BEHAVIOR MODIFICATION IN THE CLASSROOM:
A REJOINDER TO WINETT AND WINKLER¹

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Winett and Winkler aptly criticized the "appropriate" behaviors that behavior modifiers have chosen to change. However, after reviewing 14 *Journal of Applied Behavior Analysis* articles concerning behavior modification in the classroom, they made the sweeping over-generalization that "as currently practised, behavior modification has done very little to change the deplorable state of our schools." Finally, they suggest a free classroom in which learning is accompanied by "singing, laughing, and whistling." A number of studies not mentioned by Winett and Winkler are here presented to illustrate the innovative ways in which behavior modification has been utilized to change the complexion of classrooms from the elementary school to the college level. A straw-man model child as purportedly seen by behavior modifiers was built by Winett and Winkler, but this author could not find one instance in the literature where the teacher or behavior modifier desired the behavior thus depicted by the straw-man model child. Furthermore, this author questions the desirability of the "informal" or "free" classroom approach for children with marked social and academic problems. Nonetheless, the general admonition of Winett and Winkler should definitely be taken seriously—namely the behavior modifier should seriously question the behaviors he is being asked to change. Finally, a possible integration of reinforcement principles and some aspects of the informal school are discussed.

The notion that psychologists and educators cannot escape making important value judgments has been well-illustrated by Silberman (1970) and amplified by Winett and Winkler (1972). Relying heavily on the provocative book by Silberman, Winett and Winkler argue that too little emphasis has been placed on the types of behavior being changed by behavior modifiers and that the educational system is being used to train docility and a slavish adherence to routine. Most importantly, they suggest that behavior modifiers have been swept into developing behaviors such as being quiet and sitting still so that the children will fit well into existing educational systems, rather than questioning the

types of educational systems to which those children are being asked to conform. In short, Winett and Winkler seriously question the desirability of the "appropriate" behaviors that behavior modifiers have chosen to develop. This general thrust of their article is well taken, and they deserve thanks for stating a position that many behavior modifiers have discussed at conferences (Ayllon, *unpublished*; Ayllon, Layman, and Burke, *unpublished*; Hively, 1971; Martin, 1971); but the position has not been expounded fully or convincingly in the published literature. On the other hand, they raise a number of issues that deserve critical comment.

OVER-GENERALIZATION

First of all, although Winett and Winkler restrict their review to 14 JABA (*Journal of Applied Behavior Analysis*) articles (1968 to 1970) with "normal" classrooms, they make a number of statements concerning behavior mod-

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ification in *all* classes. As such, their critique is made as a general critique of behavior modification in classrooms, and there is a great deal of incorrect over-generalization from the studies they reviewed. For example, Winett and Winkler conclude that "as currently practised, behavior modification has done very little to change the deplorable state of our schools." As this author views the field, this statement is incorrect, both when one looks at traditional measures of academic achievement and classroom participation and when one looks at some of the more innovative work in behavior modification where the structure and format of classrooms has been completely abandoned or radically altered.

Let us look first at some of the traditional academic and social behaviors that have been changed through behavior modification procedures and that would probably be compatible with most teachers' goals. For example, Winett and Winkler ignore the fact that studies appearing in JABA demonstrated that children with special problems could increase academic response rates (Lovitt and Curtiss, 1969), talking (Reynolds and Risley, 1968), descriptive adjectives in spontaneous speech (Hart and Risley, 1968), instruction-following (Zimmerman, Zimmerman, and Russell, 1969), prosocial interactions (O'Connor, 1969), and attendance and achievement test scores (O'Leary, Becker, Evans, and Saudargas, 1969). By restricting their review to JABA, they also ignore a number of studies that have focused directly on increasing academic behaviors such as correct answers (Birnbrauer, Wolf, Kidder, and Tague, 1965), and grades (Wolf, Giles, and Hall, 1968). They ignore classic studies in behavior modification conducted at the University of Washington nursery school where a host of social behaviors such as regressed crawling, operant crying, and withdrawal were successfully modified (Harris, Wolf, and Baer, 1964). They ignore the Englemann-Becker Follow-Through Model, which is heavily based on curriculum development and behavior modification and which has demonstrated its effectiveness in teaching disadvantaged children

language and reading skills (Bereiter and Engelmann, *unpublished*; McDonald and Soeffing, 1971). Casual observation of children in these Follow-Through classrooms reveals children who beam with pride about their educational accomplishments and who show little if any of the docility that Winett and Winkler describe. Finally, they ignore the success that token reinforcement programs have had in changing both academic and social behavior of children usually labelled emotionally disturbed, delinquent, retarded, or childhood schizophrenic (O'Leary and Drabman, 1971).

Let us now turn our attention to a number of developments not mentioned by Winett and Winkler that seem to be extremely innovative and that may well have an important impact on the complexion of classrooms across the country. Keller (1968) developed a method of instruction based upon contingency management where portions of material are chunked into small units and where a student must pass a quiz based upon that material in order to advance to the next unit. The student can move at his own rate, but if he completes the quizzes assigned for the semester, he receives an "A" grade. Variations of this method have been tried where students must pass certain material in order to gain access to the professor, to attend lectures, or to attend special classes where movies are shown. Furthermore, Malott (1971) based a whole college plan on the Keller method. It is now in operation at Western Michigan University; students in this plan live in the same dormitory and take a large portion of their courses (including liberal arts courses) in classes following the Keller method. Abandoning much of the traditional classroom structure and routine, Cohen (*unpublished*) devised a host of programmed instruction formats for delinquents where the students earn the right to special beds, desserts, and privileges by completing their academic work. Ulrich, Louisell, and Wolfe (1971) also abandoned much of traditional classroom structure in their program where instruction is viewed in a hierarchical fashion and where professors teach graduate stu-

dents, graduate students teach undergraduates, undergraduates teach high school students . . . and elementary students teach preschoolers. There is also evidence that behavior modification procedures can be used to teach creativity in the classroom (Reese and Parnes, 1970). In a series of ingenious studies, Graubard and his associates (Graubard, Rosenberg, and Miller, 1971) taught deviants (special class children) to modify the behavior of normals (teachers). As the authors note: "If children are to be more than recipients of someone's benevolence, they must learn how to operate on society as well as be operated upon." Adolescents were taught to change the behavior of teachers so that they accelerated praise comments and decelerated negative comments of teachers. The adolescents brought about this change by ignoring teacher provocations, showing up early for class, asking for extra assignments and by making "Ah, Hah !" comments when a teacher's explanation was well-understood. Secondly, Graubard *et al.*, 1971 modified the teacher's tolerance of noise, not by producing quiet children but by having a special education supervisor praise teachers for tolerance of noise and for freedom of self-expression allowed in the class. Thus, the behavior modifiers involved in classroom intervention seem to have brought about a host of important changes of both a traditional and novel nature with both normal and "deviant" children.

STRAW-MAN MODEL CHILD

Winett and Winkler incorrectly build a straw man in that they imply from the definitions of disruptive and appropriate behavior in the studies they reviewed that the model child as seen by the teacher and the behavior modifier is one who "stays glued to his seat and desk all day, continually looks at his teacher or his text-workbook, does not talk to or in fact look at other children, does not talk unless asked by the teacher, hopefully does not laugh or sing and assuredly passes silently in the halls." This author could not find any instance in the articles reviewed by Winett

and Winkler where the children behaved this way, or more importantly, where the teacher or behavior modifier desired such behavior in the extremes noted. In most, if not all, instances the desire has been to reduce disruptive behavior not to a zero level but in a manner that might make academic progress more likely. In a number of studies, the aim of the teacher and researcher was not to ascertain whether Winett and Winkler's "model" child could be developed but to ascertain whether the disruptive behavior of *certain* children could be changed; for many of these children it was felt that their disruptiveness impeded their academic performance and/or the progress of other members of the class (Barrish, Saunders, and Wolf, 1969; Broden, Bruce, Mitchell, Carter, and Hall, 1970; Lovitt and Curtiss, 1969; Madsen, Becker, and Thomas, 1968; O'Leary, Becker, Evans, and Saudargas, 1969; Surratt, Ulrich, and Hawkins, 1969; Ward and Baker, 1968). Furthermore, although Winett and Winkler refer to their review as a review of research in "normal" classes, the classes involved in this research they reviewed contained children with special problems, and as such were not representative of the average class. When dealing with average classes or classes with few or no problem children, the types of behavior being changed would probably be very different (*e.g.*, increasing questions asked, increasing the quality of questions asked, increasing the effective use of independent work). Thus, if a behavior modifier sought to change the complexion of a normal class, he would not address himself to changing disruptive behaviors, because by definition, disruptive behavior would not exist or would exist at extremely low rates. In sum, their reference to "normal" classes is misleading.

INFORMAL CLASSROOMS FOR ALL?

Winett and Winkler failed to question whether the informal classroom is the best kind of class for the unmotivated, educationally disadvantaged, hyperactive, withdrawn, or otherwise problem child often dealt with in behavior

modification studies. Psychologists and educators from very diverse backgrounds have advocated rather structured environments for children with special problems, and it is questionable whether, given the freedom described by Silberman, these children would make academic progress as rapidly as they would in more structured programs. In fact, there already is evidence with young children who are educationally disadvantaged, that structured educational environments are most favorable for academic progress (Spicker, 1971).²

VALUES OF BEING ABLE TO ATTEND

Although Winett was recently involved in a normal classroom study where the target behavior was attending (Winett, Richards, Krasner, and Krasner, 1971), Winett and Winkler never openly admit the possibility that some of the skills acquired in the traditional classroom, such as attending and sitting still for a specified period of time (upon request of a teacher in subject matter of the teacher choice), may have later functional value for a child. This author feels that such skills will be useful not only for undergraduate and professional students but also for the person who never attends college. First of all, some skills are probably most efficiently taught in a lecture class where being able to sit and attend are helpful, particularly where there is a large student body and where introductory material is being presented. There are probably many courses one has as a college or professional student that are not very palatable, yet which students clearly choose to take because mastery of the material is seen as useful *e.g.*, learning anatomy, physics, certain types of corporate law. Similarly, there are jobs involving typing, key

punching, and accounting that require one to sit and attend for lengthy periods. It is doubtful that such attending skills would be acquired in an open classroom if a child is always allowed to work on material of his own choice and for the amount of time he wishes.

IMPORTANCE OF PAST TARGET BEHAVIORS

Although Winett and Winkler say that the nature of the target behaviors being changed has been of little importance to behavior modifiers, in fact, only 10 years ago, many people would have relished the notion that classroom behaviors could have been changed in a fashion that behavior modifiers have clearly demonstrated. A perusal of the literature indicates that many of the behaviors that have been successfully changed through behavior modification procedures are of critical concern to teachers. For example, Woody (1969) found that when classroom teachers referred children to special classes, the children had the following most frequent characteristics: poor social relations, poor reading skills, poor concentration, and "hyperactivity". The fact that getting out of one's seat, short attention span, and frequent talking (hyperactivity) concern teachers is no excuse *per se* for modifying those behaviors, but as mentioned previously, in many of the projects reviewed by Winett and Winkler, such behavior impeded the academic progress of that child or of the class. In fact, in a study by the author (O'Leary and Becker, 1967), the teacher was going to quit her job if a means could not be found of reducing classroom disruption. While it is probably useful for behavior modifiers to place greater concentration on modifying academic behavior than on modifying "disruptive" classroom behaviors, it seems unjustified to argue that the kinds of behavior being changed by behavior modifiers in classroom settings were only secondary or minor considerations. It should also be emphasized that behavior modification procedures have probably been one of the most important developments in

²It must be admitted that a type of structure is very much in existence in the "free" school (Silberman, p. 238), but in the informal classroom, in contrast to a traditional classroom, a child is almost completely free to avoid work that is even mildly distasteful to him.

psychology that provided teachers with results that have practical import.

Actually, it will always be true that in certain studies the kinds of behavior or levels of behavior being changed will be of secondary consideration, and the demonstration of a principle will be of primary concern. For example, although Winett and Winkler note that in the Thomas, Becker, and Armstrong (1968) study almost no aggression was observed, one would certainly not have expected such; according to the teacher, the class was "a good class, with an above-average distribution of ability and no 'bad' kids." The study was an extension of earlier work with problem children and, in fact, the intent was to produce and remove problem behavior by varying teacher behavior systematically. That is, their aim was to demonstrate that behavioral principles that held promise with problem children also were operative with normal, well-behaved children.

While we should always question whose interests are best served by the changes we execute whether in a classroom, a ward, or a correctional institution, many of the behaviors being changed thus far have been of considerable importance to both the individual and the person in charge of or responsible for that individual (*e.g.*, changes in reading, achievement scores, work skills and, yea, even the ability to sit and attend). Whether alternative means of producing changes in such behaviors are as efficient as some of the behavior modification procedures remains to be demonstrated.

POSSIBLE INTEGRATION OF APPROACHES

Winett and Winkler make an excellent point in calling for extensive community dialogues concerning those behaviors and values we wish to develop in our children. They argue in a well-balanced manner that research is needed and warranted on the long-term effects of informal schooling. Furthermore, as mentioned elsewhere (O'Leary, *unpublished*), . . . "many of the princi-

ples of reinforcement are not at all incompatible with many of the procedural aspects of an informal school system. In fact, a wedding of reinforcement principles and some aspects of the informal school system such as working at one's own rate and frequently working on subject matter of one's choice do much to dispel the association of behavioral principles with an autocratically run school." Finally, while one may disagree with some of the points made by Silberman and amplified by Winett and Winkler with particular relevance to current behavior modification, their general message should be taken very seriously, *viz.*, if the behavior modifier is to have maximal impact in institutional settings such as schools and hospitals, he must seriously question whether the behavior he is being asked to help change should really be changed. As earlier argued by this author (O'Leary and O'Leary, 1972): "The classrooms and the goals of education in the year 2000 may be very unlike the classrooms and goals of 1970, but the *principles* of behavior modification . . . [already known] will still apply to changing children's behavior. The behavior modification approach provides a set of rather well-defined procedures to change behavior, but the procedures do not spell out the goals or the behaviors which *ought* to be taught or changed. Whether the goals of education in the year 2000 involve a structured class or an unstructured class, a class which emphasizes affective or cognitive development, it is the authors' opinion that the types of principles and procedures described [by behavior modifiers] will be helpful in reaching whatever goals our educational systems choose."

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CURRENT BEHAVIOR MODIFICATION IN THE CLASSROOM: JABA REVIEWERS' COMMENTS

COMMENTS BY REVIEWER A

Winett and Winkler clearly and correctly make the point that much behavior modification research in education has been addressed to behaviors that are not of crucial concern to some educators and laymen. O'Leary correctly notes that this point has been previously made, and that Winett and Winkler speak to a biased sample of research. If my recollection of the JABA manuscripts that I have reviewed during the past year is correct, I believe the Winett and Winkler sample will be even less representative of behavior modification research by the time these manuscripts could be published.

Both manuscripts have gross shortcomings in what I think is perhaps the most important non-review question considered by the authors. Winett and Winkler argue that using certain behavior modification techniques (or perhaps any technique) to produce "docile" behaviors is somehow detrimental to school children. O'Leary rebuts that these "docile" behaviors (at least at the terminal rates produced) are beneficial to students (or in some cases necessary to keep teachers from quitting their jobs). In fact, the utilities of various docile behaviors should

be an empirical question. I would be happy to see either position tentatively stated as part of a Discussion section of an experimental paper that demonstrated a functional relationship between "docile" behaviors and say the number of reinforcers accruing to a child or perhaps the number of "happy" behaviors (perhaps smiles) children emit. The question, then, is perhaps empirically approachable. Exactly what both manuscripts do is state opinions. To me, the *Journal of Applied Behavior Analysis* represents a short tradition of trying to replace opinion by fact or at least requiring that opinion be supported by some amount of fact. The publication of these manuscripts, then, discards that tradition to an extent that is incompatible with general behavioral philosophy.

Not publishing such pure opinion in *any* journal, is most consistent with *my* values. However, I know that this is a head-in-the-sand position. Opinions and counter-opinions will be stated and they will perhaps have some influence on research and education practice. There are probably many professional reinforcers for such writings. Therefore, the rejecting of such manuscripts would probably only turn the authors of the manuscripts to other journals.