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ABSTRACT

In summarizing the results of naturalistic observations of children, it is often useful to have a reading of the child's overall deviance and the responses of social agents to these deviant behaviors. Traditionally, investigators have categorized a series of child behaviors as deviant based solely on their own assumptions with no empirical basis for classification. The present study was directed toward the deviation and comparison of two methods which could provide a more empirical classification base. In method 1, 66 parents of young children who had been recruited for observational research were given a questionnaire which required them to characterize the observed child behaviors as deviant or nondeviant. In method 2, behaviors were classified on the basis of the proportion of aversive and positive consequences which they actually received during the observation period. Those behaviors which received less positive and more negative consequences were presumed to be viewed as more undesirable or deviant. Comparisons of the two methods revealed a significant degree of agreement between questionnaire and observational derived classification. (Author)

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A COMPARISON OF TWO APPROACHES TO BEHAVIOR CLASSIFICATION

by

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Abstract

In summarizing the results of naturalistic observations of children, it is often useful to have a reading of the child's overall deviance and the responses of social agents to these deviant behaviors. Traditionally, investigators have categorized a series of child behaviors as deviant based solely on their own assumptions with no empirical basis for classification. The present study was directed toward the deviation and comparison of two methods which could provide a more empirical classification base. In method 1, 66 parents of young children who had been recruited for observational research were given a questionnaire which required them to characterize the observed child behaviors as deviant or nondeviant. In method 2, behaviors were classified on the basis of the proportion of aversive and positive consequences which they actually received during the observation period. Those behaviors which received less positive and more negative consequences were presumed to be viewed as more undesirable or deviant. Comparisons of the two methods revealed a significant degree of agreement between questionnaire and observational derived classification.

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Any behavioral study of deviancy in children must begin with a decision as to what child behaviors are in fact deviant, abnormal, or undesirable. This classic philosophical problem has long been a difficult stumbling block for the study of behavior pathology in any group. An empirical basis for the identification and measurement of unacceptable behavior is a needed tool for both clinical treatment programs and the study of social interaction patterns.

A behavioral study of child deviancy must be based on the assessment of actual rates of observed behaviors which are deviant. Once this is done, it is then possible to examine correlational or functional relationships between the deviant behavior of the child and other variables, such as social class, ages of parents, contingency patterns of the social agents in the environment, etc. This approach has been used by several reserachers whose general approach was behavioral in nature (e.g., Raush, 1965; Warren & Mondy, 1968; Buehler, Patterson & Furness, 1966; Patterson, 1969). In every case, however, decisions as to what behaviors were to be classed as "deviant" or "nondeviant," "friendly" or "unfriendly," "appropriate" or "inappropriate" have been made on a strictly a priori basis by the investigators involved with no external or empirical basis to verify their judgment. While the face validity of the resulting classifications in these studies often seems persuasive, this hardly seems to be a completely satisfactory procedure for the development of a science of behavior.

Two independent strategies were devleoped to help provide a more empirical method of determining deviant behavior. Both strategies are based upon the assumption that the concept of deviancy is culturally determined; deviant behavior in one culture may be highly appropriate behavior in another. Therefore, one should look to the relevant social agents in an environment to determine the nature of deviance in that environment. One should look not only at what these social agents say about those behaviors they consider deviant, but also at what they do in response to the behaviors when they occur. The two approaches to classification derived and composed for th e present research are based on an examination of what relevant social agents say and do about the behavior categories of interest. This research was carried out on young children in the family setting, and it is to behavior coded in this setting to which the results should apply. The behavior code used in this research involved 35 discrete behavioral events which may apply to all social agents in the environment. The first approach to classify these behaviors on a deviant-nondeviant dimension involved asking parents to rate each behavior on a simple paper-and-pencil test. The second approach involved examining the consequence patterns associated with each behavior code. It was hypothesized that, in general, behaviors which were viewed as more deviant or undesirable would receive a larger proportion of consequences which could generally be considered aversive or intentionally punitive. Although there are some guidelines for which codes in this observation system would be considered aversive (i.e., Patterson & Cobb, 1972), much of the

classification of negative consequences had to be done on an a priori basis. The hypothesis of the present study was that the two methods of ranking behaviors from deviant to nondeviant would produce highly similar results. If this hypothesis were confirmed, a classification system for child behavior would be available with two independent sources of external and empirical verification.

Method

Thirty-three families were recrited through advertising which was designed to reach varied socio-economic population. Each family was paid $20.00 for their participation in the study. Both parents were in the home and the target child was between the ages of four and six years. No family member was currently under psychiatric treatment; the target children had no history of behavior or psychological problems.

Descriptive data was obtained on each family so that an overall description of the sample is possible. The median age of the parents was 31; the median Shipley-Hartford intelligence quotient score for all parents was 106; the Hollingshed index for measuring occupational level where 1 is the highest and 7 is the lowest resulted in a median of 2.9. The median income level for these families was in the $6,000-$9,000 range.

A modified form of Patterson, Ray, Shaw, and Cobb (1969) observation code was used to collect data in each family's home for 45 minutes on five consecutive evenings. The code focused on the target child and his

interactions with one or more of the family members. Thirty-five distinct behavioral categories were defined and recorded in sequential form.[1] A continuous behavioral account of all social interactions involving the target child were recorded as well as the absence of any interaction when that occurred.

The observations took place just before the dinner hour with all family members present. The family was limited to the use of two adjoining rooms; the television could not be on during the observation; incoming telephone calls were kept brief and no one other than family members could be present. The observers were not allowed to interact with the family during the observation.

Observations were conducted by a group of trained students who received academic credit for the activity. Observer training continued throughout the duration of the study. Observer reliability was checked for one 45-minute session on thirteen of the thirty-three families.

Observer agreement was measured initially by a highly stringent test which yields an overall percent agreement figure. An agreement occurred when both observers recorded the same behavior for the same agent in the same interaction block. The agreements were then divided by the number of agreements plus disagreements, yielding an average observer agreement figure of 65.29%.

While this figure may seem low by some standards, it is within the range of agreement figures for complex coding systems with stringent criterion. The percent agreement which could have been obtained by chance was less than 3%. As has been noted elsewhere, this global

index of agreement is of very limited utility, because it does not relate specifically to the dependent variable(s) under study here (see Johnson & Bolstad, 1972). For present purposes, it is of more interest to establish agreement on the overall observed rate of each behavior category and the overall agreement in observing the emission of negative consequences. The median correlation between two observers for each of the nineteen codes observed for five or more children was .88. We may use the Spearman-Brown formula to correct this correlation for attenuation and estimate it's value for five days (as opposed to one day) of observation.[2] The corrected agreement correlation equals .97. The proportion of "negative" responses observed has a corrected agreement correlation of .98.

The 35 behavior categories used in the study were characterized on an a priori basis as positive, negative, or neutral consequences. The 35 code categories are presented in Table 1 by consequence category.

Insert Table 1 About Here

Results

This research was concerned with the relationship between two different methods of establishing the relative unacceptability or deviancy of selected behaviors when emitted by young children. The two methods, a) parental rating of these child behaviors and b) the consequence patterns associated with the emission of these behaviors, gave two approaches that lend themselves easily to cross validation. Also, both of these methods provide measurable guidelines for categorizing child behaviors.

The behaviors involved were rank ordered by both methods and the results of these ranking procedures are presented in Table 2. The Spearman rank order correlation relating the two methods of ranking was relatively high (r = .73, p < .01). There were a few interesting discrepancies between the two methods which can easily be discovered by an examination of the data in Table 2. These discrepancies will be discussed in the following section.

Insert Table 2 About Here

The parent rating data gave the investigators an opportunity to examine for possible differences between mothers and fathers in rating behaviors. No differences were found. Neither fathers nor mothers were more prone to rate behaviors as more deviant. This finding was confirmed in the analysis of overall ratings as well as ratings on each behavior individually.

Discussion

The results confirmed the experimenter's expectations; a high level relationship was established between parents' ratings of the desirability of a child's behavior and the average family's responses to those behaviors. The convergence of the two procedures enhances the convergent validity of the deviant-nondeviant dimension and establishes a base for the classification of behaviors as deviant for children. The far-reaching implications include a measurable index for determining how deviant a child is in relation to his normal peers. This could then provide a valuable diagnostic tool, as well as a useful assessment device for treatment outcome research.

An examination of the data indicated that two behavior codes were rather dramatic exceptions to a more perfect agreement between the two methods. These codes (command positive and command negative) involve those instances when a child reasonably asks someone to do something or to stop doing something. Naturally, most parents felt that these innocuous responses were nondeviant. But, behaviorally, people don't always do what they are asked by a four- or five-year-old child, and since noncompliance was coded as a negative consequence, it seemed that this artifact of our characterization might have artificially lowered our construct validity coefficient. By eliminating these two command categories from the calculation, the correlation coefficient was raised to .81.

Another incongruent finding occurs with the behavior whine. Parents rated whine as being highly deviant and displeasing, if it were to occur for any length of time. However, in consequating the occurrence of whine, the responses were frequently neutral or negative (see Table 2). This may be due to the annoyance factor of whine. While the behavior is extremely annoying, it is not necessarily viewed by the parent with alarm. Perhaps parents habituate to the emission of the behavior and fail to be discriminating in their responses.

The ranking of the behaviors, as shown in Table 2, establishes the acceptability of each behavior as it is related to all of the other behaviors. The exact cut-off point used to determine exactly which behaviors are to be considered deviant is still largely an arbitrary decision based upon the focus of the experimenter's research. However,

irrespective of the cut-off point, those behaviors both below and above this point can be shown to have external evidence for their relative position along the deviant-nondeviant dimension.

Research coming out of the laboratory with which the authors are affiliated has used a "total deviant behavior score" as a central dependent variable. This score is made up of the total rate of the 15 behaviors rated by the parents as most deviant. These behaviors are given in Table 3. The mean ranking of all of these behaviors which

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Insert Table 3 About Here
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were ranked by the behavioral consequence method was 8.6, while the mean rank of all other behaviors was 22. This difference is, of course, significant ($p < .001$), and provides additional convergent validity evidence for this score. Further evidence has been provided in the study recently completed by Johnson and Lobitz (1972). In this study on fakability of behavioral data, parents were asked to do whatever they could to make their child look "bad" or "deviant" on three days of a six-day observation and to look "good" or "nondeviant" on the remaining days. The results showed that the total deviant behavior score was significantly higher on the "bad" days than on the "good" days ($p < .02$, two tailed). These results also speak to the fundamental issue which motivated this study: the establishment of a valid index of deviant behavior in children.

Data from other research on this sample also establishes the fact that this deviant behavior score has an observer agreement correlation of .94 and a split half reliability of .84.(Wahl, Johnson, Johansson,

& Martin, 1972). In sum, the results of this study and other related research indicate that the deviant behavior score as constituted here demonstrates high observer agreement, high reliability, and multiple evidence for convergent and construct validity.

References

Bolstad, O. D., & Johnson, S. M. Self-regulation in the modification of disruptive classroom behavior. Journal of Applied Behavior Analysis, 1972, in press.

Buehler, R., Patterson, G. R., & Furness, J. Reinforcement of behavior in institutional settings. Behavior, Research and Therapy, 1966, 4, 157-167.

Buss, A. H. Psychopathology. New York: John Wiley & Sons, Inc., 1966.

Johnson, S. M. & Lobitz, G. K. Demand characteristics in naturalistic observation. Unpublished manuscript, University of Oregon, 1972.

Johnson, S. M. & Bolstad, O. D. Methodological issues in naturalistic observation: Some problems and solutions for field research. Paper presented at the Fourth Banff International Conference on Behavior Modification, March 1972.

Patterson, G. R. & Cobb, J. A. A dyadic analysis of "agressive" behaviors. In J. P. Hill (Eds), Proceedings of the Fifth Annual Minnesota Symposia on Child Psychology, Vol. V. Minneapolis: University of Minnesota, 1971, in press.

Patterson, G. R., Ray, R., Shaw, D., & Cobb, J. Manual for coding interactions. Unpublished manuscript, Oregon Research Institute, Eugene, Oregon, 1969.

Patterson, G. R. & Reid, J. B. Reciprocity and coercion: Two facets of social systems. In C. Neuringer, & J. L. Michael (Eds.), Behavior modification in clinical psychology. New York: Appleton-Century-Crofts, 1970. Pp. 133-177.

Raush, H. O. Interaction sequences. Journal of Personality and Social Therapy, 1965, 2, 487-499.

Raush, H. L., Dittman, A. T., & Taylor, T. J. Person, setting, and change in social interaction. Human Relations, U. S. Department of Health, Education, and Welfare, 1959, 12.

Robins, L. N. Deviant children grown up. Baltimore, Md.: Williams and Wilkins Co., 1966.

Shaw, D. A. Family maintenance schedules for deviant behavior. Unpublished doctoral dissertation, University of Oregon, 1971.

Wahl, G., Johnson, S., Johansson, S. & Martin, S. An operant analysis of child-family interaction. In press, Behavior Therapy, 1972.

Warren, S. A. & Mondy, L. W. To what behavior do attending adults respond? Paper presented at the Midwestern Psychological Association Annual Meeting, Chicago, 1968.

Wiggens, J. S. Personality and prediction: Principles of personality assessment. Reading, Mass.: Addison Wesley, 1973, in press.

Footnotes

[1]Several behaviors which are used in the coding system are not included in the present analysis. The behaviors humiliate and dependency could not be included because they did not occur in the behavioral sample. Repeated noncompliance and temper tantrums were not used on the verbal report scale because they are subsumed in other categories (i.e., tantrums are defined as the simultaneous occurrence of three or more of the following behaviors: physical negative, destructiveness, crying, yelling, etc.). Nonresponding of the child was excluded post hoc because it was clear that parents were responding to this item as ignoring rather than mere nonresponse to ongoing activity (i.e., it was a poorly-written item).

[2]The reader is referred to Wiggens (1972) or Johnson and Bolstad (1972) for further justification on this statistical procedure for problems of this kind.

Table 1

Observation Code Items Listed by Consequence Categories

Consequence Category	
Negative	Neutral
Threatening Command	Command
Command Negative (Terminating)	Command Prime*
Cry	Demand Attention
Violation of Standing Command	Dependency
Disapprove	Independent Activity
Destructiveness	Leave
Humiliate	No Response
Ignore	Self-Stimulate
Noncompliance	High Rate
Negativism	
Physical Negative	
Smart Talk	
Tease	
Tantrum	
Whine	
Yell	

*A command for which compliance would be impossible to determine. Refers to commands for future action, or very general commands.

Table 2

Coded Behaviors as Ranked by Two Methods:

Parental Ratings and Negative Social Consequences*

Behavior Rank by Parental Rating		Behavior Rank by Proportion of Negative Consequences	Mean Parent Rating for Behavior	Proportion of Negative Consequences to Behavior
1	Whine	13	1.056	.125
2	Physical Negative	2	1.074	.527
4	Destructive	8	1.204	.352
4	Tease	5	1.204	.382
4	Smart Talk	4	1.204	.390
6	Aversive Command	3	1.208	.428
7	Noncompliance	12	1.278	.175
8	High Rate	16	1.307	.064
9	Ignore	11	1.370	.205
10	Yell	10	1.537	.215
11	Demand Attention	15	1.611	.083
12	Negativism	6	1.685	.375
13	Command Negative	1	1.833	.569
14	Disapproval	9	1.870	.235
15	Cry	14	1.962	.097
16	Indulgence	22	2.093	.027
17	Command Prime	27.5	2.132	.000
18	Receive	18	2.222	.052
19	Talk	23	2.278	.020
20	Command	7	2.296	.355
21	Attention	25	2.556	.013
22	Touch	20	2.648	.043
23	Independent Activity	26	2.704	.005
24	Physical Positive	21	2.741	.034
25	Comply	17	2.759	.053
26	Laugh	19	2.778	.044
27	Nonverbal Interaction	24	2.833	.012
28	Approval	27.5	2.926	.000

*Spearman Rank-order correlation between columns 1 and 2 = .73 ($p < .01$).

Table 3

Deviant Behaviors as Rated by Parents

Whine	Noncompliance
Physical Negative	High Rate
Humiliate	Ignore
Destructiveness	Yell
Tease	Demand Attention
Smart Talk	Negativism
Threatening Command	Temper Tantrum

Deviant Behavior