

LRI Report No. 32

COGNITION

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**Linguistic Research Institute
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1. An abridged version of this paper was presented as part of the symposium, "Contemporary Approaches to Cognition," sponsored by the Division of General Psychology at the annual meeting of the American Psychological Association in Washington, D.C. in August, 1982.

2. Additional copies of this paper may be obtained from the Linguistic Research Institute, P.O. Box 1294, Boulder, Colorado, 80306.

Background: Descriptive Psychology

The following provide a summary characterization of Descriptive Psychology (DP) as a background for a survey of the Descriptive Psychology approach to cognition.

1. Descriptive Psychology (Ossorio, 1966; 1971/1978) is a conceptual approach rather than a theoretical one. That is, the primary effort is to introduce distinctions and formulate conceptual structures which can be acted on effectively in scientific and other efforts.
2. Descriptive Psychology consists of two related activities.
 - a. The first is the formulation of a complex conceptual structure called the Person Concept or the Human Model. The major components of this structure are the concepts of Reality, Person, Behavior, and Language. The aim here is to codify a fundamental understanding of persons. Just as an explicit grammar of a spoken language codifies a conceptual structure the mastery of which would qualify an individual as a speaker of the language, the Person Concept formulation codifies a conceptual structure the mastery of which would qualify an individual as a person.
 - b. The second is the use of this formulation or parts or derivatives from it in addressing various problems in psychology, education, psychotherapy, computer science, social system analyses, etc.
 - c. A derivative intermediate activity is to address the kinds of facts which led to the traditional division of psychology into "learning," "motivation," "perception," "cognition," and so on, without supposing that these categories have any primary value for understanding people.

3. Being conceptual rather than primarily truth-oriented, primary DP formulations have the function of generating the various possibilities from which the facts we establish empirically represent a selection. The Person Concept formulation is explicated as "a set of systematically related distinctions designed to provide formal access to all the facts and possible facts concerning persons and their behavior."
 - a. Concepts are acted on or not acted on, in contrast to statements which are to be believed or doubted. The primary purpose of introducing concepts (distinctions) is to open up possibilities for knowing and for acting.
 - b. Neither DP nor the Person Concept assumes or presupposes the validity of any other conceptual formulation, e.g., substantive theories, methodological theories or philosophies of science, mathematical or logical theories, and so on.
4. Descriptive Psychology typically employs a variety of non-reductive conceptual-notational devices for introducing subject matter. Among these are Paradigm Case Formulations, Parametric Analyses, Calculational Systems, schemas, etc. (Ossorio, 1981a). Appendix A shows an example of a formula (for behavior) and a parametric analyses (of behavior) on the first page and an example of a calculational system (for behavior description) on the second page.

II. "Top Down" Formulations

Descriptive Psychology provides a basis for either reductive, "Bottom Up," formulations or non-reductive, "Top Down," formulations. The connotations of "Top Down" are that one goes from the more general to the more specific, from the larger to the smaller, from the whole to the parts, from the pre-empirical to the empirical, from the possibilities to the actualities, and so on. The following are examples of the Top Down emphasis which are directly relevant to the area of cognition.

1. Definitions and other comparable formulations (e.g., parametric analyses) are given formally, in systematic terms, and whatever qualifies as an instance is an instance. (This is a case of going from possibilities to actualities.) There are no inductive summaries or generalizations in the basic Person Concept formulation.
2. For example, a "person" is defined as "An individual whose history is, paradigmatically, a history of Deliberate Action." Whatever fits this definition is a person. Note that there is no implication that a person is a human being, a specimen of Homo Sapiens, or even an organism. [Compare: Automata theory does not define a computer in terms of what it is made of or how it is constructed. Anything that functions in accordance with the formalism is a computer.]
3. Language is formulated as primarily and essentially a form of behavior (rather than, e.g., as primarily a set of labels for things). We use words and other locutions to make distinctions ("make," in the pragmatic sense in which we make a promise or make a point in a conversation). The distinction partitions the world of possibilities into those that fit and those that don't fit. For example, if I say "That's a green chair," the

locution partitions the world of possibilities into two classes, i.e., those that fit (instantiate) "green chair" and those that don't. The information conveyed by my saying that is that what I am referring to is a member of one of those classes (the class of things that fit) and not the other. Here again we approach the actual via the known to be possible.

4. A person's life is seen as hierarchically structured (see Appendix B). Ways of living, careers and affiliations, long term projects and relationships, general social practices, specific social practices, individual actions, performances, movements, and other physiological, chemical, etc. processes are all going on at the same time.
 - a. All of these things are not merely going on simultaneously side by side. Rather, there is an inclusion relationship, hence the hierarchical structure. The occurrence of the smaller units is part of the occurrence of the larger unit.
 - b. The most important influences are top down, not bottom up. That is, the primary phenomenon is the smaller elements occurring because they are ways for the larger elements to be implemented; the latter are not seen as accidental or epiphenomenal consequences of the former.
5. The aim of the schemas, formulas, paradigm case formulations, and other conceptual/notational devices used in DP is to achieve sufficient representational power to encompass all the conceptual possibilities with respect to persons and their behavior. On the whole, the primary devices generate many purely notational possibilities (analogous to ungrammatical sentences). Because of this, one of the basic enterprises in DP is to move from the merely notational possibilities to the genuine conceptual possibilities.

Thus, one of the major top-down aspects of DP is to consider the entire domain of persons and behavior and formulate the pre-empirical constraints on the possibilities within the domain. Because this is done for the general domain of persons and behavior, it can be done for the more restricted domain involving anything which in traditional treatments would be classified as "cognition."

The strategy of narrowing the range of possibilities, first on conceptual grounds, then on empirical grounds is very different in form and spirit from the traditional question of "what are the processes which make cognition happen?" Note, for example, the close relation (a) between the formulation of constraints on the possibilities within a domain and the view of language as essentially a means of partitioning possibilities, and also (b) between the description of the processes which make cognition happen and the view of language as essentially a set of labels for things.

The formulation of pre-empirical constraints on possibilities has taken the form of a set of maxims (Ossorio, 1982). Maxims are specifically contrasted with statements or descriptions. They may be taken as a set of more or less implicit rules for describing states of affairs in the domain of persons and behavior. They may also be taken as a set of reminders and warnings with respect to descriptions (expectations, understandings, hypotheses, etc.) of people and their behavior. A selection of maxims which are overtly or fairly directly relevant to "cognition" is shown in Appendix C.

III. Cognition

1. The archetypal form of cognition is knowledge about the real world. If there were no such form of cognition as that there would, presumably, be nothing else to call "cognition" either. However, given that form of cognition, we routinely assimilate thinking, perception, imagining, etc. as varieties of the species "cognition."
2. Knowledge of the real world depends on having a concept of the real world. Acquiring knowledge about something involves finding something out about that something, and we cannot find anything out about something if we cannot distinguish between that something and anything else.
3. The concept of the real world is not an undifferentiated concept such as, e.g., "red," but rather, it involves a set of systematically related real world concepts. [Compare: "arithmetic" is not a simple, undifferentiated concept, but rather, involves the systematically related set of concepts of "addition," "subtraction," "multiplication," "division," "equality," "number," and so on.]
4. The basic real world concepts are those of "object," "process," "event," "state of affairs," and "relationship." Whatever we take to be real will fall under one or more of these categories. These are also observation concepts, in that we do observe exemplars of each kind, even though not all exemplars of each kind are observable. Although "observation" is often equated to "visual observation" we need not restrict ourselves in this case. Thus, I observe an object (and thereby find out something about it) when I see a house, and when I touch an octopus, smell an orange, taste a banana, or jump up and down on a mattress. I observe a process when I see an automobile moving down the street, hear a coyote howling, feel the wind

blowing through my hair, taste the grapefruit turning sour, or smell bacon burning. I observe an event when I see the automobile stop, feel the wire break, or hear the thunder begin. I observe a state of affairs (and at least one relationship) when I see that the street lights are on, hear that the singer is off key, smell that the bacon has burned, taste that the oregano was omitted from the soup, or feel that the table top is rough.

5. The State of Affairs System (Ossorio, 1978), shown in Appendix D, is a formulation of the basic system of reality concepts. It shows that the basic reality concepts of "object," "process," "event," "state of affairs," and "relationship" are mutually defined by their respective places in the conceptual system.
6. The technical means for describing objects, processes, events, and states of affairs as such and the means for distinguishing one object from another, one process from another, etc., are given by descriptive formats which reflect parametric analyses of the concepts of "object," "process," "event," and "state of affairs." An example of such a descriptive format is the Basic Process Unit, which is used for generating process descriptions. The Basic Process Unit is shown in Appendix D. This conceptual-notational unit, when used recursively, generates the kind of process hierarchy shown in Appendix B in connection with life histories.
7. Certain features of the State of Affairs System bear immediate comment.
 - a. The SAS deals systematically with part-whole relationships. It does so with respect to objects, processes, events, and states of affairs. [Note how many of the Transition Rules refer to either "constituents" or "totality."]
 - b. A real world is generated formally from the SAS by introducing at

least one limiting case, e.g., ultimate objects which have no object constituents, or, e.g., the state of affairs which includes all other states of affairs. The latter is the familiar real world of human affairs. Substantive concepts and empirical facts fill in the formal framework of the real world. The state of affairs which includes all other states of affairs provides a basic anchor for a top-down approach.

- c. Ordinary languages which, like English, have a subject-predicate form or its equivalent, may be regarded (under a nonreferential theory of language) as implementing a top-down approach in which the subject term specifies a place in the scheme of things and the predicate term provides a further specification in the same vein. [Hence the kind of interchangeability which we find among subject and predicate terms: "The chair is green." "The green chair weighs 20 pounds." "The green 20-pound chair was made in Hong Kong." Etc. Or, "Something is happening in the next room." "What's happening in the next room is an argument." "The argument in the next room is between Arabella and Juan." Etc.]

Statements in ordinary language are literally State of Affairs representations, usually of truncated sort, within the SAS. Locutions having the form exemplified by "What's happening in the next room is . . ." identify the information which is to be given not by actually giving the information, which would be an absurd procedure, but by locating it in the scheme of things. Unlike other ways of identifying information, this way of doing that is not arbitrary or artificial, since it is the fact that it has that place in the scheme of things that makes it the information it

is. This is why we can know what it is we want to know without having the information in question. The SAS forms of representation (Object Description, Process Description, etc.) provide this capability in a general way.

IV. Implications

A number of conclusions concerning cognition and our knowledge of it can be drawn fairly directly from the foregoing.

1. By common consent, objects, processes, events, and states of affairs are ultimate ontological categories of "what there is" in the world. Since, as the SAS shows, these concepts are defined by their places in a simple formal system and their corresponding relationships to one another, then (a) they are not defined in terms of what they refer to; (b) they are not merely external "labels" for what they refer to; and (c) they do not simply mirror an external reality that has nothing to do with persons. Thus, the real world, which we see when we look around us is much more simply and directly the result of human invention (categorically) and human construction (individually) than most people have taken it to be, even those people who routinely talk about people constructing worlds. The SAS formulation shows how worlds can be constructed using simple means which are available to normal 3-5 year old children.

And, to forestall a predictable objection, it isn't that there wasn't a world before there were people. Rather, there wasn't a world before there were people before there were people (Ossorio, 1981b).

2. A corollary is that our knowledge of the real world and our discovery of facts about the real world is much more a matter of merely recognizing which of the things we already know about is actually the case than it is a matter of discovering what is the case from an initial position of complete ignorance and lack of understanding. The world has our behavioral logic built into it, and our knowledge of it reflects that (Ossorio, 1978; Ossorio & Schneider, 1982).

3. It is a truism that in the real world everything is connected to everything. The SAS is one of the few conceptual systems which deals with the real world parts and wholes at all. It is possibly the only one which deals with these part-whole relations in a direct, systematic, and fundamental way. (Other efforts generally are attempts to incorporate part-whole relations into a first-order logical theory.) The concept of the real world serves as a general framework for registering and collating all the information we have. Our references to objects, processes, and events are ways of encoding facts (states of affairs). The system of real world concepts functions in this way not merely because it is a crucial technical convenience, which it is, but also because information about the real world is the only kind of information there is any point in having (cf., maxim 2 in Appendix C).
4. The fact that there is no real world completely independent of people to which we can point and say that that's what our merely human understanding is an understanding of has implications for any of the social institutions basically concerned with the generation of knowledge (e.g., the various sciences and "the philosophy of science"). A new archetype is needed to replace the inadequate notion that the scientist is one who simply engages in the disinterested discovery of how the world is and works independently of people.

In the Descriptive Psychology approach to understanding knowledge of the real world, what replaces the real world as the independent reality within which people live their lives is the more fundamental notion of reality constraints. Reality constraints are limitations on our possibilities for behaving (including the behaviors of speaking and

describing, including the behaviors of describing our various behaviors and the reality constraints thereon).

Reality constraints are thus boundary conditions on the whole domain of persons, behavior, and real world construction. As such, they are categorically different from the real world. They are nothing at all like what we see when we look around us.

5. A further consequence of the reality orientation, in contrast with a simple truth orientation is a basic shift in our understanding of how scientists bring new knowledge to the world. Basic science consists of engaging with the unknown and establishing limits and opportunities therein, so that to that extent the unknown becomes the known. If the limits are limits on behavioral possibilities, then the most fundamental way of exploring the unknown is to create new forms of behavior and demonstrate their viability as paradigms and archetypes.

Such contributions correspond fairly closely to Kuhn's notions of "Paradigm" and "Paradigm shift." We didn't know beforehand that certain patterns of behavior could be carried off empirically, not because we had some doubts about the truth of the matter but because we had no thoughts on the matter at all, since they hadn't been invented yet. To invent such patterns and demonstrate their viability, that is a fundamental increment in our knowledge of what is empirically possible for us. Correspondingly, what is genuinely cumulative about science is the increasing intellectual sophistication of the behaviors we invent, not the truths, data, and technology we accumulate.

6. With respect to memory:

Information is always information about something, just as cognition

is always cognition of something. As noted earlier, the acquisition of information is the acquisition of some further specification with respect to the real world. At the same time, the acquisition of information is also an episode which is part of a personal history which is part of world history. Within that episode the information which is acquired can in principle (and mostly in fact also) be separately and explicitly distinguished.

It follows that the retention of information can be accomplished in two major ways. The first is to preserve the information explicitly as an isolated state of affairs and to retain it under a state of affairs description, possibly back up by a historical account of the episode whereby it was required. This is the hard way, and it leaves undone the task of integrating that knowledge with all the other real world knowledge for purposes of action. The second way is to accept the [further] specifications with respect to the world as being just that and let it make that difference (and any further differences which go with that) in our knowledge of the world. Then to retain that information is just to have it available for use, and it is automatically available for use if we merely act in terms of how we then understand the world to be.

7. With respect to cognitive processes:

Given the convertibility of descriptions of objects, processes, events, and states of affairs in accordance with the Transition Rule of the SAS, it follows that our descriptions of cognitive processes can be replaced by other descriptions which do not refer to any cognitive processes at all but do refer to objects, events, states of affairs, and possibly other sorts of processes, e.g., behavioral processes. Given that

cognitive processes cannot be observed, the replaceability of cognitive process descriptions by other sorts of description adds to our understanding of (a) cognition, (b) the question of whether there really are any cognitive processes at all, and (c) the possibility of a phenomenon which could equally well be described as a process or as a non-process. This point deserves some mention because psychologists are prone to presuppose that cognitive processes are given, as a subject matter to be studied, rather than as a dispensible aspect of our study of persons' knowledge and thought.

In what terms might a non-process description of cognition actually be given? One of the more obvious candidates is a set of familiar, unglamorous, but serviceable family of concepts, i.e., abilities, disabilities, sensitivities, insensitivities, concepts, actions, and so on (see "unconscious motivation," below). And there are others.

8. With respect to computing and cognition:

The State of Affairs System is, in effect, a data model, and as such, it opens the way to a new generation of data base theories and data models, all of which will be truncated versions, special cases, or variations on the SAS (Ossorio, Schneider, & Frankel, 1982). When such theories become prominent in computing science, then psychological theorizing which uses computer models as theories of cognition will be able to make use of the SAS freely.

In this respect, it is significant that the SAS genre of data models represents a considerable reduction in the requirement of information processing processes (and, correspondingly, for cognitive processes in a cognitive model). In particular, the fact that information in a SAS system

is self-indexing, or self-locating, in the way that it is (see II 7C, above) restructures the whole information processing problem in such a way that there is no need for an elaborate, unconscious information storage and retrieval apparatus to locate and make use of previously acquired information. Instead, it opens the way to seeing persons as being relatively transparent in this respect and acting in ways which simply reflect what they have discovered about the world, past, present, and future.

From this vantage point neither deductive reasoning, inductive reasoning, statistical inference, nor rule following in a narrow sense appear to be fundamental cognitive capabilities. What does appear to be fundamental is (a) the kind of ability which enables a playwright to create meaningful dramas, (b) the kind of ability which enables a casting director to match effectively the individual actors and the parts they are to play, and (c) the recognition of patterns and instances. The former set (deductive reasoning, etc.) may be regarded as degenerate cases of these latter.

9. With respect to "distortion of reality":

It was noted above that the SAS type of system does not require an elaborate unconscious information processing apparatus in order to make use of previously acquired knowledge. From the standpoint of clinical theory, it is of interest that we also do not need an elaborate unconscious information processing apparatus in order not to make use of previously acquired knowledge. "Unconscious motivation," like "cognition," is not one of the central concepts of Descriptive Psychology. Nevertheless, the phenomenon can be systematically generated within DP. Appendix E shows how

we can derive the phenomenon as a formal possibility starting with two impeccable "premises" and moving by innocuous steps to the conclusion. As is shown in Appendix E, this formulation not only gives us formal access to the phenomenon, but also allows us to reconstruct a traditional way of talking about that phenomenon.

Note that the derivation makes no reference to any processes at all except, implicitly, overt behavior. In this respect it is a typical status dynamic formulation. Together with the reconstructed psychoanalytic account, it provides an example of the possibility, noted above (section 7), of accounting for "cognitive" phenomena without any reference to cognitive processes. On the one hand, we have a picture of complex and arcane processes which occur within one person. On the other hand, we have a picture of simple relations involving two persons and the world.

10. With respect to future directions:

The State of Affairs System is a cognitive model first and a data model second, but the fact that it is computer-implementable has far-reaching consequences. It opens the way to a new genre of intelligent computer systems (Jeffrey, 1981) and further, to the construction of synthetic persons who are not organisms. There are enormously greater possibilities for persons, for cognition, and for behavior than could be exemplified by human beings or human-like organisms. To date we have restricted our study of persons and behavior to the naturally occurring instances which are ready at hand, i.e., human beings, organisms, and their behavior. Fundamental investigation requires that we not restrict our efforts in this way but rather extend them into the full range of possibilities of persons, worlds, and behavior. In this regard, it seems safe to

predict that the creative dramatic capabilities referred to above will be of greater significance than will technical achievements in computer design, experimental methods, and the like, though the latter will surely be needed also.

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Appendix A

1. A parametric analysis of behavior
2. Behavior as a calculational system

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Outline of Descriptive Psychology for Personality Theory and
Clinical Applications (LRI Report No. 4D)

In K. E. Davis (Ed.)

Advances in Descriptive Psychology, Vol. I
Greenwich, Conn.: JAI Press, 1981

Parameters of Behavior

(1) = <IA> = <I, W, K, KH, P, A, ID, S>

Where

- B - Behavior (Instances of behavior are identified directly by locutions in ordinary language)
- IA - Intentional Action (The technical designation for behavior under the present parametric analysis)
- I - The 'Identity' parameter (Refers to the identity of the individual whose behavior it is; values of this parameter are given by names or individuating description)
- W - 'Want' - The motivational parameter (Values of this parameter are given by specifying states of affairs as being wanted)
- K - 'Know' - The cognitive parameter (Values of this parameter are given by specifying states of affairs as being distinguished or conceptualized)
- KH - 'Know How' - The competence parameter (Values are given by specifying prior states of affairs as a relevant learning history)
- P - 'Performance' - The process, or procedural parameter (Values are given by specifying a process)
- A - 'Achievement' - The result, or outcome, parameter (Values are given by specifying events and states of affairs)
- ID - The 'Individual Difference' parameter (Values are given by specifying personal characteristics of which the behavior is an expression)
- S - The 'Significance' parameter (Values are given by specifying behaviors or behavioral patterns engaged in by means of the behavior in question)

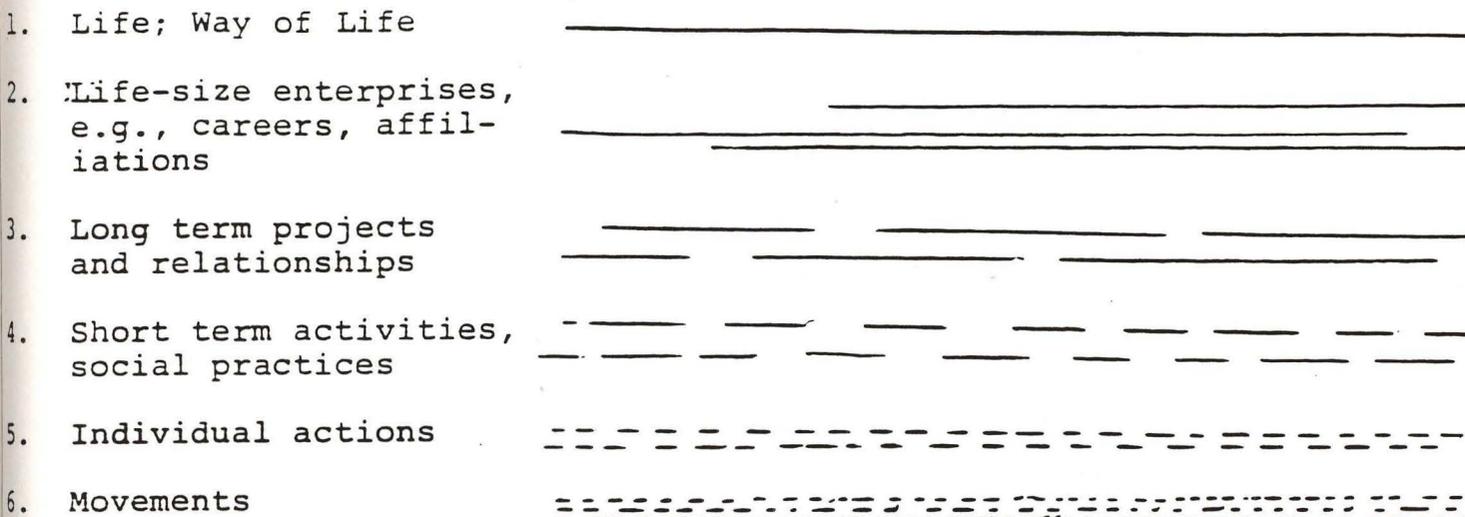
Behaviour as Calculation

Element	Operation	Product
1. <I, W, K, KH, P, A, ID, S>	Substitution	<I, W, , KH, P, A, ID, S> Cognizant Action Description
2. "	Substitution	<I, , , KH, P, A, ID, S> Deliberate Action Description
3. "	Substitution	<I, W, K, KH, P, , ID, S> Social Practice Description
4. "	Substitution	<I, W, K, KH, , A, ID, S> Symbolic Behaviour Description
5. "	Deletion	<θ, θ, K, KH, P, A, θ, θ> Activity Description
6. "	Deletion	<θ, θ, θ, θ, P, A, θ, θ> Performance Description
7. "	Deletion	<θ, θ, θ, θ, θ, A, θ, θ> Achievement Description
8. "	Deletion	<I, W, K, KH, P, θ, ID, S> Performative Description
9. "	Deletion	<θ, θ, K, θ, P, A, θ, θ> Stimulus-Response Description
10. "	Identity	<I, W, K, KH, P, A, ID, S> Intentional Action Description
11. "	Reduction	<I, C, C, C, C, E, ID, S> Purposive Description
12. "	Reduction	<I, C, C, C, E, E, ID, S> Cause-Effect Description

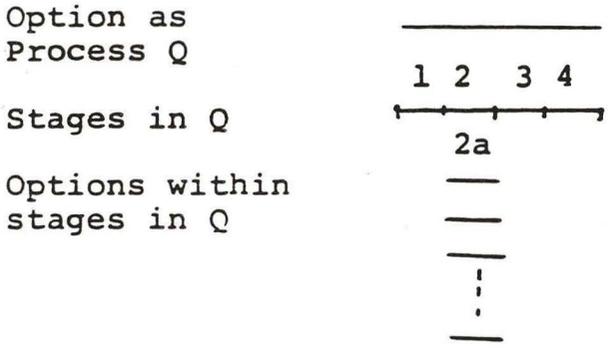
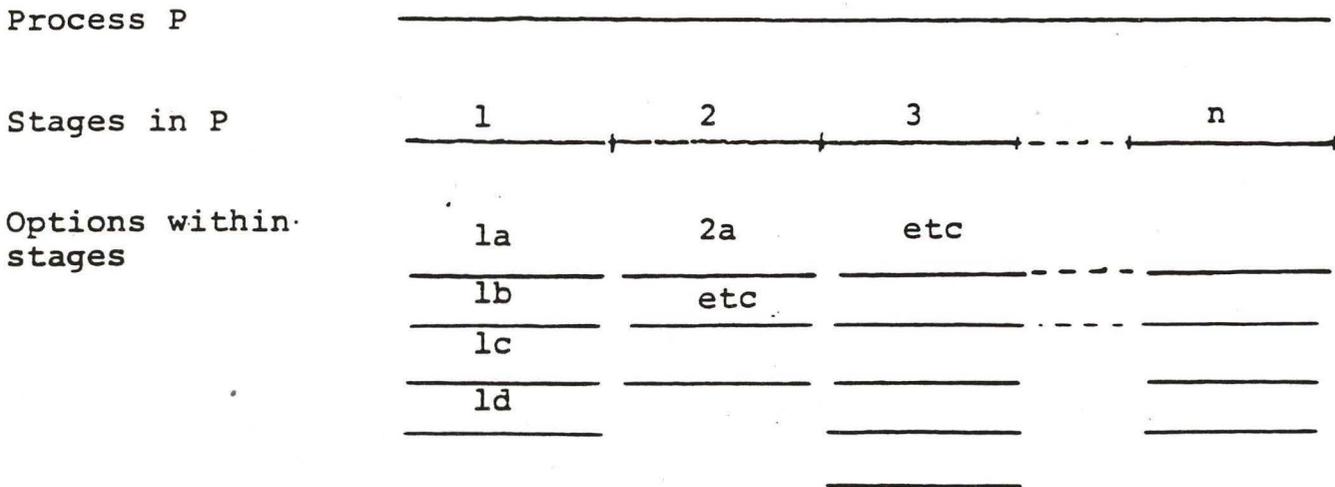
Appendix B

1. Hierarchical representation of personal history
2. Hierarchical process representation (schematic) in accordance with the Basic Process Unit (the descriptive format for process representation -- see Appendix C)

A. Hierarchical Representation of Personal History



B. Hierarchical Process Representation



Option as Process R

Appendix C

A collection of status dynamic maxims

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Place (LRI Report No. 30a)

Boulder, Colo.: Linguistic Research Institute, 1982

A Collection of Status-Dynamics Maxims

A. Person and World

- A1. A person requires a world in order to have the possibility of engaging in any behavior at all.
- A2. A person requires that the world be one way rather than another in order for him to behave in one way rather than another.
- A3. A person's circumstances provide reasons and opportunities to engage in one behavior rather than another.
- A4. For a given person, the real world is the one which includes him as a person, actor, observer-describer, and critic (appraiser, evaluator).
- A5. What a person takes to be the case (takes to be real) is what he is prepared to act on.
- A6. A person acquires knowledge of the world (states of affairs to act on) by observation and thought.
- A7. For a given person, the real world is the one he has to find out about by observation.
- A8. A person takes it that things are as they seem unless he has reason enough to think otherwise.
- A9. A person takes the world to be as he has found it to be.

Status Maxims contd.

- B7. If a person's circumstances call for him to do something he can't do, he will do something he can do.
- C1. A person values some states of affairs over others and acts accordingly.
- D5. A person acquires concepts and skills by practice and experience (in one or more of the social practices which call for the use of that concept or skill).
- D6. If a person has a given person characteristic, (e.g., knowledge) he continues to have it until it changes.
- D11. The world is subject to reformation by persons.
- E4a. In a social structure a person will view events in light of the values and concerns which go with his position in the structure.
- H2a. A person's personal characteristics correspond to reality constraints on which personal characteristics (including knowledge characteristics) he can acquire (and how he can acquire them).
- H7. Given the relevant competence, behavior goes right, if it doesn't go wrong in one of the ways that it can go wrong.
- H8. A person always acts under (formal) uncertainty.
- H9. A person always has enough information to act.

Appendix D

1. The State of Affairs System Transition Rules
2. The Basic Process Unit for process representation

Reproduced by permission from
Ossorio, P. G.

"What Actually Happens": The representation of real world phenomena
Columbia, S.C.: University of South Carolina, 1978

TABLE 2 Basic Process Unit (BPU)

P-NameA: The process "Name" of process A.
P-DescriptionA: The "Description" of A. It specifies:
I. P-Paradigms: The major varieties of P-NameA. This is a technical option. If only one paradigm exists, it will be the same as P-NameA. For each paradigm, the following is specified:
(a) Stages I-K: These are "Names" of subprocesses within A. They are systematically specified, e.g., as P-NameA11, P-NameA12, . . . , P-NameA1K for Paradigm 1. For each stage, specify:
(1) Options 1-N: These are the various exemplars of the process (stage) in question. That is, these are the various ways in which that process could happen. Each Option is systematically indexed as P-NameA111, P-NameA112, . . . , P-NameA11N. Each of these can now be expanded (decomposed) on the model of P-NameA.

- (b) Individuals
- (c) Elements
- (d) Eligibilities
- (e) Contingencies
- (f) Versions

TABLE 1 State-of-Affairs System Transition Rules

1. A state of affairs is a totality of related objects and/or processes and/or events and/or states of affairs.
2. A process (or object or event or state of affair) is a state of affairs which is a constituent of some other state of affairs.
3. An object is a state of affairs having other, related objects as immediate constituents. (An object divides into related, smaller objects.)
4. A process is a sequential change from one state of affairs to another.
5. A process is a state of affairs having other, related processes as immediate constituents. (A process divides into related, sequential or parallel, smaller processes.)
6. An event is a direct change from one state of affairs to another.
7. An event is a state of affairs having two states of affairs (i.e., "before" and "after") as constituents.
8. That a given state of affairs has a given relationship (e.g., succession, incompatibility, inclusion, common constituents, etc.) to a second state of affairs is a state of affairs.
- 8a. That a given object or process or event has a given relationship to another object or process or event is a state of affairs.
9. That a given object, process, event, or state of affairs is of a given kind is a state of affairs.
10. That an object or process begins is an event and that it ends is a different event.
- 10a. That an object or process occurs (begins and ends) is a state of affairs having three states of affairs ("before," "during," and "after") as constituents.

Appendix E

1. A derivation of the formal possibility of detecting and describing distortions of reality and "unconscious motivation"
2. A reconstruction of the traditional way of describing the phenomenon

Reproduced by permission from
Ossorio, P. G.
Clinical Topics (LRI Report No. 11)
Boulder, Colo.: Linguistic Research Institute, 1976

Empiricist principle

You have to find out about the real world by observation.

Paraphrases

For a given observer the real world is the one that includes him as an observer.

For no observer is the real world one that does not include him as an observer.

For no observer is the real world one that has no place for him.

For no observer is the real world one that would leave him in an impossible position.

Maxim 5

If a situation calls for a person to do something he can't do, he will do something he can do.

Conclusions

If, for a given observer the real world is such that it would leave him in an impossible position, he will not see it that way; instead, he will see it as a world that does have a place for him, and he will act accordingly.

A second observer, P, who sees the world differently from O and knows it, can count that difference as O's distortion of reality and account for that distortion of reality by reference to some real condition that O would find unthinkable (because it would leave him in an impossible position) and therefore be unable to behave with respect to it.

Interpretations

- 1) Among such unthinkable real conditions would be that O's behavior was a particular behavior or that it had a particular motivation or significance (hence unconscious motivation).
- 2) Because the derivation above is a statement of logical constraints, the conclusion and the phenomenon is non-voluntary and automatic (hence one could speak of mental mechanisms).
- 3) Because the effect of the logical constraints is that the person continues to function still more or less realistically when otherwise he would be unable to function, one could speak of the mechanisms as preserving realistic functioning or as ego defensive.
- 4) The second observer, P, might set up a taxonomy of the kinds of distortions O was engaging in. If the distortion were explained by the operation of mechanisms, the taxonomy could be identical to that for ego defense mechanisms.