Psychological Review
1983, Vol. 90, No. 2, 166-170

0033-295X/83/9002-0166$00.75

Temporal Dynamics and Decomposition of Reciprocal Determinism: A Reply to Phillips and Orton

Albert Bandura
Stanford University

In their analysis of reciprocal determinism, Phillips and Orton (1983) mistakenly assume that behavior, cognitive and other personal factors, and environmental events operate as a simultaneous wholistic interaction. Contrary to this belief, the interactants in triadic reciprocality work their mutual effects sequentially over variable time courses. The problems that Phillips and Orton raise concerning the "internal relations" and wholistic doctrines have little relevance to the conception of triadic reciprocality within the social-learning framework. Issues relating to the temporal dynamics and decomposition of reciprocal determinism are discussed.

Psychological theories depicting behavior as the product of influences flowing unidirectionally have in large part been supplanted by models emphasizing the reciprocality of influence. The major issues in contention therefore center less on interactionism than on the model of reciprocality advocated. The article (Bandura, 1978) to which Phillips and Orton (1983) refer analyzed three different types of interactionism, with the major focus on how self-processes operate within a model of triadic reciprocality. I am much surprised by the cosmic purpose the authors ascribe to the article because, far from prescribing a "new causal principle" designed to effect "fundamental change" in the "underpinnings of his discipline" (p. 158)—a heady mission indeed—the article actually addresses more circumscribed issues regarding the reciprocality of influence.

To recap briefly, explanatory models that regard major classes of determinants as interactional in form have been conceptualized in at least three different ways, as summarized schematically in Figure 1. The top two formulations subscribe to a unidirectional causality with respect to behavior. In the unidirectional view, persons and situations unite in unspecified ways to produce behavior. The partially bidirectional conception acknowledges that persons and situations affect each other. But it treats influences relating to behavior as flowing in only one direction—the person–situation interchange unidirectionally produces the behavior, but behavior itself does not affect the transaction between the person and the situation. A major problem with this type of view is that, except for their social-stimulus value, persons cannot influence the environment other than through their actions. It is difficult to conceive of behavior as the offspring of an intimate exchange between a behaviorless person and an environment. Behavior is an interacting determinant, not a detached by-product that plays no role in the production process.

In the third model of interactionism, based on triadic reciprocality, behavior, cognitive and other personal factors, and environmental events all operate interactively as determinants of each other. In this triadic reciprocal determinism the term *reciprocal* is defined as mutual action between events, and the term *determinism* signifies the production of effects by events. Because of the multiplicity of interacting determinants, events are associated with effects probabilistically rather than inevitably.

Triadic Reciprocality Presented as One Model of Interactive Causation, Not as a Wholistic Causal Principle

In the article under discussion, triadic reciprocality is presented as one model of interactionism in which the three major classes of determinants affect each other, rather than as a new causal principle in which the interactants act simultaneously as a fused whole. The concluding section of that article provides brief examples of how the notion of reciprocal determinism can serve as a generic analytic principle for examining classes of

Requests for reprints should be sent to Albert Bandura, Department of Psychology, Building 420, Jordan Hall, Stanford University, Stanford, California 94305.

interactants in psychosocial phenomena at the level of intrapersonal development, interpersonal transactions, and the interactive functioning of organizational and other social systems. Phillips and Orton (1983) extracted the phrase "generic analytic principle," which affirms that influences operate interactively at all levels of functioning; appended the word "new"to it; and elevated it to a "new causal principle," presumably requiring fundamental change in the very conceptual foundation of psychology (p. 158). I neither espoused the lofty view ascribed to me, nor did I prescribe that wholistic causation replace interactive causation embracing sequentiality of mutual influence.

Alternative causal models were analyzed briefly in order to provide a meaningful framework within which to address the major issues to which the article was devoted—namely, how self-processes operate within the model of triadic reciprocality. Theories arguing for the causative irrelevance of thought essentially portray cognitive events as preserved replicas of past environmental influences. In such one-sided causal regress, previous external influences are treated as though the environment was untouched by human action. But environmental influences have causes, as do behaviors. By their actions, individuals contribute to the nature of their situations (Bandura, 1981). People are therefore at least partial creators of their own history. Moreover, memory representation of the past involves constructive rather than reproductive processes in which events are filtered through personal meanings and biases and cognitively transformed. People thus serve as partial authors not only of their past experiences but of their memory of them as well. In the regress of prior causes, environmental determinists emphasize how actions are determined by external events but neglect the prior cause in the chain of occurrences showing that the environmental events themselves are partly determined by human action.

To say that people contribute to the nature of their situations does not mean that they are the sole authors of them. Numerous other influences—some social, some institutional, and some physical—also contribute to the shape situations take. Because people are only partial authors of situations, it is not the case, as Phillips and Orton imply, that an interactional analysis of "history" invites an infinite regress in which behavior is determined solely by past behavior. Rather, behavior is determined by a multiauthored influence.

In likening triadic reciprocal determinism to Haldane's (1884) wholistic conception of reciprocity, Phillips and Orton (1983) ascribe properties to triadic reciprocality that do not belong there and then judge it in light of arguments advanced against wholistic notions of causation and the doctrine of "internal relations." In Haldane's conceptualization of reciprocity, the interactants act on each other simultaneously and are inseparably fused. Contrary to the claim that I share a similar view, the notion of triadic reciprocality rejects both of these assumptions (Bandura, 1977). Nowhere were the triadic factors said to operate as a wholistic entity "at the same moment in time." Phillips and Orton raise the possibility that the internal relations and wholistic doctrines may have little relevance to how interactive influence is conceptualized within the social-learning framework. Indeed, they do not.

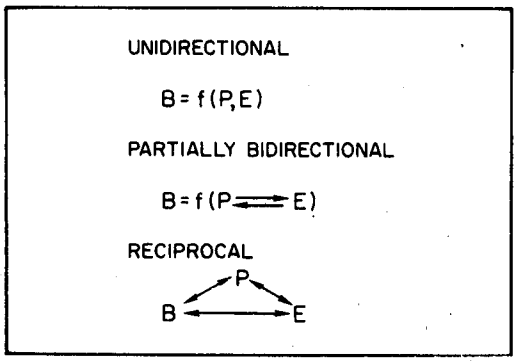

Figure 1. Schematic representation of three alternative conceptions of interaction. (B = behavior, P = cognitive and other personal factors, and E = environmental events. From "The Self System in Reciprocal Determinism" by Albert Bandura, *American Psychologist,* 1978, *33,* p. 345. Copyright 1978 by the American Psychological Association, Inc. Reprinted by permission.)

Triadic Reciprocality Does Not Mean Simultaneity of Interactive Influence

Determinants can affect each other proximally or distally but, whatever the time course may be, they involve sequentiality of mutual influence. Even when bidirectionality of influence is immediate, as in verbal interchanges in which a question by one person evokes a prompt reply from another, an influence is not altered before it has operated itself. The production of a reciprocal effect takes time. In the example just cited, questions and replies do not occur simultaneously. Because reciprocality is traditionally defined as a back-and-forth interchange, to conceptualize it as a process in which the interactants are influencers and influenced at the same instant in time would constitute a contradiction in terms. Successive happenings cannot be simultaneous.

Phillips and Orton quote several passages from *Social Learning Theory* (Bandura, 1977) presenting the view that the interactants in reciprocal determinism affect each other sequentially over time. In a puzzling assertion, they would have readers believe that, in an article published a year later (Bandura, 1978), I altered my view of reciprocal causation in favor of simultaneous reciprocality in which behavior, personal factors, and environmental events all allegedly "reciprocally determine each other *at the same time*" (Phillips & Orton, 1983, p. 164; italics added). I hold no such view. I do not know what they misread in the 1978 article in forming this misjudgment. At no time have I advocated a doctrine of simultaneous wholistic reciprocality. To pursue the television example, unless one were bent on propounding absurdities, obviously, tuning in a program does not instantly alter network offerings; acquiring preferences and behavioral competencies through televised modeling does not at that precise moment trigger action effects; and executing an act does not instantly transform the social milieu. Each of these segments of reciprocality involve bidirectional-influence processes, but obviously the mutual influences and their reciprocal effects do not spring forth all at once. They work their mutual effects sequentially over variable time courses.

Triadic Reciprocality Does Not Mean Undecomposable Wholism

Because the triadic factors do not operate simultaneously as a wholistic entity, it is possible to gain some understanding of how different segments of reciprocality operate without having to mount a Herculean effort to study every possible interactant at the same time. This is true even in the case of physiological functioning, where the subsystems are closely interrelated and the time course of reciprocal action is generally much shorter. The body contains innumerable reciprocally activating systems, a subset of which is portrayed in Figure 2. The figure represents the aggregate knowledge compiled from separate lines of research on how the various 354 facets of circulatory function operate interactively in the physiological system (Guyton, Coleman, & Granger, 1972). Any gigantic attempt to study all these reciprocal actions at once would produce investigatory paralysis. It is the subsystems and their various interrelations rather than the entirety that are analyzed. Clarifying how the various subsystems function interactively advances understanding of how the superordinate system operates. James's (1884) critique of wholistic notions—"Either this Whole System, just as it stands, or Nothing at all" (p. 283)—points to the constraints of such views. A doctrine of simultaneous wholistic causation has paralytic effects on efforts to shed empirical light on causal processes. Were one to take it seriously in the physiological example just cited, one would either have to study simultaneously all the functions of the whole body or forsake the endeavor.

Different subspecialties of psychology center their inquiry on selected segments of reciprocality: the interactive relation between thought and action, between personal factors and environmental influences, and between action and environmental events. Confining analysis to a particular interactive segment clarifies some aspects of causal processes. But it inevitably leaves unexplained some of the observed variance in events when other determinants in the triadic system make causal contributions at various points in the transactions. For example, the interactive relationship between behavior and environmental events in social interchanges is not governed solely by the immediate reciprocities between actions and social counterreactions. While behaving, people think about where their actions are apt to lead and what they may eventually produce. Forethought can enhance, attenuate, or nullify the proximal social effects of action. To understand fully the interactive relation between behavior and environment, the analysis must be extended temporally and broadened to include cognitive determinants that operate in the triadic system. This requires tapping what people are thinking as they perform responses and experience their effects.

Just as reciprocal determinism does not demand that all interacting constituents be studied at once, neither does it prescribe only reciprocal investigatory paradigms. It is important to understand how certain determinants produce change in the first place regardless of how the resultant changes, in turn, affect the subsequent operation of the determinants. To continue with the television example, to gain knowledge of how personal factors and televised influences interactively foster acquisition of aggressive conduct requires a separate analysis apart from how the acquired aggression and social milieux affect each other bidirectionally, or how acquired preferences for aggressive contents aggregately affect television offerings. The study of initial effects and the study of reciprocal effects are separable and require different analytic methods. Both approaches are needed for a full understanding of psychosocial functioning.

I have no quarrel with Phillips and Orton if they wish to slice up constituent reciprocal links and either string them out horizontally or stack them

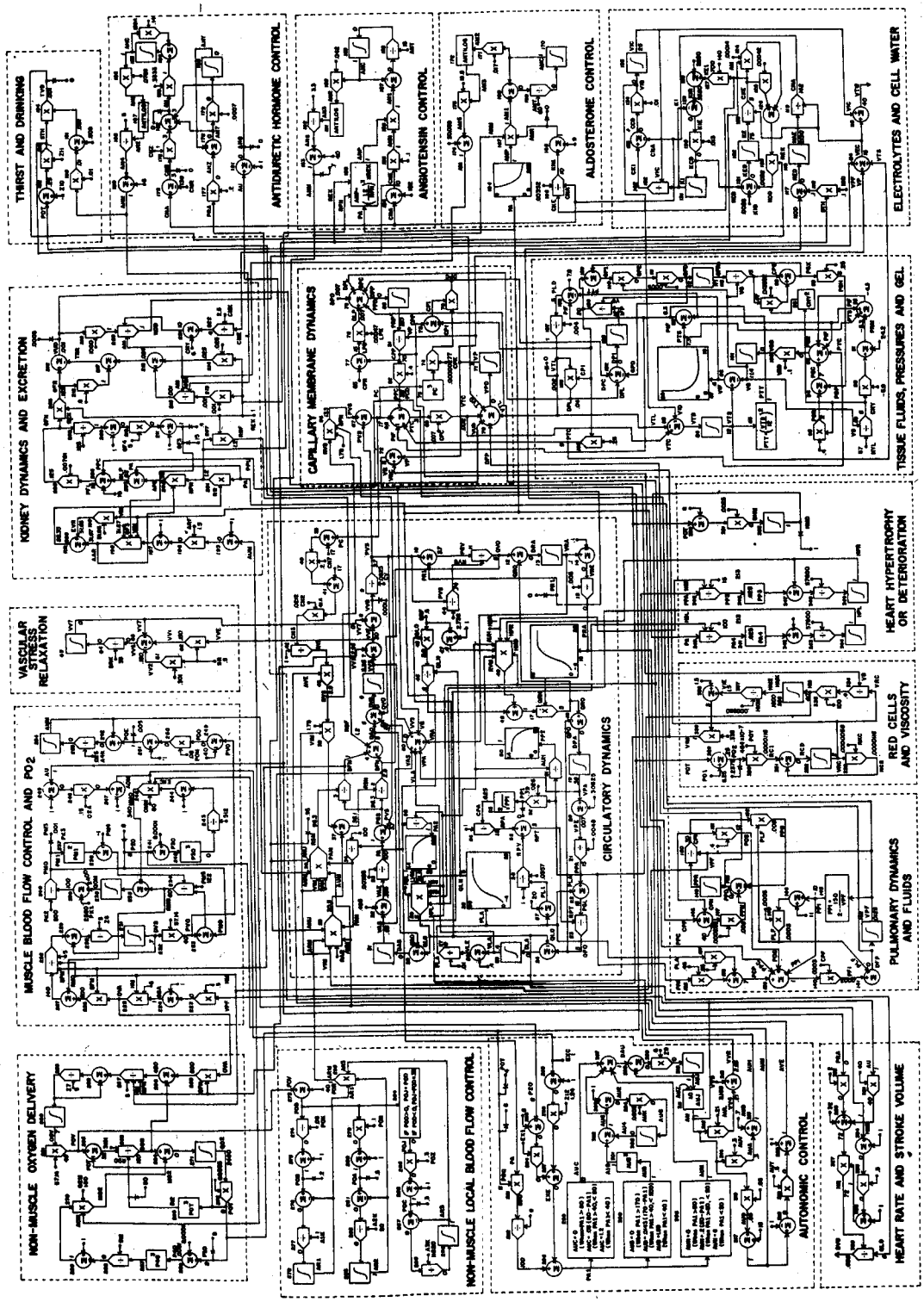

Figure 2. Interactive functioning of multiple subsystems of the circulatory system. (From "Circulation: Overall Regulation" by A. C. Guyton, T. G. Coleman, and H. J. Granger, *Annual Review of Physiology,* 1972, *34,* p. 12. Copyright 1972 by Annual Reviews, Inc. Reprinted by permission.)

vertically, provided the segmentation includes all of the relevant interactive relations. Nor is there much to contest if they wish, by shifting their gaze back and forth, to recast segments of triadic reciprocality as bits of two-sided unidirectionalism. Such accounts represent graphic preference rather than fundamental disagreement over the nature of reciprocal influence.

References

Bandura, A. *Social learning theory.* Englewood Cliffs, N.J.: Prentice-Hall, 1977.

Bandura, A. The self system in reciprocal determinism. *American Psychologist,* 1978, *33,* 344–358.

Bandura, A. In search of pure unidirectional determinants. *Behavior Therapy,* 1981, *12,* 30–40.

Guyton, A. C., Coleman, T. G., & Granger, H. J. Circulation: Overall regulation. In J. H. Comroe, Jr., A. C. Giese, & R. R. Sonnenschein (Eds.), *Annual review of physiology* (Vol. 34). Palo Alto, Calif.: Annual Reviews, 1972.

Haldane, J. S. Life and mechanism. *Mind,* 1884, *9,* 27–47.

James, W. Absolutism and empiricism. *Mind,* 1884, *9,* 281–286.

Phillips, D. C., & Orton, R. The new causal principle of cognitive learning theory: Perspectives on Bandura's "reciprocal determinism." *Psychological Review,* 1983, *90,* 158–165.

Received November 22, 1982 ■