He had managed to reach the island after two days and two nights clinging to a piece of wreckage in rough seas, his ship destroyed by Poseidon.

Nausicaa, mindful that "every stranger and beggar comes from Zeus" (6:227-228), gave Odysseus a chance to bathe, clothing, food, drink, and the advice to go past the king and directly to the queen to ask for passage home. The princess also promised to see him into the palace but then abruptly reneged, giving a teenager's reasons for changing her mind.

After Nausicaa left Odysseus, Athena appeared to him in a little girl disguise. He did not let on that he recognized her but instead made the move called for by her disguise: "Little girl, now wouldn't you be my guide to the palace?" (7:24-25). The goddess replied in kind: "Oh yes, sir, good old stranger" (7:30-31).

Once they reached the palace, Odysseus had to decide how to handle his appeal. Starved for home, he wanted with all his heart for the king to grant his request for quick passage home. He had been advised by the king's own daughter *not* to go directly to her father, but then she had given Odysseus reason to doubt her judgment. Should he go to the queen?

In this situation Athena in her little girl disguise offered him a full briefing on the queen, tracing her ancestry back through four generations and describing her place in relation to her husband, her children, and the people of Phaeacia. She concluded by telling him, "If only our queen will take you to her heart, then there's hope that you will see your loved ones" (7:87-88).

Did I really do it?

Things went well for Odysseus in the palace. Alcinous, the Phaeacian king, was so impressed by Odysseus that he even raised the possibility

that Odysseus might stay in Phaeacia and wed his daughter. He also promised that his crews would sail him home at the end of the next day if that were what he chose.

The next day Alcinous went out of his way to show Odysseus the best of the Phaeacian world – feasting, sailing, the lyre, the dance, and athletic competitions. At the end of the athletic contests, Alcinous' son suddenly taunted Odysseus to show *his* prowess. When Odysseus made it clear that he wanted no part of this – that all he wanted was passage home – the other young men joined the prince in mocking and ridiculing the aging hero.

Odysseus was so infuriated by their ridicule that he seized a discus and hurled it farther than any of the young men had thrown theirs. The Phaeacians had all dropped to the ground under the onrush of his throw so he was the only man standing. Seeing what he had done, he must have had a moment of disbelief. He wanted so much to beat them all, but given his age and the hardships he had endured, he doubted that he could have.

In that moment Athena appeared on the field as a Phaeacian man and staked out the discus. She called out that even a blind man could *feel* that Odysseus had won because his discus was so far ahead of the others. No one else seemed to see or hear the extra man on the field except Odysseus. But he, energized by Athena's presence, challenged the young men who had mocked him.

Have I really reached Ithaca?

Alcinous kept his promise to Odysseus, and a Phaeacian crew sailed him home to Ithaca that night. Odysseus was asleep when they landed so the crew simply hoisted his bed onto the shore and left him asleep on the beach. When he woke up, a mist covered the land and he did not recognize Ithaca. He was afraid that he had been tricked.

As he walked along the shore weeping, Athena appeared "as a shepherd boy yet elegant too" and Odysseus was "overjoyed" to see her (13:253-254). He immediately joined her in one of their impromptu dialogues.

Tongue in cheek he declared to her, "I pray to you like a god, I fall before your knees and ask your mercy! And tell me this for a fact – I need to know – where on earth am I?" (13:262-265). Athena the shepherd boy described Ithaca to him just as he remembered it and called it by name.

He choked back the joy he felt in order to keep his guard up and made up a mendacious tale about his history and wanderings. After he was through, Athena dropped her shepherd boy disguise and affectionately told Odysseus, "Any man – any god who met you – would have to be some champion lying cheat to get past you for all around craft and guile" (13:329-331). She went on to advise him: "To no one – no man, no woman, not a soul – reveal that you are the wanderer home at last" (13:350-351).

Odysseus was not sure that she was being genuine, however. He wanted so desperately to be home that he knew he could easily be deceived. Before he would accept her status assignment of "home at last", he confronted her about why she had not been in his world for ten years and insisted that she tell him the truth about where he was: "Have I really reached the land I love?" (13:373). This time Athena did not describe the land to him. The mist had cleared, and she pointed out landmarks that he recognized – a haven, an olive tree, a cave, forested slopes – and he rejoiced at last.

Once he had resolved his doubts about where he was, he was ready to act. Athena suggested the next step, to go to his loyal swineherd Eumaeus and find out how things were in Ithaca. She then transformed his appearance and made him look like a beggar.

Is now the time?

Disguised as a beggar, Odysseus went to the lodge of Eumaeus and stayed with him for a while, enjoying his company and learning about the situation in Ithaca. Then Odysseus' son Telemachus returned from overseas and sent Eumaeus off to the palace to tell Penelope that he, Telemachus, was home. Suddenly Odysseus found himself alone with his son whom he had not seen for twenty years. With all his being he wanted

to reveal himself to him, but he had resolved not to reveal his identity to anyone.

Athena appeared at the door at that moment, out of Telemachus' sight but visible to Odysseus. She signaled him to come outside and he immediately went to her. She simply urged him on: "Now is the time, now tell your son the truth. Hold nothing back, so the two of you can plot the suitors' doom" (16:189-191). She restored his appearance so that he no longer looked like a beggar, and he returned to the lodge and told his son who he was.

Show me the way.

On the night before the day on which Odysseus and Telemachus had to kill the suitors, Odysseus tossed and turned in his bed, unable to sleep because of his rage. How could he kill the suitors? How could he escape the suitors' avengers? Athena swept down to see him and hovered at his bedside, and he asked her to show him the way. She reassured him that with her beside him, he could fight off fifty bands of fighters, and he was finally able to sleep.

Rescue us!

In the middle of the fight against the suitors, Odysseus saw that someone with the voice and build of Mentor had entered the hall. Odysseus "knew in his bones it was Athena, Driver of Armies" (20:220) and was thrilled to see her. The suitors also saw Mentor but did not know who he really was. Both sides made appeals to him to join their side, with Odysseus calling out, "Rescue us, Mentor!" (22:217)

Athena in her Mentor disguise only responded to Odysseus. Like an angry football coach she raged at him: "Are you asking for help in a fight with *suitors*?" She ranted at him about his strength and valor in the Trojan War, and about the grueling fights that he had won against real soldiers. Her presence and her words roused him on in the fight.

Hold back now!

After Odysseus had taken revenge on the suitors and been reunited

with his wife Penelope and his father Laertes, some of the men of Ithaca came after him to avenge their sons' deaths. As the men closed in on Odysseus, Athena "marched right in" in her Mentor disguise, and "the good soldier Odysseus thrilled to see her" (24:555-556).

As Odysseus charged the front line of the avengers, Athena cried out for the fight to stop. Her voice terrified the avengers who ran for their lives with Odysseus in hot pursuit. Athena then commanded Odysseus personally, "Royal son of Laertes, Odysseus, master of exploits, hold back now!" (24:595-596). He obeyed her, and peace was established in Ithaca.

A Descriptive Formulation

We could dismiss the relationship of Athena and Odysseus as merely an ancient oddity, reflective of the primitive beliefs of the ancient Greeks and the genius of Homer, with little relevance to the behavior of persons today. But there are some remarkable similarities between this relationship, described in the late eighth or early seventh century BC, and the relationships that people create today with imaginary companions.

Just as Odysseus rejoiced in the company of Athena, children sometimes delight in the company of imaginary companions. Just as Odysseus looked to Athena for advice ("Is now the time?"), widows and widowers sometimes consult a ghostly spouse ("Should I buy the stock?"). Just as Odysseus treated Athena as a guide on the island of Phaeacia, dying persons sometimes accept a take-away apparition as a guide through the unknown territory of death.

In a previous paper, "Companions of Uncertain Status", I describe such companions as world + *x* constructive and reconstructive phenomena, and present a parametric analysis for systematizing the range of facts relevant to whether or not a person constructs a world with an imaginary someone (Roberts, 1991). The parameters are:

> 1. Extent to which real world requirements for the systematic connectedness of everything press upon a person

2. Degree to which circumstances facilitate the creation and maintenance of a companion

3. Gain in behavior potential that comes from having a relationship to a companion

I will use this interrelated set of considerations to understand Athena's appearances in Odysseus' world and to show that it makes sense to think of Athena as his goddess companion. Seen in this light, the relationship is not an oddity at all, but rather one of the oldest imaginary companion relationships on record.

Real World Requirements

To what extent did real world requirements for the systematic connectedness of everything press upon Odysseus? First, notice that Odysseus was free of the last 2700 years of social pressure about how things are. For example, he was not fettered by the view that the real world is nothing more than the physical world. He was not shackled with the idea that what we see when we look around us has nothing to do with us. Ideas such as these, which are part of our scientific and intellectual tradition, had no hold on him.

Not only was Odysseus free of pressure from our ideological traditions. He was also living in a world where there was cultural support for certain world + *x* constructions. The societal acceptance of gods and goddesses with special powers and abilities made Odysseus' world very different from a standard materialistic real world, and it made the appearance of an imaginary companion less of a violation than it would have been in a homebound, tables-chairs-and-apples world.

This is not to say that something like "The Face in the Wall" would simply have been taken matter-of-factly. ("The Face in the Wall" is the image of a face materializing out of a wall and then receding back in (cf. Ossorio, 1976, pp. 6-8).) But such an event would not have been totally disconnected from everything else in the Homeric world in the way that it would be in ours. The Homeric world had places for things like that – for example, as warnings flashed by a god – and there were social prac-

tices like prayer and sacrifice to deal with such happenings.

Finally, Odysseus had been "warfaring and wayfaring" for twenty years and hence was not subject to the same pressures as someone living a life at home as a full member of the community. As a wanderer and stranger he was freer to invent whatever he wanted and to treat things however he wanted than someone who was embedded in the life and structure of the community.

Circumstances

To what degree did Odysseus' circumstances facilitate the creation and maintenance of a companion? Notice that four of the seven synopses presented in the "Two of a Kind" section are introduced by questions. Should I go to the queen? Did I really do it? Have I really reached Ithaca? Is now the time? If we drop the details of the questions, a pattern is obvious: Odysseus was operating under conditions of indecision and uncertainty.

These were not conditions of garden-variety indecision or routine uncertainty, however. A great deal hinged on how Odysseus handled the situations in which Athena appeared, and he had no room for error. If he failed to win the favor and respect of the Phaeacians, then he would have no way to leave their island and no way to support himself there; he would be nowhere. If he made a mistake after he reached Ithaca, then both he and his son would be killed.

The difficulty of his position was intensified by the fact that in the world of Homeric Greece, a god or daemon could easily trick a person or take away a person's understanding. Odysseus had already been fooled once on the island of Helios, where the gods "poured a sweet, sound sleep" upon him at a time when his men needed him (12:364). He could not afford to let himself be tricked again.

Think of how much it would help in these circumstances to have someone who could see the situation from a different point of view, who could give him objective advice, who could help him with reality checks, who would not make the same mistakes that he was likely to make. But

Odysseus had no one.

What he did have available to him was a readymade vehicle for an imaginary companion. A companion is more commonly custom-made, created out of whole cloth to fit the needs and wants of a particular individual. But Odysseus did not need to create a companion from whole cloth. All he needed to do was a little tailoring to make the goddess Athena a perfect fit for who he was and the circumstances he was in.

Behavior Potential

Did Odysseus achieve a gain in behavior potential from having a relationship to his goddess companion? First, Athena enabled Odysseus to enact actual behaviors appropriate to the situation he was in that he could not have enacted without her. For example, to use the analogy of playing a game, he could not have engaged in "get the umpire's ruling on the play", "call a timeout and check with the coach", or "get a pre-game pep talk from the coach" if she had not materialized on the scene. He simply did not have anyone available to cast for the parts of "umpire" or "coach".

Once Athena appeared in his world, however, they engaged in these social practices together. They enacted "get the umpire's ruling on the play" after he threw the discus in Phaeacia. They did "call a timeout and check with the coach" before he revealed himself to Telemachus. And they did "get a pre-game pep talk from the coach" on his sleepless night before the battle with the suitors. Engaging in these actual behaviors in the immediacy of the situation with Athena was far more powerful and real than anything Odysseus could have done in his head.

The first four episodes presented in "Two of a Kind" illustrate the doubt-dispelling power of interacting with his goddess companion. When Odysseus was undecided about whether to go directly to the queen, Athena in her little girl disguise gave him a full briefing on the queen's background and relationships. This was Odysseus' way of bringing back to mind as much of the local politics and genealogy as he could remember. Then she concluded, "If the queen takes you to her heart,

then there's hope." Having her reach that matter-of-fact conclusion was his way of making his decision.

Likewise, when he was uncertain if he had succeeded with his discus throw, Athena as a Phaeacian man pronounced, "Even a blind man can see that you did it." This was Odysseus' way of concluding he had really done it. When he hesitated before revealing himself to his son, Athena advised, "Now is the time." This was his way of deciding to do it.

Notice that Athena's answer to every one of Odysseus' questions was not merely "Yes", but "Yes, as *anybody* can plainly see." In effect he reassured himself that he was not just acting on what he deeply wished for or desperately wanted to be the case. He was acting on what (any) one of us – even a child, even a blind man – could see *was* the case (cf. Ossorio, 1990, on objectivity).

In most cases it took just one round with his goddess companion to convince himself of what was the case. But after he reached Ithaca and he was afraid that he had been tricked, they went three rounds. First, Athena as an elegant shepherd boy gave Odysseus a briefing about Ithaca and called Ithaca by name. This was his way of remembering the land he had not seen for twenty years. For round two, Odysseus told a mendacious tale about his misfortunes, and Athena affirmed that even a god would have trouble tricking him. This was his way of making the self-status-assignment "almost impossible to trick". For round three, Odysseus insisted she tell him the truth about where he was, and she pointed out actual landmarks that he recognized. In these amazing interactions, she was his way to decide beyond any reasonable doubt that he had not been tricked and that he was really home at last.

The fifth and sixth episodes presented in "Two of a Kind" illustrate the faith-enhancing power of interacting with his goddess companion. These were situations in which Odysseus was questioning basic feasibility ("*Can* I beat the suitors?"). On his sleepless night before the fight with the suitors, she assured him that with her by his side, he could fight fifty bands of fighters and win. This was his way of reassuring himself and it enabled him to get to sleep. In the middle of the battle with the suitors,

she raged at him that a fight with suitors was nothing compared to the battles he had won in Troy. This was his way of affirming that he had it in him to win, and it enabled him to fight with renewed intensity.

The final episode, where Odysseus was about to do the wrong thing, illustrates the power of a companion for mustering self-control. Even though he wanted to go after the avengers, Athena's appearance on the scene made his second thoughts and reservations about it real. It did not make sense to do this. There had already been enough bloodshed in Ithaca and the community needed all its remaining men. By having her "blow the whistle on the play", Odysseus stopped himself from killing the avengers and increased his future possibilities as the King of Ithaca.

Most of the encounters we have just looked at were short and to the point. At a strategic moment Athena arrived out of nowhere, gave her advice, judgment, or command, and then was gone. For these encounters she was more often than not in disguise – as a little girl, as a Phaeacian man, or as Mentor. If Odysseus spoke at all, it was only to greet her in the way called for by her disguise. She knew what he needed in the situation and she did it.

In the two situations where there was greater ambiguity, they interacted much more personally and affectionately. For example, on the night when he could not sleep, she asked him, "Why still awake?" He answered her, "This worry haunts me, heart and soul… There's another worry that haunts me even more" (20:40-43). After listening to his fears and reassuring him, she added with empathy, "What a misery, keeping watch through the night" (20:56-57).

The I-Thou quality of their relationship was also apparent in their encounter when he was not sure that he was really in Ithaca. This was the only time he tried to dissemble before Athena, telling her an elaborate tale about his misfortunes. In response she "broke into a smile and stroked him with her hand" and in effect commended him as a "champion lying cheat" (13:325-330). But then she appealed to him to drop his disguise ("Come, enough of this now" (13:335)), and they negotiated their relationship and talked about the upcoming fight against the suitors.

Odysseus appreciated the very unique, I-Thou relationship that he had with Athena. Of course he valued the times when she "popped in" to crystallize things for him without him having to say a word, but he also valued having a more personal relationship with her. She was there for him in situations where he needed someone to talk things over with.

Thus, the gain in behavior potential that Odysseus achieved was significant. He enjoyed the intrinsic satisfactions of the practices he engaged in with Athena. By engaging in them, he dispelled his doubts, reassured himself, or exerted self-control. By putting doubt aside, keeping faith, or controlling himself, he was able to act more effectively and wisely in the life-and-death situations he faced. (This is just the familiar significance/implementation structure of behavior.) He also enjoyed the intrinsic satisfactions of the affectionate relationship he had with Athena.

I Never Glimpsed You

We have been using a parametric analysis to understand why Athena appeared in Odysseus' world. We have seen that the real world requirements for the systematic connectedness of everything were unusually relaxed for Odysseus, his circumstances were optimally conducive to companion appearance, and his gain in behavior potential from having a relationship to Athena was maximal.

The parametric analysis can also be used to understand why Athena did *not* appear in particular situations. If she did not appear, it was because there was too much pressure for consistency, his circumstances were not conducive enough, or there was not enough gain in behavior potential.

After Odysseus reached Ithaca and finally spoke to Athena face to face, he groused to her about the years in which she had not been with him: "Daughter of Zeus, I never saw you, never glimpsed you striding along my decks to ward off some disaster." (13:361-363). His complaint is especially intriguing given the incidence in more modern times of imaginary companions appearing to sailors in potentially disastrous situations (e.g. Slocum, 1905; Lindemann, 1958).

How can we explain Athena's failure to appear to Odysseus during the

ten years that he was making his way home from Troy? For one of the ten years, Odysseus shared a bed with the lustrous goddess Circe, whom he left only after his crew insisted it was time to go. For an additional seven years he was with the seductive nymph Calypso. The behavior potential that the virgin goddess offered Odysseus may not have been sufficiently attractive for her to appear in those years.

But what about the remaining two years while Odysseus was at sea? The explanation that Athena gave is, "I could not bring myself to fight my Father's brother, Poseidon, quaking with anger at you, still enraged because you blinded the Cyclops, his dear son" (13:388-390). In short she tells him, "*Our* circumstances were not conducive."

An Extraordinary Companion

It is easy to imagine an ordinary person in the Homeric world feeling that Odysseus had an unfair advantage in life by virtue of his relationship with Athena. That person might want to have his *own* relationship to Athena in order to gain the benefits that Odysseus enjoyed – decision support, faith enhancement, damage control, and more.

If the envious person did find himself in a world with a goddess companion, she would be very different from Odysseus' Athena. Because his companion would be one that a person like him would have and *not* one that a person like Odysseus would have, he might find himself in a world with a more bread-and-butter companion.

In the previous section we used a parametric analysis to account for why Odysseus had an imaginary companion. In this section we look at why he had such an extraordinary companion.

The Great Teller of Tales

When a companion appears in a person's world, even a readymade one like a Greek goddess, that companion does not arrive with a script in hand with lines and stage directions already written. Rather, the world constructive achievement of a person who has a companion involves creating a scenario to enact with the companion and lines for the companion

to deliver. Even if the person recognizes that this is the "Giver of Good Counsel" and hence has some general guidelines about *what* part the new arrival might play, the person still has to instantiate the part.

It follows that people who are not very good at writing scripts for a companion probably will not achieve a significant gain in behavior potential from a relationship to a companion. If the companion endures at all, it may be an "Awkward Range" companion, where the relationship is not bad enough for the companion to disappear but not good enough for the person to be satisfied. In contrast, people who are good at creating scenarios and dialogue for a companion probably will gain in behavior potential and will find the relationship a satisfying one.

(The relationship between literary creativity and imaginary companions has received some empirical support. Schaefer (1969) found that for both sexes, students creative in the literary field reported imaginary companions significantly more often than their matched controls.)

Odysseus excelled in his ability to create plots and characters. Whenever anyone in Ithaca questioned him about his background, he made up an elaborate story to hide his real identity. These stories are "brilliant fictions, tales of war, piracy, murder, blood-feuds and peril on the high seas, with a cast of rogue Phoenician captains, Cretan adventurers and Egyptian Pharaohs" (Knox, 1996, p. 38). Because he was a "great teller of tales", he was able to create an extremely good script for an imaginary companion.

The Weaver of Schemes

Even the best of writers has times when he cannot see his way clear to the denouement. He knows what he wants the outcome to be, but he cannot conceive of the means to bring it about. This was true for Odysseus. He did not know how he was going to kill more than a hundred suitors.

Because he did not have a plan, he could not construct a script for Athena such that she could direct him, "As anyone can plainly see, the way to do the job is…." After they had dropped their disguises and

were talking together on Ithaca, she admonished him, "Think how to lay your hands on all those brazen suitors" (13:430), and he appealed to her, "Come, weave us a scheme so I can pay them back!" (13:442). But they did not create a tactical plan.

While imaginary companions cannot give us ideas that we do not already have, other people can. So Athena wisely advised Odysseus to reveal himself to his son "so the two of you can plot the suitors' doom" (16:190-191). Odysseus instructed his son to precede him to the royal manor and at his signal to place the weapons in the banquet hall out of reach of the suitors. But as Fitzgerald (1963) observes, "this is as far as Odysseus ever goes, by himself, in planning the final combat" (p. 498).

After Odysseus in the disguise of a beggar arrived at the royal manor, Penelope requested that he be brought before her. She had heard from her son Telemachus and a diviner that Odysseus was alive and would be home soon, and she wanted to question the beggar about her husband.

Modern Homeric scholars disagree about whether Penelope actually recognized Odysseus in the course of their interview (e.g. Harsh (1950), Fitzgerald (1963), Knox (1996)). But there is no question that Penelope concluded her interview with the beggar by announcing that the next day she would put the suitors to the test of the bow, the bow that only Odysseus could draw. As Fitzgerald (1963) writes,

> Consider what she bestows on Odysseus. Up to now his plan of action, as I have noticed, has been fairly desperate. Now it is she, not he, who remembers the big hunting bow that has hung in an inner room since he left Ithaka. Archery against men who have no missiles is in fact the only practical way of beating the numerical odds. Penélopê supplies the weapon for the suitors' downfall, and she does so for that purpose and no other. (p. 503)

In short, when Odysseus could not think how to lay his hands on the suitors, Penelope wove a viable scheme for him. On hearing her plan, Odysseus simply urged her on and promised her that her husband would be home before any suitor could draw the bow.

The interview in its entirety shows that Odysseus had a place in his world for an exceptionally competent woman, and was prepared to listen to what she had to say, to take her seriously, to accept her lead, and to follow her advice and act on her decisions.

Someone Just Right for Me

Why did Odysseus have an extraordinary imaginary companion? Because he was prepared to encounter and be inspired by an exceptional woman, and because he was able to write an extremely good script for her. When he found himself in a world with the goddess Athena, he gave her a place as his personal goddess companion and wrote a script for her such that she was an excellent fit for him.

Recall our ordinary fellow in the introduction who was envious of Odysseus' relationship to Athena. He was not someone who was prepared to encounter a godlike woman, and he was not someone who could "write like Homer" to provide her with a sublime script. But if he found himself in a world with a more bread-and-butter companion and gave her a place, a personal relationship might develop between them. With time he might find that she was just right for him – and in that way extraordinary.

Conclusion

In the Homeric world there was no uncertainty about Pallas Athena's status. She was a goddess, the daughter of Zeus, his virgin child, the Giver of Good Counsel and Driver of Armies. A person was fortunate to have an I-Thou relationship with her. Now, 2700 years later, her status is uncertain. The whole pantheon of Greek gods has been discredited, and in most circles, only an unfortunate would claim to have a relationship with a Greek goddess who pops out of thin air.

In this paper we demonstrate that it makes sense to think of Athena as a goddess companion, very much like an imaginary companion of childhood or a ghostly companion of a bereaved person. We show the tremendous gain in behavior potential and in personal satisfaction that Odysseus achieved in relationship to her.

Perhaps the paper will help to restore an appreciation for the value that such a companion can bring to a person's life.

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Notes

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Playing the Person Game in Healthcare

C.J. Peek and Richard L. Heinrich

Abstract

A 15-year intervention to better integrate medical and mental health care in a large multispecialty medical group is reviewed. This quest to heal the "mind-body split" in healthcare employs the metaphor of "creating a new game" to help clarify why this task has been so difficult to accomplish in most mainstream healthcare systems and to move existing change strategies to a new level. Integrating care is viewed not as a problem to be solved but as creating a "new game" that eventually becomes a "national pastime" played on "fields" all over the country. Casting current healthcare practice in the game metaphor, the mind-body split in healthcare is characterized as the "organism game" (biomedicine) running in parallel to a "mind game" (mental health), each with its own objectives, rules, players, tools, and playing fields. The problems of forced choice for patients and clinicians between these two "games" are reviewed and how these games are gradually being integrated into a "person game", with biomedical and psychosocial factors well integrated by teams of physicians and mental health clinicians.

The Fragmentation Of Biomedical And Mental Health Care And The "Mind-Body Split"

Rene Descarte (1641) is commonly given credit for establishing separate domains for the physical and mental (or spiritual) and the philosophical basis for the "mind-body split". In healthcare, this takes the form of separate and parallel systems for biomedical care of physical problems and mental health care of mental diseases and psychological conditions.

Over many decades, the old-time town doctor who did all of the above with limited scientific knowledge and tools has been replaced by dramatically more sophisticated and powerful medical knowledge applied by practitioners of many disciplines. What might have become a sensible and coordinated division of labor between biomedical and behavioral health clinicians in a world of exploding knowledge and know-how instead became mostly separate and non-communicating domains—each with separate clinical, professional, operational, insurance, payment, record-keeping and clinic siting practices. This paper focuses primarily on uniting the clinical domains, but touches on those other aspects as well.

Many persons need a well-coordinated blend of biomedical and behavioral care, especially those with chronic illness, industrial injury, psychosomatic or psychophysiologic reactions, simultaneous co-morbid medical and mental health conditions, and ordinary mental health and psychosocial realities (such as family and vocational distress) that combine in a way that complicates many aspects of healthcare. The traditional either-or care delivery structure too often forces both patients and clinicians into a choice between medical and mental health: two kinds of problems, two kinds of clinicians, two kinds of care, two kinds of clinics, and two kinds of covered benefits. This either-or delivery structure exists even though most clinical presentations result from an interplay of biomedical and psychosocial factors that require a well-integrated blend of care. The authors (along with many others) have made this critique of healthcare system design elsewhere (Peek & Heinrich, 1998, 2000; Patterson, Peek, Heinrich, Bischoff & Scherger, (2002).

To someone outside healthcare, the problem may seem elementary and the solution obvious. Yet re-integrating biomedical and psychosocial aspects of healthcare delivery has typically been very difficult to do in the mainstream, even with increasing scientific evidence for it. Hence the authors, who have lived with and been puzzled by the difficulty encountered in moving forward this obvious idea, felt the need to look at the difficulty in a different way and take the reader through the following areas of our inquiry:

• Common dissatisfactions with the separate medical and mental health "games" in healthcare

• How the literature base has (and has not) led to change

• Metaphors in use in healthcare and how adding the game metaphor helps us understand why this change has been so difficult

• The story of the spread of the "person game" in one organization

• What the authors would have done differently had they been smart enough to incorporate the game metaphor from the beginning.

What's Wrong With Separate And Parallel Systems For Medical And Mental Health Care?

The legacy of the mind-body split in healthcare is unhappiness of one kind or another for all stakeholders, even when everyone acknowledges the huge gains in know-how and outcomes in both domains. Energy for widespread change can come from mobilizing these dissatisfaction with the status quo (Dannemiller & Jacobs, 1992). Yet people often habituate to chronic unhappiness with the status quo, not recognizing the causes until named specifically.

Naming the dissatisfactions in a public way that people recognize can help generalized and chronic discontent become attached to specific features of the status quo and then motivate the search for better alternatives—a better game. Early in the quest the authors articulated the common dissatisfactions that people experience while providing, receiving, or purchasing care in the traditional separate and parallel structures for medical and mental health care—what they experience as being no fun in the games people are presently playing (paraphrased below from Peek & Heinrich (2000); Patterson et al (2002). Readers will no doubt recognize some of these from their own experience as patients, clinicians, managers, or executives. Articulating this common database of dissatisfaction with the status quo is intended to mobilize energy for change.

Common Clinician Dissatisfactions

1. You don't know enough about the complex patient sitting in front of you. Several charts all have just a piece of the story. One of these charts is not available, and the person with the information is on vacation.

2. Contacting other clinicians for more information is laborious or impractical. Schedules are set up for making referrals, not talking about cases first. Confidentiality and "phone tag" make it difficult to quickly find out what you need to know.

3. If you are a primary care doctor, you have to "sell" behavioral health referrals. Many patients see their problems as purely medical. You don't know the behavioral health clinicians or what they do or who to recommend. Mental health referral seems like a "black hole".

4. If you are a mental health professional, some patients say, "I don't know why I'm here—my doctor sent me." Others may say, "My doctor said you will do X with me", but this prescription doesn't sound right and you don't want to unsettle the patient or undermine the doctor by immediately questioning it.

5. Many patient problems don't fit neatly into "medical" or "mental health" domains. If you are a physician, emotional factors can be difficult to address in a 15-minute visit, e.g. for headache, low back pain, somatization, or distress for families coping with chronic illnesses. Moreover, some patients keep coming back even when you feel you don't have anything left to offer, and you find yourself ordering another test or referral but have the feeling you aren't getting to the real issues. If you are a behavioral health clinician and the patient focuses on physical problems, you don't really know what to make of it (and it's not so easy to find out).

6. Complex situations that don't fit separate mental health/medical systems "can ruin your day." Some patients complain about their physician to their therapist and vise-versa. It takes much less time to refill the pain medication or time-off prescription than to confront

complex problems for which you need a team. It is laborious to push the creation of a new team for every new situation that arises, so you just tough it out alone. When you see a certain name on the schedule that requires things you can't deliver all on your own, you want to go home.

Common Patient Dissatisfactions

1. "I'm physically ill but they think its all in my head." At other times, patients ask, "When will someone take seriously how my personal stress and fear affects my health?"

2. "The left hand doesn't know what the right hand is doing". The patient may have a family doctor, a specialist or two, a psychiatrist, a therapist, and a group therapist, and say, "they keep sending me from one person to the next, and I repeat the same story over and over to every new person. No wonder health insurance is so high!"

3. "It seems like I'm at various doctors all the time and still not getting better." The patient may say things like, "I get the feeling I'm not being a good patient and no one wants to see me anymore" or "It seems like they are trying to cut me off", or "I get the feeling everything is my fault or maybe everything is their fault."

Common Care System or Health Plan Dissatisfactions

1. Thick charts with high and unfocused utilization. Outpatient physician and behavioral healthcare visits multiply when delivery services don't match clinical needs. Lots of "searching" and unnecessary visits result—along with unnecessarily high hospital and referral costs when a break in continuity of care occurs at the wrong time.

2. Patients who are often unhappy with care, even though they get a lot of it. Some of these become "difficult" patients only because "most difficult patients started out merely as complex." A few patients resort to "doctor-shopping," writing letters trying to secure help, bringing Internet solutions, or employing difficult behavior to make something better happen. But these strategies escalate conflict and tend to make

things worse for them.

3. Misunderstandings occur between medical and behavioral health providers. Common sources include limited understanding of what the different professions can contribute to the entire care of patients, "culture clash" from different ways of training, knowing, talking, thinking, and working, and pejorative mutual stereotypes based on limited contact and opportunity to work out problems.

4. The problems of separate and parallel medical and mental health are no longer acceptable as a normal cost of doing business. Care systems can no longer postpone redesigning basic care processes to improve total system quality and reduce the satisfaction and service penalties associated with healthcare that is fragmented along the medical-behavioral health split.

Common Employer Dissatisfactions

1. Traditional behavioral healthcare may be seen as an expense of dubious value. This is felt at times when it is difficult to see how mental health benefit dollars are contributing to health and good work adjustment, disability management and getting people safely back to work.

2. Employers witness productivity or citizenship problems with some employees who will not seek behavioral healthcare for their mental health or substance abuse problems. Employers already know that general medical settings are the most common place people seek help for symptoms associated with mental health and substance abuse problems. Employers also know that most primary care practices are not geared up well for detecting and treating these problems.

3. Employers know that psychologically distressed employees are more often absent, get back on their feet more slowly, or fall into disability. In addition to these employer burdens, these employees cost more in health benefits, whether their distress is "a covered mental health benefit " or not. Ordinary marital and family distress is usually not covered by mental health benefits but is often brought to personal

physicians in some form and is identified by employers as a major cause of employee psychological distress.

As the reader can see, the root problem giving rise to these dissatisfactions is the "either-or" care delivery structure, not behavioral health problems or the patients themselves. What is commonly perceived in clinical practice as difficult in care of patients with intertwined biomedical and psychosocial problems is greatly magnified by a care system that typically fragments that care by first attempting to divide it into artificially separate domains of the organism and the mind.

How the Literature Base Has and Has Not Led to Change.

The dissatisfactions above have been accompanied by a huge literature on the interplay of biomedical and psychosocial conditions and how care systems and individual clinicians, managers, and insurors can take this interplay into account more effectively. Published research and demonstrated models for integrating biomedical and psychosocial healthcare have been recommending a more integrated approach since the 1960's. Since then, particularly since the 1990's, a flood of books, articles, conferences, demonstration projects, government reports and task forces have recommended the integration of medical and mental health care in many contexts and for many reasons. But as of 2005, integrated medical and mental health care still awaits mainstream implementation, even though the ideas are now largely accepted and many local, state, or agency level recommendations and demonstrations are taking place.

It is no longer necessary to raise consciousness and sell the concept. It is now necessary to help real clinicians, patients, care systems, health plans, and policymakers make fundamental changes in actual practice "on the ground" and gradually improve them until a practical integrated system emerges. The literature is enormous and cannot be reviewed here. The reader is referred to the following books just since 1992 that include literature reviews: Haas (Ed., 2004), Frank, McDaniel, Bray, & Heldring (Eds., 2003); Maruish (2000), Patterson, Peek, Heinrich, Bischoff & Scherger (2002); Cummings, O'Donahue, & Ferguson (2003); Seaburn, Lorenz, Gunn, Gawinksi, & Mauksch (1996); McDaniel, Hepworth,

& Doherty (1997); Cummings, Cummings & Johnson, (Eds.,1997); Blount, (Ed, 1998); Haber & Mitchell (Eds., 1998). More books are currently in press and hundreds of separate articles and chapters in other books or Task Force reports are in print.

The literature frequently points to the difficulties in making the change to an integrated system of medical and mental health care. But the difficulty achieving mainstream progress puzzles many who have worked for this change over the past forty years. This paper offers a way to look at and appreciate the enormity of the challenge of integration by looking at it fundamentally as a matter of inventing and then attracting people to "a new ball game".

Metaphors in Healthcare

Common metaphors in use

Metaphors develop spontaneously around complex human activities as people discover patterns and similarities between one field or activity and another. Apt metaphors can help people relate new or complex fields to things they already understand and can create handy images and figures of speech that guide action. Healthcare is no exception. Some metaphors found in healthcare are comparisons to other fields (real metaphors) and others are different perspectives from which to view healthcare (not so much metaphors as perspectives or viewing angles). But for purposes of this paper, the following five metaphors serve the same function—to facilitate understanding of underlying patterns and creation of a useful set of images or heuristics for planning, acting and evaluating actions going on in a very complex undertaking:

- Science
- Engineering
- Business
- Politics
- Community

Each contributes different insights and images to healthcare and has a different range of useful application. Taken together they are a useful package of metaphors when used at the right time for the right purpose. They don't so much compete with each other as fill out the whole metaphorical toolbox. No single one could possibly do the job by itself and the point is not to pit one against the other, argue for the superiority of one over the others, but to know when and how to use each one.

Science. This is not so much a metaphor as a key perspective or viewing angle, particularly for the clinical dimension of healthcare. People speak of "evidence-based medicine"-- providing care that works and avoiding care that doesn't work; taking a scientific mindset to the understanding of health and illness; and creating effective treatments through scientific methods. A scientific mindset is also present in creating "patient centered care" where the evidence-basis for patient-clinician communication and relationship-building is the focus. A scientific mindset also accompanies much quality improvement in healthcare, with concepts and tools such as "small tests of change", "process measures", and "run charts". Knowing science helps you know healthcare.

Engineering. This metaphor is a close cousin to science, particularly for the operational dimension of healthcare. This mindset appears as process improvement, office practice improvement, continuous quality improvement (CQI) or total quality management (TQM); patient safety as in "safety is a system property" (Institute of Medicine, 2000) or "best practices"; coding, billing, and charting systems, and the design of human resources (HR) and performance management systems. The engineering metaphor invites us to look at healthcare as a system that can be designed and built consciously and well from basic design and manufacturing principles and practices-- rather than being informally and inconsistently patched together over time. Knowing engineering helps you know healthcare.

Business. This perspective is a cousin to engineering, also relying on explicitly designed systems, measures and benchmarks that use numbers. But it focuses primarily on the financial dimension of healthcare-- staying

solvent, making the best use of resources, and building market position. This brings with it talk of markets, market share, competitive edge, territory, the right price and value, consumerism, margin and bottom line, reserves, risk exposure, capital investment, contracting, fee schedules, cost structure, regulatory compliance, business ethics and so on. This perspective brings a language and mindset for using established business principles and industry standards for survival in a competitive and risky world. Knowing business helps you know healthcare.

Politics. This perspective, a next-door neighbor to business, has internal and external application. Internally, the political perspective has to do with who is at the table, who gives input and how meetings are run; who ultimately makes decisions; how general buy-in is obtained; and the internal distribution of risks and benefits, perks and prestige. This perspective brings talk of organizational structure, governance, process, organizational culture, internal communication and feedback loops, and helping everyone find their way to contribute to the enterprise and discover their motivation to do so.

Externally, the political perspective has to do with the rules of the game on national, state, or local levels; where key issues for healthcare are raised in the public sphere and by whom, who takes which risks, mutual responsibilities among stakeholders, how decisions are made, proper regulatory compliance, appropriate legal and business structures, and so on.

Both the internal and external political metaphor or perspective bring with them talk of constituencies, knowing what matters to whom, lobbying, jockeying, negotiating, bargaining, clout, influence, leadership, and so on. Sometimes when things are intense, the metaphor shifts to war- - with talk of battles, fronts, turf wars, shots fired, ground gained, blood let, industrial espionage, loyal soldiers, etc. Or a sports metaphor might take hold—with talk of moving the ball forward, scoring, blocking, curve balls, changing the playbook, hitting a home run, being benched, cheerleading, high-sticking, penalty box, and so on. Knowing politics, war, and sports helps you know healthcare.

Community. This metaphor is much less common in healthcare, even if it has equal or greater intuitive appeal as discovered by the authors who have featured this metaphor in their own organizational leadership and consulting since 1991. In this metaphor, the healthcare organization (defined as tightly or loosely as you wish) is compared to a community—more than that—a "community with a mission" (Putman 1990). This is a group of people who recognize each other as a more or less defined group dedicated to a common purpose—along with a set of shared practices, decision making principles, concepts and language, and a particular world or sphere in which they operate together. This metaphor brings talk about community and community-building, shared mission, members, what members do together (practices), what is real to them (concepts and language) how they structure their thinking and actions (decision-making principles), and how they construct and delimit the world in which they operate (in this case, the clinical, operational, and financial worlds of healthcare).

The community metaphor leaves room for the language of all the other metaphors—in the concepts, language, practices and decision-making principles of the community. This is a major advantage for a healthcare metaphor, because members of the healthcare community (taken together) do in fact need to be able to think as scientists, engineers, business people, politicians, and keepers of a human community. Knowing community-building also helps you know healthcare.

Why Add the Game Metaphor?

With all these healthcare metaphors or perspectives already in use, why add another? Why introduce the language of games to an already-busy metaphorical landscape? Why introduce a game metaphor when healthcare is by no means playing around or a laughing matter?

The reason is this: The game metaphor makes it very difficult to avoid confronting the deeply human challenge of getting healthcare people, systems, and patients to change what they do everyday—to question their deepest traditions and change time-honored rules of the game that they grew up to assume and respect—and perhaps not even question. The

game metaphor makes it impossible to slide around the fact that there may be a new game in town, but few people want to play it. Why not? And what can we do about it? The rest of this paper explores this.

If change in healthcare is seen purely as a science topic to entertain, an engineering challenge to meet, a business problem to be solved, or a political situation to be negotiated, the core human challenge of changing deeply held patterns is scarcely recognized for what it is, let alone addressed. The fact that healing the mind body-split in healthcare has a forty year long trail of scientific, engineering, business, and localized political effort—but still exists only in pockets-- speaks to the fact that something is missing in the human analysis. We hope the reader will follow us as we look at our own quest for integrated medical and mental health care through the lens of "games we play in healthcare". The game metaphor is of course anchored in the community metaphor described earlier, but brings with it familiar language and imagery—along with an intuitive appreciation of what it takes to create a new game that people actually want to play. We believe that thinking about games also helps us understand healthcare.

What The Game Metaphor Opened Up

Adding the game metaphor opened up to the authors a new set of images and language in a familiar idiom to help describe the stubborn challenges in healing the mind-body split in healthcare. In this view, better integrated care means establishing a new game with new goals, players, and rules for clinicians, patients, and care systems. This means integrated care would need to be a team sport—not an individual competition or a form of solitaire. Moreover, it means creating a team sport that is *widely* practiced, rather than practiced only in isolated pockets among a few collaborative care pioneers. From this, several often-overlooked insights quickly emerged:

Integrated care is not a problem to be solved—it's a creation. Better integrating biomedical and psychosocial care isn't just a scientific problem, a clinical problem, business problem, an organizational problem, or a political problem to be *solved*. Rather, it is a human *creation—cre-*

ating a "major league" new social practice or "game" within local, then larger, healthcare *communities*. The task of healing the mind-body split in healthcare is no less than creating a new game in healthcare and seeing it played all over town by just about everyone—"the only game in town".

But efforts to better integrate biomedical and psychosocial healthcare have often treated it as a clinical, scientific, communication, or business problem. Technical solutions or adjustments are applied to the old ways, e.g., better research-based protocols, improved systems for information exchange, or adjustments to things like coding and billing systems, healthcare benefits design or contracts, geographic proximity of clinicians, social mixing, cultural understanding between professionals, or exhortations to collaborate and communicate better.

While these problem-solving steps are certainly necessary and often do improve the level of coordination and collaboration between medical and mental health clinicians, they often fail to gain widespread and enduring acceptance in the mainstream of care systems and professional communities. The missing ingredient is the conscious effort to invent and spread *a new game* in town. This has to do with people's daily practices and relationships—what they show up on the field to do every day, who they do it with, how they equip themselves to do it, and how they measure themselves (their own "player stats"). Conventional problem solving is aimed at improving play of the old game, but rarely makes a frank call for a new game. The problem-solving approach, especially when genuinely helpful, can actually postpone the day of reckoning—the realization that the old separate and parallel model for biomedical and mental health care delivery is just not salvageable in the long run.

The game metaphor reminds us of that missing piece: that mainstream integration of biomedical and psychosocial healthcare today is about shifting world views and daily practices of clinicians, along with operations and finance experts, "in here, among us", even more than about technical or scientific issues "out there". The enabling factor is not so much problem solving as what in Descriptive Psychology is sometimes called world reconstruction (Roberts, 1985) and what is real, who I show up as, what

I pay attention to, my place in the story, what I do with whom as an actor , observer, or critic, and the rules of the game or social practices (Putman, 1998, p 129-137; Ossorio, 1998, p. 104). The game metaphor gives intuitive access to this in a way that "problem-solving" does not. Hence we speak first of "bringing a new game to town" rather than "solving a slate of problems". Creating a new game in town is much tougher in human terms than solving a slate of technical problems with the old games.

Most new games never make it beyond their inventors. This reminded us of our experience with integrated care. Many demonstrations in integrated healthcare prosper while under the personal guidance of founders and pioneering figures, but dissipate in the press of usual practice when these figures move on. The game metaphor makes it easier to understand why progress in this area in the national sphere has been slow and prone to setbacks. Ask yourself how many of the games invented by people over the ages end up being played daily on the world's stage? How many of you invented games as children? But how many of these lasted beyond your own childhood group? For every game that reaches the stature of baseball, chess, GO, or Monopoly, how many others were invented but died with their inventors or occupied a niche only to be swept away when the niche was? This is the familiar problem of creating a next generation of leaders for innovative practices and creating "games" that people really want to play even after the charismatic founders are no longer cheerleading and marketing them.

Without really knowing it at the outset of their journey, the authors had set themselves the daunting goal of inventing and spreading a new game in healthcare, starting in their own organization.

Mainstreaming integrated healthcare means turning "pickup games" into a "national pastime". The challenge to pioneers, advocates, and champions is what quality improvement experts call "spread"—allowing the most successful experiments, demonstrations, and successful tests of change to become routine practice everywhere. Staying with the game metaphor, this means turning the many spontaneous and improvised "pickup games" played by collaborating clinicians into a "national

pastime" rather than letting these remain invisible exceptions in the background or die away with their local founders. The goal is to help unorganized groups of a few people who integrate care become a much larger community of many players across the many professions. This much larger community of clinicians and patients will need to be joined by large organizations and insurors who sponsor these activities and also play by the new rules. As mentioned earlier, Putman (1990, 1998) captures this idea as "an organization is a community with a mission". In this view, building organizations is largely the work of building organizational and professional communities. This Descriptive Psychology formulation of organization and community has been core to the authors' approach to organizational and professional change and therefore is one of the healthcare metaphors listed earlier.

After seeing the integrated care challenge more clearly, the authors playfully adjusted their mission to read: "When it comes to better integrated medical and mental health care, there shall be a new game. And there will be requests for more and more games, by more and more players, with better and better equipment, teams, parks, and leagues."

New games are most marketable when interesting enough, simple enough, compatible enough with related games, and available for a free trial. These are lessons from the "diffusion of innovation" literature discussed in more detail later (Rogers, 1983) but put in way that is less technical and academic sounding. This literature identifies things empirically associated with successful widespread implementation of new methods, i.e., distinct improvement over usual practice, compatibility with everything around it, simplicity, potential to try it first, and observability of the results. The game metaphor complements the diffusion literature by casting it in more accessible and personal terms as the marketing of a new game in town to replace old limited ones.

Both the game metaphor and the diffusion literature leave a place for mobilizing energy for change from the previously outlined dissatisfactions real people have in playing the existing games– what people don't like (but often stoically accept)—and what game would attract more

players. Mobilizing large-scale dissatisfaction with the status quo as the driving force for a new vision and first steps is discussed by Dannemiller & Jacobs (1992) and a case study in healthcare by Peek, Heinrich, & Putman (1997).

At this point in the chapter, we will go ahead and use the game metaphor consistently, anticipating that the reader will see some of the same advantages we see. However, this does not mean we are trying to displace the science, engineering, business, politics, community or other healthcare metaphors or are merely suggesting a new way of talking about everything. We certainly don't go around talking about everything as a game. Instead, we are trying to show what additional mileage is to be gained with the chronic issue of better integrating medical and mental health care by applying the game metaphor in a few key areas.

The Games People Play in Healthcare

One way to mobilize energy for change is to cast the unsatisfying features of usual practice as "rules of the game" now being played. This device can make it easier to see how usual practice does not handle the clinical reality that we face every day. Making these connections is especially important when people have become habituated to the consequences of the old games—and accept them without thought as "a normal cost of doing business."

The Organism, Mind, and Person Games.

Table 1 shows "the games we play in healthcare". This is a heuristic device rather than a literal depiction of reality. The first two columns (organism game and mind game) highlight rules or premises of the separate and parallel approaches to biomedical and psychosocial health care. The third column (person game) outlines new rules of a new game in which the old games are realistically combined.

Table 1. The games we play in healthcare

	Organism game	Mind game	Person game
Object—what you touch every day	The disease and disease processes—physical pathology	Mental processes and constructs—psychopathology	The unfolding life of a person, in context of disease and illness (see next table for this distinction)
Core approach	Treat patients as mindless bodies (except when the mind is really just an another body part)	Treat patients as body-less minds (except when the mind is just another organ of the body)	Treat patients like persond—persons who lead a life and make mindful (or not) choices every day while inhabiting their bodies
Players	Physicians and other biomedical clinicians, usually as soloists	Mental health professionals, usually as soloists.	Healthcare professionals, regardless of professional discipline, often in teams (no one knows everything)
Root concepts and language	Physical & biological science with a nod to social sciences when necessary	Psychological theory, with effort to use methods of science, especially the biology of mental illness & behavior	Based in biopsychosocial concepts, self-determination, and goals of care as defined by the person. Still evolving a broad base of quantitative and qualitative science
Object of game	Fix the organism, or at least keep it going and prevent its death	Cure of the mental disorder (or at least management)	Help a person improve/maintain health, manage health conditions, realize individual/family goals of care; retain meaningful participation in the community throughout life and end of life.
Role of clinician	Find and fix	Find and explain-hopefully fix	An invited expert, coach, trainer and guest in the patient's life—along with "finding and fixing" where possible
Measures or stats	Physiological measures, lab values, disease state indicators, your own outcome stats	Presence / absence of diagnostic signs / scores, mental symptoms & functioning	Ability to participate with satisfaction in the life of the community, including ability to monitor and manage conditions & symptoms that would significantly interfere with it

To keep it simple, this was done in a stereotypical, simplistic, and irreverent or satirical way that hopes to engage people in recognizing the foibles in usual practice—as honorable historical facts rather than threatening people or making them rise to a defense. The purpose of this device is not to educate, convince, criticize, or pressure, but to crystallize motivating insights and stimulate curiosity. In Descriptive Psychology, this amounts to mobilizing the person's *own* "critic function" to arouse the curiosity needed to question things without making the person feel defensive or bad. This table employs deliberate stereotypes and irreverent oversimplications just for the sake of illustration!

Some readers, particularly those from outside healthcare, will see the problem and solution depicted here as painfully obvious and wonder why there needs to be a paper devoted to it. But from the inside, the legacy of separate and parallel systems is so strong that it takes more than exhortation to mobilize change—as if the traditional games command so much loyalty that they survive in the face of obvious deficits in handling daily reality. Hence pointing out the foibles of the traditional games and offering a new one is a promising strategy for change and is consistent with the diffusion literature (offer something distinctly superior to usual practice).

Much of the dissatisfaction with the separate and parallel organism game and mind game is traceable to patients shuffled (often out of desperation) between biomedical and mental health clinicians who are playing their separate games on separate fields. Patients are often unhappy with both games encountered in the healthcare system. "Why can't they treat me like a person, not just an assembly of separate physical and mental problems!" The person game does just that—by combining the best goals, strategies, and plays of both the organism and mind games. In this game, the same patient is viewed from biomedical and psychosocial perspectives and these are combined into one picture.

This can be compared to ordinary binocular vision. One eye sees an object from one perspective and the other eye sees the same object from a somewhat different perspective and our brain combines these visual in-

puts into *one* picture of *one* object with amazing perception of depth that neither eye could accomplish alone.

Treating a Disease; Treating an Illness.

Table 2 follows up with a contrast between "treating a disease in an organism" and "treating an illness in a person". The therapeutic moves are different for treatment of an illness because social and family factors, poverty, what people bring to their diseases, and what counts for them as meaningful living are all incorporated. This is shown below, again in simplistic stereotypical form as an illustrative device rather than a literal portrayal. Of course, in reality clinicians work in both these modes because the disease is present in the illness. Illness care goes beyond disease care, but does not neglect it.

Note that the same contrast between disease and illness can be drawn for mental diseases– those of the brain or the intrapsychic mechanism contained in the theory the therapist is using. In addition, psychiatrists, psychologists, or others sometimes recast mental processes as biological processes in order to connect mental health phenomena with the growing biological science base.

In the end, patients want to be treated like persons who are also organisms—and want their clinicians and care systems to have the wisdom to know the right time and place for each way of thinking and how to blend them into one approach.

Table 2. Treating a Disease and Treating an Illness

	Disease (of an organism)	Illness (disease played out in a person)
Basic questions	What are the mechanical breakdowns, physical findings, or loss of physical function? What is the fix or management strategy?	Where is the disability and interference with being a person in a community? How can effective care of the disease be successfully incorporated into the life of the person?
Object— what you touch every day	Bodies, protoplasm, organs, organ systems, organism	Life in a community, including limitations, sensations, and self-management challenges imposed by bodily realities and conditions
Process	Find and fix—or establish strategy for damage control	Coach on incorporating physical realities and conditions into daily life while "fixing" physical conditions where possible
Desired outcome	A body free of disease, in remission, or controlled	A person living what they consider a good life as a member of a community (patient-centered care). Maximum behavior potential and participation in the practices of the community
Standard	Normal or best-you-can-hope-for physiology, medical indicators and functions	Doing as well as you can expect a person in that situation to do with those conditions present in their life.
Dr-Patient Relationship	Educator-educated, fixer-fixed	Interviewer/listener-storyteller/ synthesizer Coach-actor
Relevant principles	Science, healing, ethics; safe and effective (evidence-based medicine) procedures and conduct	Science, healing, ethics; Safe and effective coaching in participating in the life of communities, given health problems

Pathology and a Person-centered Approach

The Descriptive Psychology definition of pathology (Ossorio, 1997) makes clear why a blended, person-centered approach that emphasizes participation in the social practices of communities appears so promi-

nently in the "illness" column above: "When a person is in a pathological state there is a significant restriction on his ability. . . to participate in the social practices of the community". Paraphrased in the vernacular, this becomes, "A person is sick when he is sufficiently limited in his ability to do what is essential to being a person, i.e., act on purpose in ways that make sense, knowing what he is doing . . . or to do what a real person in a real life setting ought to be able to do" (Ossorio, 1997, p. 11).

This definition of pathology applies equally to problems such as a broken leg or major depression. In both cases, the person's ability to participate in the social practices of the community is significantly impaired, and that is how you know they are really sick. This definition makes the restriction of behavioral capabilities essential to the notion of illness of any kind, as shown in the following thought experiment (Ossorio, 1997, p.15):

"Imagine that I have a broken leg or an extreme case of gout or arthritis affecting my legs. Imagine also that, nevertheless, I am able to do all of the things I used to be able to do before I had this condition. That is, I can walk, run, hop, kick various objects, climb ladders, dance (and enjoy it), and so on. Moreover, this state of affairs can be expected to continue indefinitely. And finally, imagine that I am not exceptional in these respects, but rather that I am typical of people who have broken legs, gout, or arthritis. Under these conditions, would I or anyone else claim that I was "sick?" Obviously not—it would be nonsensical. Yet such physiological conditions are what we routinely and unreflectively refer to as the illness. What the thought experiment brings out clearly is that it is the restriction in behavioral capabilities which is essential to the notion of illness, because without that there is nothing to be explained by reference to a physiological, psychological, or other condition, and there is nothing that calls for treatment by reference to physiological, psychological, or other theories."

Because all illnesses may be conceptualized in this way as restrictions on a person's ability to participate successfully in the social practices of his or her community, treatment of the person must focus on how these

restrictions can be removed or how the person can live with those that are unalterable. Such a conceptualization provides the basis for the person game or "person medicine" with a wide range of "biopsychosocial" interventions, a famous term coined by George Engel in germinal writings that proposed a model of human health and illness that combines interacting biological, psychological, and social dimensions and contributing factors to health or illness (Engel, 1977, 1980).

Reconciling "Evidence-based Medicine" with "Patient-centered Care"

Before returning to our own story, we want to lead the reader through a key discussion taking place right now in healthcare that illustrates and reinforces the importance of a shift to "the person game" that prominently includes patient behavioral capabilities as members of communities. Two seemingly opposing but powerful and simultaneous trends in healthcare ("evidence-based medicine" and "patient-centered care") are calling out for reconciliation. Each of these has its own rules and could be thought of as competing games in healthcare. This is summarized very clearly by Jozien Bensing (2000). We will draw from Bensing's article and offer a way of thinking about it that incorporates both into what we call "person medicine". Bensing opens with this statement:

"Modern medicine is dominated by two general beliefs or paradigms: one is called 'evidence-based medicine'; the other is called 'patient-centered medicine'. Both concepts are generally accepted as 'good', 'valuable', and something to strive for. Few people will deny the relevance of either of them. But two serious questions can be raised. For, how patient-centered is evidence-based medicine? And, how evidence-based is patient-centered medicine? Close inspection of the literature reveals that evidence-based medicine and patient-centered medicine seem to belong to separate worlds. Bridging the gap is a major challenge for all who want to protect the humane face of medicine in the next millennium."

Evidence-based medicine. Summarizing from Bensing, evidence-based medicine is often biomedical and positivistic in perspective, relying on a highly developed empirical base from homogeneous patient

groups with the same condition in randomized clinical trials. It relies on evidence for the most adequate treatments in health care, often on meta-analyses or review studies of the best randomized clinical trials, along with strength-of-evidence scales as way of knowing how heavily to weight particular studies.

Evidence-based medicine is disease-centered—with best care of diseases at its core. In this way it can be regarded as "doctor-centered"—the doctor's interpretation of the evidence with diminished attention to the patient role and the patient's own relationship to the condition in the context of life. It holds out the promise of ideal integration of individual clinical expertise and external scientific evidence, producing guidelines, protocols, and standards that serve as a professional group decision that are sometimes offered as an alternative to individualized patient decisions. In this way, evidence-based medicine s considered hard and objective, rather than fuzzy and subjective.

Patient-centered medicine. Patient-centered medicine is humanistic and biopsychosocial in perspective, holding out promise of successfully applying evidence-based approaches to real patients, focusing on the care of illness as well as the treatment of disease. It is concerned with facilitating patients' disclosure of real needs, wants, and worries, emphasizing patient participation in decision making by taking into account the patient's perspective, and tailoring medical care to the patient's needs and preferences. Knowledge from individual patients such as their own experience, capacities, needs, preferences are considered to be important additional sources of information.

The theoretical, values, or relational basis is more highly developed than the scientific evidence base, centering on the naturally-occurring diversity of problems and individuals in clinical practice rather than on homogeneous condition-specific populations. Patient-centered medicine is also concerned with the content of the consultation, the choice of topics that should, or could be addressed, control over the consultation, whose agenda is to be dealt with, and who is expected and has the power to make decisions. In this way, the evidence domain for patient-centered

care is patient-clinician communication research as much or more than homogeneous and disease-specific randomized controlled trials.

Bensing goes on to point out his surprise at the need to talk about "patient-centered care" at all:

"The very first thing that comes into mind when reflecting about the concept of patient-centered medicine is . . . bizarre and extremely important. . . that a concept like 'patient-centered medicine' exists. It is bizarre. . . because the term 'patient-centered' should be a superfluous addition to the term medicine. All medicine should—by definition—be patient-centered. However, it is not. Since Hippocrates told us: 'first of all, do no harm', medicine has developed as a scientific endeavour, as a technological challenge, as an organizational puzzle and as an economic enterprise, in which—undoubtedly—everybody will claim that everything that is done, is done on behalf of the patient, that—of course—the patient is the centre of it all. But, certainly, most patients won't feel it that way."

Bensing's surprise that the concept of patient-centered medicine exists at all parallels the surprise from people outside healthcare that the task of integrating biomedical and psychosocial healthcare is a longstanding issue that still exists at all.

Bensing points out that the concept of "patient-centered medicine" is not firmly rooted in empirical evidence. It is regarded as a "fuzzy concept"—a global concept whose meaning everyone understands, but with quite different connotations for different people. "Fuzzy" also means that the core elements of the concept are clear to everyone, but at the edges the picture becomes blurred and difficult to operationalize with measurable elements– which of course is what researchers need to do. He concludes that "preparing patient-centeredness for empirical research means that the concept has to be clarified." He goes on to do this by relating "patient-centered" to "doctor-centered" or "disease-centered" in a way quite similar to our contrast between the organism game and the person game.

Reconciling "Evidence-Based" and "Patient-Centered" as Aspects of the Person Game.

We suggest that the these two powerful trends in medicine can be reconciled and placed under one conceptual and practical roof of "person medicine" or the person game through the use of two Descriptive Psychology contributions: A clear concept of "person", and the notion of operating simultaneously from more than one framework or "world".

Using the Descriptive Psychology person concept to reduce the "fuzzy" quality of the patient-centered concept. "Patient-centered" can readily be translated to "person-centered", which more clearly points to treating patients like persons rather than a collection of independent diseases. Bensing points out that "patient-centered medicine" is a global concept with core elements that are clear to everyone, but blurred at the edges and difficult to operationalize with measurable elements. Such a picture is blurred to the extent that the concept of "person" is blurred.

Fortunately, Descriptive Psychology has a very clear and systematic formulation of the person concept (Ossorio, 1995), one that permits clinicians to distinguish and orient to important factors in patient-centered healthcare such as:

• Community practices that are most important to that person; what the person most wants to be able to keep doing

• Valued places or roles in their various communities that the person wants to maintain.

• The person's own view or theory about their disease and health—and the significance to that view of various alternative choices of medical care.

• Embodiment—all the facts and conditions of the physical organism that affect what a person can do or will likely be able to do in the future.

• The person's own story and world within which disease and health have a place, including the person's own concept of living a good life and dying a good death

• A person's decision-making principles or spiritual practices relevant to health decision-making

• Anything else that characterizes a person and their actions.

With a well-articulated person concept in place, patient-physician communication goals and practices can be systematized such that care of diseases and conditions is carried out in a person-centered manner that is much less fuzzy. To the extent that particular interviewing or relationship-building strategies are found empirically to be productive increases the scientific evidence basis for person-centered care. Furthermore, the Descriptive Psychology person concept does include embodiment—a place to take into account organism facts as an aspect of the person. All this is for a different paper!

Evidence-based and patient-centered paradigms as mutually influential and simultaneous realities. There is no need to frame these as either-or or competing choices. Don't ask which is more important, which trumps the other, or which has the most solid foundation. Descriptive Psychology provides conceptual foundations for living and working in simultaneous realities or worlds such as this (Roberts, 1998; Jeffrey, 1998; Patterson et al, 2002). The fact is that we need to play "the person game" by both kinds of rules because the clinician's and patient's total world is composed of both the worlds of evidence-based medicine and patient-centered care. Principles for operating simultaneously in an evidence-based and patient-centered manner:

A. Do only what demonstrably works for the care of diseases and conditions (and not things that make no difference or cause harm) based in scientific study of which treatments work in general for given conditions where the clinical picture is not complicated by wildly interfering other conditions. (evidence-based medicine)

B. Apply these patterns of evidence-based care to actual patients with their full participation (to the extent they want it) and tailored to their multiple and interacting conditions along with their needs, wants, values, capacities, and preferences—with the relationship and communication

strategies that are scientifically shown to be effective when done well by clinicians. (patient-centered medicine)

In a nutshell, this approach can be captured in a pair of mottos for use in person-centered medicine:

A. Do evidence-based medicine in a patient-centered sort of way, and

B. Do patient-centered care in an evidence-based sort of way.

Advantages and Satisfactions in Playing the "Person Game"

Convincing arguments are needed to spread person-centered medicine. But beyond that, clinicians (and others) must experience actual advantages from playing the person game rather than the separate and parallel organism or mind games. These satisfactions are the flip-side of the dissatisfactions described earlier. Without concrete practical advantages to a new game, things tend to stay the same. A sample of advantages or satisfactions associated with the person game are listed below, using similar categories as the "dissatisfactions with the status quo" described earlier.

Common Clinician Satisfactions

The concept of illness and pathology matches what patients actually present, rather than leaving room mostly for the disease aspect. As shown in Tables 1 and 2, playing the person game in healthcare means attending to diseases and the psychosocial aspects of illness and health—including the person's ability to participate as well as possible in the social practices of the communities in which he or she is a part. Whereas the separate and parallel systems for medical and mental health care tend to center on physical or mental diseases as the underlying pathology and focus of healthcare, person medicine (playing the person game) sees pathology as fundamentally linked to behavioral capabilities and limitations that come from disease processes. This expanded view more closely matches the picture that patients actually present to clinicians, what clinicians listen to and work with anyway, and what is required for good outcomes in actual practice.

Clinicians are equipped with roles, rules, tools, and team for actual clinical presentations they confront in daily practice. The clinician is not required by rules to first sort medical from mental health and then try to take on one portion while attempting to refer out for the other. Complex and intertwined biomedical and psychosocial factors in illness and health are allowed to remain intertwined in one person-centered picture, and the appropriate team is assembled for coordinated expertise in the various aspects of that one picture. Clinical, operational, and financial systems are designed to make this possible rather than putting up obstacles to a person-centered approach.

The person game can be a more satisfying "team sport". Acting alone within your biomedical or mental health domain can be a frustrating individual sport. When individual clinicians are confronted by complex clinical presentations that they don't feel able to address alone, discomfort results. As the Descriptive Psychology maxim goes, "If the situation calls for a person to do something he *can't* do, he'll do something he *can* do, if he does anything at all" (Ossorio, 2002, p. 40). But if accessible and reliable teams are in place for these common complex clinical situations, clinicians will have something they *can* do in any situation, and will enjoy practice and appreciate their colleagues more.

The person game has greater potential for professional development and satisfaction. The scope of person medicine is broad and the interactions, strategies, and content are numerous and complex. The person game is indeed complex and has a long learning curve, but once you get the hang of it, the rewards are extraordinary. The person game comes with a much wider set of possibilities and "levels of play" for a lifetime of professional exploration and development. The decision to learn this game might be compared to the decision to continue with a typewriter vs. learning a word processing program. Everyone agrees there is a steep learning curve to computers along with many ways to become frustrated at first (and later on too). But virtually no one would go back to a typewriter once they get the hang of their word processing program.

Clinicians may actually be able to play the person game more readily

than they might initially think, because the person game taps into the full range of clinicians' competence as persons themselves. The person game in healthcare returns them to what they already understand about people and the ordinary language of health, illness, and healing-- but with all the clinician's technical training powerfully added to it.

Chronic care is less frustrating using a biopsychosocial approach. Almost all chronic care, e.g., for diabetes, congestive heart failure, or asthma, involve multiple interacting factors that require a biopsychosocial approach with "prepared practice teams" using "integrated health information" to maintain "productive interactions" between clinicians and "informed activated patients" (quotes from Wagner et al, 1996). Such contemporary views of chronic care are heavily person-centered, even as they address disease processes. This is because chronic illnesses are managed, not cured, and a big challenge is patient self-management and health behavior change. Goals of care include helping the patient participate in the social practices of his or her communities. Addressing chronic care in this way makes it much more satisfying for clinicians and patients alike.

Rehabilitation, industrial injury, and back-to-work planning is less frustrating with the larger picture in view. These issues necessarily weave together social, vocational, and financial issues with physical and psychological factors. In a traditional mental health framework, back to work issues may be seen as an employer intrusion into the therapeutic relationship or as "non-clinical" or "administrative" concerns, when in reality work adjustment is a key area for health. In a strictly biomedical framework, the patient's fears, anger, mental health conditions, or personal situation regarding getting back to work may be seen as a Pandora's box that the clinician does not want to open, yet are key parts of the total picture. Complex psychophysiological reactions and emotional distress have the same features—an inextricable blend of biomedical and psychosocial factors that become much easier and more natural for everyone when clinicians treat people like persons rather than only organisms or minds.

Common Patient Satisfactions

Patients would like to participate in their healthcare as persons. This goes beyond being treated merely as organisms or mental assemblies. They will help, rather than resist, when clinicians treat them as persons rather than as disconnected organisms or minds—so long as the organism and mind facts remain in the picture!

Clinicians more readily take into account the personal significance of medical or disease facts for the patient and family. When clinicians are thinking of health and health problems in purely organism terms or purely in mental terms, it is very easy to miss the significance of either mental or physical findings for the *person*. For example, anyone who has ever been sick or hurt knows that problems with the organism have significance for the person—sometimes profound ones. A biomedical clinician focused just on the physical findings may catch the *organism* facts, but lose their significance for the *person*. In this way, even a conscientious clinician can miss what matters most to the person, even when being very clear and accurate about a disease.

In the same way, a mental health professional may miss the significance of biological problems for the person, e.g., how an injury affects ability to engage in meaningful social practices of the community; how a work injury brings in back-to-work issues, employer concerns, worker's compensation and livelihood issues that are not traditionally thought of as mental health problems.

But the patient is aware of all these interconnections. The person game and its larger concept of pathology has an important place for all of it—mental, physical and social facts that have significance for a person's life, how they lead it, and how they are able participate in the social practices of their communities. Connecting patient self-management of diseases such as diabetes depends for success on linking behavioral changes to what already matters to patients, which is usually at the level of the person, not only the disease. This is important to patients.

Clinical problems such as depression are easier to describe and understand. For example, there is no need to accept a forced choice between depression as *either* a psychosocial problem *or* a brain disease. In the person game, all kinds of factors can be incorporated into a useful concept of depression that patients can identify with and respect. This can include both clinical depression, results of other physical processes such as heart disease, reaction to physical and personal losses such as loss of limb from diabetes, voice from cancer, or vocation from stroke. The significance of those symptoms is very easy to portray in the person game as contrasted with strict organism or mind views of depression which may not focus as much on interference with the person's participation in important social practices of the community. This allows for a more personalized and nuanced view that patients can understand and cooperate with.

End of life care readily blends physical, family, psychological, social and spiritual realities. These can be combined into one coherent plan and care team because control of suffering, connection to family and spirituality, and dying a good death become larger issues for goals of care than active treatment of disease. (Byock, 1997; Cassel, 1991). For example, the Medicare hospice benefit is a full-scale, complete and mainstreamed biopsychosocial approach to end of life care with a matching set of healthcare benefits which allows patients and families to deal with the full picture of death and dying with one coherent care team.

Patients are not asked to spend time and energy migrating back and forth between medical and behavioral professionals and clinics. This reduces the implicit expectation that patients learn to subdivide themselves into biomedical and mental health domains in order to get the attention they need. Person-centered design of the healthcare system helps patients preserve the person they are in the midst of their healthcare problems while mobilizing energy for coping with illness rather than coping with the system itself. This is described very clearly in Crossing the Quality Chasm, the Institute of Medicine's (2001) influential report that outlines patient centered, scientifically valid, and operationally excellent criteria for healthcare system design of the future.

Common Satisfactions For Health System Designers Or Researchers

Health systems designers are free to think innovatively and help renew everyone's confidence in the systems they work in. Mental health or biomedical disciplines that become too separated from the biopsychosocial realities of actual clinical presentations can generate the kinds of chronic dissatisfaction for clinicians outlined at the start of this paper. This is because the separation of physical and mental doesn't fit either what they confront daily in their patients or what they know themselves about being a person. Health systems suffer their own chronic dissatisfactions from being disconnected from reality in this way. As health system designers and managers redesign systems to treat health and illness more realistically, the relationship between caregivers and their organizations can improve. It becomes more satisfying for the clinician and improves the credibility of their disciplines to combine biomedical and psychosocial factors into one base of knowledge, clinical picture, field of action and "playbook" (Fischer, et al, 1997; Lucas & Peek, 1997). Health system designers and managers are key to making that a reality in actual healthcare organizations.

The main research question becomes "How is the person game best played?" This is different than "what's the evidence for playing the person game in the first place?" The game metaphor helps understand a common observation: Those who have found a way to do integrated care in daily practice often don't require further evidence-basis or proof that the idea is worthwhile. They find that the collaborative way of working significantly reduces their daily dissatisfactions with practice and makes good sense—with validity for patients and clinicians. That is, the decision to be person-centered is heavily a pre-empirical stance reflecting the kind of world and relationships people want to work in. But even when practitioners and patients are enthusiastic about collaborative care and the "person game" directly through participation in it, empirical evaluation is still needed— not so much to prove whether the game should be played, but to identify the fruitful and useless ways to play it.

A person might say "I don't need a study to find out if I like to play

this game better than the old games". But this person still needs studies to show which of the systematic possibilities that come with integrated care pay off well and which make little difference. Integrated care and the person game have to be in place in order to study them. But systematic evaluation of which ways to play the game work well for patients and which do not is a continuing need. Another way to say this is that the pre-empirical task is to lay out the systematic possibilities for integrated medical and mental health care and the empirical task to discover which of these pay off.

The Spread of the Person Game in a Major League Healthcare Organization: A Story

Arguments for integrated medical and mental health care and the person game come to life better in an actual story of successful implementation. We tell this story using a three-stage developmental framework (from pilot to project to mainstream) illustrated with examples. The science, engineering, business, politics, and community metaphors are in full use in this story along with the game metaphor. Our story takes place in a large, multispecialty medical group associated with a health plan serving the Minneapolis-St. Paul area.

From Pilot to Project to Mainstream

Successful examples often develop over time from small-scale pilots or demonstrations between just a few clinicians to widespread and systematic application in the larger system or community. The goal is to spread benefit to more people in the community or population rather than remain an otherwise excellent but isolated pocket of collaborative practice. Table 3 shows three developmental stages, adapted from Davis (2001).

After better integrated medical and mental health care was substantially accomplished in this organization, Davis (2001) reviewed the history and described it as having moved through these developmental stages from pilot to project to mainstream. The authors also see this now as an evolution from pick-up games in the sand lot to better organized and

locally sponsored projects at medical clinics (local parks), to officially sanctioned strategies that created medical / mental health collaboration throughout the entire healthcare system (city league play).

Table 3. Stages of development for spreading integrated medical and behavioral care

	Stage 1	Stage 2	Stage 3
Davis (2001)	**Pilot: A protected demonstration of feasibility & value**	**Project: Demonstrations led together as a visible, sponsored effort to create wider change**	**Mainstream: A full scale shift to a new way of life in the practice or community**
The end in mind	Demonstration of improved care for a group of patients served by a small-scale collaborative dyad or team	Better care and service within the larger clinic or community; a better match between design of clinic services and patient needs	A care system that routinely delivers the right care at the right time in the right places by the right clinicians and teams—a complete design
Core group to engage	A few motivated clinicians who want to do things differently and note the results	Interested clinic/ community leaders including clinicians, managers, operations/financial staff	Care system / community leadership, across levels and areas
Common interests to build on	Clinician desire to better serve their panel of patients and to improve their working relationships	Clinic / community leader desire to better serve more of its population, learning from pilots and improving reach	Leadership investment in improving health, healthcare, service, and resource stewardship for an entire population of patients

First steps	Finding each other and working out a good-enough startup plan	Establishing clinic / community ownership and a viable clinic integration/ implementation team	Establishing care system ownership, executive vision and direction at the highest level
Operational or financial tasks	Local and pragmatic solutions, often non-standard or outside the usual system; maybe with seed money or time	Pragmatic solutions workable within the clinic system, with expectations of financial and time workability	Carefully crafted system-wide operational and financial designs to support a new clinical way of life throughout the care system / community
Game metaphor	**Sand lot: A few people playing pick-up games wherever they can, with whomever they can, with whatever they can find around them**	**Local Parks: Locally recognized games on a few park fields, usually visible on the official park schedule**	**City league: A collection of teams across town, playing the same game as a normal part of the city program**

Sand Lot or Pilot Stage (1980-92)

By the early 1980's "pick-up games" appeared spontaneously between a therapist and doctor or two in medical clinics—mostly among a few physicians with past experience working with therapists and a few therapists who had already worked with physicians. All were restless with the current system of separate and parallel care. Pick-up games usually consisted of one or two doctors and a therapist or two improvising collaborative care of a few specific challenging or "difficult" patients or diagnostic groups, without a consistent or explicit general blueprint. These experiments were mostly not part of a formal system of care or operations, but

were pieced together with time, talent, and materials at hand.

This took place in a large medical system with geographically distributed clinics and a mostly centralized mental health department. Although there were many inspired and very thoughtful efforts from both sides to bridge care for specific cases, the dominant care delivery model in the mainstream remained the traditional separate and parallel system. Using the game metaphor, the organism game and the mind game were dominant. As expected, patients who needed better-integrated care were coming to medical clinics in much greater numbers to than mental health clinics, regardless of their particular mix of biomedical and psychosocial problems. Because of this, medical clinics were where integrated care and the person game would mostly need to be played. A few key developments:

The first fully designed pilot. In 1984 the first deliberately designed and visible integrated care clinic was established within a dental clinic. The target population was chronic head, neck, and jaw pain and disability (temperomandibular disorder). Known as "the TMD clinic", dentists, physical therapists and psychologists shared the same space, chart, systems, clinic management, and care plans. Moreover, the design included appropriate and harmonized clinical, operational, and financial aspects–one hallmark of a potentially enduring program. This proved quite successful for clinical reasons and because it squarely addressed the chronic dissatisfactions that patients, clinicians, and care system executives had with the care of this population of patients. This program became a template for other integrated care programs.

Beginning a systematic shift on the mental health side. By 1991, the second author arrived as the new Mental Health Department Head or "park supervisor" who said in effect "Let's build some real fields. I've played this game before too. It's a good game." But the challenge was to attract others to play. Because the creation of a new game is essentially a social enterprise, he helped us bring together those who were playing the pickup games and worked with them to put the rules and equipment together as a more conscious effort to try something new in the system.

Everyone was invited to participate in integrated care. As expected, some people looked forward to playing in new ways and others did not. These differences sometimes led to what were seen as internal competition between professional models, professional elitism, or as critique of the usefulness or inadequacy of particular training. Sometimes this was experienced personally, and had to be redescribed as fundamentally a clash of paradigms rather than of persons.

New appreciation of the cultural shifts to a new "way of life". A conceptual breakthrough occurred in 1991 when the first author heard the Presidential address at the annual meeting of the Society for Descriptive Psychology (Torres, 1991). This paper looked at cross-cultural adjustment and assimilation at the level of "a way of life", not only at the level of specific behaviors. This made it clear to the authors that integrated care was a shift in clinician (and health system) "way of life" and that interventions at the level of specific behaviors would not be fully understood or appreciated without reference to this larger shift. We needed to recognize, appreciate, and create space for dialogue about showing up as a clinician in a new game with new rules, goals, and players. A related insight was that it is difficult to play the "person game" from within either of the old games. That is, the biopsychosocial paradigm and its practices cannot be fully contained within either the traditional biomedical or mental health paradigms alone. Like those in the sandlot, other clinicians would have to step out of their present "game" in order to appreciate and get good at the new one.

Local Parks or Project Stage (1992-1998)

Seeing the larger picture of professional identity, goals, relationships and "way of life" at stake here, the authors realized they needed to merge what they were learning about integrated care as a clinical approach with a companion organizational and professional approach. This was shaped in large part by the Descriptive Psychology concept of "an organization is a community with a mission" (Putman, 1990) in which organizational life and organizational change is cast as a form of community development rather than only solving business problems. The seeds of the game

metaphor were sown as the enterprise began to look more like a community development challenge than a technical problem to be solved. From this time on, all internal and external presentations and publications were a blend of clinical, organizational, and professional community issues surrounding the development of better-integrated care. This starter "rulebook" was needed if small pilot projects and pick-up games were to be rolled together into a larger, more visible cause. Some key developments:

Creating a large-scale shift on the medical side. In an accident of history, the organization recruited a new medical director for primary care who was a nationally-known family physician, also trained in family therapy. Already dedicated to integrated care and a seasoned player himself, he eagerly picked up the leadership on the medical side. This was important because leadership for the new game had been largely from mental health people. At this point, champions were working on both sides of the medical-mental health divide. The new medical director would engage the physicians as one of them while the authors continued to engage the mental health clinicians. This medical director went a long way to prepare all the primary care clinics (the local parks) for integrated behavioral health care. This included defining the scope of primary care to include behavioral health, including the authors in the primary care leadership team and adopting national quality targets and measures for depression, including the bulk of depression care (which takes place in primary care clinics).

An officially sponsored, visible project was created, in which four primary care clinics would expand and refine their capacity for on-site collaboration between physicians and mental health professionals. Integrated care rules of the game, a slate of measures, and a visible leadership team composed of people from both the medical and mental health side were pulled together. Using the metaphor, coordinated and publicized league play began in four local parks, while lots of the original pick-up games continued. Clinic-specific implementation teams were established to ensure successful operational follow-through in each site.

Creating a large-scale shift on the mental health side. With the visible championship and shifts taking place on the medical side, the Mental Health Department Head (second author) decided the time was right to mobilize a shift of mindset regarding the place of mental health in an integrated health system for his entire department of over 100 therapists and managers. He brought in an external consultant to facilitate a 3-day event that followed this general formula: Mobilize shared dissatisfactions with the status quo, create a shared vision of a preferred future, and take some first steps toward it. This process was described by Peek, Heinrich, & Putman (1997) and is outlined in generic form in Dannemiller & Jacobs (1992). This successfully shifted mindset at the level of "way of life" for mental health clinicians to more clearly include their place as part of a larger system of care, professional community, and interlocking relationships.

Shortly after this, project leaders secured a funded project to investigate the integrated care pilots or pick-up games through the research foundation. This marked a shift from a pre-empirical concern (here's a new game—lets try it) to empirical concerns (How do clinicians and patients actually like this new game? What good does it do them? What plays work best?) Quantitative and qualitative results were positive and were published externally by Fischer et al (1997) and internally by Davis et al (1997). These findings pointed out clearly that the project was promising and a good candidate for mainstream application.

Appreciating the dangers of success. At about this time, the pilot-stage programs were becoming popular with physicians and patients. More referrals were made. But capacity began to be outstripped by demand. As mainstream demand was placed on pilot programs, they became backlogged and collected frustration and skepticism regarding their adequacy (Fisher et al, 1997). At this point, it became very clear that mainstreaming medical-mental health integration would require building in the right level of clinical, operational, and financial capacity at each stage. It was clear that success at one stage could set the stage for failure unless the programs were deliberately moved to the next stage. This was published as "from pilot to project to mainstream" by Davis (2001). The

danger of mainstream demand placed on pilot programs plus promising empirical results precipitated a move to go mainstream (city league play) rather than let things suffer at the pick-up or local park level as mainstream demand was building.

City League Play

As sand-lot and local park games began to suffer from lack of capacity in the larger system they were serving, it was clear that if this game was to survive it needed to spread and become league play. That would mean official sanction and sponsorship by top organizational leaders in the medical group, health plan, and associated clinical and administrative areas. A few key developments:

A merger precipitates a visible public examination. A second accident of history was a merger between the original medical group and another large one. During this process (some of which the first author facilitated) the question of the proper role of behavioral health in the care system was raised. Groups of primary care and specialty physicians came up with guiding principles for the place of mental health in the care system. This gave a boost to the new game because physician consensus for a more integrated model (the person game) across the organization was now explicit as a piece of the foundation of the new merged medical group.

The leadership group for integrated care and the person game came to include leaders from primary care, mental health, and research, along with executives from finance and clinic operations. This meant that a microcosm of the whole organization was now in charge of the project. By around 1999 it was clear that an integrated package of clinical, operational, and financial mechanisms would need to be established for integrated care– and that all of this would require examination at the top of the organization. So the authors, the primary care medical director and others prepared a presentation and detailed syllabus and went progressively up the chain of executive groups that included medical directors, COO, CFO, marketing, HR, and other functions. These groups saw promise in moving forward and gave the green light to continued systematic de-

velopment. It was still up to the clinics, departments, and administrative areas to make it happen on the ground of course!

Mainstream or National League

From 1994 onward, national attention was increasingly focused on medical – mental health integration. National conferences were held and books were written. A flood of books and articles on this topic appeared between 1997 and 2002, often citing promising developments in care systems including the authors' own. The books and conferences also showed that the person game was not just about integrating biomedical and mental health care. It is an important feature in all healthcare, e.g., for chronic care, rehabilitation, and end-of-life care. Key developments:

Connecting local progress to national trends. The authors routinely linked the locally developed new game to national trends that support better integration of biomedical and psychosocial care. These included federal agencies such as the Bureau of Primary Healthcare and Veterans Affairs, credentialing organizations such as the National Council for Quality Assurance (NCQA), foundation grants and think tanks such as the Institute of Medicine, Institute for Healthcare Improvement, and Robert Wood Johnson Foundation, the Collaborative Family Healthcare Association, the remarkable development of counseling in primary care in the UK, and the efforts of other large organized care systems in the U.S. The authors and others began pointing out within their organization that there is a national arena forming in which large organizations are becoming players. This helped give additional significance and impetus to developing local teams and play across the organization. Integrated care appeared to be an idea whose time has come– a game that is ready to become a national pastime.

A next generation of leaders. By 2002, the authors had turned over responsibility for integrated care in their own organization to managers and leaders in behavioral health and primary care. It was those leaders' turn to have fun with it, play and coach it themselves, acquire deeper "player's knowledge" of the game and build the relationships across the organization that come with playing the person game. In addition, be-

havioral health integration became an increasingly normal part of organizational initiatives such as chronic illness care and a bold response to the challenges of the 2001 Institute of Medicine report, "Crossing the Quality Chasm" which straightforwardly holds out a biopsychosocial approach that includes both evidence-based and patient-centered care.

As the authors and other founders released the project to take their quest to different settings, a critical test is how the game is going without them around. A 2004 scan speaks for itself. About two-thirds of the 20+ primary care clinics in the system had on-site mental health professionals doing integrated care with physicians. Approximately 21 adult and child therapists and psychiatric nurse specialists were in at least one medical clinic, adding up to about 10 FTEs serving both adult medicine and pediatrics. One FTE of behavioral health time was devoted to oncology for psychosocial care of cancer patients and part of another is devoted to the dental division for care of chronic temperomandibular disorder (neck, head, and jaw pain—the first integrated program that began in 1984). A geriatric psychiatry presence split 1 FTE between 3 psychiatrists, 1 nurse practitioner, and three psychiatric nurse specialists who are fully integrated into the Geriatric Division. The "person game", and broadly, "person medicine" continues to be played and spread in this organization and across the country. Name recognition for integrated care or collaborative care (this new game) was higher than before, and more players were finding more and better equipped playing fields than ever.

Lessons learned: What We Would Do Differently, Using the Game Metaphor From the Beginning

Many events– planned and unplanned– comprise this 15-year story. Looking back with 20 / 20 hindsight, we have identified things we would now do differently had we been thinking in terms of creating a new game in town in addition to cracking clinical, scientific, engineering, systems, business, and political problems. Many of these seem obvious in retrospect, perhaps especially to those readers whose initial reaction was to think that the whole problem and solution is painfully obvious in the first place. But from within, things were not so obvious.

Use the game metaphor in ordinary conversation to attract all potential players

We would have used the game metaphor in ordinary conversation to clarify the nature of the challenge and make an open invitation to play. Using the game metaphor changes strategy for spreading the integrated care innovation—by opening it to everyone and emphasizing opportunities to try it out. At the outset, the mission for the first group (around 1990) of mental health clinicians championing integrated care read this way:

To create within the organization an innovation in the provision of health care services. This innovation shall be marked by:

• A biopsychosocial model of human health and illness

• Paradigm shifting methods for synergizing the work of medical and mental health professionals

• The actual integration of medical and mental health care at clinics with health psychologists

• The appearance of seamless systems of care for complex patients for whom separate and parallel medical and mental health care leads to unsatisfactory clinical, operational, or financial outcomes

This mission served quite well at the beginning for this particular small group but in retrospect a more inclusive, accessible, and inviting mission for the whole project (rather than just this group) would have been very helpful. The mission statement used then had several flaws when viewed through the lens of "bringing a new game to town":

1. It applied to a small and particular group rather than being an open-ended invitation to a broad community of potential players. "Players" appeared limited to mental health and medical clinicians rather than anyone who could use a new, more "person-centered" game in their own world– including managers, operations, finance people, and those in chronic illness and end-of-life care. It further limited mental health players to health psychologists, the founding group.

2. The first two markers of success were academic statements featuring models rather a practical statement featuring the creation of a better and "more fun" way to deliver and receive care for everyone.

3. The final marker, though precise and still applicable, presupposed awareness of the problems the "new game" was intended to solve, and hence had face value to only a subset of potential players who *already* knew why someone would want to play a different game.

4. This mission did not feature building connections to the many people all across the country working for the same thing in their own worlds in their own ways. (from local parks to national league)

5. This mission included no reference to moving along a developmental sequence for spreading the innovation such as the "pilot-project-mainstream" stages or the earlier "idea-invention-innovation" schema (Peek & Heinrich, 1995).

To be fair to ourselves, we probably needed to walk our path to realize these things. But if we had grasped the value of adding the game metaphor to the mix (and the real challenge before us) we would have written mission and goal statements differently. We would no doubt have included clarifying references to the metaphor such as "bring a new game to town", "create a national pastime", "evolve from pickup games in the sandlot to national league play". These are humorous thumbnail expressions of the *significance* of developing integrated care. In Descriptive Psychology, the significance of some action is "what you are doing by doing that". At some point when you keep asking "what are you doing by doing that?" you arrive at a statement that needs no further explanation, such as "bring a new game to town and live to see it played as a national pastime". This probably gives a more realistic impression of what the multifaceted task is than restricting the significance to scientific, technical, or business tasks.

Routinely engage people as "players" rather than as spectators. Clearly the founding groups of mental health and medical clinicians were "players"– that is how they became enthusiastic about the new game. But

that lesson was sometimes lost. Attempts to recruit new players, especially managers, finance, operations, and executives were done through persuasion, appealing to the data, testimonials, and appealing to enlightened self-interest of various kinds.

What we did not automatically do (but would now) is find a way to engage these people in the game itself. We would now devise some form of participation suited to the person's role (whatever it is) where they could experiment, see results, try things themselves. People would feel like they are on the team—the actual roster-- not merely a shareholder or sponsor facing yet another group of good people asking for their name or money. Failure to do this with organizational leaders probably made widespread acceptance slower and less enthusiastic (though it did happen anyway). Interestingly, high-level leaders who were obviously and visibly on the team were usually those who at one time or another played pickup games themselves—mostly physicians or other clinicians who had discovered early in their careers the joy of this kind of play.

The lesson is that no one becomes a player through exhortation, appeal to data, or argument. People become players (and maybe enthusiasts) when they have a chance to try the game on their own terms. Creating a project structure and diffusion strategy that featured giving everyone a chance to play the game would have been very different from what we did– appealing to those who weren't already in the game through traditional rational approaches with argument, data, publications, and enlightened self interest.

In Descriptive Psychology, this is referred to as "engaging the actor" rather than the observer or critic function (Putman, 1998, p.131-133). There is much more fun in being in the actor role—when people get to "be themselves"—than in being merely an observer, critic or support person on the side. People come to enjoy playing baseball or any other game or activity by *playing* it, by *being* baseball players—and getting the hang of it (Ossorio, 2005)

The following five maxims for "becoming" offered by Putman (1998, pp. 143-150) would now serve the authors as reminders while trying to

help persons become integrated care players.

1. A person becomes what he acts as. In addition, involvement precedes appreciation.

2. A person acts as who he takes himself to be.

3. A person takes himself to be what he is treated as being.

4. A person becomes what he is treated as being.

5. A person becomes what the situation calls for him to be.

While not guaranteeing results, these maxims would have been helpful to keep in mind while trying to recruit new players and shift professional practices and identity in a new direction.

Point out opportunities for taking game-type satisfaction while playing the person game. People seek out and learn even difficult games because of the challenge and satisfaction they bring, even when there is no extrinsic or instrumental reason to devote all the effort. The person game, like many real games, creates valuable opportunities to develop oneself and have fun. In retrospect, we would have tapped into intrinsic motivation that games often provide to:

• Develop sensitivity and judgement within the domain of the game—in this case, sensibilities which are not only practical on the job but useful in everyday life.

• Recognize, study, and appreciate strategies used by others in this larger domain that contains more elements. Then create strategies of your own and have them appreciated by others. The ceiling for strategy development is raised, much like when moving from playing checkers to playing chess, even though the board is the same.

• Exercise skills—intellectual, relationship, design, and conceptual as well as procedural. People enjoy "making the right moves at the right time".

• Achieve intrinsic satisfaction and mastery in the interactions and

partnerships called for by the game. People enjoy team play when done well and often go out of their way to choose team-based activities rather than solo modes of play.

• Achieve a certain status within the professional community, e.g., being at a certain level of play or respect or having certain "statistics". People appreciate and accredit others who obviously "know the moves" or "have a black belt" in integrated care.

Some of these satisfactions might well appear on a list of what people often call "the joy of medicine" to be recaptured in daily practice.

Be explicit about the process of spreading the game. Spreading from pickup games in the sandlot to local parks and city league to national league turned out to be a necessary and systematic process. We would now use this image to show people that settling for pickup games and local play, while good, does not make the desired imprint on the larger scheme of things. Eventual success has to do with spreading the game, not just inventing it, and there is a systematic way of thinking about and doing that. The concepts of developmental sequence did occur to us (from Idea to invention to innovation, Peek & Heinrich, 1995) and later came to us in a better way (from pilot to project to mainstream, Davis, 2001). But these sequences were anchored in industrial and organizational development metaphors. We think adding in the game metaphor would have made this more intuitive and less academic sounding. Who wouldn't want to move their favorite game from the sand lot to city play to the national league?

Use the empirical findings of the "diffusion" literature. Using the literature on diffusion of innovation (Rogers, 1983) would have helped us design the details of the games so that people would truly want to play—and bring their friends. We suggested earlier that the choice to play the person game (do person-centered care) is not completely empirical. It is more of a statement of values, how you want to deliver and receive care, and what kind of world you want to live in. But at the same time, some games are more attractive and spread faster than others. Some of the possibilities inherent in person-centered medicine are much more practi-

cal or appealing than others. The diffusion literature could have helped us with that earlier than it did.

For example, Rogers (1983) says that adoption of an innovation in any given population follows a pattern. An innovation starts with an innovator, often one person with a new idea (if there really is such a thing as a new idea). The innovation spreads slowly at first, usually through the work of pioneers or change agents who actively promote it—then picks up steam as more and more people adopt it. Somewhere along the line it reaches a take-off point when the number of early adopters reaches a critical mass—between 5% and 15%. At that point the innovation gets a life of its own, as more and more people talk about or demonstrate the innovation with each other.

The task is to get things up to the take-off point, which we think we did. However, we could have been smarter about just what that takes–and done it more quickly. For example, the innovation literature identifies five characteristics that go with successfully spread innovations (Rogers, 1983).

1. *Relative advantage*. Is the innovation distinctly better than usual practice? Will people perceive it as better? If not, the innovation will not spread quickly, if at all.

2. *Compatibility.* How does the innovation fit with past experiences, present needs, and existing values? If it doesn't, it won't spread well. If people feel like they have to become very different people to adopt the innovation, they will resist it. "I can't play this new game and still be me!"

3. *Complexity*. How difficult is the innovation to understand and operationalize? The more difficult, the slower the adoption process. "This is just a way to make life harder."

4. *"Trialability".* Can people "try out" the innovation first? Try out the game before buying it? Or must they commit to it all at once? If the latter, people will be quite cautious about adopting it. "Can't I return this if I don't like it?"

5. *Observability*. How visible are the results? Is there a score? Can you produce "stats?" Can the scores and stats be observed and understood by others? If not, the innovation will spread more slowly.

How we would have done things differently using the diffusion literature. Had we carried index cards with the characteristics of successfully spread innovations written in big letters from the very beginning, we would have done several things differently.

First of all, we would have designed the interventions for areas likely to produce more spectacular results for clinicians and the care system. The very first systematic pilot (the "TMJ clinic") did just that, but subsequent work mostly had more subtle though valuable targets.

We would also have taken pains to ease any "culture shocks" and "identity crises" in taking up the new game. As it was, we depended largely on testimonials, word of mouth, professional arguments, and trends in the literature. Those who were convinced, especially within the mental health area, became a culturally more distant subcommunity rather than becoming more connected to the mainstream until quite recently in 2002. We would have created brief "internships" or "visiting clinician" programs that allowed people to actually try the new game with support and supervision from experienced players. We could have built in the opportunity for clinicians (both medical and mental health) to "shadow" their peers in this new practice, debrief, and even begin to interview and treat patients themselves within this program– all with no obligation whatever. This "money back guarantee" would have been extremely helpful for clinician managers, not only front-line clinicians.

To make things easier to understand, we would also have kept integrated care programs simpler and more standardized where we could. In our efforts to tailor things to local clinics, we sometimes allowed complexity or fuzziness to creep in. If we had been more conscious of the eventual need for "league play" and a simple rulebook we might have made the innovation spread more easily—as long as we didn't go so far that we were accused of promoting a "cookie cutter" approach. This would also have made it easier to create and use a systematic "scorecard" from the

beginning with a slate of measures for each aspect of the program's mission– the classic "balanced scorecard" approach that taps clinical, operational, financial, and satisfaction areas. We could have posted these "stats' regularly and let people talk about them and even "compete". We did in fact do quantitative and qualitative analyses from time to time and even published them. However, this is no substitute for a posted scorecard with "stats" meaningful to individuals and teams.

We would also have borrowed from the mature literature on the anthropology and spread of games. We didn't even touch that, but would no doubt look into it were we to take on a project like this again. Finally, there are insights from unexpected sources that accidentally pop into view. Here is an example of what attracts a person to a new game, taken from a 2004 Google search on "diffusion of games", posted to a video game blog by "jay":

"What gets me most excited about a game is not whether I have had any prior experience with it, such as with a sequel in a series or franchise; or whether it contains any recognizable characters or locales as with a license. For me, it's the possibility of going to a new world undiscovered, or experiencing gameplay mechanics unfamiliar yet comfortable and natural to the touch. It's a game which defines a new genre, or defies existing ones; a game so gratifying to play, it demands playing over and over again".

What an informative snapshot—insights we could have used from the beginning in our own project. Images such as "going to a new world undiscovered" or "experiencing gameplay that is unfamiliar yet natural" would have been helpful as we designed our new integrated care programs and introduced them to clinicians. Today, we would set up our own "blog" on which person medicine players could post their own observations and insights on what makes it work well or not for themselves and for patients.

Raise more outside funds to help finance early experiments. At the beginning it is difficult to secure funding for experiments and new games

from local grassroots operations. People generally want to see a playable game before they buy anything. This is particularly true in healthcare delivery organizations whose margins from providing care are very slim if not negative. Local clinics are tightly budgeted to cover clinical expenses, not experimentation with "paradigm-shifting methods for synergizing the work of medical and mental health professionals" as the mission statement read at the beginning.

Rather than expecting clinics to just contribute time and materials while sacrificing production to these demonstrations, we would now find ways to provide in-kind support, e.g., from small external or internal grants or some form of "bake sale" that could provide just enough financial support to make it easier for clinics to spend time and energy trying new things. Our project was not usually budgeted beyond our own time and corporate technical support. Only once did we secure a significant external grant to finance things—and that was for a formal published research project (Fischer et al, 1997).

Connect with the larger patterns in person medicine sooner. Integration of biomedical and psychosocial healthcare is only one aspect of person medicine or the person game. But at first we treated it as the only instance of person medicine– which it wasn't, especially later on. The following major thrusts or pressure points in healthcare all involve what we call person medicine and invite a place within them to play the person game.

Chronic care and disease management protocols and systems. Care of chronic conditions such as diabetes, heart disease, asthma and depression is a major challenge, especially in our aging population. The Chronic Care Model (Wagner, et al 1996) is designed for proactive care of all chronic illness and is clearly a person-centered approach, emphasizing a common biopsychosocial approach across all specific diseases. This model also builds in evidence-based medicine and patient centered care as described earlier.

End of life care and palliative care. End of life care and the hospice movement is a field which is early adopter of person medicine and in-

cludes some of the most mature philosophy, clinical methods, operational systems, and financial benefits systems in existence. For example, an entire package for person medicine is contained in the Medicare hospice benefit and requirements for providers.

The Institute of Medicine report, Crossing the Quality Chasm: Healthcare for the 21st Century. This widely read and influential 2001 report declared in no uncertain terms that the system is broken and proposed a set of new rules for healthcare and contrasted them with the old rules. A major theme is the continuing need to better integrate the overall system of healthcare, including integration of patient-centered and evidence-based care. For example, inadequate teamwork and coordination between primary care and specialty physicians across all the "handoffs" and transitions often leads to fragmented care, especially when mental health aspects are present. The "person game" comes with a large repertoire of care management and continuity-preserving methods for keeping complex cases from "coming off the rails" during times of rapid change and involvement of many providers both in chronic and acute situations. This is a universal healthcare system challenge (and problem) which goes far beyond medical-mental health integration.

Unfolding legislative and policy dramas. Some policy issues that came up along the way involved benefits for complex conditions, payment methodologies, clinician training, and other "rules of the game" as determined by State and federal governments. On one occasion in the late 1980's a hearing at the Minnesota State legislature set the terms for insurance coverage and appropriate clinical integration for chronic craniofacial pain (TMJ syndrome) as part of the regulation of HMO's. Our very own 1984 vintage program was cited as one of two in the State that provided the right mix of clinical care, operational procedures and covered benefits. But beyond that, we did little study or participation in policy debates or "white papers" for policy use. We would do more of that today.

We did engage these trends in our presentations and writings, but did not effectively make the policy connection for many of the local play-

ers. To see and feel that you are part of making a seismic change in your field through your own efforts to create and spread a new game in town would, we think, have helped the innovation spread faster. Moreover, our many presentations, articles, book chapters, and book were aimed at professional audiences– not consumer or policy audiences. Now we would write for all these audiences—including all of them together (Pronk, Peek, & Goldstein, 2004). Everyone has a stake in this game– not just the professional audiences.

Conclusion

Better integrated medical and mental health care is part of the future, along with other aspects of person medicine and the person game. This paper was written to explore why this obvious clinical innovation has been so difficult to spread, and how it can help to view spread as creating a new game and turning it into a national pastime. We have featured this metaphor in context of other metaphors in healthcare, told our story, and listed the many ways we would have done things differently had we added this metaphor to the mix all along. We conclude that change projects such as this can benefit greatly from viewing them through several lenses at once.

- Clinical, organizational, scientific, or business problems to be solved
- Professional, political, or organizational community practices to be improved
- A new game to be created and turned into a national pastime

All these lenses are important, and none is sufficient all by itself. Each carries an overlapping but somewhat different set of observations and lessons about change and attracting people to positive change. Each has different images and locutions that speak to people situations more clearly at different times. Our own work depended heavily on the first two, and suffered to some extent by the absence of the third.

We conclude that recasting our work as creating the person game as a national pastime was not just a flash of insight about the enormity of what we were really facing and why we felt as we did. It has enduring value in the design of programs and change processes—including those resting on evidence and the business case. There is always a human case to be made as well. One way to build and test the human case is to think of the change as a new game and then see if you can attract anyone but a few enthusiasts to play it.

As we said before, the decision whether or not to *play* a particular game rests on more than empirical data. It depends also on what kind of life and world a person wants to live and work in– and the values and relationships that are to govern that world. The decisions on just *how to play* the game– which possibilities inherent in the game actually pay off and which don't– is an empirical matter. We believe that a unified evidence base, business case, and human case is facilitated by comparing change to the spread of games– something that everyone has experienced.

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Stalkers and their Worlds

Keith E. Davis

Abstract

This chapter proposes a synthesis of clinical and forensic studies of stalker types, suggesting that the vast majority of cases can be encompassed by six types. The types are (a) rejected, previously abusive, partner; (b) rejected, nondangerous partner; (c) love obsessional stalker; (d) erotomanic stalker; (e) disorganized, delusional obsessional stalker; and (f) sadistic stalker. The Paradigm Case methodology, originally developed by Ossorio (1981), is the major tool for delineating the types. The characteristics of each type identified in this analysis are used to delineate potentially successful strategies for treatment of stalkers and the management of cases that currently have poor prognosis for treatment. A successful case application of a status-dynamic world reconstructive therapy (Roberts, 1985) is illustrated for a *rejected, nondangerous* stalker—one of the most common types (Meloy, 2002; Sheridan & Boone, 2001). These six types and the differential plans for treatment and case management should be helpful both to criminal justice and to mental health personnel. We identify briefly the crucial steps in risk management plans for victims.

Numerous typologies of stalkers have been presented (Meloy, 1997; Mullen, Pathe, & Purcell, 2000; Sheridan & Boon, 2002; Zona, Palarea, & Lane, 1998) with the goal of guiding the treatment and management of stalkers by mental health professionals and the police and prosecutors who deal with them. There is, however, no universally agreed upon typol-

ogy, and it is perhaps fair to say that the four approaches above have had the most widespread use in practice. (See Cupach & Spitzberg, 2004, pp. 69-74 for a comprehensive review both of clinically oriented and research based typologies—and a critique of the current state of knowledge.)

Without a coherent classification system, it is difficult both for the police, other members of the criminal justice systems, and mental health professionals to provide appropriate treatment of the stalker. In this chapter, we use two tools for the creation of a coherent typology: (a) Ossorio's (1981) Paradigm Case Formulation (PCF) as the method for bringing order to these competing views of stalkers and (b) a careful comparison of the various empirical typologies.

PCF is a technique for articulating a domain when one has no guarantee of being able to give an adequate definition that will sort all cases into the appropriate categories and exclude non-instances. It operates as follows: Pick a real, if possible complex case, describe its important features, then transform one (or more features) to generate a new, genuine case. Repeat step 2 as often as necessary to cover the entire domain of cases. The result is that all real cases are identified and non-cases are excluded. Notice this procedure depends upon competence in recognizing cases—not in the definition of words. In his classic article, Ossorio (1981) applied the technique to the identification of the subject matter of the family. Subsequent students working with him have used it to good effect in delineating the types of humor (Littmann, 1983) and of intimate relationships (Roberts, 1982). In Ossorio's PCF of the family, he picked out instances that anyone familiar with the field would have recognized. Among these were married parents of the opposite sex with several biologically natural children of their own, unmarried parents living together as a family, adoptive families, single parent families, and it included some types that are valid in other cultures but not within the United States--polygamous families. The resulting types were not necessary novel, but their systematic generation allowed individuals and groups with different "definitions" of the family to be precise about their respective boundary conditions. For example a person or group who insists that "families" can only be composed of opposite sex parents who have the potential to raise

children, one sees that one is intentionally excluding same-sex parents who may also be willing and able to raise children—and , indeed, in some cases are successfully raising children. For holders of this position, it is clear that the childrearing function of the family takes second place to the gender of the parents.

Thus while it is not necessary to using a PCF that one can see "dimensions" such as the "childrearing" function vs. the biological sex of the partners that distinguish among types, that is often the case. We plan to show that four characteristics of the stalkers and their relationships with their victims emerge as useful in identifying the six stalker types. Furthermore, these types enable both mental health professionals and the police to handle individual cases more effectively and to provide feedback that is more realistic to clients about the dangerousness of their situations when being stalked. Case illustrations taken from the clinical-forensic literature and from one case on which I collaborated with a psychiatrist will be used to illustrate the potential benefits of a status dynamic, world reconstructive approach to the management of a *rejected ex-partner* whose behavior placed him at the borderline between the dangerous and nondangerous stalker.

For those who are counseling victims, providing some practical suggestions that are relevant for case management of stalkers is essential. In one of the major national studies of stalking victims, Tjaden & Thoennes (1998) found that victims were satisfied with the way that police and courts handled their situation in less than 50 percent of the cases. The same was true for mental health services. Clearly, there is room for improvement.

Paradigm Case Formulations

The essential step in this procedure is that one starts with a genuine case, preferably a complex one containing as many features of other real cases as possible. Second, one changes single characteristics of the starting case (or paradigm case) so that one obtains a new, genuine case of stalking. The second step is repeated until one has identified all (or all of the important) cases relevant to the task. Note that, in contrast with

some views of good scientific procedures for creating typologies (See Cupach & Spitzberg, 2004, for a statement of this position), the PCF procedure does not proceed from an identification of dimensions but from the sequential creation of real cases. The logic involved is akin to that involved in the recognition of family resemblances in the creation of all kinds of typologies of animal, vegetable, and mineral world. The crucial competence involved is the ability to recognize distinct, real cases—not the creation of categories out of some more primitive distinctions.

From a legal perspective all cases of being stalked share two features: The perpetrator has engaged *repeatedly* (at least twice) in behaviors that have made the victim *very afraid* for her safety or that of her family or property. From a Descriptive Psychology perspective, stalking is an *activity* description, because no commitment is made about the specific social practice being performed or about the motives of the stalker. But a result is specified—namely that the stalker has generated a high level of fear of harm in the victim. This latter criterion corresponds to Ossorio's (1981) category of an *achievement* description, and again it neither commits the describer to the motive nor to the significance of the activities in which the stalker has engaged.

Those who encountered stalkers in the criminal justice and mental health systems quickly became aware that there were several types of stalkers (Meloy, 1997 and Zona, Sharma, & Lane, 1993). In my view, the two best studies of the variety of stalkers have been done in Australia (by Mullen, Pathe, & Purcell, 2000) and in Great Britain (by Sheridan & Boon, 2002). But valuable information about variations in stalker types and their management can be found in Meloy (1997, 2002) and in Zona, Palarea, and Lane (1998). Because the independent results of the two major classifications are so similar, I have drawn on them extensively for this paper. When the descriptions of their types are compared, one sees that they agree in finding four distinctions essential to their sorting of types: (a) the motives of the stalker, (b) the nature of the prior relationship between stalker and victim, (c) the degree of reality contact of the stalker, and (d) the degree of dangerousness of the stalker. In the presentations of each type, I will describe the values these four parameters

take for each case and use these variations as the characteristics that guide treatment and case management options.

The Mullen et al., (2000) and Zona et al. (1998) typologies each attempted to make use of variations in the types of psychopathology associated with stalking behavior, but evidence for specific associations of types of psychopathology and risk of danger or for specific treatment/management recommendations is weak. Indeed the evidence suggests that the non-psychologically impaired stalkers are more likely to be dangerous (Meloy, 2002; Mullen, Pathe, & Purcell, 2000). The one exception to this generalization is the case of predator, sadistic stalkers (type 6 below) who seem to fall within the category of dangerous psychopaths (Hare, 1993).

Motives. Almost all research groups have noted three categories of motives: (a) desire for revenge for mistreatment or rejection, (b) pursuit of an unrequited love, or (c) desire to degrade the victim (where the victim has not mistreated the stalker). The primary variation in *relationship history* is (a) whether the perpetrator had an intimate enough relationship so that *betrayal* was possible vs. (b) being merely a stranger or acquaintance. Betrayal is possible in both romantic and nonromantic relationships. In the former, having been sexually intimate prior to a breakup dramatically increases the risk of violence (Meloy, 2002). In the case of co-workers and friends, evidence of case studies suggests that whenever the persons are interdependent enough so that one person can harm the other's reputation or standing in an important community, then betrayal or humiliation can lead to stalking and violence (De Becker, 1999; Kienlen, Birmingham, Solberg, O'Regan, & Meloy, 1997; Meloy, 1996).

The issue of *reality contact* can best be summed up by the answer to the question: Are crucial beliefs (e.g., that he and the victim have had an intimate relationship) of the stalker delusional or not? Psychiatrists have long been interested in the variety of delusions and obsessions held by their patients, and patients who stalk have been no exception. Finally, stalkers vary greatly in how likely they are to be engaged in physically *dangerous behavior* toward their victims, including property damage as well as personal harm or death. Many stalkers want merely to be in their

beloved's world and have no desire to harm. Yet out of their insistence on being part of that world, they become a major violator of their victim's privacy and engage in harassing and stalking behaviors such as persistent unwanted telephone calls or emails. They show up at the victim's home, school, or workplace uninvited and at inappropriate times. They presume a relationship with the victim that does not exist, and while this may not technically be dangerous, the inappropriateness of the stalker's behavior strikes fear in the heart of the object of his attention. It is worth noting that stalking episodes often persist over extended periods, with the median time being between 18 to 24 months (Tjaden & Thoennes, 1998). To have an unwanted suitor in one's life for such a period is wearing.

Furthermore, nothing seems to work to dissuade the stalker. Initially many victims try the polite "No, I am not interested in a relationship.", only to find that such statements may increase the intensity of stalking. Some stalkers take this polite rejection as a test of their intentions and respond with redoubled effort. The plight of the victim takes on even more stressful aspects to the degree that the stalker makes verbal threats, damages property, and/or gains access to private information about the victim (Davis & Frieze, 2002; De Becker, 1999). There is no good longitudinal study that would allow one to estimate the probability of dangerous behavior by stalkers as a function of time, specific types of events, or stalker characteristics. By extrapolating from extensive research on domestic violence, one can offer some useful guidelines (Walker & Meloy, 1998). The best predictor of future behavior is past behavior; thus any evidence that the stalker has been violent previously toward the victim or toward others immediately indicates higher risk. Threats by the stalker to harm himself or the victim again must be given some weight—although these are often ploys to force the victim to take the stalker seriously and thus to continue interacting with him.

Stalker's Worlds: Six Paradigm Cases

The Rejected, Previously Abusive, Partner

In the samples collected in all three countries—USA, Australia, and Great Britain, this is the largest single subgroup of stalkers. Thus it is an appropriate starting place for a PCF because it is common, embodies many of the essential elements of stalking victimization and of the stalker's worldview.

Out of their rejection after having had an intimate relationship, these stalkers wish either to re-establish their control over their former partners (and hence reverse the status degradation involved in being rejected) or to exact revenge upon the person who has humiliated them. Both rating scales by undergraduates (Davis, Ace, & Andra, 2000; Sinclair & Frieze, 2000) and interviews with forensic cases (Walker & Meloy, 1998) suggest that the control and revenge motives are mixed together in many cases. And our efforts do not require that we impose a pure type upon these messy data. If the partner who has been left had a history of using interpersonal violence in the relationship, it becomes more likely that he will resort to it again as part of his stalking strategies (Meloy, 2002).

The crucial motives are revenge or closely associated motives such as the desire to re-assert control or dominance over a partner who has left a previous, intimate relationship. In most respects, the stalker has good reality contact with the exception that he tends to see her behavior as provocative to a degree that would not be seen by impartial observers. The level of dangerousness for this subtype is high for two reasons. The harassment is typically characterized by high levels of verbal threat, property damage and physical violence, and this pattern is often a continuation of a previous physical and verbal abuse prior to the breakup. The breakup provides a set of new issues for the stalker to become angry about. In the case of married or cohabiting partners, the division of property and associated financial questions provides a rich source for potential disputes. If children are involved, then issues of custody and child support offer another opportunity for conflicts that can easily escalate into violence. New relationships formed by the target of stalking can also elicit jeal-

ousy and aggressive behavior. In short, for partners whose status and control have been threatened by the breakup, the multiple potential for additional provocation makes it wise to treat danger for the victim as a genuine possibility.

The stalker sees himself as a victim of the former partner's unacceptable (to him) behavior. His righteous indignation allows him to justify his threatening and violent behavior toward his ex and makes it possible for him to recruit his friends and relatives to assist him in harassment of his ex. Indeed some stalkers feel so justified in what they are doing that they will use the victim's own friends and relatives as a source of information to aid in regaining control or harassing the victim (Mullen, Pathe, & Purcell, 2000; Walker & Meloy, 1998). In summary, revenge motivation, a prior intimate relationship, a high level of dangerousness, and moderately good reality contact can characterize the first type.

Case management implications. Because the risk of property damage and violence is high, a danger management plan needs to be in place. This plan should identify a safe place to go in case one's residence is not secure, and provide for an alternative set of keys, money, credit cards, medication, and important papers should the victim need to take quick action to avoid the stalker (Mechanic, 2002). Avoidance of the stalker is likely to produce better results than confrontation or threats. De Becker's (1999) maxim is "Don't engage, don't enrage." Because the police cannot protect the victim even after a court-ordered restraint on contact with the victim has been issued and after the potential danger is clear to everyone, some stalking victims chose to move away to entirely new locations (11% in the NVAW sample, Tjaden & Thoennes, 1998).

The second major component of the victim's approach needs to be a careful documentation of the acts of stalking. Messages, threats, phone calls, and physical contact such as appearing at the victim's home or work need to be recorded and dated. Victims need to alert their family, friends, and coworkers of the stalker's identity and of the possibility that he would contact them for information about her. Successful legal action against the stalker, if necessary, will depend upon the victim's documentation of

the case. If avoidance does not work, then legal action to incarcerate the stalker is a last resort. On one hand, many stalkers in this group have sufficient reality contact that they can be deterred by the potential of serious legal consequences (Mullen, Pathe, & Purcell, 2000). On the other hand, there are several problems with this approach. Penalties tend to be mild, such as short jail time or only probation, and there is no guarantee that the stalker will not persist from behind bars. There is likewise no assurance of treatment for the stalker during incarceration that might reduce his obsession with the victim (Meloy, 1998). The clinical literature suggests that some dangerous stalkers can benefit from counseling focused on (a) grieving the loss of the relationship, (b) developing greater skills in handling intimate relationships, and (c) new social contacts. Because substance abuse has often been part of a pattern associated with stalking in these cases, rehabilitation is another part of the therapeutic program for ex-partner stalkers (Mullen, Pathe, & Purcell, 2000).

The Rejected, Nondangerous Partner

The change in PCF #1 to get to PCF#2 is the deletion of "previously abusive." This is the most promising case for intervention success since the motivational balance between wanting to re-establish the love relationship and the desire for revenge over being rejected tends to lean more to the former. The stalker has not engaged in domestic violence toward his partner prior to the breakup; hence the probability of violence is lower. Reality contact is good—but the stalker may suffer loss of self-control or may exercise poor judgment—as we will see below.

If the stalking victim can communicate the end of the relationship and her determination not to return in a clear but non-derogating manner, then these cases are less likely to escalate into revenge stalking with a high level of dangerousness.

In doing counseling work with stalkers, the best outcomes arise from getting started on a new world construction before the stalking has evolved into a revenge episode. Affirmations of the stalker's capacity to love and of the potential for new relationships that are reciprocated are crucial parts of this new world construction. (See the case presentation

that follows for an explication of this approach to treatment). Initially, the stalker may hold onto the notion that the ex is his "one and only true love," but active confrontation of this distorted status assignment by the therapist combined with non-response from the victim will tend to erode this belief.

Case presentation: A status-dynamic, world reconstructive approach.

This case was referred via a psychiatrist who shared the case with me and on which I consulted by making some case management suggestions, with the permission of the client. The client came to the psychiatrist for treatment during a difficult divorce initiated by his wife. Previously, he lost his job, his wife, and custody of his children. He was angry at the world and felt the urge to follow and to berate his ex-wife for her treatment of him. He succumbed to this compulsion frequently enough that his wife secured a restraining order. In his view, she had destroyed his life. This case falls at the borderline between the dangerous and non-dangerous type. Although the stalker had no history of prior abuse of his partner, the level of anger he felt at the start of therapy both raised concerns that he might do something genuinely destructive. The extent of the multiple losses that he suffered made anger and aggression a distinct possibility. But, on the other hand, he came voluntarily for treatment because he was concerned that he was losing control over his aggressive urges.

The patient and his wife met in college and over the course of 18 months, he conducted a courtship typical of the 1980's. Her family owned a successful small business, and upon marrying the daughter, he was taken into the business in a sales capacity. For several years, the business did well, supporting the parents, the client's family, and the families of two brothers-in-law (sons of the owner). They enjoyed an upper middle class life-style, which included country club memberships, a second home at the coast, and the social recognition that goes with being a family associated with a successful business. The couple had two children: a daughter, seven (at the time of divorce), and a son, five.

From the client's point of view, the difficulties began when the father and owner of the business died. Subsequently, a son became manager

of the business and made decisions that over-extended the company. Shortly, the business encountered financial troubles because the expansion occurred just before an economic down-turn that had a negative impact on business and family income. The client was openly critical of the bad judgments that he saw his brother-in-law making. Even though she was upset about the state of the business, his wife tended to side with her brothers. The business losses and curtailment of family and personal income caused difficulties for all family members. But the client was treated as "not one of us" when he expressed his views, and when the managing brother fired the client, his wife sided with her brother, saying to her husband: "Well, what did you expect when you criticized him so persistently and so openly."

Initially, she asked the client to move out, but it quickly became apparent that the managing brother had promised to support her financially if she defended him rather than her husband. When the husband confronted her about the "conspiracy" against him, she denied it, initiated divorce proceedings, and took steps to gain sole custody of the children. Unfortunately for the client, he acted on his anger about the mistreatment in the following ways: Yelling and screaming at his wife in front of the children and some of her relatives, threatening her, and, after he moved out, following, telephoning, showing up at the former place of work, and insisting on greater contact with his children than was provided for in the temporary custody decree. He gave her all the grounds that she needed to have him arrested for stalking and harassment. After being convicted of misdemeanor stalking, his wife was able to use that against him both in the final divorce and custody settlements.

At the time that he came for treatment, he was understandably both depressed and angry at the world. He had undergone multiple degradations, loss of a job, loss of his marriage, and loss of free access to his own children—and, his wife had won all the battles even though she was, in his view, fighting deviously and unfairly.

The principles of a world reconstructive approach involved five steps. The first of these involves helping him to the recognition that he had

suffered genuine losses that validly resulted in anger and grief—which the therapist acknowledged. The second step is medication management with anti-depressants. The third step was based on Bergner (1993) and Holmes (2002) formulation of the status dynamics involved in depression and on selections from Mary Roberts' (1985) "Worlds & World Reconstructions". The key steps involve a focus on rebuilding client's world through narrative home-work in which positive, status enhancing interpretations of his current world were given. For example, he felt that she was his "one and only love" who had done him wrong. The initial approach by the therapist was to review the wife's behaviors toward the client and to ask if a person who was truly his one and only love would do these things to him. A true love would have championed his interests at the time of troubles in the family business, have tried to prevent his being fired by her brother, and would *not* tried to prevent him having any real access to his own children after the separation. As descriptive psychologists will recognize, we were encouraging the stalker to engage in a status degradation of his former lover by coming to the conclusion that she was not and never had been the kind of person who really cared for him as a lover would.

After a reframing of the former love object has been achieved, the next step was to focus on his talents and his opportunities. He had been a successful salesperson, had dated other women before courting his ex-wife, and had shown the good judgment to come for treatment before doing something truly damaging to his ex-wife. An image, suggested to me by Jim Holmes (personal communication), was used to enhance his world. Finding one's true love is a bit like fishing in swampy waters. There is a lot of trash out there—old tires, inedible fish, etc., and the smart fisherman may have to toss back several unacceptable things that she or he has hooked. Patience and not expecting love at first sight are virtues in the business of finding a true partner. Fortunately, for us, the stalker was in fact a fisherman, and when he heard this image, he laughed out loud and immediately took it to heart.

The practical costs of acting on his anger toward his wife and her family were reviewed, and, as his sense of positive alternatives grew, he was

able to let go of the urges to stalk her. The final touch was the introduction of the maxim: "The best revenge is living honorably." This maxim was not introduced until he was ready to work on its status enhancing potential. By the termination of therapy, he had been able to terminate medication, secure a job relevant to his training and skills, date other women , and begin working on negotiations with his ex-wife that might lead to more equitable visitation with his children. He no longer felt the urge to stalk his ex and he had come to see her behavior vis-à-vis him during the financial problems of the family business as her weakness of character—not as his problem.

The Love Obsessional Stalker

Transformation #2: Delete "ex-intimates"—these are acquaintances or strangers. The next sub-group of stalkers involves cases in which the stalker has chosen a love object to pursue with which she or he has not previously had an intimate relationship. Because the goal of the stalking is to establish that loving bond, the tactics of the stalker tend to be non-malicious and without the threats and potential for danger of other stalkers. The stalker often assigns unique characteristics of desirability to the target, and frequently believes the victim is amenable to a relationship, despite the absence of reciprocation. From the victim's point of view, the stalker's persistence and indifference to the victim's negative responses brings this to the level of unacceptable stalking. In the nonprobability samples reported in the US (Zona et al. 1998) and in England (Sheridan & Boone, 2001), these cases represent 20 to 18.5% of the cases that come to the attention of the authorities.

The beloved is all-pervasive in the stalker's thoughts—hence the label, *love obsessional stalkers* (Meloy, 1998), and s/he tends to view the world through the lens of this desired relationship. By having a real or potential lover in one's life, one gains all the affirmations of worth that are implied by being loved by another. Bergner (2000) lays these out in some detail. In the case of a love relationship, one has a person who cares about one's well-being, who admires and respects one, who is prepared to share intimacies both physical and psychological, and who by accepting a place in

one's life makes each thing that one does more significant than it would be without the love object. When confronted by rejection or third-party interventions that require the stalker to stop pursuit, the stalker faces a situation that he tends to see as equivalent to choosing less behavior potential over more, to choose loneliness over a vital love relationship. It is no surprise that the infatuated stalker has trouble making that choice.

Mullen, Pathe, & Purcell (2000) have described their therapeutic approach to intimacy seekers and one can see that it is in many respects consistent with a Descriptive approach. After establishing rapport and obtaining a descriptive history of the stalking episodes, they propose to shift the focus from the victim's supposed love for the stalker to the stalker's love for the victim. The stalker's behavior is reframed as reflecting his hopes, desires, and investments. The importance of this love is affirmed, and it is placed in a context of previous absence of such relationships for the stalker. Stalkers are characteristically lonely, isolated individuals without adequate feedback about their behavior from peers. The goal is to help the stalker see that his love reflects his needs and desires and not necessarily the feelings of the victim. After accrediting the stalker's motives and feelings, the therapist begins to confront the stalker with alternative interpretations of things that he has taken to be expressions of love by the victim. It is important that these be specific instances and that alternative interpretations be given to help the stalker get unstuck. A second objective is to help to the stalker to identify the costs to him or her in time, resources, energy, and embarrassment of the stalking episodes. The third objective is to make salient the distress caused to the victim. Stalkers almost always underestimate the negative impact of their behavior (Sinclair & Frieze, 2002; Langhinrichsen-Rohling, Palarea, Cohen, & Rohling, 2002). Together these steps make apparent the costs to the stalker in terms of legal consequences and to the victim in terms of distress of attempting to sustain his previous world construction.

Now the therapist helps the stalker move to a position from which he can abandon his stalking with dignity. "The target has proved unworthy. The stalker tried and did his or her best. The stalker did not mean to . . . cause any distress, [but he has and he needs to cease doing that.] Time to

move on." (Mullen, Pathe, & Purcell, 2000, pp. 286-287). Notice how similar this move is to the status degradation of the target used by the Descriptive Psychologists above. The final moves involve helping to identify potentials for real social relationships and to encourage the stalker to be more involved in these. Sometimes the first step is obtaining a pet. This step is part of the world reconstruction move also recommended by Descriptive Psychologists. The client needs a position of strength from which to play the game of life—and being a convicted stalker is not such a position. Therefore, what we see here is that many of the therapeutic moves recommended by the pre-eminent Australian forensic mental health team are quite similar to those recommended by Descriptive Psychologists.

Erotomanic Stalker

Transformation #3: Delete "non-delusional": The result is a stalker who believes that the victim is in love with him and/or that he has an intimate relationship with her—neither of which is the case. Short name: In these cases, the stalker has the fantasy of a reciprocated love relationship with a person who is often a total stranger, and never more than a mere acquaintance. The level of reality contact is poor (delusional) because there is no such love relationship, but the stalker takes even the smallest gestures of politeness as indications of love. The delusions are focused exclusively on the object of affection (thus obsessional) and the stalker does not have other marked indications of other forms of psychopathology. But in the most severe cases, such individuals can manifest enough psychopathology to fit a DSM-IVR category of delusional disorder, but distinct from paranoid schizophrenia or affective psychosis (Badcock, 2002). While these individuals are disturbing to the objects of their affection, they tend to be dangerous only when they become jealous of real-life partners and to see them as rivals for affection (Sheridan & Boon, 2002). By their insistence that the relationship is real and their determination to become part of the victim's life, their behavior becomes a serious problem for victims. They intrude into the victim's life and work, give misinformation about the victim's relationship with them to others, and generally cause problems for the victim. Their persistence can

be extraordinary.

The Disorganized, Delusional, Obsessional Stalker

Transformation #4: Delete "otherwise good reality contact"—the result is the more significantly psychopathological types who exhibit one or more serious comorbid symptoms along with the delusion of a relationship. The broader pattern of psychopathology associated with the delusion of having a reciprocated love relationship can range from paranoid schizophrenia, to manic-depressive disorders, or to borderline personality disorder, and to coexist with substance abuse problems. Such stalkers are more disorganized in their behavior and more likely make openly sexual advances toward victims. Being treated by the stalker in a lewd manner is, of course, very upsetting to victims. The inappropriateness of the stalker's behavior and their unpredictability make them seem dangerous to victims (Sheridan & Boon, 2002). In fact, they are more dangerous than the better-integrated stalkers above and somewhat less dangerous than *intimate ex-partners* with a history of prior domestic abuse (Mullen, Pathe, & Purcell, 2000).

The case management recommendation both for the *erotomanic* and *disorganized delusional stalker* is that the victims pursue legal action as quickly as possible. These types of individuals are very difficult to reason with, and their insistence on seeing the world and the victim the way they do makes it necessary to remove them as quickly as possible. Beyond the recommendation of legal action against both the *erotomanics* and *disorganized delusional stalkers*, some differentiated recommendations can be made. Because of their disorganization, the delusional stalkers may have already come to the attention of the police or other authorities. Victims will still have to do all of the recommended things to help the police make a case against the stalker, but the fact of the stalker's broadly bizarre behavior typically makes this easy. In contrast to intimate ex-partner stalkers, the delusional types seldom take extensive measures to hide their stalking from authorities. For the *erotomanic* stalker, documentation of the stalker's behaviors to help make the case is essential. Avoidance whenever possible and firm but non-angry rejection of advances when they are

made is advisable. One's family and work friends should be made aware of the identity of the stalker so that they cannot be unwittingly manipulated to act against the interests of the victim. Even in the non-violent case, the degree of disruption to one's life and family can justify legal action and it should be pursued. For the more dangerous disorganized stalkers, taking steps to avoid contact with the stalker is advisable.

Mullen, Pathe, & Purcell (2000), who have perhaps the most experience in attempting therapeutic interventions with these two types, comment as follows:

[Many experts] have noted the extreme persistence of erotic delusions. . . [the general review literature is characterized] by gloomy prognoses and diminishes expectation for the effectiveness of psychiatry and other mental health disciplines in diminishing erotomanic delusions.

An abiding problem with managing these cases is the almost total lack of motivation for treatment. Those caught up with pathologies of love do not see themselves as ill but as blessed with a romance whose only blemish is the tardiness of response in the beloved or the interferences of third parties. . .The benefits of these disorders should not be forgotten, for they provide some solace for their loneliness, some support for damaged self-esteem, and some purpose to their otherwise empty existences.

[But Mullen & Pathe (1994) reported] that the response to treatment in the disorders varied by the nature and severity of the underlying disorder . . .with treatment required over many months before improvement can be expected. . . improving the social supports and networks of patients with pathologies of love is worthy of greater emphasis. (2000, p. 155).

Sadistic Stalker

Transformation #5: Delete intimacy seeking as the motive and substitute control and humiliation of victim. This is the most dangerous type of stalker because they are willing to inflict harm on the victim and because they try to control the victim's life once they have established a relationship with the victim. They approach the victim initially as a friend or

as someone with a romantic interest. However, unlike the *erotomanic* stalker where the forms of harassment remain benign, the *sadistic stalker* engages in conduct designed to disconcert, unnerve, and disempower the victim. These can take such forms as notes left in the victim's locked car in order to unsettle the target, subtle evidence of contact with the victim's personal items such as a rifled underwear drawer, re-ordering/removal of private papers, cigarette ends left in ash trays, the toilet having been used, etc. Once the victim's self-confidence has been undermined, the *sadistic stalker* often moves in to establish a relationship in which the victim is now dependent upon him. Sadistic stalkers appear to select with two criteria in mind. First , the target must be regarded as someone worthy to be spoiled. Second, she must be seen as someone vulnerable to being isolated and controlled. The *sadistic stalker* seems to get part of the thrill out of humiliating a person who has lived a stable, happy life. The second part of the motivational package is a sense of power that grows from his ability to control all aspects of the victim's life. A crucial part of the strategy is to isolate the victim from family and friends so that she is truly dependent upon him alone. *Sadistic stalkers* are very good at using a combination of professions of love combined with threats designed to confuse the victim and to render her world uncertain and unsafe. Classic threats include things as having a dozen dead roses delivered or telling her that "We will die together." Killing or torturing the victim's pets is also one of the tactics used. Sadistic stalkers will often fit the DSM-IV-TR criteria for sadistic (aggressive) personality disorder but some fit into the anti-social personality disorder. More broadly, they tend to fit the dangerous psychopathic personality syndrome. The tactics are parallel to those employed by the domestic abuser.

Once a relationship has been established, the stalker is likely to demand that the victim participate in sexual practices that violate the victim's personal standards. Through the victim's humiliation, disgust and shame, the stalker once again asserts his power. These stalkers can be highly dangerous - in particular with psychological violence geared to the controlling of the victim with fear, loss of privacy, and the curtailment of her social world, and with physical violence designed to undermine the victim's confidence in matters normally taken for granted (e.g.

disabling brake cables, disarming safety equipment, and cutting power off). When thwarted the stalker is capable of resorting to direct physical violence toward the victim or those assisting her. Although there is no good epidemiological study, the evidence from clinical-forensic samples suggests that sadistic stalkers constitute approximately 4.7% (of Mullen et al.'s, [2000], predator stalkers) to 12.9% (of Sheridan & Boon's [2002] sample).

Case management implications. These cases need to be taken very seriously because of the risk of physical harm and because of the extreme distress that they generate for victims. The most important steps are (1) to immediately develop a danger management plan for the victim and (2) to explore relocation to a place and a job that the stalker will be unlikely to find. Confronting the stalker with requests to desist is pointless because these will only feed his sense of power and his desire to continue to control the victim. Victims will need as much support as possible to face the hard decisions required for safety, and they will need to understand the limited protection that can be provided by authorities. Until a successful case for incarceration can be made, the stalker is likely to be free and to be using any means at his disposal to find and harass the victim. Overcoming the obstacles to his control becomes a challenge to sadistic stalkers—not a deterrent.

The police need to be made aware, if they are not already, that this type of stalker presents a special challenge. He will have alternative interpretations of supposed stalking events, some that may even cast the victim in the role of stalker. "[The] Sadistic stalker will be likely to: (a) carefully construct and calculate their activity to simultaneously minimize the risk of intervention by authorities while retaining maximum impact on the victim, (b) be almost impervious to intervention since the overcoming of obstacles provides new and potent means of demonstrating the victim's powerlessness and (c) if jailed, the stalker will continue to harass both personally and vicariously with the use of a network of associates." (Sheridan & Boon, 2002, pp. 77).

Conclusions

Do these six types exhaust all possible cases of stalkers? No. They are presented as sufficient to cover the statistically common cases and to provide guidance to police, criminal justice officials, and mental health workers. Refinements are possible in the identification of specific motives and specific features of the history of the relationship between the stalker and his/her victim. Even within the framework of these six cases, it would be a mistake to think that one of these sizes fits in all respects, for the specifics of the case will often require creative interventions by counselors, therapists, and the criminal justice system.

A PCF procedure can be continued to recognize the existence of further real types whose features offer important issues for treatment or case management. Thus as more cases accumulate and the importance of distinguishing between motives such as revenge, control, love, companionship, status-enhancement ("being a somebody"), become clear, the PCF procedure allows a natural elaboration. No claim is made that the current PCF is the one and only useful way of identifying stalker types. The proof is in the pudding and that is in the degree to which it facilitates effective practice both in mental health and forensic contexts.

The characteristics identified to assist in the handling of stalkers focused on four factors: the motives of the stalker, the nature of the prior relationship—if any, the degree of reality distortion involved, and the degree of dangerousness of the stalker. The six types of stalkers identified herein involved different combinations and patterns of these four characteristics, but attention to these will typically provide a sound basis for (a) providing a realistic assessment for the victim of the courses of action available to them, (b) provide law enforcement with differential treatment options (ranging from warnings, educational interventions, protective orders, and arrest), and (c) provide the counselor with a clear focus for treatment planning. The attempt in this paper has been to pull together implications for "best current practices." Clearly, careful research evaluation is required to determine which aspects of these proposals are indeed effective for victims, the law enforcement community, and mental

health providers. And because of the kinship of the issues identified herein to those in the handling of intimate partner violence, workplace rage, and school violence, we may see an integrative treatment of all of these areas that would lead to innovations in prevention, treatment, and case management

Considerably more could be said about the management of victim distress and about how both mental health professionals and the police can be of assistance to victims (See Davis & Mechanic, 2005). With respect to case management, I recommend the relevant chapters in Mullen, Pathe, & Purcell (2000), Kropp, Hart, Lyon, & Lepard's (2002) chapter in the Sheridan & Boon volume; and Gross's (2000) self help guide, *Surviving a stalker*.

I hope that I have accomplished the four goals that I set out to accomplish: To present six major types of stalkers, to identify the four characteristics of the stalkers and their victims that may serve as linchpins to provide some practical suggestions for case management of stalkers that are relevant to victims, the police, and to the counseling of victims, and finally, to present two treatment descriptions which either directly embodied descriptive psychology's status dynamic, world reconstruction approach or whose procedures seemed almost entirely consistent with a world reconstructive approach. Finally, suggestions for further reading in the case management of stalkers and in advice for victims were made.

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Biographical Sketch of Contributors

Raymond M. Bergner received his Ph.D. in Clinical Psychology from the University of Colorado under the direction of Peter Ossorio. He is currently Full Professor of Psychology at Illinois State University and has a private practice in Bloomington, Illinois. His work in Descriptive Psychology has been concerned with its applications to psychopathology and psychotherapy. He is a two-time President of the Society for Descriptive Psychology (1984 and 2004), a member of the Editorial Board of *Advances in Descriptive Psychology* since its inception, and the co-editor of four volumes in this series. Dr. Bergner has published over 60 articles, book chapters, books, and edited books. Many of these articles have appeared in such national and international journals as *Family Process*, *Psychotherapy*, the *American Journal of Psychotherapy*, *The Journal of Sex and Marital Therapy*, and *Clinical Psychology: Science and Practice*.

Gregory Colvin is a Principle Member of Technical Staff at Oracle Corporation. He received his B.A. at the University of Colorado, where he studied with Peter Ossorio, and his Ph.D. in Psychology from Cornell University. His first technology startup was with Peter Ossorio in 1983, and he has worked in computer software technology ever since. His professional interests include programming language design and information retrieval. He has published frequently in trade journals like the C Users Journal, helped to craft the C++ language international standard, and currently serves on the editorial board of the C++ Source. His interest in Descriptive metaphysics dates from his earliest conversations with Peter Ossorio.

Keith E. Davis is a Professor of Psychology at the University of South Carolina. He received his B.A. and Ph. D. from Duke University, and taught at Colorado with Peter Ossorio during the 1960's. He chaired the Department of Psychology at Livingston College of Rutgers University and has held several positions at the University of South Carolina. He was the first President of the Society for Descriptive Psychology and the founding editor of *Advances*. His research has focused on personal

relationships, friendship and love as well as intimate partner violence and stalking. The departmental website at USC contains a link to his vitae, representative publications and course syllabi.

Richard L. Heinrich is Associate Clinical Professor of Psychiatry at the University of Minnesota, formerly Adjunct Professor of Psychiatry at UCLA, and currently Medical Director, HealthPartners Medical Group's Hospice of the Lakes and Chief of Geriatric Psychiatry, Division of Geriatrics, HealthPartners Medical Group, where he specializes in End of Life Care Issues. He has been pursing the applications of Descriptive Psychology to person-centered medicine at the end of life. He is a former president and board member of the Society for Descriptive Psychology. Current research and writing focus on advanced directives and helping individuals, families and caregivers achieve their goals at the end of life.

Peter G. Ossorio is the founder of Descriptive Psychology and the Honorary Lifetime President of the Society for Descriptive Psychology. He received his B.A. and Ph.D. from the University of California, Los Angeles, and taught for more than thirty years at the University of Colorado, Boulder. He received the title of Professor Emeritus at the University of Colorado in 1991. His published works include books, journal articles, chapters, reviews, technical reports, and Descriptive Psychology monographs. He has also served as the President of the Linguistic Research Institute, President of LRI spinoffs LRI Associates and Ellery Systems, Inc., and Executive Vice President of Global Commerce Systems, Inc. He is currently working on the development of descriptive metaphysics.

C.J. Peek is a consulting psychologist in healthcare communication and collaboration based in Minneapolis. He received his B.A. from Carleton College and his Ph.D. from the University of Colorado in 1976, where he studied with Peter Ossorio. Later he started a health psychology section in a large integrated medical group to better integrate medical and mental health care and has co-authored a book and several chapters and articles on this topic and health behavior change and biofeedback. He works extensively with physician and administrative leaders in leadership

development, physician/administrator partnership, patient-physician communication, systems of dialog and decision-making, strategic planning and inter-professional communication in large care systems, clinics and residency programs.

Mary K. Roberts is a writer in Boulder, Colorado. She received her Ph.D. in clinical psychology from the University of Colorado, Boulder in 1980 and practiced as a psychologist for nine years. She then earned her M.S. in computer science from the University of Colorado and worked as a software engineer for eight years. She has served as President of the Society for Descriptive Psychology and as a member of the Editorial Board for *Advances in Descriptive Psychology*. She also created the Society's first web site and served as the first Webmaster. Her recent work in Descriptive Psychology focuses on understanding a range of world reconstructive phenomena, including dreams, imaginary companions, and worlds of uncertain status.

H. Paul Zeiger is semi-retired from careers in academic Computer Science and industrial Software Engineering. He received his S.B., S.M., and Ph.D. in Electrical Engineering from Massachusetts Institute of Technology, chaired the Department of Computer Science at University of Colorado, Boulder, and led software development efforts at several startup companies and one large telecommunications firm. He studied with fellow faculty member Peter Ossorio in the early 1970's, and has since pursued applications of Descriptive Psychology to Computer Science, and, more recently, to the philosophical problems of everyday life. Paul and his wife Carolyn live in Tucson, Arizona, where they are participating in the creation of a new kind of retirement community.

Carolyn A. Zeiger is semi-retired from careers in Clinical Psychology and Industrial Consulting on gender issues in the workplace. She received her B.A., M.A., and Ph.D. in Psychology from the University of Colorado, where she was one of the first students of Peter Ossorio. She stayed on to supervise clinical graduate students, and built a thriving group practice of Psychotherapy. She was a founder of the Society for Descriptive Psychology and is a past president of the Society. She was

also the first psychologist to be examined and licensed as a Descriptive Psychologist.

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