In Response

In Response to Kohler and Greenwood's "Toward a Technology of Generalization"

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In their article, "Toward a Technology of Generalization," Kohler and Greenwood (1986) suggest that better generalization and maintenance of treatment effects can be achieved by identifying and using "behavioral traps" found in the contingencies of peer reinforcement. Within those contingencies are to be found social antecedents and consequences that occasion and maintain responding. The authors then describe five forms of evidence that may identify behavioral traps for the purpose of promoting a "technology of generalization."

Although Kohler and Greenwood's suggestion to develop a "technology of generalization" is commendable, their theoretical and applied analyses overlook several important issues pertaining to the scientific use of terminology. Johnston (1979) has commented specifically on the problems that may be created by an uncritical use of the terms *generalization* and *generality*. His comments are worth reconsidering as we develop a "technology of generalization." First, the use of the term "generalization" confounds different behavioral processes and the concept of generality. Second, mentalistic explanations may be encouraged by inattention to the variables that account for "generalization." Third, such inattention may limit the effectiveness of behavior analysts in educating and training non-behavioral personnel. And fourth, the notion of "behavioral traps" is perhaps

better expressed by considering the conceptual issues of *generality* rather than the processes of *generalization*.

First, according to Kohler and Greenwood, one form of evidence for a behavioral trap is the demonstration of generalization. They adopt Stokes and Baer's (1977) interpretation of generalization, that being the unscheduled occurrence of any relevant behavior in different, non-training situations. In so doing, they seem to separate the process of stimulus or response generalization from the variables that account for it. For example, as evidence of generalization, Kohler and Greenwood cite a study by Buell, Stoddard, Harris, and Baer (1968) in which the researchers "shaped a child's use of outdoor play equipment and found that her untrained social interactions with peers also increased" (p. 21). This is not an example of stimulus generalization in which the same response is controlled by a similar, but different, nontraining stimulus. Nor is it an example of response generalization where a different response is controlled by the training stimulus. Not only is there no similar, but different, training stimulus that evokes a response common to the training setting, but there is also no common training response. Hence, the example is neither an instance of stimulus nor response generalization. It is an instance of the occurrence of a relevant behavior evoked by unknown variables and processes.

Second, conceptually, the above approach seems to minimize the distinction between the processes of stimulus and response generalization, and the variables that account for them. Failure to appreciate this distinction may lead less sophisticated analysts of behavior to in-

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ternalize the variables and processes, making them into explanatory fictions. For example, a teacher may observe that a student failed to generalize relevant social behaviors to a new situation. In the absence of the variables that account for the process, the statement focuses on the *student* (e.g., the student “fails to generalize”), but not on the environmental events that account for the lack of trained behavior. Moreover, such analyses too easily lead to the internalization of any one of several fictitious controlling variables—the student did not generalize because of motivational, intellectual, or cognitive causes. The generalization process and its controlling variables, thus internalized, constitute a mentalistic explanation in which the student’s “wants and desires,” “intelligence,” and “memories” are explanatory fictions controlling behavior. Precise attention to the controlling variables of stimulus and response generalization is likely to be more useful in the development of a “technology of generalization.”

Third, imprecise terminology may lead to claims of generalization where none has occurred. For example, a child may learn to read the word “three” in a training setting that uses a sight-word-emphasis reading method. Later, in a testing situation, the child says the word “three” in the presence of (1) the word “three” and (2) a peer holding up three fingers. Inattention to the controlling variables for the child’s response may have deleterious effects. One might conclude that the child read the word “three” when, in fact, the response was controlled by the peer holding up three fingers. Repeated errors of this type might lead to claims of program effectiveness when there is none. In addition, nonbehavioral consumers might not successfully implement programs lacking precise focus on controlling variables and behavioral processes. Those of us in education have heard, “I tried that reinforcement stuff and it doesn’t work.” But if we ask further, we find that the novice practitioner was inattentive in some way to the variables of reinforcement. If behavioral analysts are unclear about the specific vari-

ables under which reinforcement, response, and stimulus generalization occur, then we cannot expect the conceptually less sophisticated practitioner to understand them. The specific events under which response and stimulus generalization occur are important for the identification of their occurrence, as well as for teaching others about the analysis of behavior.

Fourth, the transfer of relevant behaviors to natural settings may require multiple behavioral processes and procedures. For example, training Joe to introduce his friend, Mary, to other friends may require stimulus generalization training in the presence of irrelevant stimuli (e.g., Mary is introduced to friends in a *train station, school, playground, etc.*). The transfer of this relevant behavior may also require training for response generalization (e.g., “Mary, this is my friend, *Bob, Sue, Ed, etc.*”). Finally, the transfer may also require discrimination training that involves reinforcement of any relevant response in the presence of any relevant stimuli, and withholding it in the presence of all irrelevant responses and stimuli (e.g., Joe is differentially reinforced for introducing Mary, when Mary is *present*, to *friends* and *acquaintances*, but not to *store clerks* or *people on the TV*). The effective transfer of behavior to natural settings may necessitate some or all of the above, as well as other behavioral processes and procedures. Relevant behaviors may fail to become “trapped” if process and procedural incongruities occur between the treatment setting and the natural environment.

Johnston (1979) has convincingly pointed out that the central issue is not “how to get ‘generalization’ but how to arrange control over different environmental conditions which result in desired influences on behavior” (p. 3). This, he states, is an issue of *generality* not *generalization*. Whereas “generalization” is a behavioral process, “generality” refers to the degree to which the variables, methods, and behavioral processes of a treatment are common across subjects, responses, and settings. Perhaps a “tech-

nology of generalization” is better understood and advanced within the concept of generality.

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