

Discussion: "Our Data Not Our Word"

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The discussion following the four papers on "Our data, not our word" began with the most salient issue which revolved about the complexity and subtlety of aphasic disturbances and of the treatment process. Members of the audience expressed concern over the ability of single subject research designs to control for the influence of cognitive strategies, linguistic variables, and variability of aphasic behavior. It was suggested that we should not be lulled by the simplicity of the designs presented and should avoid being simple minded. Because of the potential for confounding by several variables, our use of single subject designs may lead us to believe we are answering our questions when we really are not and this could be dangerous. Other possible confoundings were suggested such as stimulation to the patient that is not part of the formal treatment being studied, including the design itself with repeated sampling of target behavior(s) and other persons who have contact with the patient. Also, clinicians may carry out a given procedure differently, and these clinician variations include the subtle responsivity and flexibility that Vignolo has suggested is characteristic of good clinicians.

The panel accepted the reality of multiple variables related to the patient, his or her environment, and the treatment process. However, we need to start somewhere in establishing clear identification of controlling stimuli and relevant responses in order to answer questions about treating aphasia. One panel member hoped the audience would not go away with simplistic notions about the study of aphasia treatment, and another panelist cited the pedagogical problem of introducing research designs on a rather simple or basic level before getting into the subtleties and complexities of some designs. Some rather complex designs have been developed to answer complex questions, many examples of which appear in Hersen and Barlow (1976) and in the Journal of Applied Behavior Analysis. A third panelist warned colleagues not to overreact to the complexities and run off into the swamp without attempting to face some of the issues. One way to avoid only appearing to answer questions with single subject designs is not to try answering a complex question with a simple design. One should be careful that the question and design match. Also, one should not put forth too many implications from a relatively simple study. One way of avoiding this is to list possible confounding variables when designing a study so that unclear results or results not conforming to predictions can be explained. Also, when possible sources of confounding are identified, such as multiple sampling, single subject studies can be adjusted to evaluate the effect of these variables. Additional phases may be used to examine the presence and absence of other variables, or their application to different behaviors may be delayed, as in multiple baseline.

The point regarding variability of aphasic behavior received some attention, and one panelist questioned the validity of assuming that intra-subject variability is an inherent property of aphasia. He warned against assuming the existence of a factor that may not be there or that has not been established empirically. Furthermore, regarding intersubject variability, instead of starting with an assumption of differences among patients, we should ask if differences really exist. Group designs might uncover similarities among patients, and the strongest result is one that holds up with many different patients. One member of the audience cited the panel's omission

of mixed designs from consideration, in which the time-series components of single subject research can be applied to groups of subjects. In this way we can deal more effectively with the intersubject variability that plagues group designs and the intrasubject variability that confounds individual subject designs. Finally, intrasubject variability was cited as a problem for establishing a stable baseline, especially considering the possible day-to-day changes in the state of the organism. There is no way to guarantee a stable baseline, and each baseline must be carefully examined relative to subsequent phases. Measures must be taken frequently enough within phases to minimize the influence of variability and to insure identification of the true trend within each phase. Also, one can still measure change from a clearly defined range of variability.

Some discussion centered on the establishment of stimulus control and specification of response in investigating treatment questions. Salvatore's study of stimulus pause duration was questioned as to the possible confounding by introducing a second examiner. However, the second examiner was introduced to study the question of generalization of findings across examiners, which is an answerable question applicable to the previously mentioned concern about variability among clinicians. The stimulus-response model was questioned in terms of its explanatory powers in that it seems to ignore processes occurring between stimulus and response as well as violating Schuell's "process orientation" to treatment. Response consequences, therefore, have an effect on internal mediating processes rather than on responses per se. This is a concern especially if responses are defined solely in terms of number correct in naming ten objects. Furthermore, mediating processes include a variety of unknown variables that could make interpretation of single subject studies difficult. One panelist emphasized that only the stimuli and responses are observable and directly measurable. Another panelist questioned the relevance of this issue to the implementation of single case designs. The nature of mediating processes is a different or supplemental issue, explanatory in nature, relative to determining simply whether it is treatment that produces change in behavior. This latter question may be answered with single subject strategies looking at broadly defined or process oriented treatments and looking at a variety of responses or response parameters that are more functional than object naming.

Similar to this issue over mediating processes between stimulus and response was a question as to whether we can get the answers we want regarding treatment with a stimulus-response concept and whether single subject designs afford the best possible model for looking at treatment. One member of the audience expressed uncertainty as to whether we have the technology to determine what truly affects a response. In addition, we must be careful about the assumptions we make in relating stimuli to responses, even in using terms like "control." Also, a better design for looking at treatment might be "systems theory" rather than the designs presented formally at the conference. We need a model that accounts for simultaneously occurring factors besides the observed response. One panelist responded to this particular point by suggesting that models like the one suggested do not pose an alternative to single case design but relate to defining the most appropriate treatment variables and response parameters to be examined by single case designs. Another panelist cited some new attempts at least to broaden the definition of variables and parameters with the application of pragmatics in evaluation and treatment procedures, including Audrey Holland's measurement strategies and some work at Memphis State University and the VA Hospital in Gainesville.

Finally, two other issues were raised briefly during the discussion. One pertained to the use of statistics with single subject experiments, and the other touched upon recent demands for accountability in therapy. There have been some problems in using traditional inferential statistics to evaluate time-series data. The main difficulty is presented when time-series data involves a sequential effect of one response influencing a subsequent response. More appropriate statistics are described by Kazdin in Hersen and Barlow (1976), who address the issue of whether to use such statistics at all, since there may be a difference between clinical significance and statistical significance of a certain comparison. The second issue involved a warning against being terrorized into using inappropriate and excessive measurement in the name of accountability, especially by bureaucrats who may not understand the treatment process for adults with aphasia. One panelist noted that bad results may arise from good intentions and that we need to investigate the source of these demands, which may be economic in nature and have broad social implications.