What is Descriptive Psychology? An Introduction

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Abstract

The purpose of this chapter is to provide an accessible introduction to Descriptive Psychology ("DP"). The chapter includes, in order of presentation, (1) an orientation to the somewhat unorthodox nature of DP; (2) an explication of DP's four central concepts, those of "Behavior", "Person", "Reality", and "Verbal Behavior"; and (3) a brief listing of some applications of DP to a variety of important topics.

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 good science. *You have understood aright the basic truth that science 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.*

—"An open letter from Isaac Newton to the field of psychology" (Bergner, 2006, p. 70)

> *Descriptive Psychology is "a set of systematically related distinctions designed to provide formal access to all the facts and possible facts about persons and behavior—and therefore about everything else as well."*
>
> —Peter G. Ossorio (1982, p. 2)

Descriptive Psychology ("DP") is first and foremost a conceptual framework for the science of Psychology. Created in its original form by Peter G. Ossorio in the mid-1960s at the University of Colorado, it has subsequently been the subject of hundreds of books and papers that have updated, refined, and elaborated it, and that have applied it to domains such as psychotherapy, psychopathology, artificial intelligence, spirituality, organizations, communiities, psychological theory creation, and research methodology. What DP primarily attempts to do is to provide the kind of precise, systematic, and comprehensive conceptual framework that is a pre-empirical requirement for the adequate conduct of psychological theorizing, research, and application.

Since DP is a distinctly odd duck within psychology—not a theory, not a research finding, not an approach to therapy—some orientation to its nature will be the first order of business here. The first section of this chapter will therefore be devoted to discussing DP (a) as a conceptual framework, (b) as a grammar for functioning as a person in a world of persons, and (c) as embodying a somewhat unusual, more person-centered conception of science. Section two will then be devoted to explications of DP's four central concepts, those of "Behavior", "Person", "Reality", and "Verbal Behavior". Finally, section three will relate some applications of DP to a variety of important topics.

The Nature of Descriptive Psychology

A Conceptual Framework

When Isaac Newton created his famous theory, we are all familiar with the fact that it did an exceptional job of describing and predicting how large objects—things like apples and planets—would behave in light of the forces operating upon them. The theory, with its universal law of gravitation, its laws of motion, and other features resulted in the achievement of countless empirical triumphs such as famously predicting the presence of Neptune before anyone had ever observed that planet, and serving, centuries later, to plot the courses of spacecraft on their interplanetary missions.

What has always received much less attention is the fact that, before Newton could state any empirical propositions, he required *a new conceptual system*. The one that existed when he began his work was not sufficient to accomplish his task. So, prior to the creation of his laws, he created, from parts old and new, just such a system of concepts. For example, he essentially *invented* the concept of "*force*" as any influence that can cause a body to be accelerated. Further, he *systematically related these concepts to each other* to form a coherent conceptual framework. In defining force, for example, he related it conceptually to the concepts of *body* and *acceleration*. All of this was *pre-empirical*. He did not *observe* or *discover* what "force" meant; he stipulated its meaning. In essence, he created the pre-empirical scaffolding he needed to create his "system of the framework of the world" (Berlinski, 2000).

Descriptive Psychology, in a manner parallel to this, is *a set of systematically related concepts designed to allow one to distinguish, to describe, and to categorize all facts and possible facts concerning human behavior.* In the same way that Newton's system enabled physicists to distinguish, to describe, and to categorize any known or possible phenomenon involving bodies and their motion, so the aim of DP is to provide a system that serves the same function for

persons and their behavior. Like Newton's conceptual system, it is itself not a scientific theory and not a set of empirical research findings, but rather something designed to meet a pre-empirical requirement for the creation of such theories and research endeavors. How could one observe or claim, for example, that a "force" was inversely proportional to the distance between two objects if one did not first have the concept of "force" ? Comparably, how could one say anything rigorously (e.g., formulate a theory or state a research hypothesis) about *persons* or *behavior* or *language* (etc.) if one lacked from the outset an adequate conceptualization of these? Further, in successful sciences such as physics, biology, or chemistry, how could one proceed if one scientist held one conception of a key concept (e.g., "synapse", "force", or "ion") and another scientist quite another? Psychology, however, continues to disagree on the meaning of such fundamental concepts as "behavior", "person", "personality", "motivation", and "psychopathology". Paraphrasing Kant, we might say that the establishment of a well and rigorously formulated conceptual system represents a "prolegomena to any future successful psychological science." Descriptive Psychology is such a system.

A Grammar for Functioning as a Person Among Persons

An analogy may be helpful in understanding this peculiar sounding notion, "a grammar for functioning as a person among persons". The analogy I will employ 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 learned 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: historically, people spoke grammatically correct English long before anyone articulated the grammatical rules they were following in doing 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 has actually happened or 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 has happened or will happen, if it is a baseball happening, will fall within the "world" of baseball; it will be a run or a hit or an error, 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, declare 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 the organismic underpinnings of their behavior." 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 that all of these baseball players are following a set of heretofore implicit rules. Further, I can see, and can state, the content of these rules—the network of concepts that they are employing and how these relate to each other. I understand that what is fundamental to being a baseball player is *acting on the concept of baseball,* not being able to articulate it. After all, you have been doing it for centuries. But permit me if you will, to set forth the *cognitive content of this concept*, the rules as it were for acting as a baseball player in a world of baseball players."

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.

A Person-centered View of Science

A standard view of science, one that might be termed the "cosmic perspective," goes loosely as follows. Some 14 billion or so years ago, there was a "Big Bang." An unimaginably hot, dense and energetic singularity exploded, expanded outward, and became the universe. In time, matter clustered into many billions of galaxies, each with many billions of suns, and many of these in turn with their own planetary systems. In one otherwise ordinary galaxy, one ordinary sun formed and on one of its planets, earth, conditions came about in time such that life forms emerged. Over the course of several billion years, these life forms evolved and exhibited ever increasing complexity, until in the very recent cosmological past an especially complex organism emerged: homo sapiens. This species, then, is a very recent, accidentally evolved, cosmologically insignificant organism that has existed for one second of cosmic time on one ordinary planet in the vastness of the cosmos.

A second, far more rare (but not unprecedented) view of science may be termed the "person centered" perspective, and may be characterized in the following way. As human beings, we engage in many different activities, practices, and ways of life—different

"games" if you will—in domains such as romance, child-rearing, finance, music, athletics, drama, religion…and science. From this perspective, to borrow an old phrase, science is but one among many of the "games people play".

As persons, we give accounts of many different kinds: historical, journalistic, biographical, political, fictional, personal-experiential, and more. Among these different kinds, some are scientific accounts—accounts of how things are and have been in the empirical world—about how the cosmos evolved, how we evolved, how characteristics are transmitted to offspring, and much more. Historically, we observe that some of these accounts such those of the ether and of Ptolemaic cosmology have failed to survive, while others such as Einsteinian relativity and Darwinian natural selection continue to survive, for how long we can never be sure. We have seen fit to give such accounts a place of honor in our worlds. Still, they remain but one among many of the kinds of important accounts in the broad worlds of persons.

Pursuing a further aspect of the person-centered view, Kant pointed out long ago that we have no access to noumenal reality. That is, we have no access to reality conceived as how things are independent of us, our perceptions, and our conceptual distinctions. Scientific accounts, ineluctably couched in our concepts and based on our observations (aided or unaided), must therefore of necessity always be accounts of *how things are for us*.

In the cosmic model of science characterized above, it is often said that, in the grand scheme of things, we are unimportant and insignificant. On the person-centered model, however, it is noted that, *without persons, there is quite literally no such thing as importance or significance*. Both are "our gig." Nothing is important to planets and suns and dark matter. Without us (and other persons who may one day be discovered in the universe), it's just mindless rocks in empty space.

On the person-centered model, if we may be permitted a dramaturgical metaphor wherein "all the world's a stage," we persons are the dramatis personae. We are center stage. We are Hamlet and

Lear and Juliet, and all the rest our props and stories. Science is one human activity. Its theories, while extremely important, are but one of many human stories, and are important because we persons have given them importance, something we did not always do. They are conceived by human minds, based on human perceptions, and conceived in humanly constructed conceptual frameworks. Without persons, there would be no science. On the person-centered view, in a certain sense, psychology may be considered the queen of sciences: as the study of persons and their behavior (which necessarily involves their "props and stories"), it encompasses all else. As Santayana once observed, "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" (quoted in Ossorio, 2006, p. 7).

Which of these scientific points of view is the the "true" one? Obviously, unlike the case of claims like "light will bend in a gravitational field", there can be no either/or test of the truth here. Both are faithful to the facts, and both possible orientations to science. The one puts persons center stage. The other regards persons as an insignificant and derivative phenomenon. An understanding of Descriptive Psychology, however, will be aided by the recognition that it lies squarely in the person-centered camp.

Some Core Concepts of Descriptive Psychology

Descriptive Psychology's conceptual network is vast and complex (see Ossorio, 2006). It extends well beyond what can be covered in this brief chapter. At the heart of DP, however, lie four central concepts: *Behavior, Person, Reality,* and *Language*, and I shall try here to give the reader a basic sense of these four. Since psychology is by common consensus regarded as the scientific discipline that studies the behavior of persons, a good place to begin might be with the concepts of "Behavior" and "Person".

The Concept of "Behavior"

Consider the following hypothetical movie scene. Larry is raising his right hand to the side of his head with palms forward and five fingers extended. An observer of this, Moe, asks another observer, Curly, "What is he doing?" Curly responds: "He's holding his hand up." Moe gives him a dope slap, saying, "I know that, you idiot, I can see that. What I'm asking you is, what is he doing?" Curly (befuddled, checking his observations again): "He's holding his hand up." Moe gives him another dope slap and stalks off.

Moe is clearly dissatisfied with Curly's answer. But Curly, confused and wishing to vindicate himself, consults several psychological dictionaries regarding their definition of "behavior". He is surprised to find that most do not define the term at all. Typical of the answers he does find is the following one: behavior is "any observable overt movement of the organism generally taken to include verbal behavior as well as physical movements". (webref.org/psychology/b/behavior.htm7) According to this definition, behavior is essentially observable physical activity: a pigeon pecks a disk, a pianist strikes a key, a woman says "hello", …and Larry raises his hand to the side of his head. "There," Curly concludes, "I was right… that was what he was doing…that was his behavior."

So, what was his behavior? Was it nothing more than raising his hand as described? Or is Moe justified in finding this a woefully inadequate description? Psychology to date has been unable to settle upon any consensus answer to the utterly basic question of what behavior is. In general, the approach seems to be "Oh, you know… behavior!", and no attempt is made to define or otherwise articulate the concept. Among those few who do consider the question, the most generally favored answer is that discovered by Curly in the psychological dictionary: behavior is essentially the observable overt movements (including verbal utterances) of an organism. We notice, however, that this is precisely *not* a satisfactory answer for Moe. He already knew that Larry was holding his hand up but this did not tell him what behavior he was engaging in. Was Larry… signalling

someone to stop…giving a Native American gesture of greeting… swearing an oath… indicating 5 minutes were left until the burgers were done…informing the market maker that he wanted 5 million bushels of September corn…or what?

On the mainstream psychology definition, Curly was correct when he said, "He's holding his hand up." And, indeed, we would all agree that he did give *a* correct description. However, we note that this same definition provides no access to any of the other possible correct answers, *including all of the truly informative ones that go beyond the observationally obvious*, to Moe's question, "What is he doing?" In restricting us to the observable physical movements (or sounds), psychology cannot strictly speaking provide a meaningful answer to the what's-he-doing question such as, "He's signalling that there are 5 minutes remaining." Beyond this, there are many further problems with this conception. If the doctor taps my knee with a rubber mallet, and my foot jerks forward, this is clearly physical movement. Should I regard and treat this as behavior—*as the same kind of phenomenon* as giving a hand signal? What about movements such as my chest rising and falling as I breathe? What about situations where a person does something privately that does not involve any observable movement at all; e.g., Jack does some mental math calculations, closes his eyes and tries to remember where he left his keys, or works on an anagram "in his head"? Absent observable movement, should we count these as behaviors?

How, then, does DP address this question regarding one of psychology's most fundamental concepts, that of "behavior"? We may begin by noting that all behavior is *describable* as an attempt on the part of a person to effect a change from one state of affairs to another (Ossorio, 2006, p. 49). Jill combs her hair, drives to work, reads a book, makes herself a pot of coffee, and mentally calculates how many bottles of wine she will need for her upcoming party. In all of these behaviors, whether they involve overt physical movements or not, she is attempting to bring about a change from one state of affairs to another—to change her unkempt hair to a more presentable state, to shift from being unclear to being clear

about how many bottles of wine she must purchase, and so forth. (NB: It may be noted that this characterization of behavior excludes phenomena such as patellar reflex movements, and includes acts such as mentally calculating or working on anagrams.)

Going beyond this general characterization, DP maintains that human behavior is an empirical phenomenon that is not amenable to either of psychology's traditional means of capturing the meaning of concepts, those of classical definition or of prototype analysis (Rosch, 1973). It is instead amenable to a third procedure, that of parametric analyis (Ossorio, 2006). While little used within psychology, parametric analysis is a standard conceptual tool in other sciences (especially physics) and in mathematics. It may be illustrated briefly by recalling the familiar example of an empirical phenomenon traditionally captured in this way, that of color. The concept "color" is neither formally definable nor well suited to prototype analysis. However, the empirical domain of color—the set that has as its members all colors—can be captured completely for scientific (and other) purposes by employing a system that specifies values for three parameters: hue, saturation, and brightness (Gleitman, Fridlund, & Reisberg, 2004, pp. 190-191). On the three dimensional coordinate system that is the color solid, when one gives values to each of these parameters, one identifies a specific location on the color solid, which location is a specific color. Further, employing this parametric system, we are able to articulate precisely the ways in which one color is the same as, or different from, another.

Paralleling this, DP maintains that the empirical domain of human behavior—the set that has as its members all behaviors and possible behaviors—can be captured for scientific purposes by employing a system that specifies values for (i.e., assigns specific content to) eight parameters:

$$\langle B \rangle = \langle I, W, K, KH, P, A, PC, S \rangle$$

where…

B Behavior (e.g., the behavior of Peter moving his rook during a chess match).

I Identity: the identity of the person whose behavior it is. An aspect of every behavior is that it is someone's behavior (e.g., Peter).

W Want (the motivational parameter), the state of affairs that the person seeks to bring about. An aspect of every behavior is that it is an attempt to effect a change from one state of affairs to another (e.g., to achieve an improved strategic position in the chess match).

K Know (the cognitive parameter): the distinctions (concepts) that are being acted on. An aspect of every behavior is that it is a case of acting on distinctions (e.g., rook vs. queen, knight, etc.).

KH Know-How (the skill or competency parameter): An aspect of every behavior is that it entails the here and now exercise of some broader or more general competency or competencies (e.g., when Peter makes his move, he exercises his general ability to move the various chess pieces in the appropriate manner).

P Performance: the process, or procedural aspects of the behavior, including all bodily postures, movements, and processes that are involved in the behavior. An aspect of every behavior is that it involves the occurrence of physical processes, which processes can in principle be described at any level of analysis appropriate to the describer's needs, from molar bodily events to finer muscular events to molecular brain events (e.g. Peter's grasping and moving the rook, or the relevant brain events transpiring as he does so). On the DP account, a description of such molecular events is not, ontologically speaking, a description of what is "really real" about the behavior, or of its "basic building blocks". It is, rather, a description of one aspect of the behavior, the physical process aspect, given, one might say, "to the last decimal point".

A Achievement (the outcome parameter): An aspect of every behavior is that it is the bringing about of some outcome—something is different by virtue of the behavior having occurred, which may or may not coincide with the desired state of affairs specified in W (e.g., Peter's rook being in a new position; his opponent being in check).

PC Personal Characteristics (the individual difference parameter): An aspect of every behavior is that in its enactment personal characteristics of the behaver are expressed; e.g., Peter's competitiveness, knowledge of chess, or tendency to prefer bold, unexpected moves. These may include Dispositions (Traits, Attitudes, Interests, Styles, Values), Powers (Abilities, Knowledge), and/or Derivatives (Capacities, Embodiments, States, Statuses).

S Significance: what the person is doing by doing the concrete thing he or she is doing; the more inclusive pattern of behavior enacted by virtue of enacting the behavior in question (e.g., by making his concrete, specific move of relocating a piece of onyx from one square to another on a board, Peter is making a chess move and participating in the broader social practice of playing chess; depending on the context, he might also be gaining revenge for an earlier defeat, teaching his child the game of chess, or trying to show the world that a grand master can defeat a computer at the game of chess).

The recommended reading of the foregoing parametric analysis is this: Whenever a state of affairs of the kind "human behavior" is the case, a state of affairs of each of the kinds specified by the parameters is the case. Alternatively, we can say: "Any behavior (e.g., one that might be described simply as 'Peter moved his rook') is a complex state of affairs that includes as component states of affairs

a specific person's acting to accomplish purposes $W_1 \ldots W_n$, acting on discriminations $K_1 \ldots K_n$, exercising competencies $K\text{-}H_1 \ldots K\text{-}H_n$, engaging in physical processes or performances $P_1 \ldots P_n$, achieving outcomes $A_1 \ldots A_n$…expressing personal characteristics $PC_1 \ldots PC_n$, and engaging in actions having significances $S_1 \ldots S_n$." (Compare: "The state of affairs that can be described simply as 'lemon yellow' is the same as the totality of states of affairs that includes the having of Hue value H_n, Brightness value B_n, and Saturation value S_n").

This analysis could seem arbitrary or ad hoc and, relatedly, could arouse doubt about the necessity of one or more of these parameters. However, as a thought experiment, it is instructive to consider the following picture of what results if one tries to eliminate any of these parametric states of affairs from the formulation: "Peter moved his rook", but…no one moved the rook (I)…no distinctions were made between rooks and other chess pieces, board position X vs. other board positions, etc. (K)…no new state of affairs was sought by Peter (W)…no personal competence of his came into play in the act (K-H)…no process of a physical sort took place (P)…nothing was different by virtue of the behavior having occurred (A)…no personal characteristic of Peter's was expressed (PC)…or, finally, his behavior of physically moving a carved piece of onyx from one square to another had no significance beyond the concrete moving of a physical object from one location to another (S).

Aside from their use as a means for marking off the boundaries of empirical domains, parameters, in science or in everyday life, are a means by which we specify the ways in which one instance of a concept (e.g., a behavior or a color) can be the same as, or different from, another instance. If all of the values for two behaviors are identical, the behaviors are identical (compare: if hue, saturation and brightness are identical for two patches of color, they are the same color). If one or more values are different, the behaviors (or colors) are different. For example, to return to an earlier illustration, suppose that Pat and Terry engage in the same concrete overt performance of raising their right hands to the side of their head with palms forward. However, the primary value of (at least) the W (Want) parameter for

Terry is "to vote for House Bill 27," while the primary value of the W parameter for Pat is "to make a bid at the auction". This parametric difference renders Terry's behavior a different behavior than Pat's. Colloquially, despite the identity of their physical movements, we characterize this difference by giving quite different behavior descriptions: we say that what Terry is doing is "voting," while what Pat is doing is "bidding".

In principle, one could give an exhaustive description of any behavior by specifying all of the values of all of the above parameters. In practice, however, on any given occasion, whether scientific, therapeutic, or everyday interactional, persons make descriptive commitments to those parameters that serve their purposes in the giving of the specific description. They commit, among other things, to the W (Want) parameter when they want to describe what Pat is doing as bidding. They commit to the K (distinction made) parameter when they want to describe what Kathy is doing as treating the remark as a joke rather than an insult. They commit to the PC (Personal Characteristic, subtype Trait) parameter when they want to characterize Senator Smith's vote on a child care bill as an expression of political ambition, not humanitarianism.

A final point involves going beyond what space permits here into matters that one can perhaps only glimpse from the foregoing discussion. The DP conception, in formulating the domain of behavior via parametric analysis, is in effect saying that in giving behavior descriptions by assigning values to parameters, we are *working a system*. By analogy, it is as if we had here explicated the concept of "algebra", and in doing so had given only a short, simple description much as one might find in a dictionary. However, we would be aware that what had been referred to by the word "algebra" was not something simple and thinglike that one could point to, but an entire complex system that is used by persons. Where in working the algebraic system one might say, "I think x = 3", so in working the system of behavior description, one is in effect saying things such as, "I think one value of K (one distinction being acted upon) in Peter's behavior is 'rook' (vs. queen, knight, etc)"; or "I think a

value of PC for Senator Smith's behavior is 'political ambition' (vs. 'humanitarianism'). The interested reader is referred to Ossorio, 2006, for an in-depth discussion of this matter.

The Concept of a "Person"

As in the case of "behavior", psychology to date has arrived at no consensus definition or other formulation of the concept "person". When discussing persons, the usual approach is simply to assume that we all know and all agree on what this term means. When it is defined at all, the predominant tendency has been to define a "person" as a certain kind of organism. A person is taken to be a highly evolved specimen of the species homo sapiens, a species that via evolution has acquired certain physical features, most importantly a large, complex brain that renders this species capable of consciousness and higher mental accomplishments such as using language and solving complex logical problems.

The DP formulation of persons differs fundamentally from this. It begins by honoring the traditional intellectual custom of not defining things—things like chairs, automobiles, dollars, radios, chess pawns, and computers—in terms of what they are made of or of how this "stuff" is organized. They are defined instead in terms of what they do—*the roles they play, the ways they function* in the human scheme of things. A pawn, whether it be ivory, wood, or onyx, is something that functions a certain way in the game of chess. A computer, whether composed of ancient vacuum tubes or modern semiconductors, is a device for carrying out various operations involving the processing of information. A chair, whether wooden rocker or leather beanbag, is a piece of furniture designed to seat a single person.

Employing this function-based approach, Ossorio defined a "person" as "... *an individual whose history is paradigmatically a history of deliberate action*" (2006, p. 69). A person is an individual, in other words, that (paradigmatically) has the ability to *behave* in the full sense of that term, i.e., to engage in some behavior B,

knowing that he or she is doing B rather than other behaviors that he or she distinguishes, and having chosen B as being the thing to do from among a set of distinguished behavioral alternatives. In the vernacular, such behavior is characterized as "knowing what you're doing and doing it on purpose". Such behaviors as making a carefully considered move in a board game, ordering from a restaurant menu, or phrasing a verbal reply so as not to offend another, represent clear everyday examples of deliberate actions. ("Paradigmatically" gets at the point that persons are not *always* engaging in deliberate action; e.g., when they are asleep or if they have been rendered unconscious.)

Defending this conception further against the view that "person" designates a certain kind of organism, Ossorio (2006) has argued that at one time the only kind of airplane was a wooden propellor-driven one, and the only kind of computer was a vacuum tube model. At the present historical juncture, the only completely unarguable example of a person is homo-sapiens type human beings. However, many scientists have long believed that there is a strong possibility that there are persons who are aliens, and extensive efforts have been made to establish communication with such persons. Further, another longstanding endeavor exists to create computers and robots with all of the features of humans. It is not beyond the realm of possibility that at some point ones are created that are capable of entertaining behavioral options and selecting from among them—i.e., computers that, like such cinematic "characters" as Hal in *2001: A Space Odyssey* or R2D2 in the *Star Wars* series, are persons. Third and finally, ongoing programs of research explore the linguistic, communicational, and behavioral capabilities of gorillas, chimpanzees, dolphins and other infrahuman species. It is not beyond the realm of possibility that such creatures will one day come to be regarded as persons. Even if none of these possibilties were to come to fruition, the conceptual point has already been made. Our concept of "person" is not confined to organisms with homo sapiens embodiment, but extends beyond it to any creature that exhibits a certain kind of functioning. Scientists, as well as ordinary

citizens who are moviegoers, science fiction devotees, science news consumers, and believers in such religious entities as angels and devils, extend the concept to creatures whose embodiment is not homo sapiens.

Individual persons. If the conceptual system for a science of psychology is to provide conceptual access to all facts and possible facts about persons and their behavior, it must not merely capture the concept of *Person* in general, but it must also provide descriptive resources for describing *individual persons*. Whether we are psychologists, historians, biographers, or just persons leading our everyday social lives, we do and must distinguish persons, not merely on the basis of identity ("that's John Smith"), but on basis of *what kind of persons they are.* Descriptive Psychology provides the conceptual resources for doing so with the following parametric analysis, one again that attempts to capture the actual (if implicit) concept in use by persons undertaking this essential life task:

<PC> = <Ds, P, Dr…..>

where…

Ds Dispositions, the various inclinations or tendencies, ordinarily observable in a person by virtue of a pattern of frequency in their behavior. These include *Traits* (dispositions to engage in a certain kind of behavior such as hostile or generous behavior)*, Attitudes* (dispositions to regard and treat different objects [e.g., the bible or a presidential candidate] or certain classes of object [e.g., liberals or conservatives] in certain characteristic ways [e.g, contemptuously or reverently])*; Interests (*dispositions to find certain topics or activities [e.g., world affairs, politics, or sports] captivating; and *Styles* (dispositions having to do, not with what a person does, but with how he or she does it [e.g., in a sophisticated, naive, graceful, or awkward fashion].

P Powers, concepts having to do with what is possible and not possible for a given person. These include

the person's *Abilities* (the person's capabilities with reference to some kind of achievement such as shooting a basketball, playing chess, or learning languages); *Knowledge* (the set of facts the person has the ability to act on, such as the rules of chess or the requirements for making a good omelet); and *Values* (the set of motivational priorities that the person is routinely able to act on, such as a value for honesty or for an adventurous way of life).

Dr Derivatives, concepts which, unlike the two categories above, do not have a direct connection to behavior but are defined by their reference instead to Dispositions and Powers. These include *States* (states of affairs in which there is a systematic difference in the ordinary powers or dispositions of a person, such as being sick or exhausted or drunk); *Capacities* (the potential to acquire personal characteristics, such as a capacity to acquire mathematical skills or to learn languages; and *Embodiment* (the physical characteristics of a person, such as being six feet tall, weighing 180 pounds, or having brown eyes).

In essence, we describe what kind of person John Smith is by giving values to these parameters. As a research psychologist, clinical psychologist, organizational personnel selector, and more, I might have reason to do this in a highly systematic and rigorous way. As a prospective life partner, business associate, friend, or voter, I might do so far more informally. In either case, what I am doing is making commitments to some number of these parameters pertaining to the kind of person John is. When I describe John as "honest," I commit to (one value of) the Trait parameter; when "flamboyant" to the Style parameter; when "obsessed with making money" to the Values parameter; when "very good with numbers" to the Ability parameter. Of course, all of these parameters will have multiple values—honesty will not be John's *only* trait. And I am saying in essence: "This is the

kind of behavior, style, motivational priority, ability, etc. that you can expect, not certainly but probabilistically, to observe in John.

The Concept of "Real World"

DP, as noted above, is a conceptual framework designed to provide formal access to all facts and possible facts about persons and their behavior, "*and therefore about everything else as well*". Consider a few statements that we might encounter in everyday life. "She read her child a fairy tale." "He stopped when the light turned red." "She took along an umbrella in case it rained." Each of these is a description of someone's behavior. And each of them *includes references to the real world*—to the world that includes fairy tales, stop lights (and their significance), umbrellas, and rain. And, of course, each of these persons and each of their actions is also part of the real world.

If a person had no vocabulary for distinguishing aspects of the real world, the world of fairy tales, stop lights, and umbrellas, he or she would lack something completely indispensable for describing persons and their behavior. Persons, a part of the world themselves, behave in the world. If we did not have reality concepts—concepts of Objects, Processes, Events, and States of Affairs, real or imagined, present or future—we would not be able to describe anything. Therefore, a conceptual system designed to give formal access to all facts and possible facts about persons and their behavior necessarily requires reality concepts.

Consider a few further statements. "He prayed to God to forgive him for his sins." " She came very close to being the first to discover the structure of DNA." "He has always been intrigued by the Shakespearean quote, 'We are such stuff as dreams are made on, and our little lives are rounded with a sleep'." "Although an opera singer, she prefers to sing jazz songs." Here we have statements pertaining to four different domains, the worlds respectively of religion, science, drama, and music. Behavior descriptions can literally go anywhere, go to any of the myriad domains of the real world. A conceptual

system for articulating all facts and possible facts must therefore be able to go anywhere—to the worlds above as well as to those of mathematics, athletics, poetry, finance, and so on ad infinitum. This does not of course mean that every person must have an expert's command of the conceptual system of all these domains. It means, rather, that *the conceptual system itself* must have the conceptual resources to go anywhere. (Compare: the *system* of mathematics contains the resources to go anywhere in the world of numbers, but most persons will never explore such things as Fibonacci numbers or Pascal's triangle, or acquire the competence to do so.) Now we can see the sense of Ossorio's addendum, "and therefore about everything else as well."

Let us make explicit one other place where Descriptive Psychology, or any conceptual system with the same aspirations, must go. As previously discussed, Isaac Newton required a conceptual system capable of distinguishing and articulating every fact and possible fact about physical bodies and their motions. His system, however, did not have to conceptualize anything *about Newton himself as a describer of nature*, or about any other person insofar as that person was giving descriptions and explanations, scientific or otherwise, of the world. In contrast, any system whose goal it is to give formal access to all facts about persons and their behavior must provide coverage of the behavior of the person writing the theory, as well as that of all other persons giving descriptions and explanations of the world. That is to say, it must be *reflexive*. It cannot be, as in Newton's case, a system for use by persons in a purely spectating role. If it does not cover us and our doings, it is incomplete.

With all of the above considerations in mind, DP contains the following:

1. The concept of the *"Real World"* (or *"Reality"*) itself, conceived simply as "the state of affairs that includes all other states of affairs." (Compare Wittgenstein: "The world is all that is the case" [1922, # 1).

2. A set of concepts, designated the "Reality Concepts", for distinguishing what there is or could be in the world. These are the concepts of *"Object", "Process", "Event",* and *"State of Affairs"*.
3. A system for articulating the relations between these concepts. (Compare: Newton defined his concepts in terms of their systematic relationships to each other; thus, "a *force* is any influence that causes a *body* to be *accelerated*".) In DP, these are designated the "transition rules" for the Reality Concepts.
4. A set of Descriptive Formats for describing/conceptualizing any actual or possible Object, Process, Event, or State of Affairs from any real world domain in such detail that any one exemplar of these can be differentiated from any other.

While we cannot explore the very considerable complexities of this system in an introductory overview such as this, we can say that the four elements just noted comprise what is known as the "State of Affairs System". This system and its operations allow us to conceptualize the objects, processes, events, and states of affairs from any domain of human activity—baseball, mathematics, music, finance, etc.—and to describe in highly useful ways the behavior of persons operating within these domains (see Ossorio, 2006, for an in depth discussion of these matters).

The Concept of "Verbal Behavior"

The fourth and final indispensable concept, if we are to succeed in providing a conceptual framework that gives descriptive access to all facts and possible facts about persons and their behavior, must be that of *Verbal Behavior.* Why is this so? First of all, it is a truism to say that verbal behavior is a kind of behavior, and a further truism to say that it is a part of the real world. But why, we might ask, should we regard it as such an *important* kind of behavior, and such an

important part of the real world that it merits being singled out for separate discussion?

Earlier, we noted that a conceptual framework, to be adequate to its task, must be *reflexive*. It cannot be, like most of our general psychological *theories*, a portrayal of reality that provides no formal access to the behavior of the author of the theory or to his or her linguistic products themselves. The authors ot these theories are clearly engaging in *verbal behavior.* Failing this reflexivity requirement, they are left making the following self-contradictory claim: "We have given you a general theory of human behavior, but we have nothing to say about *our own verbal behavior* of writing this framework. And of course, by extension, we have nothing to say about the verbal behavior of other creators such as Newton, Aristotle, Einstein, Darwin, Shakespeare, Dante, or Copernicus."

Further supporting the critical importance of language and verbal behavior in a comprehensive conceptual framework, it is obvious that we could not understand, not only the material you are now reading or the works of countless authors such as those just cited, but *any* written or spoken communication *anywhere*, without resort to language. We could not understand what others said to us, the signs on the highway, the newspaper story, the latest novel, the television program, or an indefinitely large number of other verbal products that we encounter in our lives. Nor could we engage in the arguably central activity of our lives—that of communicating with other persons via the medium of spoken or written language.

Finally, we frame our worlds in language. We formulate our conceptions of ourselves, of other persons, of our place in the scheme of things, and of what sort of world this is and what possibilities it contains for us, via the medium of language. Indeed, as Wittgenstein once stated, "The limits of my language mean the limits of my world" (1922, #5.6).

For all of these reasons, any conceptual framework that purports to give formal access to all facts and possible facts about persons and their behavior must include a formulation of verbal behavior—of language and its use by persons.

The DP formulation of verbal behavior. Let us take as our simple paradigm case the everyday occurrence of "Jack says X to Jill." X here might be "I love you", "Stop it" , "Checkmate", "Please put the cap back on the tooth paste", "The cat is on the mat," or an indefinitely large number of other utterances. On the traditional mainstream view, what is the behavior here? As discussed previously, it is the observable, vocal/physiological performance of the utterance in question. It is the making of the sound conventionally assigned to some locution such as, for example, "Stop it!"

What is wrong with this picture? For starters, it largely omits the entire idea of *meaning.* We observe, trivially and obviously, that words have meaning. We observe that certain sounds we make such as "checkmate!" mean something, while others such as "grk" do not. There is something radically different about making these sounds. We read or hear sentences, often for the first time and thus with no learning history in relation to them—"the principle of special relativity states that….", "We are such stuff as dreams are made on"; "President Kennedy was assassinated in Dallas in 1963"—and they *communicate* something to us. They *tell us* something; they have some *significance*. Mainstream accounts, even cognitive science ones focussing on "information processing", do not contain formulations of language wherein this feature of meaning is represented (see Searle, 1984, on the "Chinese room" thought experiment).

Is this fair to the mainstream point of view? Does not everyone, mainstream psychologists included, comprehend the simple truth that words have meaning? Do they not point to that old paradigm wherein our parents pointed to things and said "chair" or "horse," or "red," and by this means we learned the meanings of these terms, this meaning being essentially that which they stood for? Two brief remarks only. First, this view of language and meaning has long since been discredited, most notably by Wittgenstein (1953), who asked, for example, what objects or properties do words like "hello" or "hooray" or "shut up" designate. Second, even if we accepted this view, it would not solve the problem. It is after all, a *theory* of meaning. One of the concepts included in the theory is that

of "language". But, just as Newton had to define the term "force" *before he could theorize* that "the force operating on the apple is the same as that operating on the moon," so we need a definition or other articulation of the concept "language" *before* we can offer a theory of it. The commonsense account in question contains no such pre-empirical, conceptual articulation. On the mainstream account, when mommy pointed to the picture and said "horsie", her vocal behavior remained nothing more than the making of a sound.

A second obvious difficulty with this standard notion of language as vocal performance has already been mentioned in another connection, and will be reiterated here only briefly. On the vocal performance account, every instance of a person saying, for example, "I love you," being the same performance, is considered the same behavior. However, this is transparently false. Saying, for example, "Hit me", might be a directive to the card dealer to provide another card or the request of the masochist for further gratification. Saying "I love you" might be declaring one's love, trying to con a wealthy widow out of her money, reciting one's part in a play, jokingly declaring one's affection for one's shiny new car, and many other things. In everyday life, when someone asks of the speaker, "What were you doing?" and they merely state that they were uttering the words in question ("I was saying, 'Hit me'"), this is generally regarded as an evasive, ignorant, or a lamely humorous response. It is not regarded as an adequate response to the question: "What behavior were you engaging in?" The mainstream view, as we saw in the case of behavior in general, in essence tries to strip all else but the performance from the behavior and patch it all back in as something separate (for example, the motivation and/or the situational demands) that is causing this performance. It is as if they said to Romeo: "No, you were not declaring your love to Juliet. That is not what you were doing. What you were doing was uttering the words 'I love you' in the context of certain feelings of affection, certain motivations, and certain situational demands. Oh, and by the way, we are working on a science that will one day be able to link all these things together in a lawful way."

The Descriptive position. Language is not necessary for the making of distinctions. With no evidence of any involvement of language, the rat can distinguish the red triangle from the blue square and jump to it; the gazelle can distinguish the odor of the lion from that of the grass, and bolt; the human infant can distinguish the bottle from other stimuli, and reach for it. What each of them cannot do, so far as we know, is *distinguish the distinctions they are making.* The rat merely discriminates red triangle from blue square. It cannot distinguish *that it distinguished* triangle from square, or jumping to triangle from jumping to square. For this, language is requiired.

In DP, language is fundamentally about something that goes beyond the mere making of distinctions, namely, the distinguishing or marking off of these distinctions with specific, public, communicable locutions, i.e., with words. These distinctions, or concepts, may be about objects (e.g., rocks), processes (e.g., ice melting), events (e.g., lights going out), properties (e.g., being red), relationships (e..g, the cat being *on* the mat), or other states of affairs. Their communication may occur in the context of different forms such as giving information ("The cat is on the mat"), issuing orders ("Stop!"), asking questions ("Where are the keys?"), exclaiming ("Hooray!"), and many others. What language is essential for is for us to be able to distinguish which distinctions these are and to communicate this to others via public, communally agreed upon words. If I did not possess language, I could distinguish the red triangle from the blue square, but, like the rat, I could not know that that's what I was doing and I could not communicate this to another. I could not know that *what* I was distinguishing was red triangle from blue square, or jumping from not jumping, or landing on versus alongside of the red triangle. And I also could not know that *what* I was doing was distinguishing one state of affairs from another state of affairs.

Further, without language, I could distinguish the red triangle from the blue square, but I could only do it i*n the presence of the red triangle and the blue square.* That is, I could only distinguish them if they were there to be distinguished. In contrast, with language I

am freed from this restriction and can distinguish them any time or any place. For example, right here and right now, with no such "stimuli" present, I can say to you, "Think of the difference between a red triangle and a blue square", and you can do so. Via language, we can distinguish them, discuss them, and communicate with each other about something we both understand precisely because we both possess this non-stimulus bound vehicle for doing so: our public, shared, communicable language.

All of this indicates a final reason why language must be a core element in any conceptual framework for human behavior. If I cannot distinguish doing one thing from doing another—if I cannot select from among distinguished behavioral alternatives—then I cannot engage in deliberate action. Thus, for us persons, such an ability to distinguish the distinctions we are making (the burger vs. the fried chicken, the red jacket vs. the blue coat), including the distinction of behavioral options open to us (ordering the burger, putting on the red jacket) is a sine qua non for deliberate action—and thus for *being a person*. What could be more central than that? No language, no persons.

So how, more technically, can we articulate the concept of verbal behavior? Earlier, we presented a formulation that captured the concept of Behavior in general:

$$\langle B \rangle = \langle I, W, K, KH, P, A, PC, S \rangle$$

Verbal behavior, as a kind of behavior, is amenable to being analyzed with this formula. The following formula, however, takes the matter further and addresses the question of what, in addition to being a case of behavior, must be the case for a given behavior to be a case specifically of *verbal* behavior. In other words, it is designed to capture the concept itself of *Verbal Behavior*:

$$\langle V \rangle = \langle C, L, B \rangle,$$

where…

V Verbal Behavior (e.g., the behavior of the teacher saying to her young pupil, Jill, "Point to the triangle.")

C A Concept, which is also a distinction C vs C', where C' is a set of alternatives to C (e.g., triangle vs. non-triangle)

L A Locution, i.e., a word, phrase, or sentence that is spoken, written, or conveyed by gesture (e.g., in sign language) on the occasion in question (e.g., "Point to the triangle.").

B A set of Behaviors, Bc, each member of which qualifies as acting on the concept in question (e.g., teaching geometry, or creating buildings with triangular support structures)

A detailed explanation of this formulation is beyond the scope of this introductory presentation. However, expressing the matter in everyday language, we can say the following: Verbal behavior, for example, a behavior such as a teacher saying "Point to the triangle" to a pupil, is a kind of behavior. As such, it conforms to the formula for all behavior, <B>=<I, W, K, KH, P, A, PC, S>. But, it is a special kind of behavior with three special features.

First of all, it involves as a value of the P (Performance) parameter a Locution (L), i.e., some spoken word, phrase, or sentence; here "Point to the triangle."

Second, it involves as a value of the K parameter there being some concept(s) such as "triangle", which concept not only itself has criteria for its correct employment (3 straight sides, etc.), but also represents a distinction between it and other concepts (non-triangles), which distinction is a publicly shared one in some linguistic community (e.g., that of all English speakers). What is distinguished in the verbal behavior is this concept (or concepts). It is because C represents a selection from a set of alternatives (such as non-triangles) and represents a publicly shared, communicable distinction (unlike "grk") that verbal behavior can be informative in a way that swimming or chopping wood cannot.

Third, there needs to exist some set of behaviors, Bc, such that each represents a way of acting on the concept C. After all, Plato

notwithstanding, concepts do not have any sort of independent, freestanding existence. Their only real world existence is as distinctions made in some person's behavior, and were there no behavior calling for this distinction, there would be no such concept. Thus, a condition for something to be a concept in the first place is that there be a set of behaviors that call for this distinction. This might be as concrete and obvious as the behavior of sweetening one's coffee calling for the concept "sugar", or as obscure and abstruse as the behavior of having a philosophical discussion of the mind-body problem calling for the concept "supervenience".

In the interests of clarity, it may be helpful to express this matter negatively. If we were discussing triangles instead of verbal behavior, we might say something like, "If it doesn't have three sides…isn't enclosed, etc….then it can't be an instance of the concept "triangle". Paralleling this, and coming back to verbal behavior, we can say the following:

1. If there is no vocal (or written or gestural) performance of some locution—if no one says, for example, "The cat is on the mat"—there is no verbal behavior here.
2. If there are no publicly shared concepts/distinctions corresponding to these locutions—no concepts of "cat", "mat" or "on"—then there is no verbal behavior here (but perhaps there is nonsensical vocal noise of some sort—"grk" again).
3. If there does not exist any way to act on the concept(s) in question—if it makes no difference anywhere in anyone's behavior, social practices, or forms of life—then there is no verbal behavior here (although again we might have that vocalized noise such as "grk").

Applications of the Descriptive Framework

The concepts of *Behavior*, *Person, Real World, and Verbal Behavior* are the four most basic concepts in the vast network of

concepts that is Descriptive Psychology. Given limitations of space, others will not be pursued here (the interested reader is referred to Ossorio, 2006). As noted in the introduction, DP concepts have been applied over a vast range of topics, and I shall in closing mention only a small subsample of these applications. Regrettably, the linkages between these works and the concepts just discussed cannot be drawn here. In the area of psychopathology, DP formulations and treatment recommendations exist for schizophrenia (Ossorio, 1997), depressive states (Bergner, 1988), manic states (Wechsler, 1991), suicide (Kirsch, 1982), bulimia (Marshall, 1985; Bergner, 2005), problems of adolescence (Roberts, 1991), and many other problems. With respect to psychotherapy, a distinctively Descriptive approach known as "Status Dynamics" has been developed (Ossorio, 1997; Schwartz, 1979; Roberts, 1985; Bergner, 2007). In the area of social psychology, much work has been done on love and other close relationships (Davis, 1985; Roberts, 1985; Bergner, 2000). Further, a great deal of work has been done in the areas of artificial intelligence (Jeffrey, 1981), spirituality (Shideler, 1990), communities (Putman, 1981), organizations (Putman, 1990), health care (Peek & Heinrich, 2006), cognitive psychology (Ossorio, 1982; Jeffrey, 1998; Bergner, 2006), psychological theory creation (Ossorio, 1981a, 2006), and research methodology (Ossorio, 1981b, 2006). Finally, with the publication of this book, nine complete volumes of *Advances in Descriptive Psychology* are available containing many more applications of DP to a wide variety of other issues and problems.

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