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E/MOTIONAL MEMORY AS A MEDIATING CONSTRUCT IN THE STUDY OF PERSON/ENVIRONMENT INTERACTION. Marisa Zavalloni, Department of Psychology, University of Montreal.

Recent trends in social and environmental psychology underlie the importance of studying psychological processes through which a person and his/her environment interact (Bronfenbrenner, 1979). At the same time, it has become more and more apparent that psychology has established a methodological and epistemological tradition which is not adapted to the study of interactive phenomena (Cronbach, 1975; Proshansky, 1970). The traditional approach of scientific psychology is based on the comparison of average responses measured on an aggregate, and it aims to elicit general properties of the psychological system, such as attitudes, values, and needs, which allegedly represent the basic parameters of hypothetical constructs through which it is hoped that one day it will be possible to explain the complex functioning of the mind. However, as Feldman and Lewontin (1975) note, there is a vast loss of information in going from a complex machine to a few descriptive parameters and an immense indeterminacy in trying to infer the structure of the machine from those few descriptive parameters. Moreover, the data thus obtained refer to average characteristics of a group and not to properties expressing some transaction between the person and his/her environment. The development of a social/ecological and interactive psychology will require a methodological perspective capable of producing a concrete research program having as prerequisite a much clearer understanding of what it means to study interactive phenomena as they operate in the real world. If the epistemological orientation in psychology today appears to be acquiring an interactive and constructivist outlook, it would be wrong to assume that we witness a harmonious development in this direction. On the contrary, as discussed elsewhere (Zavalloni and Louis-Guérin, 1979), we are in a period of transition and uneasiness, characterized by a widening gap between the theoretical reflection and its concrete applications.

The constructivist, interactive perspective in psychology has found persuasive defenders in recent years, yet very much has to be done to translate the implications of this perspective into a research model and to devise concrete methods for its application. The major problem is how to have access to the processes at work in the internal construction of reality of which environmental perception is one of the elements. The fundamental question to be raised in this connection is, are there empirically detectable structures responsible for these processes, or will this level of psychological functioning in the real world remain beyond the reach of psychologists?

Our research goal was to discover through the Social Identity Inquirer (SII) the relation between the objective social identity of a person and his/her internal operant environment (Zavalloni and Louis-Guérin, 1981). The SII represents a complex procedure based on a method called representational contextualization. The procedure comprises different phases each using different technics: free association, focused introspection and associative network analysis. The results obtained indicate that the linguistic encoding or categorization through which we evaluate the socio-cultural environment constitutes only one aspect of what is activated in the brain when a per-

son enunciates these categories. The method of representational contextualization has permitted to identify several psychological components which accompany tacitly the evaluation categories people use to describe the environment such as images, collective and biographical memories and events that act as recoding features of the general stimuli used to produce the categories. These contextual components may be seen as constituting the psychological meaning of a category in contrast to its semantic meaning as provided by a dictionary or common sense. At the same time, they disclose the content of the internal operant environment.

The method of representational contextualization is designed to elicit the latent connections between a concept or category and images, thoughts, and experiences which constitute its background. The principal feature of this method is to provide a display of cognitive material which is never accessible to consciousness or research in its totality, but which is experienced in a segmented way at different times under particular situations of elicitation. The resulting combination of words, images, and memories whose connections have been found stable over time has been defined as conceptual-e/motional cluster and appears to constitute the units of representational thinking. What are activated are the ideational and experiential features which summarize the salient aspects of the transaction between the individual and his/her environment, and which in the natural situation inhabit the periphery of consciousness.

The conceptual-e/motional cluster as a unit activated when a respondent is asked to evaluate an element of the sociophysical environment includes the following components: 1) Representational unit (RU): category of concept, 2) Implicit operant referent, 3) Prototype images 4) Episodes (exemplifying memory), 5) Subjective meaning of RU.

These components can be described as follow:

- 1) The representational unit (RU) represents one of the categories or concepts used by a person to evaluate an element of the sociophysical environment (groups of identity, of alterity and feature of the physical environment. The sum of all the RUs constitutes the semantic repertory of a person, descriptive of his/her internal environment.
- 2) The implicit operant referent. The linguistic categories (RUs) used to describe a group in general or other environmental features are mediated by a subgroup and/or individuals important in the life space of the respondent. These were found, through repeated elicitations over time to be stable features of a respondent associative thinking. This result indicates the existence of a recoding mechanism by which objective groups are translated into particular subgroups and/or individuals evolving in a socio-physical environment. The respondent is rarely aware that his/her linguistic encoding is generated by these implicit operant referents and not by the manifest stimulus to which he/she responds. The sum of the implicit operant referents constitutes the sociophysical microcosm of a person.
- 3) The prototype images are also stable features of memory content and/or symbolic images associated to each RU as descriptors of the environment.

The sum of these prototype images is part of the microcosm of a person as well as an indicator of the motivational and ideological system of a person.

4) Episodes (exemplifying memory) are salient features of the group history and of the biography of a respondent. They represent those aspects of the socio-physical environment that are embedded in the personal and collective biography.

5) The subjective semantic refers to subjective connotation of the categories used (RUs), when applied to a particular referent. This subjective meaning emerges as a complex interaction between the general meaning of the linguistic categories and of the referent as a social object.

It should be emphasized that if the elements of the conceptual-e/motional cluster inhabit the periphery of consciousness, in the natural situation, this is due not to their intrinsic nature, but to the situation of elicitation. Under a different conditions of stimulation these background data may emerge as manifest response. This will occur, for instance, if a person is asked about preferred environments, some important events in his/her life, ideological preferences, etc.

But this direct elicitation will not permit us to see the processes through which this personal and subjective memory content operates in the evaluation of the sociophysical environment, at a given moment on time.

What is specific to the representational contextualization method is that it elicits the unconscious links which exist between a rational discourse, an ideological stance, and the affect, images which are associated to a personal biography. The identification of the conceptual e/motional cluster thus as a unit of analysis, constitutes a step toward the empirical study of the relation between language and thinking in the area of self, alter and society.

A structural analysis described elsewhere (Zavalloni and Louis-Guérin, 1981) permits us to detect patterned relations between conceptual-e/motional clusters, leading to the identification of what could be called the intrapersonal ideational system. This dynamic structure, constituted by a limited number of subsystems called sociomotivational nuclei, represents the articulation between one's aspirations and desires and one's evaluation of the sociophysical environment. The sociomotivational nuclei seem to represent some invariant modality for defining, responding to, and adapting to the sociophysical environment.

This constitutes an affective-cognitive Gestalt which could be defined as e/motional memory. Since Tulving (1972) there has been a tendency to distinguish between two types of long-term memory, episodic and semantic. Episodic memory contains stored information concerning episodes and events situated in time. Semantic memory refers to concepts and abstractions. E/motional memory appears to contain those aspects of episodic and semantic memories which are invested with affect (possessing motivational properties and orienting a person's action in the real world). The concept of e/motional memory as emerged to describe a dynamic structure empirically linking our memory of the world, our existential project, and our evaluation of the sociophysical environment. What we have identified as the internal operant environment can be considered the content of e/motional memory.

It is important to note that the psychological material thus obtained does not reflect some properties of the organism as it is usually understood and measured through traditional methods (attitude scales, interviews, etc.). Here the organism is seen as indissociable from its umwelt or internal environment, defined as those elements of the sociophysical environment which are enmeshed in its motivational system. They are a mixture of stability and change as the individual proceeds through life. The internal operant environment (the content of e/motional memory) as a dynamic structure, stored in long-term memory, can provide a baseline for investigating the modalities of person/environment interaction in a particular research situation and as such could be considered as a mediating construct.

The uncovering of the conceptual-e/motional cluster as a unit of representational thinking, has permitted us to set as a goal the exploration of invariances and patterns where there appeared to be a continuously changing and elusive flow of consciousness, a domain which has been considered outside the reach of science, to be left to writers and poets. (Marsh, 1977)

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