In Response

Reaction to Willems and McIntire's Review of "Preserving the environment: New strategies for behavior change"

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We thank the editors of *The Behavior Analyst* for the large amount of journal space devoted in the Fall 1982 issue to a review by Willems and McIntire of our book, *Preserving the environment: New strategies for behavior change* (1982). On the whole, we found this to be a balanced review, and we found ourselves agreeing with many of the reviewers' criticisms. Indeed, we did miss some important issues and overemphasized others. The focus of environmental issues changes rapidly; for example, throughout most of our writing of the book, it seemed impossible that the price of oil would plummet. We also agree that, perhaps, the greatest overarching problem is population curtailment and distribution. Also, as noted, the problems of toxic waste disposal have become paramount, and we wish we could have addressed this issue in the book. But actually, behavior analysts have not as yet studied behavior change strategies for decreasing air pollution and toxic waste.

The reviewers' greatest concern seemed to be our level of analysis and intervention and lack of a true systems perspective—a frequent criticism of a reductionist approach to psychology. We readily agree that most psychological interventions in the environmental area have merely dealt with the end products and not tackled the behaviors of inefficient energy/environmental systems, the turmoil of the international economic situation, and the vagaries of political ideology. The scope of the psychological interventions reviewed in our book is not even a drop in the bucket when one considers the controlling systems and the enormity of environmental problems, al-

though with appropriate networking such strategies could be refined for larger system control. We only hope that *Preserving the environment* may prompt such extensions.

A most unfortunate illusion for psychologists (even radical behaviorists) is that their work has global impact. We admittedly have shared this illusion at times when designing research projects, and such illusion was motivational. On the other hand, one of the dangers of an ecological orientation and a larger-scale perspective on world problems is a paralysis in thinking and action, leading to statements like, "If we can not address problems at a high level (which, frankly, is beyond the ability of virtually all psychologists), then we can not really effect any change." We think Willems and McIntire are accurate in their ecological perspective, but it is not clear at what level psychologists and other behavioral scientists can intervene. We started at the bottom with hopes of working up. Perhaps the value of an ecological position is that interventions at one level can radiate up and down the system, and as we noted in our first chapter, behavior change and problem solution are the result of interactions of events at different levels. Large-scale change is improbable if we stay at the individual level; but if we move our interventions up a notch or two (e.g., to organizations and communities), the chances of more meaningful outcomes will increase dramatically. Thus, we offered a variety of community plans for incorporating behavior change strategies.

Preserving the environment introduces potential plans for community-based in-

tervention and presents some data in this regard. For example, the simple operant-based transportation contingencies have served as a framework for citywide transportation systems, and much of the Clean Community System of Keep America Beautiful is based on the antecedent and consequent interventions reviewed in our book. The equally basic work on video modeling has been the basis for the first successful, large-scale testing of television programing as a foundation for changing specific environmentally-important behaviors. All of these endeavors represent a move up in the level of behavioral analysis and intervention. Such larger-scale projects, as noted in our last chapter, are forcing us to work with other disciplines and conceptualizations, particularly economics, communications, and marketing. In some of these endeavors, we have found, as Willems and McIntire imply, that we have reinvented the wheel (e.g., dissemination techniques and marketing strategies). However, in other areas we feel we have added to the knowledge base in other fields. For example, some of the work alluded to by Willems and McIntire on persuasive communications was accomplished 35 years ago in a different media era. Indeed, some of the results of our recent projects (e.g., behavior change from brief media spots) are contrary to "axioms" given in the literature cited by the reviewers.

Willems and McIntire's review has obviously hit a responsive chord for us and hopefully for other behavioral scientists as well. The review challenges us to refocus and expand our work, and to be aware that if we stay at the individual behavior level, we may be part of the problem and not the solution. This is indeed the case for most human problem solving, not only environment-related concerns. While the review was provocative and a bit unnerving and our reaction somewhat defensive, we remain thankful for the interest and guiding comments. We are disappointed that these reviewers found Chapter 2 of our book to be boring and confusing rather than innovative and constructive. We still believe the latter qualities apply, since there we offered new ways of conceptualizing antecedent and consequent strategies for behavior change, introduced special research designs and methodologies, and suggested necessary deviations from radical behaviorism.

One final point—our book is *not* an edited text, as indicated in the title by Willems and McIntire. Only one chapter was prepared by another author (Robin Winkler), and each of our chapters were original contributions, many covering substantial data which had never been published elsewhere.