

## **MACROCONTINGENCIES AND INSTITUTIONS: A BEHAVIOROLOGICAL ANALYSIS**

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**ABSTRACT:** *Macrocontingency* is defined as the conjoint actions of two or more individuals under common contingency control. This unit of analysis addresses the effects of contingency relations controlling the actions of any number of individuals, concurrently or sequentially. A macrocontingency analysis at the institutional level begins by identifying the motivating condition and functional components of an institution. The components are occasional but interrelated behavioral situations (e.g., meetings) incorporating the physical settings, conjoint actions of the participants, and macrocontingencies controlling those actions. What is denoted or inferred in a macrocontingency analysis must be capable of being directly observable. An institutional macrocontingency analysis is illustrated with a report of a protest march issuing from the struggle in Brazil to reverse an unequal distribution of land.

**KEYWORDS:** macrocontingency, institutional analysis, language, interlocking behavioral contingencies, verbal behavior

In *Science and Human Behavior* (1953), Skinner discusses institutional practices such as education, government, and economics—clearly cultural-level phenomena. However, he restricts his focus to the effects of contingencies on the behavior of an *individual*. For Skinner, the individual is the locus of causal variables—physical, biological, and behavioral (including cultural). What about contingency analysis involving the concurrent interactions of two or more individuals, or the sequentially related behavior of many individuals?

To approach this problem, I suggested the macrocontingency as a conceptual tool for examining “those enormous controlling variables that operate at the institutional level of analysis” (Ulman, 1978). The macrocontingency is conceived as a concept dealing with the conjoint behavior relations of many individuals.<sup>2</sup> The purpose of the macrocontingency concept described herein is to

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<sup>2</sup> The macrocontingency concept described in this paper differs markedly from the one Glenn (2004) describes as “the relation between a cultural practice and the aggregate sum of

promote a better understanding of complex sociocultural phenomena; that is, to approach such phenomena behaviorologically and thereby more easily interface with social scientists who share the same selectionistic paradigm.

*Macrocontingency* refers to the effects of contingency relations vis-à-vis many similar or different actions of any number of individuals, either concurrently or sequentially.<sup>3</sup> No inner agency notion such as intentionality is accepted as an account of behavior. Initially I defined the concept as “a set of differing actions (topographies) of different individuals under common postcedent control” (Ulman, 1998, p. 209). But this definition proved to be somewhat ambiguous. Subsequently, I refined the definition of macrocontingency as follows: *the conjoint actions of two or more individuals under common contingency control*. Referring to conjoint actions alone is insufficient; for example, two people trying to go through a narrow doorway at the same time—there is no persistent common contingency control. Likewise, referring to common contingency control alone is insufficient; for example, several people crossing a street after the traffic light changes—there is no significant conjoint behavior. However, *conjoint actions* of two or more individuals under *common contingency control* does define a macrocontingency sufficiently; for example, several people playing an on-line video game. One player’s actions with a computer mouse are conjoint with those of the other players. At the same time, the actions of all the players are under common contingency control—the general reinforcing activity of playing the game.

These interlocking behavioral contingencies may form a plexus of interwoven combinations of contingency relations in a structure or system such as an institution. A macrocontingency analysis at the institutional level begins by identifying the impetus or motivating condition (Laraway, Snyckerski, Michael, & Poling, 2003) controlling the conjoint behavior of two or more—perhaps thousands—of individuals over time. Once we have selected some sociocultural issue of interest, we must adduce its manifest phenomena. As with any operant

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consequences of the macrobehavior [i.e., the “the combined behavior of many people,” p. 143] constituting the practice” (p. 142) where *cultural practice* refers to “the similarity in operant content of many people” (p. 143). Glenn asserts inaccurately that “Ulman (1998) makes it clear that the ‘common postcedent [operant] control’ is the cumulative effects of . . . differing actions” (pp. 141-142), adding that “the cumulative effects cannot be in a contingent relation with the behavior of any individual; therefore they cannot control (as operant consequences) the behavior of individuals” (p. 142). What is missing in Glenn’s concept of the macrocontingency is any consideration of the function of verbal behavior, an inherent feature of my macrocontingency analysis. Moreover, she conflates the concept of the operant with that of contingency.

<sup>3</sup> The concept of the *metacontingency* (Glenn, 2003, 2004) may be considered as one possible arrangement of a macrocontingency relation.

analysis, a macrocontingency analysis requires explicit specification of the relevant behavioral phenomena (i.e., conjoint behavior and its motivating condition). That is, to qualify as subject matter for a macrocontingency analysis, the targeted behavior must be capable of being directly observable (i.e., actual). For example, a protest march is directly observable while class struggle, although real, is not.

In a large-scale macrocontingency analysis the sociocultural behavioral phenomenon of interest will typically occur within the context or boundary conditions of an institution. The observable components of an institution are behavioral situations (see Ulman, 1998). A behavioral situation includes (a) people engaged in activities, principally language behavior that coordinates other actions among the components of an institution; (b) a macrocontingency arrangement giving the activities repetition, stability, and predictable order; and (c) physical features of the setting (e.g., room, furniture, tools). The occasional but interrelated behavioral situations that compose an institution are observable, but an entire institution is not.

The following is a brief illustration (as reported by Reuters on May 17, 2005; see Italie, 2005) of a macrocontingency analysis at the institutional level. The motivating condition relates to the struggle in Brazil to reverse an unequal distribution of land. The current administration promised the “resettlement” of 400,000 landless peasant families during its four-year term, but so far very few have received any land. The *conjoint actions under common contingency control* were a two-week march in May 2005 for land reform, culminating in a protest of 12,000 in the streets of Brasilia.

Note that this conjoint behavior is observable (i.e., it could have been—and apparently was—recorded with a camcorder). Next, let us proceed to the institutional-level macrocontingency analysis. As for the institutional arrangement, the march and the protest actions were organized by the Movement of Landless Rural Workers (MST). Even though in this case it was not possible to have directly observed the organizing behavior, we can draw a reasonable inference about the language behavior that transpired in the MST meetings.

Continuing with our institutional analysis—as reported, the police injured dozens of protesters when mounted officers made repeated baton charges in the worst protest violence seen in Brasilia in years. We can conceptualize the police department as an antagonistically related institution within the larger institutional structure of the government.

We could extend this macrocontingency-based institutional analysis by taking into account the hardships imposed on the impoverished people of Brazil by demands issuing from such institutions as the International Monetary Fund and

the World Bank, which in turn are largely controlled by a few billionaire families in the United States. And so on. So the next step in our ambitious interpretative undertaking might be to analyze the flow of money as institutionalized social relations (Dugger & Sherman, 2000; Ingham, 1999) within a larger macrocontingency framework.

Some important points in this example: All of the actions involved in the macrocontingency analysis were conjoint actions of many individuals, potentially observable, set into motion by a particular motivating condition, extracted from an actual sociocultural context, and related in some organized way within an institutional structure. But just as language is not a thing, neither is an institutional structure. *Structure*, whether we are talking about a particular language or an institution, refers to a stabilized nexus of macrocontingency relations maintained by a particular social community over time (possibly centuries, e.g., the English language and the Roman Catholic Church, respectively). In fact, along with being pervasive, a language itself constitutes an extraordinarily stable but evolving institutional structure. And just as different verbal communities shape and maintain different languages, different ethical communities shape and maintain different ethical systems *as institutions*. What makes a verbal community an ethical community are the particular characteristics of the macrocontingencies the community shares in common. What a given ethical community deems as good (reinforcing) or bad (punishing)—say, a right (Vargas, 1975)—is a function of those macrocontingencies. In our example, the conflicting macrocontingencies involved in the struggle over the right of land ownership resulted in the emergence of a countercontrolling institution, the MST.

The contingency relations constituting a institutional social nexus can be analyzed at a much finer resolution by means of the linguistic unit proposed by Vargas (2005). This unit links together the complex behavioral relations in a macrocontingency. As Vargas specifies, language behavior (or *lingual behavior*) is a four-term contingency relation incorporating (a) an antecedent event or condition, (b) verbal behavior (e.g., speaking or writing), (c) mediating behavior—actions that intervene between the verbal behavior and the outcome, and (d) a resultant postcedent event or condition. Language behavior corresponds to the minimal verbal episode described in *Verbal Behavior* (Skinner, 1957/1992).

For example, suppose Professor X is giving a lecture but noise in the hall is causing a distraction. The professor then asks a student, John, to close the door. John complies and consequently the noise is no longer a distraction. All four required terms are present in this example: *antecedent condition*, noise in the classroom situation; *verbal behavior*, “John, please close the door”; *mediating*

*behavior*, John shuts the door; and *postcedent condition*, the distracting noise is attenuated. This four-term contingency relation constitutes a minimal verbal episode for language behavior (in this case, a *mand*—one of several primary verbal relations (see Skinner, 1957/1992). Vargas (2005) discusses some important characteristics of language behavior. First, the terms in a verbal episode obtain their particular characteristics as a result of socialization by a verbal community. Second, all four terms are necessary—preeminently *mediating behavior*, without which verbal behavior is impossible. Third, all other behavior is nonverbal.

Because language behavior interlocks the actions of two or more individuals in a contingency relation, it is capable of providing more complex linking functions (“behavioral glue”) within a macrocontingency. The four-term contingency relation in language behavior constitutes a minimal macrocontingency; that is, the conjoint operants of *two* persons under related but different contingency control, linked sequentially. From here we can adjust our conceptual “macroscope” to the institutional level, and beyond that to real social structures—all the while remaining within the domain of behaviorological science. The key to such analysis lies in the fact that the term *macrocontingency* deals with social behavior, a behavioral unit that always involves its shaping by a social community. Therefore, by definition, a macrocontingency necessarily requires the mediation of its conjoint actions by members of that community.

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