*PARENTAL MANIPULATION OF CHILD BEHAVIOR
IN HOME OBSERVATIONS¹*

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The object of this study was to investigate the extent to which parents can manipulate their children's behavior in home observations. Twelve families with four- to six-year old children were recruited for the research. The parents were instructed to make their child look "bad" or "deviant" on three days of a six-day observation and to look "good" or "nondeviant" on alternate days. Results indicated that, as predicted, the rate of child deviant behavior, parental negative responding, and parental commands were all significantly higher on bad than good days. Parental responses to questionnaires provided more detailed information on how parents felt that they influenced their children in the desired directions. These results were discussed in terms of their implications for child psychopathology and the methodology of data collection in the natural environment.

Systematic observation in naturalistic settings is enjoying a renaissance as an important assessment device in both the evaluation of behavioral treatment programs and basic social research (e.g., Johnson, Wahl, Martin, and Johansson, 1973; Lewinsohn and Shaffer, 1971; Patterson, Cobb, and Ray, 1973; Wahl, Johnson, Johansson, and Martin, *in press*; Walker, Mattson, and Buckley, 1971). This revival of naturalistic methods results partly from a disillusionment with more traditional measurement procedures, including paper and pencil tests and laboratory tasks. Such indirect assessment measures have been shown not only to yield unrepresentative data but also to be susceptible to many confounding influences, including response bias, fakability, and demand characteristics (e.g., Anthony, 1971; Bernstein, *in press*; Canter, 1963; Carp and Shavzin, 1950; Grayson and Olinger, 1957).

Clearly, naturalistic observation possesses greater face validity, and it is difficult to argue with Scott and Wertheimer's (1962) conclusion that: "When it comes to generalizing research findings to the normal, everyday behavior of the organism, naturalistic observation would appear to enjoy a clear lead over other methodologies . . ." (p. 95). Yet, to the extent that a subject is aware of being observed in his natural environment and conscious of the purpose of such observation, one must question the generalizability of naturalistic data and must investigate the operation of those confounding factors that have plagued other assessment procedures.

Perhaps because of the deceptive face validity of naturalistic methods, these issues have not often been investigated. A few studies have been done in which the knowledge of being observed was manipulated and behavioral differences were noted as a function of awareness (Bechtel, 1967; Roberts and Renzaglia, 1965). In other studies, subjects have been observed over a period of time and differences noted between behavior in earlier and later periods of the observation (Patterson and Harris, *unpublished*; Polansky, Freeman, Horowitz, Irwin,

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Papanis, Rappaport, and Whaley, 1949). These differences were *assumed* to reflect initial reactivity and later adaptation to being observed. Although the results of many of these studies may be questioned on methodological and logical grounds (see Johnson and Bolstad, 1973), they support the simple notion that being observed *can* affect one's behavior.

The potential confounding factors in naturalistic observation may have received relatively little attention because most studies employing these methods have been restricted to children. Investigators may have assumed that problems of reactivity to observation are less salient with children than adults. To support this hypothesis, Barker and Wright (1955) observed that younger children in their sample were less reactive to observation than were older children. Their conclusion *seems* reasonable and is probably widely held.

Yet, most observations of children in natural settings are made in the presence of vitally concerned adults under circumstances where certain response sets and demand characteristics are likely to be operating. For example, when observation procedures are used to assess treatment effects, the appropriate response for parents or teachers during baseline is to make the child appear deviant in order to justify treatment. Conversely, the appropriate response at the end of treatment is to make the child appear improved to justify termination and to please the therapist. Similarly, when parents and teachers volunteer their wards for research on "normal" children, both demand characteristics and social desirability response sets could affect how they present the child during the observation. These arguments assume, of course, that the involved adults are able to influence children to appear as either normal or deviant if they wish to do so. Believing that most adults are capable of manipulating children in this manner, the investigators tested this hypothesis with parents in the context of naturalistic home observation. Parents were instructed to manipulate the behavior of their own child so that he

would look bad or deviant during half of the observation periods and look good or normal during the remaining periods.

Four predictions were made regarding the behavior of children and parents in these periods. During the "look-bad" periods, it was anticipated that relative to the "look-good" periods there would be (a) more deviant child behaviors, (b) a lower ratio of compliance to parental commands, (c) more negativity on the part of parents, and (d) more parental commands. The first two predictions are simply a restatement of the proposition that parents can manipulate their children to appear more or less deviant. The child's deviant behavior score and compliance ratio are both measures of such deviancy. Predictions c and d involve parental behaviors that appear related to the emission of deviant child behaviors. Johnson *et al.* (1973) found a rather high correlation deviance ($r = 0.78$, $p < 0.01$). It was believed that parents would behave similarly in the present study. It was also predicted that parents would give more commands to their children when they were trying to make them look "bad", because the chronically disobedient child is generally viewed as "bad" by parents (Adkins and Johnson, *unpublished*), and because commands are required for disobedience.

METHOD

Subjects

Twelve families were recruited from the community of Eugene, Oregon through newspaper advertising. The criteria for accepting interested families into the subject pool were as follows: (a) a child between 4 and 6 yr of age with no history of treatment for behavior problems, (b) both parents living in the home, and (c) no more than four children in the home. Each family was paid \$20.00 for its participation. Of the 19 families that responded to the ad, 12 agreed to participate, six were interested but could not work the home observations into

their schedules, and one family, after hearing the instructions, decided they were not interested. The resulting sample contained five families with girls as the target child and seven families with boys.

Demographic data were obtained for the 12 families who participated. The median income level was between \$6000 and \$9000. The median age of the parents was 27 yr (range 21 to 41), and the median number of children per family was two (range 1 to 4).

Procedure

Parents were visited in the home and given the experimental instructions when the children were not present. The instructions that parents received were quite detailed, but the essential points were as follows:

One assessment procedure which we use often in research with children is the direct observation of child behavior in the home. Throughout our many observations of children and their families, we have wondered to what extent parents would be able to present their children as either good or bad in the home observation. Instead of asking you to give us a representative picture of you and your child, we would like you to try to give us two unrepresentative pictures. Half the time we would like you to do whatever you can do to present the best possible picture of your child. The other half of the time, we would like you to do whatever you can do to present a bad picture of your child to the observer. The observer will not be convinced by anything you say to your child or anything you say about him. She will rate only his behavior, and your job will be to make your child behave well or behave badly. We are not sure to what degree parents are able to do this or even if they can do it at all, but we want you to try if you are willing. Finally, when you are trying to influence your child to look bad, we don't want you to do any-

thing which you would consider harmful to your child. In general, we don't want you to do anything which would be grossly beyond the limits of your normal behavior.

It is particularly important that you do not talk to the observer. She will want to be as inconspicuous and uninvolved as possible. In addition, the observer will not know the purpose of these observations. And she will certainly not know that you have been instructed to present a false picture of your child to her.

Six families were randomly assigned to present a "good" picture of their child on the first, third, and fifth nights; the other six families were told to present the "good" picture on the second, fourth, and sixth nights. Alternate nights were assigned as "bad". Parents were given a written copy of the instructions and their manipulation schedule and instructed to read these daily before the observer came to the home.

Each family was observed in their home for the 45 min before dinner for six evenings. During the observations, the family was required to comply with the following rules: (a) all family members present, (b) no one except family members present, (c) all family members restricted to a specified two-room area, (d) no television, (e) no interactions with the observer. Although these restrictions are somewhat severe, they are typical of those employed in several recent studies involving home observation (Eyberg and Johnson, *in press*; Patterson, 1973; Patterson, Cobb, and Ray, 1973; Wahl *et al.*, *in press*).

After completing the six days of home observations, each parent was mailed two questionnaires, *identical in format*, but one investigated the parents' behaviors on "good" days and the other on "bad" days. The questionnaire consisted of a series of 14 behavioral statements paralleling the observational codes. For example, parents were instructed to rate separately for "good" days and "bad" days the

extent to which they "gave commands and requests to their child". Parents were asked to respond to each statement on a scale from 1, labelled "much less than usual", to 7, labelled "much more than usual". When they had mailed back the questionnaires, they received their remuneration.

Observation System

Observers used a modified version of a coding system developed by Patterson, Ray, Shaw, and Cobb (*unpublished*) that utilized 35 distinct behavior categories. It is designed to focus on the target child and his interactions with one or more family members. Interactions were coded continuously in pairs of behaviors consisting of the child's behaviors and the responses of those with whom he was interacting. To facilitate observer agreement checks, these interactions were coded in 30-sec time blocks, and observers were equipped with a 30-sec stopwatch and signalling apparatus. Behaviors within these blocks were coded as they occurred. However, when child behaviors and others' responses continued without change, these interactions were recorded only every 10 sec.

All behavioral codes were divided into deviant or nondeviant child behavior on the basis of questionnaire data collected from parents of children of the same age (Adkins and Johnson, *unpublished*). Mean parental ratings designated 15 of the 35 behaviors as "deviant" for young children. The sum of these behaviors comprised the child's deviant behavior score for this study. Deviant behavior codes included: demand attention, violation of standing command, destructiveness, high rate, humiliate, noncompliance, physical negative, smart talk, tease, tantrum, whine, yell, threatening command, ignore, and negativism. The 35 behavioral codes were also divided *a priori* into three categories of parental consequences: positive, negative, and neutral. The investigators based these categories on assumptions about the parent's intended communication to the child. For example, if a parental consequence was

coded as *disapprove*, it was assumed to convey a negative communication to the child. The face validity of categorization is enhanced by evidence that behaviors that are deviant and/or negative produce a relatively high proportion of negative consequences (Adkins and Johnson, *unpublished*; Johnson *et al.*, 1973). Negative consequence codes included: threatening command, command negative (terminating), cry, violation of standing command, disapprove, destructiveness, humiliate, ignore, noncompliance, negativism, physical negative, smart talk, tease, tantrum, whine, yell, and demand attention. The sum of these is referred to as parental negative responses.

Observers

Observers were young women paid as research assistants. They had been trained extensively in the use of the code before being employed for this study, and they continued to train throughout the study. The observations for this study were done in the context of a larger research project in which many children and families were being observed for several concurrent investigations. In all of this research, observers were kept uninformed regarding the specific purpose of any given observation. The standard procedure after each observation was to require the written reporting of any biasing information. There was never any evidence that the observers discovered that these parents had been given the special instructions to make their child look "good" and "bad".

RESULTS

Observer Agreement

A calibrating observer accompanied the regular observer to gather agreement data. Observer agreement was checked on nine occasions in a separate home for each occasion. Correlations between the total scores obtained per session by each observer on each of the variables employed in this study were computed in line with the recommendations by Hart-

mann (*in press*) and Johnson and Bolstad (1973). Since the correlations were based on only one day of observation and the estimates used in this study were based on three days, the Spearman-Brown correction for a test period three times as long was applied (see Johnson and Bolstad, 1973). The resulting correlations with uncorrected values in parentheses were: compliance ratio = 0.91 (0.78); child deviant behavior = 0.82 (0.61); child deviant behavior minus noncompliance = 0.94 (0.85); parental negative response = 0.95 (0.87); parental commands = 0.99 (0.96).

Behavioral Results

The findings for the four behavioral variables of primary interest are summarized in Figure 1. These data were analyzed by separate 2×2 analyses of variance with repeated measures on one factor to test for the effects of instructions (repeated factor) and the sex of the child. All proportion scores were first subjected to arc-sin transformations. As predicted, the child's deviant behavior score was higher on bad days than on good days ($F = 11.48$, $df = 1, 10$, $p < 0.01$). Since previous experience has indicated that the code noncompliance usually accounts for approximately one-third of the deviant behaviors emitted by children (Johnson *et al.*, 1973), a separate analysis was performed on the number of deviant behaviors minus noncompliance. This score was also significantly higher on the bad days ($t = 2.61$, $df = 11$, $p < 0.025$). In addition, the number of parental commands was significantly higher on bad days ($F = 19.26$, $df = 1, 10$, $p < 0.005$), as was the proportion of negative responses from parents ($F = 11.48$, $df = 1, 10$, $p < 0.01$). The difference in the compliance ratio was non-significant ($F = 1.69$, $df = 1, 10$).

In keeping with expectations, there were no significant effects associated with the child's sex, and supplementary analyses revealed no significant effects associated with whether the family began by attempting to make their child look good or bad. Furthermore, the total num-

ber of behaviors emitted by children on good and bad days did not differ significantly.

Examination of the individual subject data indicated that these significant group effects were present in almost all cases. The rate of deviant behavior was higher on bad days for 11 of the 12 children; the proportion of negative parental consequences was higher on bad days for 10 of 12 families; and the number of parental commands was higher on bad days for all families.

Questionnaire Results

The results for the two 14-item questionnaires given to parents after the experiment are presented in Table 1. Each item was analyzed separately by a t -test for paired observations. All differences were significant at the 0.01 level or beyond in the direction that might be expected. That is, parents indicated that they were generally more negative, restrictive, disapproving, noncompliant, and ignoring on bad days and generally more positive, attentive, talkative, and approving on good days.

DISCUSSION

The results clearly indicate that parents can manipulate the deviancy level in their children in response to instructions and that they do so in the ways anticipated, *i.e.*, by increasing their rate of negative responding and commands. It is apparent that much of this effect is due to an increase in parental commands, which is followed by an increase in the *absolute rate* of child noncompliance and, of course, compliance. However, it is also evident that this phenomenon does not account for all of the observed effects. When noncompliance was deleted from the deviant behavior score, more deviant child behaviors were still exhibited on bad than on good days.

Only one of the four hypotheses put forward in this study was not substantiated. There was no significant difference in the child's compliance ratio between good and bad days. The most

Figure 1

Parental Manipulation Results on Four Variables

Fig. 1. Compliance data in per cent of parental commands obeyed. Parental negativeness was analyzed according to the proportion of total parent behavior that was negative, but, for clarity, the data are presented in raw score form.

Table 1
Results of Parental Questionnaire

<i>Item</i>	<i>Greater on</i>	<i>p <</i>
1. Gave commands or requests to my child	Bad days	0.001
2. Restricted my child's activities	Bad days	0.001
3. Tried to express disapproval of my child's activities	Bad days	0.001
4. Raised my voice (yelled) at child	Bad days	0.001
5. Paid attention to my child	Good days	0.001
6. Ignored my child	Bad days	0.001
7. Was negative to my child physically (e.g., slapping, spanking)	Bad days	0.010
8. Was positive to my child physically	Good days	0.001
9. Expressed verbal approval of my child's activity (e.g., "Thank you", "That's good")	Good days	0.001
10. Did what my child asked me to do	Good days	0.001
11. Teased, shamed, or embarrassed my child	Bad days	0.010
12. Talked to my child	Good days	0.001
13. Was generally more positive to my child	Good days	0.001
14. Was generally more negative to my child	Bad days	0.001

obvious description of this result is that while parents increased their rate of commands on bad days, their children complied proportionately. That is, since the number of commands was greater on bad days and the compliance ratio was essentially the same, the absolute number of noncompliances was greater on bad days, as was the absolute number of compliances.

Some interesting parallels exist between the results of this study and analysis of the differences between child and family behaviors in homes with "normal" children and homes with children referred for psychological treatment. In a study by Lobitz and Johnson (*unpublished*), the best behavioral discriminator between normal and referred children was the parental negativity score. Parental negativity was considerably higher in the homes of referred children. There was also a clear trend for parents of referred children to give more commands. Although the rate of deviant behavior of the referred children was significantly higher than that of the nonreferred, there was a great deal of overlap in the two distributions. Thus, it appeared that parental behaviors were better discriminators of the two samples than was the rate of the child's deviant behavior. In general, then, parents of referred children exhibited behavior patterns similar to those of

parents in the present sample when these "normal" volunteers were instructed to make their children appear bad.

The question of the generalizability of the present findings to families with deviant or referred children arises. That is, would families with deviant children be able to manipulate their children to the same degree evidenced here? Based on the great similarity found between the deviancy levels observed in referred and normal homes (Lobitz and Johnson, *unpublished*), the present authors would predict similar results. It is possible that children viewed as abnormal would prove to be slightly less manipulable than the subjects in this study, but the direction of the effects would probably be maintained. This hypothesis is currently being tested in a modified replication of the present study.

The methodological implications of the results of this study are clear. It is naive to assume that the same threats to external validity are not present with naturalistic methods simply because the research setting is less obviously artificial than is the case with traditional assessment procedures. To the extent that people are aware of the presence and purpose of observation, the generalizability of the resulting "naturalistic" data must remain open to question.

Two basic solutions to this problem have been discussed at some length elsewhere (Johnson and Bolstad, 1973). The first approach involves procedures that make the observation less apparent or obtrusive. Although there are limits to this course set by the desire to protect civil liberties, certain procedures might reduce reactivity to observation without violating subject rights. Some evidence suggests that longer periods of adaptation decrease reactivity to observation (e.g., Purcell and Brady, 1965; Soskin and John, 1963). By using audio or video equipment, it is possible to arrange variable-interval observations so that the observed are unaware of the exact time that the observation takes place (as in Bernal, Gibson, William, and Pesses, 1971). For ethical reasons, it would usually be necessary to inform the observed of the potential for observation at any time and obtain formal consent. Other procedures for protecting the rights of the observed include providing subjects with the option of shutting off the observational device at any time and censoring any records before they are used by researchers. Observation across many stimulus settings should also have the effect of reducing reactivity. In general, any procedure that reduces the discriminability of observed *versus* non-observed periods, without violating the subjects' rights, would be preferable for obtaining valid behavioral data.

The second approach for attenuating the problems illustrated by this study is to broaden the range of measures used, *i.e.*, to combine naturalistic observation with other methods, such as paper and pencil tests, laboratory analogues, and the kinds of unobtrusive measures outlined by Webb, Campbell, Swartz, and Sechrest (1966). Of course, all measurement instruments have their problems, but the more different methods converge to yield the same outcome, the more confidence one can have in the validity of the results (Campbell and Fiske, 1959; Eyberg and Johnson, *in press*). In conclusion, any strategy that makes naturalistic observation less obtrusive and includes greater

reliance on multiple measurement procedures would seem to attenuate the kinds of problems illustrated here.

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