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..... MANUAL UPON STAFF CONTRACTING AND SOCIAL BEHAVIORS: AND RELATED EFFECTS

..... UPON YOUTHS' PROBLEM BEHAVIORS AND PREFERENCE FOR CONTRACTING

THESIS Ph.D., 1984

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Contingency Contracting with Delinquents: Effects of a Brief
Training Manual Upon Staff Contracting and Social Behaviors; and Related
Effects Upon Youths' Problem Behaviors and Preference for Contracting

by

Steven J. Welch

A thesis
presented to the University of Manitoba
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy
in
Department of Psychology

Winnipeg, Manitoba, 1984

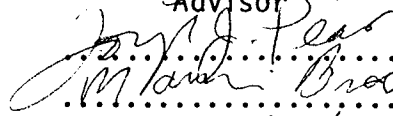
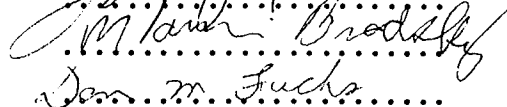
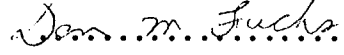
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Behaviors and Preference for Contracting
submitted by Steven J. Welch
in partial fulfilment of the requirements for the Ph.D. degree.

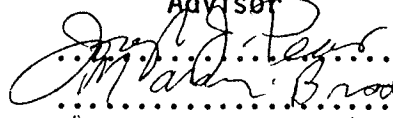
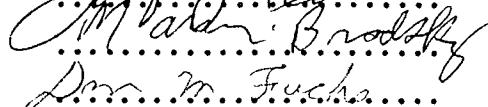


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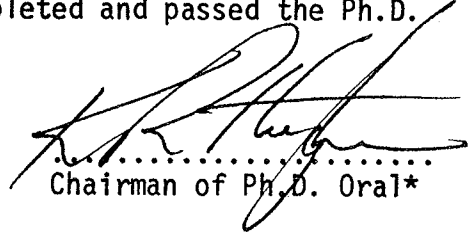

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CONTINGENCY CONTRACTING WITH DELINQUENTS: EFFECTS OF A BRIEF
TRAINING MANUAL UPON STAFF CONTRACTING AND SOCIAL BEHAVIORS:
AND RELATED EFFECTS UPON YOUTHS' PROBLEM BEHAVIORS AND
PREFERENCE FOR CONTRACTING

BY

STEVEN J. WELCH

A thesis submitted to the Faculty of Graduate Studies of
the University of Manitoba in partial fulfillment of the requirements
of the degree of

DOCTOR OF PHILOSOPHY

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ABSTRACT

A brief training manual was developed for the purpose of teaching child-care workers how to contingency contract with delinquent youths living in residential care facilities. The manual was designed to require minimal supplementary training by a professional. Study 1 employed a multiple baseline design, followed by a series of A-B replications, to assess the effect of the manual upon eight child-care workers' negotiation and contract writing behaviors. Behaviors were assessed within the context of both analogue training simulations and generalization tests with delinquent youths. Results from the analogue simulations indicated that the manual was successful in increasing both types of behaviors to a level of proficiency which equalled or surpassed that of behaviorally-trained graduate students, while results from the generalization tests indicated that the child-care workers were able to apply their newly acquired contracting skills when attempting to modify problem behaviors of youths. Procedural reliability was high. Study 2 assessed the behavioral effects of contracts negotiated with seven youths during the generalization tests of Study 1. The contracts were successful in all cases. Study 3 examined the collateral effects of training in contingency contracting skills upon 12 youth-preferred and 15 youth-disliked child-care worker social behaviors which were validated previously by Willner et al. (1977). Videotapes were made of the eight child-care workers who participated in Study 1 as they attempted to mod-

ify a youth's problem behavior before being taught how to contract, and then again while they used contingency contracting as an intervention technique. Six youth-preferred social behaviors increased when child-care workers used contracting, while five decreased and one remained unchanged. Only nine of the 15 youth-disliked behaviors were emitted by the child-care workers, and all nine decreased substantially when contracting was used. Study 4 assessed youth preference for contingency contracting as compared to a more traditional intervention strategy used by child-care workers. Nine teenage girls and eight teenage boys living in group homes rated videotapes of a child-care worker using either contracting or a traditional intervention. Girls unanimously preferred contracting while boys' preferences were more idiosyncratic.

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INTRODUCTION

A contingency contract is a written and signed agreement between two parties which specifies a behavioral requirement to be met and the consequences for the fulfillment of that requirement (DeRisi & Butz, 1975; Homme, Csanyi, Gonzales, & Rechs, 1969; Lundell, 1972). Contingency contracting, the term given to the process of negotiating and writing a contract, has been used as a treatment strategy in a variety of areas. For example, it has been used to: (a) help couples experiencing marital discord communicate more clearly and thereby increase reciprocal reinforcement (e.g., Stuart, 1969; 1980); (b) aid in the management of psychiatric patients (e.g., Bergman, 1975); (c) facilitate weight control (e.g., Mann, 1972); (d) decrease smoking (e.g., Winett, 1973); (e) reduce problem drinking (e.g., Gotestam & Bates, 1979); (f) control drug abuse (e.g., Boudin, 1972); and (g) manage school related-behavior problems (e.g., Homme, 1971).

In addition to these areas of application, contingency contracting has been used rather extensively in the treatment of adolescents deemed to be "delinquent" or "incorrigible." Numerous uncontrolled case studies exist which suggest that contingency contracting is an effective way of managing the various behavior problems typical of such youths (e.g., Blechman, Olson, Schornagle, & Turner, 1976; Tharp & Wetzel, 1969; Stuart, 1971). More importantly, a considerable amount of controlled research has been conducted which demonstrates the superior effective-

ness of contingency contracting in modifying the problem behaviors of adolescents, as compared to more traditional therapies, attention placebo controls, and no treatment controls (e.g., Alexander & Parsons, 1973, 1976; Fitzgerald, 1974; MacDonald, Gallimore, & MacDonald, 1970; Mills & Walter, 1979; Stuart, Jayaratne, & Tripodi, 1976; Stuart & Tripodi, 1973; Stuart, Tripodi, Jayaratne, & Camburn, 1976; Walter & Gilmore, 1973; Wiltz & Patterson, 1974). Two less supportive findings also exist. Jesness (1976) compared contingency contracting to transactional analysis and found that both treatments were about equally effective in promoting desired, and reducing undesired, behaviors with institutionalized, delinquent boys. Weathers and Liberman (1975a) employed contingency contracting with 28 male and female juvenile probationers and their families. Most of the families dropped out of treatment and only six actually negotiated a contract. With those youths who did negotiate a contract, minimal behavior change occurred.

Two questions arise from the research on contingency contracting with delinquent youths: (1) Why was contracting effective in promoting behavior change in most but not all of the studies? (2) How can contracting with delinquent youths be made even more successful?

A likely answer to the first question relates to unquantified variation in the contingency contracting procedure. In general, the research on contracting cannot be called technological in the sense that the term is used by Baer, Wolf, and Risley (1968). That is, investigators have not specified the exact nature of the contracting procedure which they employed in a manner so precise as to allow for a direct replication of the procedure by another researcher. Most investigators

simply indicated that their procedure was similar to that described in preceding research articles, such as those by Homme et al. (1969) and Stuart (1971). Yet none of the earlier studies are completely technological themselves, for although they provide guidelines as to what the contents of the contract should be, and stress that contracts should be negotiated, they provide no operationalized procedure for the negotiation process. Consequently, it is likely that the contracting procedures employed by the various investigators whose studies are reported in the literature differ from one another to an unknown degree. Although there is some evidence to suggest that contract content per se may not be highly related to outcome (Stuart & Lott, 1972), such is not the case with the negotiation aspect of contracting. An increasing number of practitioners are emphasizing the importance of negotiation to successful contracting outcome (e.g., Blechman, 1974; DeRisi & Butz, 1975; Frederiksen, Jenkins, & Carr, 1976; Gambrill, 1977; Homme et al., 1969; Jacobson, 1978a; Stuart, 1971; Stuart & Lott, 1972; Weathers & Liberman, 1975b, 1978; Welch, 1976). Thus, variability in the negotiation aspect of contracting may account for variability in outcome.

This problem is further complicated by the fact that individual therapists may have deviated from protocol to an unknown degree. In other words, the independent variable (contingency contracting) may not have been presented to the youths in the manner in which it was described (albeit nontechnologically) in the method section of the respective articles. Indeed, Stuart and Lott (1972) found that their therapists were somewhat idiosyncratic in the manner in which they employed contracting, and for this reason Stuart and his colleagues (Jayaratne,

Stuart, & Tripodi, 1974; Stuart, Tripodi, Jayaratne, & Camburn, 1976) recommended that investigators adopt standardized contracting procedures. However, even if standardized procedures were adopted, there would be no way of knowing the extent to which therapists conformed to these procedures unless procedural (i.e., independent variable) reliability checks were conducted in a manner analogous to the way in which dependent variable reliability checks are customarily made in behavioral research (e.g., Kazdin, 1980). Several articles have appeared in the literature recently which emphasize the necessity for procedural reliability checks in order to ensure the integrity of the independent variable in research (eg., Billingsley, White, & Munson, 1980; Peterson, Homer, & Wonderlich, 1982). Thus, it is apparent that the creation of a standardized contingency contracting procedure which could be subjected to reliability tests when applied, would facilitate the interpretation of future outcome research and also the training of behavior therapists.

The second question posed above was, "How can contracting with delinquent youths be made even more successful?" Willner, Braukmann, Kirigin, Fixsen, Phillips, and Wolf (1977) suggest that a training program for delinquent youths needs to be both effective with respect to teaching new behaviors, and preferred by the youths, if it is to be successful in the long term. According to Willner et al. (1977), the second criterion of success, youth preference, is important because if youths do not like a particular program, they may eventually withdraw from it (e.g., Weathers & Liberman, 1975a). Withdrawal may be informal, as in the case of running away from a residential care facility, or formal, as in exercising an ethical or legal right to decline treatment. As dis-

cussed earlier, there is considerable evidence that contingency contracting is reasonably effective in modifying problem behaviors with delinquent youths, but no study of youth preference with respect to contracting has been conducted to date. Such a study is needed since the long term success of contracting with delinquent youths is bound to be dependent, at least partially, upon the extent to which youths like the procedure. If youths dislike the procedure, it may be possible to isolate the relevant variables and rectify the situation.

Four studies are reported herein which relate to the two questions previously posed. The purpose of the first and primary study was to assess the effectiveness of a standardized procedure for training child-care personnel to use contingency contracting with youths living in residential care facilities. This study was necessary for several reasons. First, it will be impossible to interpret the variable results of outcome studies until researchers eliminate procedural variability as a possible source of outcome variability. The elimination of procedural variability will require (a) adoption of a standardized contracting procedure by all researchers and (b) measurement of procedural reliability in order to ensure that therapists and clients actually follow the standardized procedure. Second, adoption of a standardized procedure is essential to the development of an optimally effective contracting procedure because only then will it be possible for researchers to systematically manipulate individual aspects of the procedure which may be relevant to maximizing its effectiveness, and to report the effects of such manipulations to other investigators in a technological manner.

Reasonably technological descriptions of standardized procedures designed to train youths and their parents to negotiate and write contracts exist (Blechman, 1974; Kifer, Lewis, Green, & Phillips, 1974; Weathers & Liberman, 1975b), but no technological description of a standardized procedure for training child-care staff to use contingency contracting with youths living in residential care settings has been published to date. This is unfortunate since contingency contracting is well suited to, and often employed in, such settings (e.g., Allison, Kendall, & Sloane, 1979; Ferdun, Webb, Lockard, & Mahen, 1972; Jesness, 1975, 1976; Stahl, 1975; Thoresen, Thoresen, Klein, Wilbur, Becker-Haven, & Haven, 1979).

Moreover, there are reasons to believe that the procedures designed to train parents to contract with youths may not be appropriate for use by child-care staff. One reason relates to the amount of training time required. Kifer et al. (1974) report that each of their youth-parent pairs required 9-10 hours of training to master their rather sophisticated negotiation procedure. Weathers and Liberman (1975b) report that each of their youth-parent pairs required about 2 hours, in the presence of a therapist, to master their contracting procedure. Blechman (1974) reports that nondelinquent youths and their parents learned to negotiate a contract in as brief a time period as 15 minutes, but she also notes that more disturbed families may require a number of hours of supervised training. A case study by Blechman, Olson, Schornagel, Halsdorf, and Turner (1976) suggests that training child-care staff to use Belchman's (1974) procedure with disturbed youths may well take a number of hours. In a residential care setting where many staff would require training

and where each staff member may wish to contract with several youths, procedures which require such lengthy training periods would be difficult to implement for obvious practical reasons; staff would not have the time and many youths would not have the patience. Another reason which may render the procedures by Blechman (1974) and Weathers and Liberman (1975b) unsuitable for use with delinquent youths relates to the fact that they are both presented in a "game" format involving the use of "teams", "boards", and "cards" upon which problem behaviors and rewards are written. The game aspect of these procedures may appeal to younger children, but older adolescents, particularly "hard-core" delinquents, may view them as immature and annoying. Moreover, both procedures require that the youths be able to read game cards, a task which they may find embarrassing, since many delinquent youths have poorly developed reading skills.

For the reasons cited above, a procedure for training child-care staff to employ contracting with delinquent youths was developed and then assessed in order to demonstrate that the procedure actually acquired control over staff's contracting behaviors. The procedure has a number of desirable features. It is in a standardized format where specific behaviors which staff are required to emit during the negotiation aspect of contracting are written on a flowchart which staff keep with them and follow in a step-by-step manner, and where behaviors involved in contract writing are cued by written headings on a fill-in-the-blanks style standard contract form. Such standardization should facilitate making procedural reliability checks. It also means that staff do not have to memorize details of the procedure since the flowchart and blank

contract form provide all the discriminative stimuli necessary to acquire control over relevant staff behaviors. Lack of a tedious memorization requirement will probably make the procedure more acceptable to staff. After the contract has been negotiated and written, staff complete a behavioral checklist wherein they are asked if they completed each of the relevant behaviors involved in contract negotiation and writing. If a relevant behavior has been omitted, the staff member is asked to emit the behavior before ending the contracting session. Thus the procedure contains a self-monitoring and self-correction component.

The entire procedure is presented to staff within the context of a brief manual. This is a useful feature, since the manual was designed to be an independent training vehicle which can be read in a short period of time and which requires minimal supplementary input and time from a professional. Since staff keep the manual, they may refer to it at any time, and they may use examples provided in the manual as models for their own contracts. Moreover, a precedent for the use of a manual to teach contracting skills to paraprofessionals has been set (e.g., DeRisi & Butz, 1975; Lundell, 1972), although these manuals were not explicitly designed for child-care workers. Finally, the procedure was designed such that a child-care staff member learns to emit certain negotiation behaviors which serve to prompt the youth to emit negotiation behaviors in turn. Thus, the youth need not be subjected to a period of formal (and perhaps tedious) training prior to commencing an actual contracting session; he or she can contract with a staff member as soon as the staff member has read the manual.

The purpose of the second study was to demonstrate that child-care staff trained via the manual could in fact use their newly acquired contracting skills to modify some problem behaviors of youths living in residential care settings. Staff members studied the manual and negotiated a written contract with a youth under their care who had a particular problem behavior. In each case, a procedural reliability check was conducted in order to determine the extent to which each staff member followed the contracting procedure, and the youths' problem behaviors were monitored in order to assess the extent to which the contract was successful in modifying those behaviors. This is a step which has been largely neglected by the authors of other standardized procedures. Weathers and Liberman (1978) indicate that they have used their contracting procedure (Weathers & Liberman, 1975b) to produce behavior changes in delinquent youths, but the only published study which employed the procedure achieved little behavior change (Weathers & Liberman, 1975a). Moreover, no procedural reliability checks were made and so it is impossible to know if the contracting procedure employed was actually conducted in the manner in which it was described. Blechman and her colleagues (Blechman & Olson, 1976; Blechman, Olson, & Hellman, 1976) report that the contracting procedure designed by Blechman (1974) has produced behavior changes in families which they have seen, but only a single case study has been published to illustrate such behavior change (Blechman, Olson, Schornagel, Halsdorf, & Turner, 1976). These investigators present data which indicate that between 60% and 90% of the behaviors of the youth and his mother were "on-task" following training in contracting skills but no discrimination was made between

negotiation behaviors and contract writing behaviors. Similarly, only a single case study (Welch, 1976) has been published which suggests that the negotiation procedure which was developed by Kifer et al. (1974) can be employed by a parent and youth to generate a contingency contract. This investigator reported that the contracting procedure had a successful outcome, but no data were provided and no procedural reliability checks were reported.

The purpose of the third study was to determine if training in contingency contracting skills had collateral effects upon the social skills of child-care staff, and if so, whether positively or negatively. Videotapes of analogue simulations where child-care staff attempted to modify a youth's problem behavior pre and post training in contracting skills were analyzed for the presence or absence of previously validated "youth-preferred" and "youth-disliked" staff social interaction skills (Willner et al., 1977). The third study was conducted because the emission of these social behaviors by child-care staff will likely affect, to some degree, the extent to which youths like or dislike contingency contracting as a treatment procedure. This in turn will relate to the long term success of a contingency contracting program, as discussed previously.

The purpose of the fourth study was to directly assess whether youths preferred contingency contracting or a more traditional style of intervention. Youths were shown two videotapes of a staff member interacting with a youth with a behavior problem. One videotape showed the staff member's intervention style before he was taught to use contracting while the other videotape showed him using contingency contracting.

Youths rated the extent to which they liked each intervention. As with study three, study four was conducted because youth preference will undoubtedly relate to the long term success of a contracting program (Willner et al., 1977), and consequently an evaluation of preference was required in order to determine whether or not steps need to be taken to enhance youth preference for contingency contracting.

In summary, progress in the area of contingency contracting with delinquent youths living in residential care facilities probably has been impeded by the failure of researchers to employ a standardized procedure and by their failure to assess procedural reliability. These two factors may account for both the outcome variability which has been reported in the literature, and the relative dearth of process studies necessary to optimize contracting effectiveness. Studies 1 and 2 represent an attempt to rectify this situation by demonstrating that child-care workers can be taught to use a standardized contracting procedure such that their adherence to protocol is high and such that they can use the procedure to modify youths' problem behaviors. Moreover, since long term contracting effectiveness is thought to be partially dependent upon youths' preference for contracting, Studies 3 and 4 assess the impact of the standardized contracting procedure upon certain youth-preferred and youth-disliked staff social behaviors, and upon youths' ratings of preference for contracting. The development of a standardized procedure for contracting and for assessing procedural reliability is prerequisite to conducting process studies designed to optimize contracting effectiveness, as is the assessment of youth preference and variables which determine youth preference. Thus the four studies reported herein repre-

sent logical first steps in an effort to maximize the long term effectiveness of contingency contracting with delinquent youths. (A more detailed review of the literature related to contingency contracting with delinquent youths may be found in Appendix A).

STUDY 1: EFFECT OF TRAINING ON STAFF CONTRACTING BEHAVIORS

Phase 1: Manual Plus Minimal Feedback

Method

Subjects and Setting

The staff members who participated in this phase of the research worked in a residential treatment facility for emotionally and behaviorally disturbed youths which consisted of two locked 10 bed co-ed cottages and one unlocked 10 bed co-ed cottage. The residence served boys and girls 11 to 15 years of age who were placed in care by one of the Province of Manitoba's Children's Aid Societies or Community Services and Corrections Offices. Most of the youths were placed in this residence as a result of "status offenses" (e.g., truancy, running away from home, sexual misconduct, violation of alcoholic beverage control regulations, incorrigibility), although some also were charged with felonies. The Office of the Director of Child and Family Services of Manitoba classifies all residential care facilities according to a five level system. Level 1 residences are those which care for children who require placement due to neglect or abandonment rather than for significant emotional and behavioral problems while level 5 residences are those which care for children who have severe emotional and behavioral problems. The residence in question was classified as a level 4 to level 5 facility.

The four staff members involved will be referred to as Mr.A, Mr.B, Ms.C, and Mr.D respectively. All were employed as child-care workers (C.C.W.s). Their ages ranged from 26 to 35 years, their educational attainment ranged from grade 12 to university (bachelor degree), and their experience as C.C.W.s ranged from less than one year to nine years. All four C.C.W.s volunteered to participate in the research.

The four C.C.W.s negotiated contingency contracts with nine youths who lived in the residence. The youths will be referred to as Youth 1 to Youth 9 respectively. With the exception of Youths 2, 3, and 9, the youths were selected by the C.C.W.s on the basis of the staffs' interest in using contingency contracting as one component of a multicomponent intervention designed to reduce the number of times these youths ran away from the residence. A description of the behavior problems of Youths 2, 3 and 9 is deferred until Study 2. In general, the nine youths were representative of the kinds of youths who are placed in residential settings with a level 4 or level 5 classification.

Description of the Manual

A brief (i.e., nontechnological) description of the manual is presented here. Researchers interested in a more technological description should obtain a copy of the manual from the authors. (A copy of a revised version of the manual may be found in Appendix B).

The manual was written in such a way as to be directly relevant to child-care staff who work with delinquent youths living in residential care facilities. An early version of the manual was employed in this phase of the research. It was nine double spaced type written pages in

length, excluding figures and two sample contracts, and it was divided into three sections.

The first section of the manual consisted of a brief description of contingency contracting followed by the answers to a number of questions about contracting which C.C.W.s often ask, such as, "Isn't rewarding a youth for good behavior really bribery?" and "Doesn't contracting teach the youth to manipulate?" The answers provided were similar to those which may be found in most introductory textbooks on behavior modification (e.g., Kazdin, 1980; Martin & Pear, 1982).

The next three pages described how to negotiate with the youth the reward, the penalty, and to a lesser extent, the nature of the behavioral requirement. All relevant steps in the negotiation process were contained on a flowchart which the C.C.W. referred to during negotiation, while the text provided a rationale for the negotiation steps together with a small amount of supplementary information. For example, the text described how to make a contract "flexible" so that if a youth emitted a part of the behavioral requirement, he or she received a part of the reward, rather than nothing at all (see a description of flexible token economies by Phillips, Phillips, Fixsen, & Wolf, 1974).

The flowchart is shown in Figure 1. Step #1 prompts the C.C.W. to emit behaviors which are prerequisite to the negotiation session. The youth is asked to complete a reward survey schedule so that the C.C.W. can acquire some idea as to the sort of reward the youth is likely to ask for during the negotiation session. This is important because C.C.W.s in residential care facilities are usually not at liberty to promise certain rewards without first checking with their supervisor in

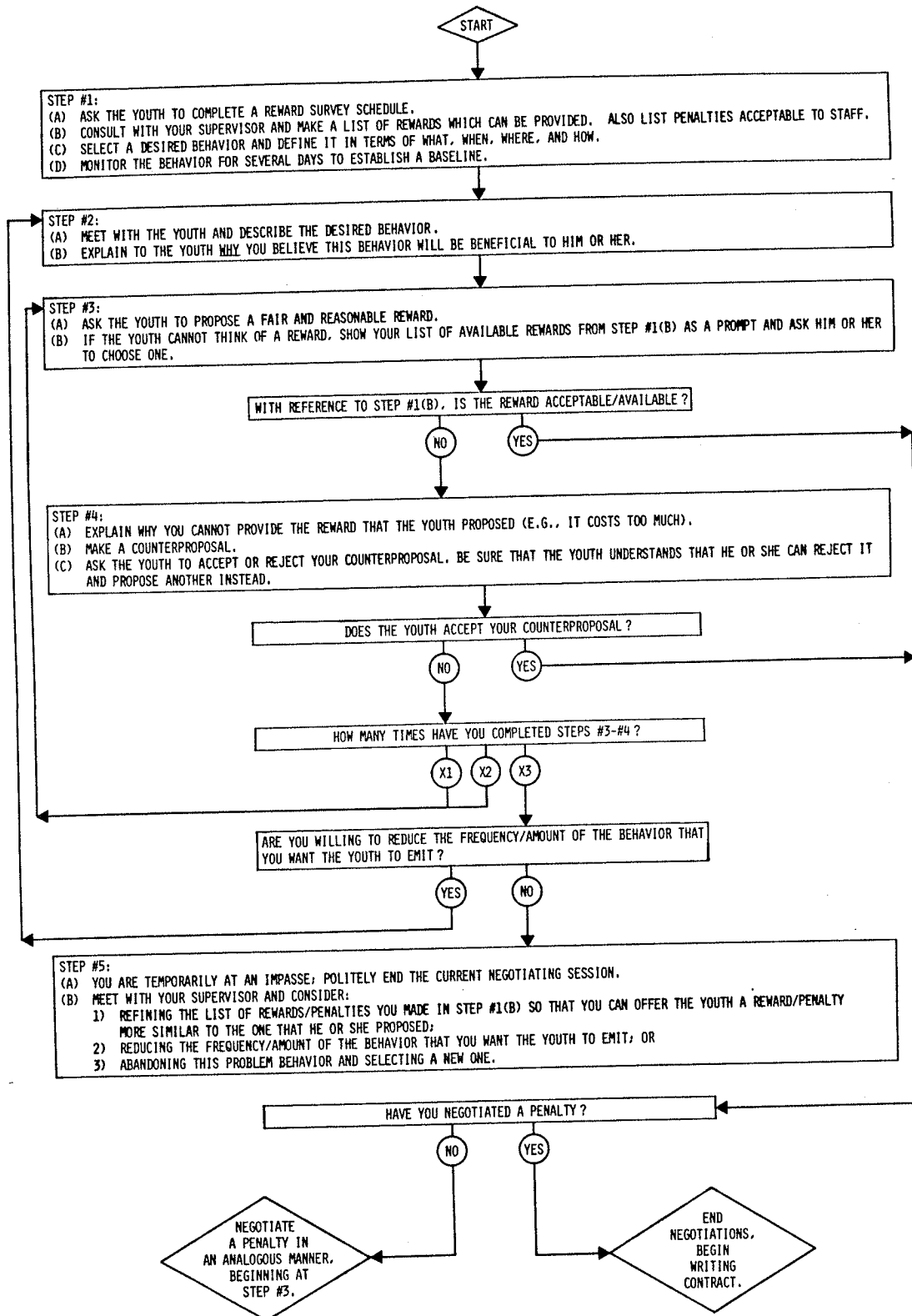


Figure 1: The flowchart of required negotiation behaviors.

order to ensure that the reward can be provided. Thus, this step minimizes the possibility of the C.C.W. either negotiating a reward which cannot be provided or disrupting the negotiation process in order to go and ask if a particular reward can be provided. Step #1 also prompts the C.C.W. to select a problem behavior, define it, and establish a baseline. Step #2 prompts the C.C.W. to describe the desired behavior to the youth and to explain to the youth why the behavior will be beneficial to him. Providing youths with a rationale for the behavior change which is being asked of them is a procedure recommended by Kirigin, Ayala, Braukmann, Brown, Minkin, Phillips, Fixsen, and Wolf (1975). Moreover, Willner et al. (1977) found that youths liked staff to emit this behavior during teaching interactions. Step #3 prompts the C.C.W. to ask the youth to propose a fair and reasonable reward and penalty. If the youth's proposed reward or penalty cannot be provided, Step #4 prompts the C.C.W. to make a counterproposal. A proposal-counterproposal format has been recommended by other researchers (e.g., Weathers & Liberman, 1975b). Initiating the negotiation session by asking the youth to propose his or her own reward is thought to stimulate the youth's interest, and it is also consistent with the literature which suggests that self-determined consequences may be more effective than consequences imposed by an external agent (see Humphrey, Karoly, & Kirschenbaum, 1978). The C.C.W.'s counterproposal, if required, is thought to serve as a model of fair and reasonable rewards and penalties. If a compromise is not achieved after a maximum of three repetitions of Steps #3 and #4, then the C.C.W. is prompted to reduce the behavioral requirement and to return to Step #2. If no compromise is achieved and the

C.C.W. is not willing to further reduce the behavioral requirement, then Step #5 prompts the C.C.W. to politely end the negotiation session and to consider a series of alternative plans prior to beginning a second negotiation session.

The remaining pages described how to produce a written contract by filling in the blanks of a standard contract provided in the manual. Headings on the standard contract prompt the C.C.W. to fill in: (a) the names of the youth and C.C.W.; (b) the desired behavior; (c) the reward; (d) a bonus for performance beyond that required to earn the reward; (e) the penalty; (f) special conditions which would necessitate a postponement of the presentation of the reward, such as being confined to the cottage for some independent misbehavior; (g) the monitoring system to be used; (h) when the contract begins and when it is to be renegotiated; and (i) the signatures of the youth and C.C.W. These headings were derived from recommendations made by other investigators (e.g., DeRisi & Butz, 1975; Stuart, 1971), with the exception of the "special conditions" heading which was suggested by the C.C.W.s. Additionally, the words "if" and "then" appear on the contract and thereby make apparent the contingency which exists between the desired behavior and the consequences.

The manual also had an appendix containing two sample contracts. Each sample consisted of a brief description of a fictitious youth with a behavior problem, a brief description of appropriate C.C.W. behaviors, and a completed contract form.

Procedures for the Assessment of Contracting Skills

Assessments of each C.C.W.'s contracting skills were conducted in a seminar room which contained a table, chairs, video camera, and video recorder. Each C.C.W.'s contracting skills were assessed during a series of simulations. During each simulation the C.C.W. sat at a table opposite the experimenter and was presented with one of the six type written problem descriptions shown in Table 1. Each described the behavior problem of a fictitious youth, indicated that the C.C.W. was to assume that he or she had already talked to the youth about the problem once before, and provided baseline data regarding the frequency of the problem behavior. None of the six problem descriptions corresponded to either of the two sample contracts contained in the manual. The paper containing the problem description also contained a list of three instructions (described below). Additionally, several pieces of lined paper and a pencil were placed on the table and the C.C.W. was told, "This is for you in case you want to jot anything down." The C.C.W. was allowed approximately five minutes to read and think about the problem description and instructions while the experimenter went and focussed the video camera. Each C.C.W. participated in two simulations per session, one session per working day. The problem descriptions used during simulations were selected randomly with the following restrictions: (a) no two C.C.W.'s initial problem description be the same, (b) a particular C.C.W.'s problem descriptions all be different with the exception of the final one which was the same as the initial one (for reasons discussed in Study 3). Some simulations functioned as pretests of a C.C.W.'s contracting skills while others followed training and thus functioned as posttests. A multiple baseline design across C.C.W.s was employed.

Table 1

Problem Descriptions Used During Simulations

-
- a. Three weeks ago John began to attend public school. The first week went fine. At the end of the second week his teacher telephoned you to report that John had skipped 5 classes that week. You spoke to John about this problem that weekend. He said that he skipped the classes because he hates math and english. He said that he spent those classes sitting in a bus shelter talking to friends who had also skipped the classes. At the end of your talk with John, he agreed to try not to miss any more classes. However, you just found out from John's teacher that he again skipped 3 classes during this past week.
- b. Bill is continually getting into fights with the other kids in the cottage. Any time another youth does or says something which Bill does not like, he punches the person. You have observed that the other kids do not seem to go out of their way to antagonize Bill. Rather, he just appears to have a short temper. In addition, the other kids do seem to be a little afraid of him and Bill appears to enjoy the "respect" that comes with being tough. You have had numerous talks with Bill where you have tried to explore the reasons for his aggressiveness but nothing much has come out of these talks. Bill has had 4 fights in the last 7 days.
- c. One of Ralph's major problems is his appearance. He is 16 years old but he still has not learned to groom himself properly. He rarely washes or showers and consequently his face and hands always look dirty. Similarly, he rarely brushes his teeth and each year he gets many cavities. In addition, his shirttail is always out of his pants, the zipper on his pants is frequently undone, and the laces on his sneakers are usually not tied. You have spoken to Ralph about his appearance many times. Each time he tells you that he "forgot" to shower, etc. You observed Ralph after breakfast and lunch each day for 7 days and you noticed that he had showered 0 times, had brushed his teeth 0 times, had his shirttail out 9 times, had his zipper down 6 times, and had his laces untied 10 times.
- d. Frank has been doing poorly in math this year and he is in danger of failing the course. His teacher believes that Frank could still pass if he did some extra work in math. Consequently, the teacher has given Frank 10 math questions to do as homework each night for 6 nights. The problem is that on 4 days he only answered 3 questions and on 2 days he answered none. Frank says the questions are too hard and that he does not know how to do them. The teacher does not believe this because the few questions Frank does attempt he usually answers correctly. The teacher is aware that you usually get on well with Frank and so she has asked you to "do something" to get Frank to do his homework at night so that he won't fail the course. You spoke to Frank about the problem several days ago but he still isn't doing the homework.
- e. Fred has a problem with his manners. When Fred wants to speak to a staff member or another youth, he simply walks up to the person and starts talking, regardless of what the other person is doing. Staff find this annoying because Fred frequently starts talking to them when they are in the middle of a conversation with someone else. Also, during group meetings, Fred often will start talking loudly to another youth while someone else in the group is trying to discuss something. In general, Fred never waits for an appropriate time to begin talking and he also never says "excuse me" before he interrupts. On several occasions you have asked Fred not to interrupt other people's conversations, or at least say "excuse me" before interrupting. Your talks have not had much effect. In the last 2 days Fred has interrupted individual staff members 16 times. During the last 2 group meetings, Fred interrupted 5 and 6 times respectively.
- f. The youths in your cottage are supposed to attend a group meeting on Mondays and Thursdays at 4:00 P.M. after school. Staff feel that these meetings are very useful for resolving routine problems which arise in the cottage. Dave hates these group meetings because sometimes staff confront him with a problem behavior he has and he does not like being "put on the spot". He also claims that he would rather watch T.V. or play cards during this time. Dave is very good at finding excuses for missing these meetings. Sometimes he has a headache and has to lie down, or he may have to stay late at public school for a variety of reasons. When he does attend, he usually will not answer questions. Dave has missed 3 of the last 5 groups and during the 2 he did attend, he would not answer any questions except by saying, "I don't know." You have spent some time discussing this problem with Dave in the past. After each discussion with you, he attends one or two groups but then lapses back into his old pattern once again.
-

Pretest 1. Two different kinds of pretests were conducted. In pretest 1, the instructions which followed each problem description were: (a) Pretend that (experimenter's name) is this youth. (b) Deal with this problem as you see fit (i.e., as you would if this problem was really happening in your cottage). (c) Try to limit the interaction to a maximum of 20 minutes. If at any time during the simulation the C.C.W. used the term "reward" or "penalty", or an analogous term, he or she was immediately given a list of rewards and penalties (described below) and was asked to use only items on the list. The "youth" (i.e., experimenter) responded to the C.C.W.'s verbalizations in a standard manner which is described in a following section.

Pretest 2. In pretest 2, the instructions which followed each problem description were: (a) Pretend that (experimenter's name) is this youth. (b) Use contingency contracting to deal with this problem. Assume that only the rewards and penalties listed on the next page are at your disposal. (c) Try to limit the interaction to a maximum of 20 minutes. A list of seven rewards and five penalties which are normally affordable and acceptable to residence supervisors was attached to the problem description. (The list may be found in Appendix B.) The "youth" (i.e., experimenter) responded to the C.C.W.'s verbalizations in a standard manner which is described in a following section.

Pretest 2 was conducted in order to help determine whether the low frequency of contracting behaviors emitted during pretest 1 was due to a true deficit in contracting skills or to a problem with stimulus control; the C.C.W.'s may have possessed contracting skills but may have been disinclined to use them when asked to deal with the youth's problem behavior "as you see fit."

Training. Following the pretest simulations, a C.C.W. was presented with a copy of the training manual to read. Since in most applied settings it is unlikely that C.C.W.'s would be observed and/or formally tested in order to ensure that they had read and understood the manual, no such observations or tests were made in this research. Thus, C.C.W.'s performances during posttest simulations should be representative of the normal variability which occurs in subject variables such as comprehension, time spent reading the manual, and number of times the manual was read. However, it should be noted that prior to the posttest simulations, C.C.W.'s were asked if they had read the manual or referred to other sources of information about contracting since the final pretest simulations. All affirmed the former question and denied the latter. Following each posttest simulation, the C.C.W.'s sometimes asked for feedback regarding the adequacy of their performance. At such times, the experimenter provided a minimal amount of feedback (e.g., "That was good but you forgot to negotiate the penalty."). Although the feedback was never more than two or three sentences, it may have had some effect on the C.C.W.'s behavior beyond that induced by the manual.

Posttest. During the posttest, the instructions which followed each problem description were the same as those presented during pretest 2, and the same list of seven rewards and five penalties accompanied each problem description. The C.C.W.s used the flowchart of required negotiation behaviors and the blank standard contract form during each simulation, and they were allowed to refer to other sections of the manual, including the sample contracts, if they wished.

During pretest and posttest simulations, the "youth" (i.e., the experimenter) responded to the C.C.W.'s verbalizations in the following manner: (a) If the C.C.W. proposed a reward without asking the "youth" to propose one first, the "youth" accepted it. (b) If the C.C.W. asked the "youth" to propose a reward, as prompted by Step #3(A) of the flowchart, the "youth" proposed a reward which was clearly excessive and not on the list of available rewards presented to the C.C.W. (c) If the C.C.W. made a counterproposal, as prompted by Step #4(B) of the flowchart, the "youth" accepted it. The "youth" responded in a similar manner with respect to the penalty. Thus the "youth" was prepared to respond such that the reward and the penalty were each agreed upon by the end of Step #4(C) respectively. If the C.C.W. asked questions not specifically prompted by the flowchart (as generally occurred during pretests 1 and 2), the "youth" simply answered the questions or said, "I don't know."

Acquisition of comparative data. Two questions which arise are:

(a) Were the six problem descriptions used in the simulations characteristic of the kinds of problem behaviors that a behavioral psychologist would use contingency contracting to treat? (b) Did the manual improve C.C.W.'s contracting skills such that they were comparable to the skills of counsellors with advanced training? In order to answer these questions, six M.A. level psychology graduate students were recruited to serve as a comparison group. All six students considered themselves to be behaviorally oriented. None had as yet received formal training in contingency contracting but all had read about the technique and two had used contracting in work with adolescents. None had read the manual

used in this research. Each student was presented with a different one of the six problem descriptions (see Table 1) and their contracting skills were assessed under pretest 1 conditions. If a student failed to use contingency contracting under pretest 1 conditions, then he or she was asked to respond to the same problem description again, this time under pretest 2 conditions.

Generalization tests. The pretest and posttest simulations which were used to assess the effect of the manual upon C.C.W.'s contracting skills were, of course, analogue situations. Following the posttest simulations (when it was apparent that contracting skills had improved), three of the four C.C.W.'s each contracted with several real youths. The fourth C.C.W. went on holidays following the posttest simulations and was available to contract with only one youth. Contracting sessions took place in various locations within the residence, most often in the youths' bedrooms. The experimenter was present during most contracting sessions and was prepared to intervene if a C.C.W. inadvertently negotiated a contract which might not be in the youth's best interest. This circumstance never arose and consequently the experimenter served no function during the generalization sessions except to audiotape the sessions for scoring purposes.

Scoring procedure. A brief description of the scoring procedure follows. A technological description may be obtained from the authors. (A technological description also may be found in Appendix C).

Negotiation and contract writing behaviors were scored separately. All simulations conducted with C.C.W.'s and graduate students were vi-

deotaped, and all generalization tests with C.C.W.'s and real youths were audiotaped. Negotiation behaviors were scored from these recordings. Scorers listened to a tape and indicated on a scoring form the occurrence, nonoccurrence, and in some cases, partial occurrence of required negotiation behaviors. "Required" behaviors were those which should have been emitted according to the flowchart. If a required behavior occurred, a "1" was scored. In the case of some behaviors (e.g., the descriptions of the desired behavior), a "1/2" was scored if the behavior occurred but was qualitatively poor. If a required behavior did not occur, a "0" was scored.

During simulations, only behaviors required by Steps #2, #3, and #4 were scored since it was not possible to emit behaviors in Step #1 during the simulation sessions, and since the standard responses of the "youth" (i.e., experimenter) were such that Step #5 behaviors were never needed. It is important to note that the behaviors cued by Steps #2, #3, and #4 of the flowchart could have been emitted by C.C.W.'s (and graduate students) during the pretests even though the flowchart was unavailable during pretest simulations. A maximum of 10 points could be earned during the negotiation phase of the simulations. The percent occurrence of required behaviors was computed by dividing the number of points earned by 10 and multiplying by 100.

During generalization tests, behaviors from Steps #1, #2, and #3 were required, while behaviors from Steps #4 and #5 could be required, depending upon the responses of the youths. Thus the scorer had to determine whether or not a behavior was required (i.e., in consideration of the flowchart and the youth's responses), and also whether or not it

occurred. The percent occurrence of required behaviors was computed by dividing the number of points earned by the number of points that could have been earned and multiplying by 100.

The written contracts which were produced during the simulations and the generalization tests were scored such that a "1" was scored if certain required textual responses occurred, and a "0" was scored if those responses were absent. In the case of some textual behaviors, a "1/2" was scored if the response occurred but was qualitatively poor (e.g., the specification of the reward), or if it occurred only in part (e.g., one signature instead of two). "Required" textual responses were those necessary to complete the blank standard contract form. A maximum of 11 points could be earned; 9 for filling in each blank correctly, one for a statement of the contingency between the behavior and consequences, and one for making the contract appropriately flexible or inflexible. If no written contract was produced, a score of 0 was assigned. The percent occurrence of required behaviors was computed by dividing the number of points earned by 11 and multiplying by 100. It is important to note that the textual responses could all occur during the pretests (paper and pen were available), even though the blank standard contract was unavailable during pretest simulations.

The six standard responses of the "youth" (i.e., experimenter) were scored in order to ensure that the "youth" did in fact respond according to protocol. One quarter of the total number of tapes made of the pretest 2 and posttest simulations with C.C.W.s were randomly selected and scored. Tapes of pretest 1 simulations were not selected since no C.C.W. used rewards or penalties during those simulations. Also, one

half of the total number of tapes made of the pretest 1 and pretest 2 simulations with graduate students were randomly selected and scored. The scorer decided whether or not one of the six standard responses was required, and if so, whether or not it occurred. If a response was required and it occurred, a "1" was scored. If a response was required but did not occur, a "0" was scored. The percent occurrence of required standard responses was calculated by dividing the number of points earned by the number that should have been earned and multiplying by 100. The value obtained was 94%, indicating good adherence to protocol.

Interscorer reliability. In the case of C.C.W.s, all pretest 1, pretest 2, posttest, and generalization tests were video or audiotaped. Approximately one third of the tapes made of each type of test were randomly selected and scored by a second scorer. Percent agreement was calculated separately for those behaviors which the primary scorer scored as, "1", as "1/2", and as "0". Separate coefficients were calculated for negotiation behaviors and contract writing behaviors. Approximately one third of the tapes of the graduate students also were randomly selected and scored by a second scorer. All interscorer reliability coefficients were calculated by the "agreements/agreements + disagreements x 100" formula. This method of interobserver reliability assessment is generally recommended when scoring the occurrence and nonoccurrence of discrete behaviors (Johnson & Bolstad, 1973; Kratochwill & Wetzel, 1977).

All interscorer reliability assessments yielded agreements of 100% except for the following: (1) For those C.C.W. negotiation behaviors which the primary scorer scored as "1" during the posttests, 97% agree-

ment was achieved. (2) For those graduate student negotiation behaviors which the primary scorer scored as "1", 83% agreement was achieved. (3) For those graduate student contract writing behaviors which the primary scorer scored as "1", 92% agreement was achieved. The unusually high reliability in scoring which was achieved in this research was likely due to the highly structured nature of the negotiation flowchart and the standard contract form, and to the fact that all required behaviors were highly discriminable.

In order to assess the reliability of the "youth's" (i.e., experimenter) standard responses, the same tapes which were randomly selected and scored in order to calculate the percent occurrence of required standard "youth" responses were also scored by a second scorer. Percent agreement was calculated separately for those behaviors which the primary scorer scored as "1" and "0". All interscorer reliability coefficients were calculated by the "agreements/agreement + disagreements x 100" formula.

All interscorer reliability assessments yielded agreements of 100%. As was the case with C.C.W. negotiation and contract writing behaviors, the six standard "youth" responses were very discriminable, and this likely accounts for the unusually high reliability in scoring.

Results and Discussion

The effect of the training manual plus minimal feedback from the experimenter upon the contracting skills of the four C.C.W.'s is shown in Figure 2. The dashed vertical line separates pretest 1 from pretest 2 simulations, the solid vertical line separates pretest simulations

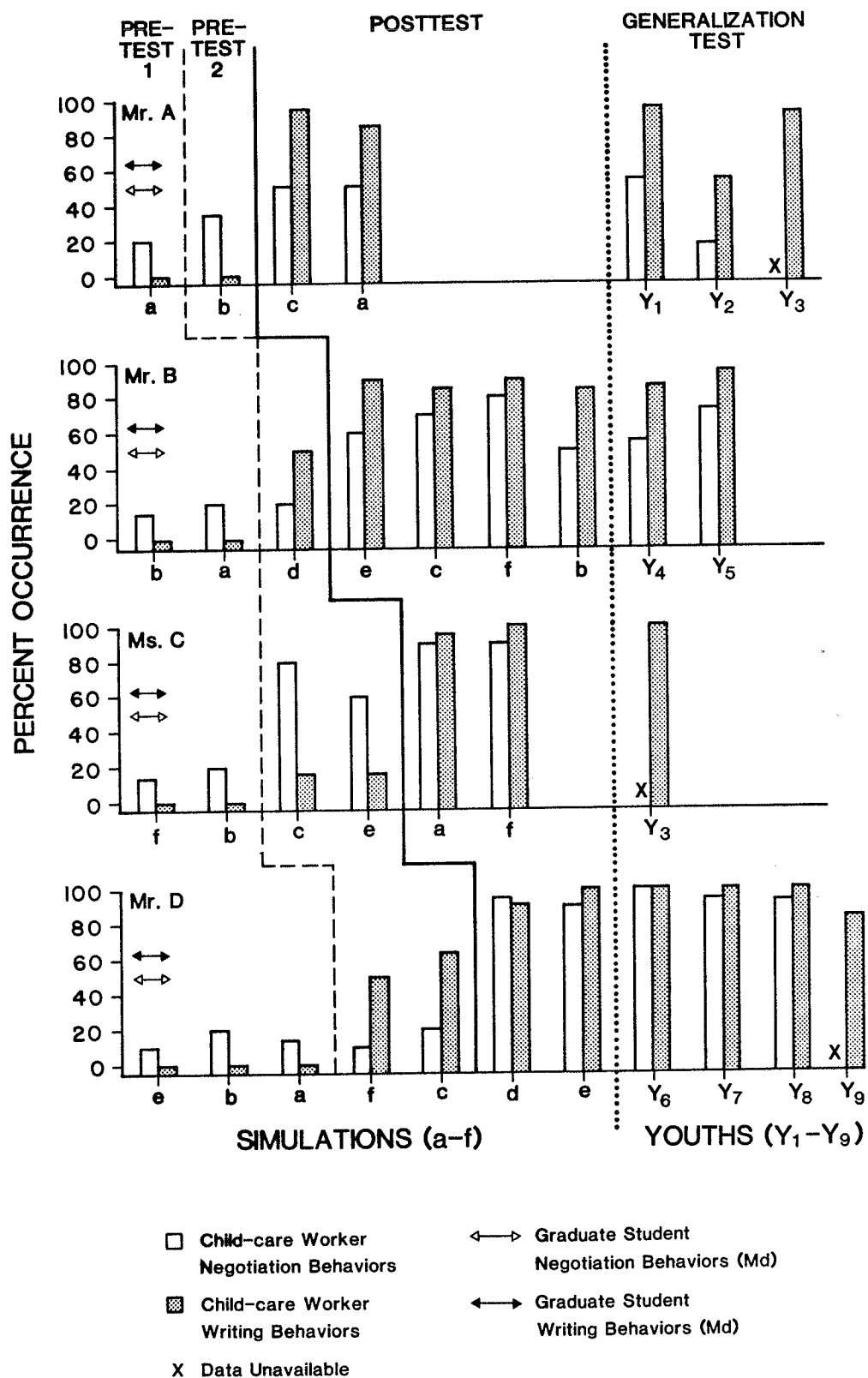


Figure 2: The percent occurrence of required negotiation and writing behaviors emitted by the four child-care workers who participated in phase 1 of Study 1.

from posttest simulations, and the dotted vertical line separates simulations from generalization tests. The lower case letters (a-f) along the abscissa each represent the particular problem description used in a particular pretest or posttest simulation (see Table 1). The subscripted upper case letter Y along the abscissa represents a generalization test with a particular youth. The ordinate indicates the percent occurrence of required negotiation behaviors and writing behaviors; the former depicted by open bars and the latter by solid bars. The open arrow on the left hand side of each C.C.W.'s graph indicates the median percent occurrence of required negotiation behaviors for the six graduate students, while the solid arrow indicates the median for writing behaviors.

Looking first at the data for the six graduate students, four used contracting under pretest 1 conditions (i.e., when asked to solve the problem "as you see fit"), while the other two used another type of positive reinforcement program (e.g., token economy) and therefore were tested again under pretest 2 conditions (i.e., where they were asked to use contracting). The median values shown in the figure were calculated from the scores obtained by the four students who used contracting under pretest 1 conditions and the two who used contracting under pretest 2 conditions. Of importance to the present research is the fact that four of the six graduate students chose to use contracting when the only discriminative stimulus for use of contracting was the problem description itself. The other two students acknowledged retrospectively that contracting was an appropriate technique to use. Thus, it may be concluded that the problem descriptions used in this research were reasonably sa-

lient discriminative stimuli for the use of contracting in the case of individuals with advanced training, and that they were, in this sense, realistic.

It is apparent from the figure that the graduate students' contract writing behaviors (median=64%) were better developed than their negotiation behaviors (median=50%). This is not surprising given that only recently has the literature begun to emphasize the importance of the negotiation aspect of contracting.

Turning now to the data for the C.C.W.s, Figure 2 shows that negotiation behaviors occurred infrequently during pretest 1 and writing behaviors did not occur at all. None of the C.C.W.s attempted to contract during pretest 1. Asking the C.C.W.s to try contracting during pretest 2 had a very small effect on Mr.A's behavior but had a noticeable effect on the other C.C.W.s. It increased the writing behaviors of Mr.B and Mr.D without affecting their negotiation behaviors, whereas it markedly increased the negotiation behaviors of Ms.C. with a smaller effect on her writing behaviors.

Pretest 2 data indicated that each of the C.C.W.s had some of either the required negotiation or writing behaviors in their repertoire prior to reading the training manual, but none had a significant amount of both types of behaviors. Only Ms.C emitted a substantial number of negotiation behaviors; the other C.C.W.s were inclined to impose consequences upon the youth rather than to negotiate them. Pretest 1 data indicated that the C.C.W.s were not likely to use the contracting skills which did exist in their repertoires when dealing with youths with behavior problems.

The multiple baseline design indicated that the manual plus minimal feedback produced marked increases in the percent occurrence of both negotiation and writing behaviors in all C.C.W.s. The fact that these increases occurred during the first posttest simulation with all four C.C.W.s, and that further increases did not occur in subsequent simulations, suggests that the behavior change was almost exclusively due to the manual rather than to the minimal feedback which followed each posttest simulation. In the case of Mr.A, and to a lesser extent Mr.B, the manual acquired better stimulus control of writing behaviors than of negotiation behaviors. Nevertheless, the manual enhanced both the negotiation and writing behaviors of all C.C.W.s to such an extent that their performances were clearly improved over pretest levels and such that they generally surpassed the median performances of the graduate students.

The extent to which each C.C.W.'s newly acquired contracting skills generalized from the analogue simulations to contracting sessions with real youths is also illustrated in Figure 2. With Youth 1, Mr.A's negotiation and writing behaviors were comparable to his performance during the posttest simulations even though he had to emit Step #1 behaviors and also proceed through Step #3 three times and Step #4 twice while negotiating the penalty (recall that Step #1 behaviors were not required during simulations which were programmed so that the C.C.W. had to proceed through Step #3 and Step #4 once only). However, many of Mr.A's negotiation behaviors and some of his writing behaviors were lost with Youth 2, possibly because this youth was rather hostile and belligerent. Data on negotiation behaviors were unavailable for Youth 3 because Mr.A

contracted with this youth in the experimenter's absence. The data on contract writing behaviors indicate that they returned to posttest simulation levels with this youth.

The data for Mr.B and Mr.D show good generalization of negotiation and writing behaviors, with both being comparable to their respective posttest simulation performance. With these youths, negotiation of the reward and penalty never went beyond Step #4(C), with the exception of Youth 6 who required Mr.D to proceed through Step #3 three times and Step #4 twice while negotiating the reward. The negotiation data for Youth 9 were unavailable for the same reason as in the case of Youth 3.

Ms.C went on holidays following the posttest simulations. Upon her return she renegotiated a contract originally negotiated with Youth 3 by Mr.A. This was done in the experimenter's absence and so only data on contract writing behaviors were available. Ms.C's performance in this regard was excellent and was comparable to her performance during post-test simulations.

Phase 2: Revised Manual Alone

Phase 2 involved a systematic replication of phase 1. It was conducted in a different residential care facility with different C.C.W.s and youths. The purpose of phase 2 was to assess the effectiveness of a revised training manual, without experimenter feedback, and under conditions which would minimize the possible confounding effect of practice during posttest simulations upon generalization test performance.

Method

Subjects and Setting

The C.C.W.s who participated in this phase of the research worked in a community based group home for eight emotionally and behaviorally disturbed youths. The group home served teenage Native girls 13 to 17 years of age. The agencies involved in placement, and the general reasons for placement, were the same as for the first residence. The group home was classified as a level 3 home according to the classification system described earlier, meaning that the girls would be described as having moderate emotional and behavioral problems.

The four staff members who were involved will be referred to as Mr.E, Ms.F, Ms.G, and Ms.H. All were employed as C.C.W.s. Their ages ranged from 23 to 37 years, their educational attainment ranged from grade 10 to university (bachelor degree) and their experience as C.C.W.s ranged from 2 to 10 years. All four C.C.W.s volunteered to participate in the research.

The C.C.W.s negotiated contingency contracts with four youths who lived in the residence. The youths will be referred to as Youth 10 to Youth 13 respectively. All four of the youths displayed one or more behavior problems which staff wished to modify, and they were selected for contracting on that basis. A description of each youth's problem behavior is deferred until Study 2. In general, the four youths were representative of the kinds of youths who are placed in residential settings with a level 3 classification.

Description of the Revised Manual

The revised manual was essentially the same as the earlier version with three exceptions. First, in order to try and increase the percent occurrence of required negotiation and contract writing behaviors, a behavioral checklist was added to the manual, along with instructions to the C.C.W. to work through the checklist just prior to signing the contract and to make any "corrections" necessary (i.e., emit any required behaviors previously forgotten). Second, the number of sample contracts contained in the manual's appendix was increased from two to thirteen in an effort to provide model contracts for the modification of many behavior problems typical of youths in residential settings. Third, a number of minor changes in wording were made in order to make the manual clearer. The latter changes were based upon feedback received from the C.C.W.s who participated in phase 1. The revised manual was 15 pages long. (The revised manual, behavior checklist, and sample contracts may be found in Appendix B).

Procedures for the Assessment of Contracting Skills

Simulations and generalization tests took place in an office in the group home. Video equipment was present in the office during simulations and an audio recorder was present during generalization tests.

In phase 1, each C.C.W. participated in several posttest simulations prior to participating in a generalization test. Consequently, it is possible that the relatively good performance obtained on generalization tests may have been due in part to the effect of practice with a variety of problem descriptions during the posttest simulations. In or-

der to reduce the potential effect of such practice, the C.C.W.s who participated in phase 2 received only one simulation under each of the pretest 1, pretest 2, and posttest conditions prior to the generalization test. A single problem description was used with each C.C.W. rather than six, as was the case in phase 1. Since one of the 13 sample contracts contained in the appendix of the manual corresponded to the problem description used with each C.C.W., that sample contract was removed from the manual before it was given to the C.C.W. and then reinserted following completion of the posttest.

The design was changed from a multiple baseline as used in phase 1 to a simple A-B replication design in order to reduce the number of simulations and associated opportunity to practice before the generalization test. No feedback was given to a C.C.W. during the time between the single posttest and the generalization test. The C.C.W.s were given the manual after pretest 2 and they were asked to record the number of minutes they spent reading it prior to the posttest. The pretest, posttest, and generalization test scoring procedures for C.C.W. contracting behaviors were identical to those described in phase 1. Since the standard responses of the "youth" (i.e., experimenter) were found to be very reliable in phase 1, they were not scored in phase 2. Also, no graduate students participated in phase 2. Approximately one quarter of the tapes made of each type of test were randomly selected for scoring by a second scorer. Reliability coefficients were calculated as in phase 1.

All interscorer reliability assessments yielded agreements of 100% with one exception. For those C.C.W. contract writing behaviors which the primary scorer scored "0" during pretest 2, 83% agreement was

achieved. As with phase 1, the high reliability which was achieved during phase 2 was likely due to the structured nature of the flowchart and standard contract form, and to the fact that the required behaviors were highly discriminable.

Results and Discussion

The effect of the revised training manual upon the four C.C.W.s is shown in Figure 3. The symbols which appear in Figure 3 have the same meaning as described previously for Figure 2. The arrows reflecting the median performance of the graduate students from phase 1 are shown for the purpose of comparison.

The results essentially replicated those obtained in phase 1. Negotiation behaviors occurred infrequently and writing behaviors did not occur at all during pretest 1. No C.C.W. attempted to use contracting during pretest 1. In phase 1, asking the C.C.W.s to try to use contracting during pretest 2 produced a small but noticeable increase in either negotiation or writing behaviors. In contrast, during phase 2 the pretest 2 instructions had little effect on the behavior of the C.C.W.s, with the exception of Ms.F whose contract writing behaviors showed a moderate increase. In phase 2, Ms.F was the only C.C.W. who attempted to produce a written contract under pretest 2 conditions.

All four C.C.W.s recorded the number of minutes which they spent reading the manual prior to the posttest. The number of minutes were 48, 20, 25, and 105, for Mr.E, Ms.F, Ms.G, and Ms.H, respectively.

The percent occurrence of both negotiation and contract writing behaviors increased markedly during the posttest with all C.C.W.s, indicating that the manual acquired a considerable degree of stimulus con-

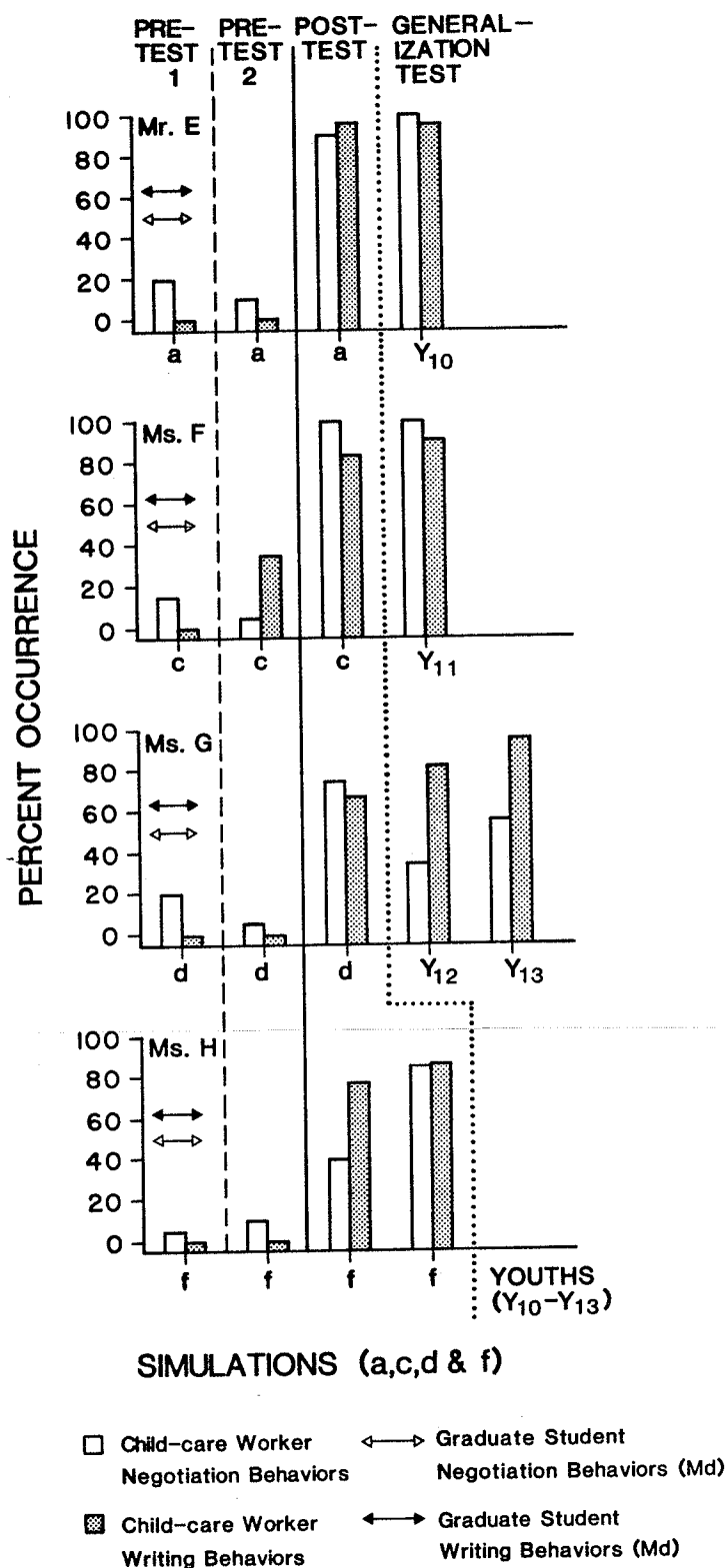


Figure 3: The percent occurrence of required negotiation and writing behaviors emitted by the four child-care workers who participated in phase 2 of Study 1. Ms. H was unavailable for generalization testing because she was transferred to another residence.

trol over these behaviors. With Ms.H, a second posttest was conducted immediately following the first, since her ability to follow the negotiation flowchart appeared to be impaired by test related anxiety. Moreover, she did not use the behavioral checklist. A small prompt to "not worry" appeared to relax Ms. H. and her performance improved noticeably during the second posttest. In general, the posttest performance of all four C.C.W.s equalled or surpassed the median performance of the graduate students from phase 1.

The data for Mr.E and Ms.F show good generalization of negotiation and writing behaviors, with both being comparable to their respective posttest simulation performances. Ms.G's negotiation behaviors decreased somewhat from posttest levels with both Youth 13 and Youth 14, although they remained well above pretest levels. Ms.G did not use the behavioral checklist during generalization tests. Ms.H was not available for participation in generalization tests due to a transfer to another group home.

The data collected during the generalization tests which were conducted in both phase 1 and phase 2 were analyzed in order to determine what kind of errors C.C.W.s were most likely to make during both the negotiation and writing phases of contracting. The negotiation behavior that C.C.W.s were most likely to omit when it was required was Step #4(C); asking the youth to consider the counterproposal and explaining that the youth has the option of rejecting the counterproposal and making another proposal instead. This was the most frequently made error during the negotiation of both the reward and the penalty. The contract writing behavior that C.C.W.s were most likely to perform incorrectly

related to the specification of the reward. Although the reward itself was usually well described, C.C.W.s often failed to state when the reward would be made available to the youth and as a result, they received a score of "1/2" instead of "1." Professionals responsible for staff training may wish to supplement the manual with a verbal prompt in order to enhance C.C.W.s' performance of these behaviors. A textual prompt could be added to the standard blank contract form.

STUDY 2: EFFECT OF CONTRACTING ON YOUTH BEHAVIOR

The literature indicates that contingency contracting is a moderately successful technique for modifying certain behaviors of delinquent youths when it is implemented by professional therapists or by others (e.g., parents) under close professional supervision. The purpose of Study 2 was to extend this general finding to C.C.W.s by demonstrating that they too could use their newly acquired contracting skills, trained via the manual, to modify behaviors similar to those behaviors that professionals have used contracting to modify. In order to maximize the external validity of the findings, care was taken to ensure that C.C.W.s employed contracting under the conditions that would normally prevail in residential situations.

Method

Subjects and Behaviors

With six of the youths with whom C.C.W.s negotiated contracts during Study 1, contracting was but one component of a multicomponent intervention designed to reduce absconding from the residence. Since the effect of contracting was confounded with the effects of other interventions, no behavior change data are presented for these youths.

In the case of the remaining youths, contracting was used as the sole means of modifying a variety of behavior problems typical of youths who live in residential care facilities. These youths were selected by

staff on the basis of staffs' wish to modify their behavior problems, all of which had been refractory to control via instructional prompts. A brief description of each youth follows.

Youth 2 was a 16 year old girl who rarely engaged in any social activities with the other youths in her residence. The desired behavior was for her to engage in some social activity with one or more youths for at least 1/2 hour per day. Youth 3 was a 15 year old girl who frequently responded to teasing by the other youths with excessive screaming, swearing, and fighting. The desired behavior was for her to ignore teases and to report instances of teasing to staff at a later time. Youth 9 was a 16 year old boy who frequently engaged in a variety of inappropriate behaviors at school such as refusing to follow teacher's instructions and picking fights. The desired behavior was "appropriate school behavior" (i.e., not engaging in inappropriate behaviors). Youth 10 was a 16 year old girl who frequently was truant from math classes. The desired behavior was to attend at least two thirds of her math classes each week. Youth 11 was a 16 year old girl who rarely showered. The desired behavior was to shower once per day. Youths 12 and 13 were girls aged 14 and 16 respectively who were roommates and who rarely engaged in five required room cleaning behaviors. The desired behavior was to engage in all five behaviors daily. Although their contracts were negotiated separately, later they were combined because Ms.G was not always able to discriminate which of the two girls had emitted a desired behavior (e.g., sweep floor). Youth 14 was a 16 year old boy with essentially the same problem behavior and desired behavior as Youths 12 and 13.

The youths who participated in this research are representative of youths in residential placement across Canada (Dr. C. J. Meltzer, personal communication, March, 1984). Moreover, it is likely that they are also representative of youths in residential facilities for misdemeanor and felony offenses in Canada and the U.S.A., since Thomas (1976) has demonstrated that these three types of offenders are very similar in terms of relevant variables such as "offense careers" (i.e., many status offenders have been or will be charged with misdemeanors or felonies).

Procedure

Youths 2, 3, 9, and 14 contracted with C.C.W.s who had read the original version of the training manual as it was described in phase 1 of Study 1. The extent to which each C.C.W. emitted the required negotiation and writing behaviors while contracting with these youths can be ascertained by referring to the generalization test data in Figure 2, except in the case of the C.C.W. who contracted with Youth 14. Neither Youth 14 nor the C.C.W. participated in Study 1. The C.C.W. read the manual and then negotiated the contract with Youth 14. This took place in the experimenter's absence and so data regarding this C.C.W.'s negotiation behaviors were unavailable. The percent occurrence of required writing behaviors with this C.C.W. was 90.90%.

Youths 10, 11, 12, and 13 contracted with C.C.W.'s who had read the revised manual as it was described in Phase 2 of Study 1. The extent to which each C.C.W. emitted the required negotiation and writing behaviors while contracting with these youths can be ascertained by referring to the generalization test data in Figure 3. The median number of days

that data were collected during baseline and contracting conditions were seven and 24 respectively.

After the completion of Study 2, three of the four C.C.W.s who had participated in phase 2 of Study 1 (Ms. H was transferred to a new residence) were asked to complete a questionnaire designed to assess several aspects of consumer satisfaction. A fourth C.C.W. (Ms. H's replacement) who did not participate in phase 2 but who later read the manual and negotiated several contracts, also completed the questionnaire. The questionnaire asked the following seven questions:

1. How satisfied/dissatisfied are you with contracting as a treatment technique?
2. How likely/unlikely would you be to recommend that contracting be taught to new staff members?
3. How likely/unlikely would you be to use contracting again in the future?
4. To what extent did you find contracting to be a useful/useless addition to other procedures that you use?
5. How easy/difficult was the manual to read and understand?
6. How easy/difficult was the negotiation flowchart to follow?
7. How easy/difficult was the blank contract form to complete?

The C.C.W.s responded to each question by placing a checkmark beside one of seven options. The options ranged from Completely dissatisfied (Very unlikely; Very useless; Very difficult) to Completely satisfied (Very likely; Very useful; Very easy), and the options were assigned scores of 1 to 7 respectively. This method of assessing consumer satisfaction is analogous to the method used by Achievement Place group homes (Phillips, Phillips, Fixsen, & Wolf, 1974).

Results and Discussion

The effect of contingency contracting upon each youth's desired behavior is shown in Figure 4. Open bars represent baseline data and closed bars represent contracting data. The contracting data for Youth 11 were unavailable because this youth absconded from her group home shortly after her contract was negotiated.

Mr.A failed to make a permanent record of baseline data for Youth 2, but his retrospective report was that this youth had engaged in social activities with one or more other youths for at least 1/2 hour on zero of the preceding 14 days. Since other staff confirmed the accuracy of Mr.A's subjective baseline, the contracting data for Youth 2 were included in Figure 3. The desired behavior increased markedly during of the days that the contract was in effect.

Data collected during both baseline and contracting conditions were available for the remaining five youths. With all youths, the contracts were successful in producing large magnitude increases in the percentage of days during which the desired behaviors occurred.

The mean consumer ratings for questions one to seven were 5.8, 6.5, 6.5, 5.8, 6.5, 6.0, and 6.3 respectively. Individual ratings ranged from 5 to 7. The ratings indicated that, on the average, C.C.W.s were satisfied with contracting, were likely to recommend that it be taught to new staff, were likely to use it again themselves, and that they found it to be a useful technique. Additionally, they found the manual to be easy to read, the negotiation flowchart to be easy to follow, and the blank contract form to be easy to complete. Using these ratings as an index, the manual appears to possess social validity.

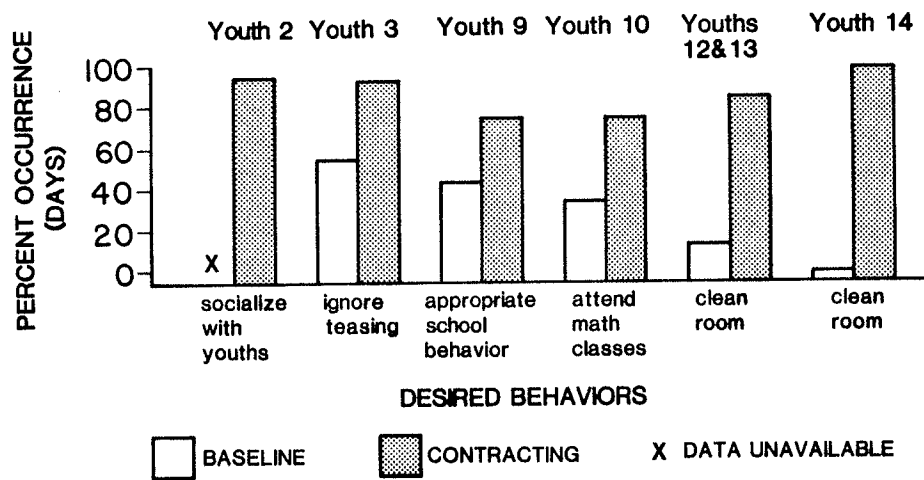


Figure 4: The percent of days during which desired behaviors occurred with seven youths who participated in the generalization tests of Study 1.

Three issues arise from Study 2: (a) the adequacy of the design; (b) the absence of reliability assessments; and (c) the nature of the target behaviors. In evaluating these issues, it is important to consider the study's purpose, which was to extend general findings obtained with professionals to C.C.W.s who were trained via the manual, and to maximize the external validity of the findings.

C.C.W.s would be unlikely to use sophisticated single-case or group designs to evaluate the effect of contracts in their day-to-day use of the technique. For that reason, the training manual was written so as to teach C.C.W.s to use a simple A-B design for evaluation purposes. This design is often recommended when the use of a more sophisticated design is not feasible in an applied setting (e.g., Hersen & Barlow, 1976), and it is the design which has been employed by others who have written contracting manuals for paraprofessionals (e.g., DeRisi & Butz, 1975). Consequently, in Study 2 the C.C.W.s used simple A-B designs; the use of a more sophisticated design would have necessitated a deviation from the procedure outlined in the manual and reduced the external validity of the findings. Although a single A-B design is relatively weak, the study involved a series of A-B replications which tends to strengthen internal validity. In the case of a single A-B design, a behavior change following the implementation of a contract could be attributed to an uncontrolled variable. However, the likelihood of an uncontrolled variable entering the system at precisely the same time contracts were implemented with seven youths by six different C.C.W.s to modify five different kinds of behaviors, at differing times, in two separate residences, is so small that the behavior changes can be at-

tributed to the contracts with a reasonable degree of confidence. The utility of A-B replication designs in applied settings has been discussed by Barlow (1980).

At the onset of Study 2, C.C.W.s were asked by the experimenter to conduct reliability checks for one another. They stated that time scheduling constraints made such checks impractical and were resistant to conducting them. They also stated that they would be very unlikely to conduct reliability checks under normal conditions. As an alternative, external observers could have been placed in the residence to conduct reliability checks, but past experience in such residences taught the experimenters that both C.C.W.s and youths are extremely reactive to being observed. Thus, external observers would serve to create an artificial set of conditions that probably would reduce external validity. Authors of other contracting manuals have acknowledged that paraprofessionals are unlikely to be able to arrange for reliability assessments, and they have attempted to deal with this problem by teaching the paraprofessionals to define behaviors clearly in order to enhance reliable recording (e.g., DeRisi & Butz, 1975). The manual employed in this research also emphasized the importance of clear behavioral definitions. Additionally, there are four reasons why the absence of reliability assessments likely does not pose a serious threat to internal validity in this study: First, appropriate and inappropriate behaviors generally occurred at specific times (e.g., in math class; in living room after supper; etc.) so that staff knew when to look for them, or they resulted in a nontransient product that could be observed at any time (e.g., a made bed). Third, in most cases, any staff member or teacher could record

the occurrence of a relevant behavior, making it very unlikely that such a behavior would go unnoticed. Fourth, the data were graphed in terms of the percentage of days during which the appropriate behavior occurred (or the inappropriate behavior did not occur). An inappropriate behavior only had to be observed once in order for the entire day to be scored as an "inappropriate day." thus, error in the exact number of times a relevant behavior occurred per day would not affect the data as long as at least one instance was noticed by staff or teacher.

Four of the behaviors successfully modified were social withdrawal, verbal/physical aggressiveness, misbehavior at school, and missing math classes. These behaviors are undoubtedly of clinical significance. However, three other behaviors involved room cleaning, and the clinical significance of this behavior may be questioned. Nevertheless, the C.C.W.s selected the behaviors for modification and so room cleaning is likely representative of the types of behavior that C.C.W.s will use contracting to modify. Allowing C.C.W.s to select target behavior should enhance external validity.

STUDY 3: EFFECT OF CONTRACTING ON STAFF SOCIAL SKILLS

Willner et al. (1977) identified 13 social behaviors that youths living in Achievement Place group homes preferred child-care personnel to emit, and 16 social behaviors that the youths disliked. The purpose of Study 3 was to determine if training in contingency contracting skills had collateral effects upon C.C.W.s' usage of these social behaviors, and if so, whether positively or negatively.

Method

Subjects

With each C.C.W. who participated in phase 1 of Study 1, the problem description (see Table 1) used during the first simulation of pretest 1 was the same as the one used during the last simulation of the posttest, although the particular problem description was different for each C.C.W.. The same was true in the case of the C.C.W.s who participated in phase 2. The subjects of Study 3 were the eight C.C.W.s who participated in phases 1 and 2 of Study 1, as each behaved while he or she responded to a particular problem description under pretest 1 conditions before training in contingency contracting, and then again under posttest conditions after training in contingency contracting. All six problem descriptions were represented, with problem descriptions "a" and "f" each being presented to two C.C.W.s, one from phase 1 and one from phase 2.

Procedure

Social behaviors. The 12 youth-preferred and 15 youth-disliked social behaviors which were assessed in this study are those which were validated by Willner et al. (1977). They are shown in Table 2. One additional preferred behavior, "point giving", and one additional disliked behavior, "unfair point exchange", which Willner et al. validated were not assessed in this study since the C.C.W.s were not taught to use a token economy. Operational definitions of these social behaviors were provided by Willner et al. (1977). In the present study, 16 of the operational definitions provided by Willner et al. were modified slightly so as to increase interscorer reliability. Each modification involved limiting the original definition somewhat. The modified definitions are available from the authors upon request. (The modified definitions may be found in Appendix D).

Scoring. The social behaviors were scored from videotapes made of each C.C.W. as he or she responded to a particular problem description under pretest 1 and posttest conditions. Each simulation was divided into a series of one minute intervals. If a scorer observed one or more occurrences of a particular social behavior during an interval, a check mark was placed in the appropriate interval on a scoring form. Youth-preferred behaviors were divided into two sets of six behaviors while youth-disliked behaviors were divided into two sets of six and nine behaviors respectively (three behaviors in the set of nine were never emitted by the C.C.W.s). Each of the four sets of behaviors were scored separately. Since the posttest simulations were longer than the pretest

Table 2

Youth Preferred and Youth Disliked Social Behaviors

Preferred	Disliked
1. Fairness	1. Unfriendly
2. Explain how/what	2. Describing only what the youth did wrong
3. Calm pleasant voice tone	3. Lack of understanding
4. Enthusiasm	4. Accusing, blaming statements
5. Smiling	5. Unpleasant
6. Joking	6. Mean, insulting remarks
7. Politeness	7. Negative feedback
8. Explain why	8. Profanity
9. Offering or providing help	9. Bossy-demand <u>vs.</u> request
10. Positive feedback	10. No opportunity to speak
11. Concern	11. Bad attitude
12. Getting right to the point	12. Shouting
	13. Anger
	14. Unpleasant physical contact
	15. Throwing objects

1 simulations with seven of the eight C.C.W.s (Mds.=17.5 & 9.0 minutes respectively), the percent occurrence of each social behavior was calculated by dividing the sum of intervals in which the primary scorer scored an occurrence within and across C.C.W.s by total number of intervals within and across C.C.W.s, and multiplying by 100. One youth-preferred social behavior, "smiling", was scored with phase 2 C.C.W.s only, since the position of the videocamera precluded scoring this social behavior with phase 1 C.C.W.s.

All videotapes were scored by a second scorer in order to assess reliability. Percent agreements were calculated for those intervals in which the primary scorer scored an occurrence, and also for those intervals in which the primary scorer scored a nonoccurrence, using the "agreements/agreements + disagreements x 100" formula. Coefficients were calculated for each social behavior which occurred at least once during either the pretest 1 or posttest condition. The coefficients so calculated had a mean value of 95.6% agreement with a range of from 85.7% to 100% agreement.

Results and Discussion

The quantitative data which are presented below can be interpreted most clearly in the light of a qualitative analysis of the verbal behavior of the C.C.W.s. During the pretest 1 condition, the verbal behavior of the C.C.W.s was partially "supportive" (e.g., "I'd like to help you with this problem."; "I'm worried about what will happen to you.") and partially "lecturing" (e.g., "You like playing the tough guy don't you?"; "If they kick you out of school, what will your parents say?") It

appeared as though the C.C.W.s' intent was to explore the reasons for the problem behavior, usually in terms of feelings, and to indicate to the youth that some sort of an attitude or behavior change was expected. During the posttest condition, the verbal behavior of the C.C.W.s was primarily related to contingency contracting; some of the "supportive" and much of the "lecturing" verbal behavior was omitted. This qualitative information may be relevant to an explanation of the quantitative data discussed below.

Changes in social behaviors from pretest to posttest were consistent across C.C.W.s and so no individual data are presented. Figure 5 shows the percentage of intervals, summed within and across C.C.W.s, in which each social behavior occurred. Open bars reflect pretest 1 simulations where C.C.W.s were asked to modify the problem behavior "as you see fit", while solid bars reflect posttest simulations where C.C.W.s used their newly acquired contracting skills. Changes in youth-preferred social behaviors are shown in the upper portion of the figure, while changes in youth-disliked behaviors are shown in the lower portion. Each social behavior is indicated along the abscissa.

Looking first at the youth-preferred behaviors, it is apparent that training C.C.W.s to use contingency contracting had the collateral effect of increasing the percent occurrence of the first six youth-preferred behaviors shown in the figure, and of decreasing the percent occurrence of the last five. "Fairness" showed the greatest increase in occurrence. This is not surprising since negotiation behaviors fall within the operational definition of this social behavior and C.C.W.s were, of course, taught to negotiate a reward and penalty while con-

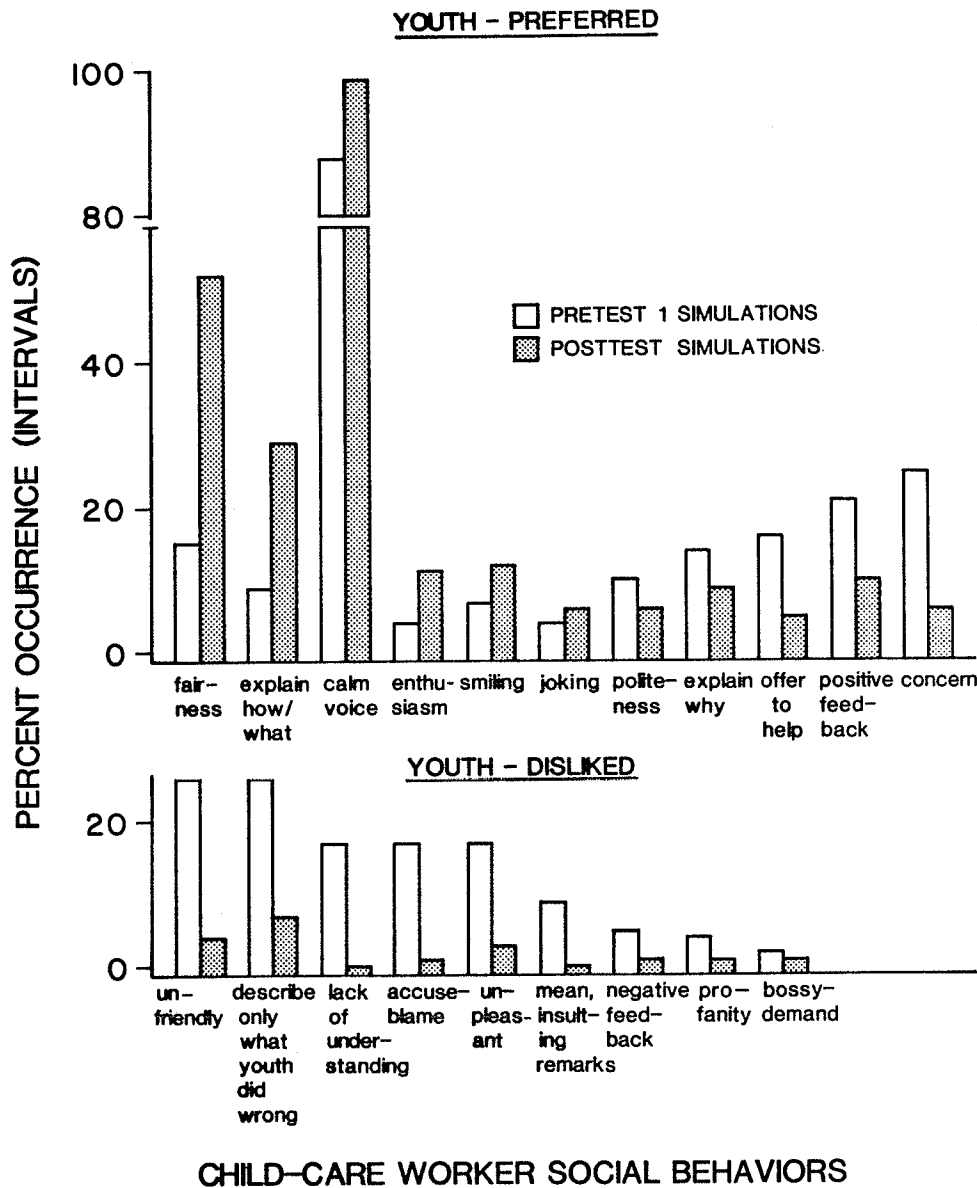


Figure 5: The percent of intervals in which youth-preferred and youth-disliked social behaviors were emitted by all child-care workers during the first pretest and posttest simulations of Study 1.

tracting. "Explain how/what" showed the next greatest increase, and as with "fairness," this is likely due to the fact that C.C.W.s were taught to describe the desired behavior to the youth as part of the negotiations procedure. "Calm voice," "enthusiasm," "smiling" and "joking" also increased. This appeared to be related to the fact that during the posttest condition, C.C.W.s typically commenced contracting immediately and dispensed with much of the "lecturing" verbal behavior that they had emitted during the pretest 1 condition. In the absence of "lecturing" behaviors, these particular youths-preferred behaviors may be more likely to occur. One other youth-preferred social behavior, "getting to the point within one minute", is not shown in the figure since by definition it could occur only once per simulation, which it always did.

Unfortunately, the five remaining youth-preferred social behaviors all decreased in percent occurrence. However, it should be noted that "politeness" and "explain why" actually increased a small amount in terms of the absolute number of intervals in which these behaviors occurred, but because the total number of intervals almost doubled during the posttest condition, the percent of the total intervals in which these behaviors occurred decreased. The decrease in "offer to provide help", "positive feedback", and "concern", appeared to be related to the fact that during the posttest condition, C.C.W.s typically commenced contracting immediately and dispensed with much of the "supportive" verbal behavior that they had emitted during the pretest 1 condition.

Figure 5 also shows that all youth-disliked social behaviors decreased in percent occurrence. In all cases, this reflected a decrease in the absolute number of intervals in which the behaviors occurred from

pretest 1 to posttest. This decrease appeared to be related to the fact that during the posttest condition, C.C.W.s typically commenced contracting immediately and dispensed with much "lecturing" verbal behavior that they had emitted during the pretest 1 condition.

Figure 6 shows the collateral effect of contracting upon C.C.W. social behaviors from another perspective. With each social behavior, the percent occurrence during pretest 1 was subtracted from the percent occurrence during the posttest. The height of the bar shows magnitude of change while the direction of the bar shows the direction of change. Thus, each bar in Figure 6 reflects the difference between the tops of the open and closed bars shown in Figure 5. With the youth-preferred behaviors, contracting had its greatest desired effect on "fairness", "explain how/what", and "calm voice", while it had its greatest undesired effect on "concern". With the youth-disliked behaviors, contracting had its greatest desired effect on "unfriendly", "describe only what the youth did wrong", "lack of understanding", "accusing-blaming", and "unpleasant". It had no undesired effect.

The results of Study 3 have implications for the training manual described in Study 1. The C.C.W.s taught to use contingency contracting skills should also be taught to increase their usage of those youth-preferred social behaviors which tend to decrease in percent occurrence as contracting behaviors increase (i.e., politeness, explain why, offer to provide help, positive feedback, concern). The extent to which youths prefer contracting to alternative interventions may be dependent upon C.C.W.s' employment of these social behaviors.

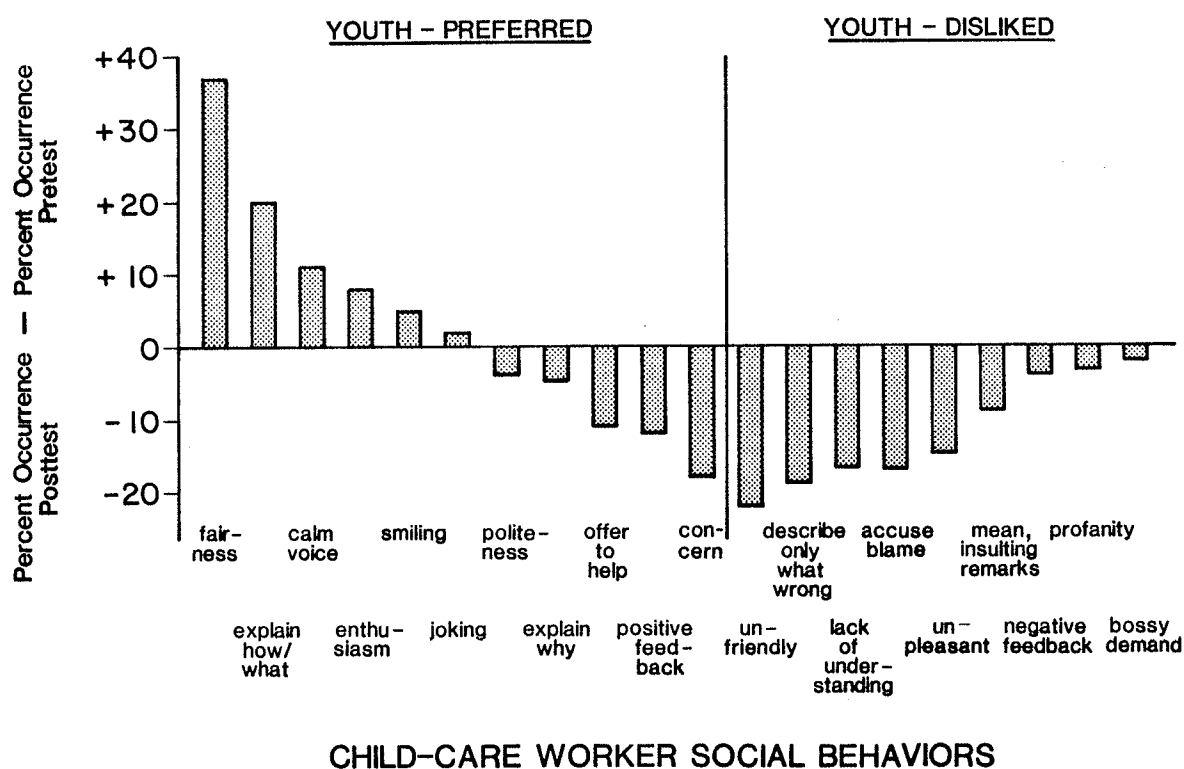


Figure 6: The change in the percent of intervals in which youth-preferred and youth-disliked social behaviors were emitted by all child-care workers, from the first pretest to the last posttest simulations of Study 1.

STUDY 4: YOUTH PREFERENCE

The purpose of Study 4 was to determine whether youths preferred contingency contracting or a more traditional form of intervention. This is of interest because youth preference is thought to relate to long term effectiveness of a program (Willner et al., 1977). The "traditional" form of intervention consisted of the manner in which the C.C.W.s behaved during the pretest 1 condition where they were told to "deal with this problem as you see fit." As previously mentioned, no C.C.W. attempted to implement an explicit reinforcement or punishment program during pretest 1, and the verbal behavior of most of the C.C.W.s alternated between being "supportive" and "lecturing."

Method

Subjects

Nine girls and eight boys participated in Study 4. The girls lived in the group home described in phase 2 of Study 1 while the boys lived in a similar level 3 group home for boys. All of the youths were of Indian ancestry. The girls' ages ranged from 13 to 17 years, with a mean of 15.2 years, while the boys' ages ranged from 15 to 17 years, with a mean of 15.8 years. Although four of the girls were later involved in the generalization tests of Study 1 (Y10, Y11, Y12, Y13), none of the youths had any experience with contingency contracting at the time Study 4 was conducted.

Procedure

The youths were shown videotapes of two simulations from phase 1 of Study 1. One videotape showed Mr.B responding to problem description "b" (see Table 1) under pretest 1 conditions, while a second videotape showed Mr.B responding to the same problem description under posttest conditions (i.e., using contingency contracting). The posttest videotape showed Mr. B. engaged in both negotiation and contract writing behaviors. Mr.B's simulations were chosen to show to the youths because, of the eight C.C.W.s, his were the most similar in terms of length (pretest = 12 minutes; posttest = 10 minutes). Mr.B was not a employee in the group homes in question and thus he was unknown to the youths. Mr.B's informed consent was obtained before the videotapes were shown to the youths.

The girls were divided into two groups of four and five, while the boys were divided into two groups of four. All groups viewed both videotapes, and the order of presentation was counterbalanced across girls and across boys. Prior to watching each videotape, the youths were read a standard set of five instructions which: (a) contained a brief description of the content of the videotape and requested the youths to watch the videotape and write down on a special form things that they liked and disliked about the way the C.C.W. "handles the situation"; (b) provided two examples of things that they might like and dislike ("seemed concerned"; "seemed fair"; "seemed bossy"; "seemed unfriendly"); (c) informed the youths that help in spelling or writing was available if they wanted it; (d) requested that the youths refrain from talking to each other; and (e) informed the youths that they would re-

ceive a free movie pass and one dollar as payment, if they completed the task.

After the youths finished writing their comments, they were provided with a rating form which read, "Please show how much you like the way the staff member handled the situation you just saw on the T.V. by giving him one of the 'grades' below. Circle your choice." Nine choices were available : A=excellent; B+; B=good; C+; C=average; D+; D=poor; F+; F=terrible. Scores of F=0 to A=8 were assigned to each youth's choice, and descriptive statistics were calculated for the girls and the boys ratings.

Results and Discussion

With the girls, the mean and standard deviation for ratings given to Mr.B's pretest 1 performance were 2.67 and 1.63 respectively, whereas for his posttest performance they were 6.33 and 1.76 respectively. All nine girls gave Mr.B's posttest performance a higher rating than his pretest performance. Thus, girls showed a definite preference for Mr.B's performance when he used contingency contracting as opposed to the more traditional intervention.

With boys, the mean and standard deviation for ratings given to Mr. B's pretest 1 performance were 4.88 and 1.83 respectively, and for his posttest performance they were 5.00 and 2.29 respectively. Three boys gave Mr.B's pretest 1 performance a higher rating, four gave his posttest performance a higher rating, and one boy gave equal ratings to both. Thus, boys preference was variable, and on the average they showed no preference for either of Mr. B's two intervention styles.

Thus, it is apparent that girls have a definite preference for the kinds of behaviors that Mr.B emitted while contracting, while, boys' preferences are more idiosyncratic. However, the reasons for particular preferences are not clear. A qualitative analysis of the comments written by the youths regarding their likes and dislikes sheds some light on this issue.

The girls produced a total of 71 written comments regarding things they liked and disliked about Mr.B's two intervention styles. Several comments were indecipherable, and a small number did not relate to the C.C.W.'s behavior. When such comments were eliminated, a total of 57 remained. The key words in the girls' comments are listed in the upper portion of Table 3. Sometimes a particular comment was listed by more than one girl. In such cases, the total number of girls who produced the comment is listed in brackets beside the comment. With respect to the traditional intervention, the ratio of "like" comments to "dislike" comments is approximately 1:4, whereas with the contracting intervention, the like:dislike ratio is approximately 4:1, a complete reverse. The comments suggest that girls liked the contracting intervention for two reasons. They liked some contracting-related behaviors per se such as the reward, the choice available to them during negotiation, the clarity of the contract, and the fairness of contracting, but they also liked a number of Mr.B's social behaviors such as being understanding, caring, and so on. Thus, it appears that the girls' preference for the contracting intervention was based upon the presence of contracting-related behaviors and upon collateral changes in Mr. B's social behaviors.

Table 3

Comments* Written by Youths According to Intervention Style

Traditional Intervention		Contracting Intervention	
Girls Like	Girls Dislike	Girls Like	Girls Dislike
-patient, talked about it	-pushy (4)	-the reward (5)	-the penalty (2)
-giving advice	-doesn't give kid a chance (3)	-choice of punish- ment and reward	-making a deal
-giving support	-tone of voice (2)	-the contract	-doesn't coach him enough
-polite	-too bossy (2)	-made things per- fectly clear	-lectured a bit
	-harsh	-fair (3)	-bossy
	-rude	-understanding (2)	
	-not under- standing	-caring (2)	
	-not fair	-good attitude (2)	
	-looks mean	-kind	
	-staring too much	-gives him a chance	
	-blamed kid	-not too pushy	
	-sounds angry	-good tone of voice	
	-his roughness	-easy going	
	-nagging	-didn't beat around bush	
		-not bossy	
		-considers kids' feelings	
Boys Like	Boys Dislike	Boys Like	Boys Dislike
-a little bit kind	-doesn't give kid a chance (2)	-the reward (4)	-the contract
-telling him straight	-asks too many questions (2)	-the bribe	-too strict
-concerned	-talks too much (2)	-making a deal	-too boring
	-too bossy (2)	-fair (2)	-too nosey
	-tells too many rules	-they don't talk much	
	-too nosey	-concerned	
	-the way he was talking		
	-calling him a tough guy		
	-gave kid a rough time		
	-unfair		
	-told kid to smarten up		
	-staff butts in		

*In some cases the table contains only key words which were abstracted from longer phrases. Spelling has been corrected.

The boys produced a total of 57 written comments. Of these comments, a number were either indecipherable or not related to the C.C.W.'s behavior. When such comments were eliminated, 33 remained. The key words in the boys' comments are listed in the lower portion of Table 3. As with the girls, a number in brackets indicates the number of boys who made the comment. With respect to the traditional intervention, the like:dislike ratio is approximately 1:5, whereas with the contracting intervention, the like:dislike ratio is approximately 2.5:1. Using the relative number of "like" comments as a measure,, the boys appeared to be more impressed with contracting than with the traditional intervention, although they were less impressed with contracting than the girls were. To the extent that they were impressed, their comments suggest that they liked the reward more than the changes in Mr.B's social behaviors. In consideration of the relatively high average rating given to the traditional intervention style, it is surprising that the majority of comments which were produced by the boys constitute reasons for disliking the traditional intervention.

The comments listed in Table 3 provide a good indication as to what stimuli were salient in controlling the ratings made by the girls, although the relationship between the boys' comments and ratings is less clear. It is also apparent that the majority of the comments produced would readily be accommodated by the categories of youth-preferred and youth-disliked social behavior validated by Willner et al. (1977), suggesting that those same social behaviors are relevant to an analysis of youth preference for contracting. With reference to Study 3, it may be that youth preference for contracting could be increased further by

teaching C.C.W.s to increase their usage of those youth-preferred behaviors which tend to decrease as contracting behaviors increase (e.g., politeness, explain why, offer to help, positive feedback, concern). Although the boys' comments suggest that they were more impressed with the reward than with social behaviors, preference for contracting might still be enhanced if preferred social behaviors occurred more frequently and thereby became more salient stimuli.

Study 4 must be viewed as a preliminary investigation of youth preference for contingency contracting rather than as a definitive investigation. This is because preference may interact with several variables other than sex. All the youths were North American Indians and so the extent to which the results can be generalized to other youths is unknown. Although the results of Study 4 suggest that preference, at least with girls, is a function of both contracting-related behaviors (e.g., use of a reward, negotiation behaviors) and changes in C.C.W. social behaviors, a more sophisticated design would be required to permit an evaluation of the relative contribution of these two categories of behaviors, or an evaluation of the relative contributions of the various behaviors within either category. Additionally, Study 4 compared preference for contracting to only one other style of intervention. It is not possible to say how contracting would have fared in comparison to another intervention, such as one that employed rewards but not written contracts. Thus, Study 4 leaves many questions regarding youth preference as yet unanswered. Nevertheless, it is an important study (albeit a preliminary one) because it illustrates clearly that some youths have a definite preference for contracting and that they are able to state

specific contracting-related behaviors and specific C.C.W. social behaviors as the reason for their preference. This in turn means that it may be possible to enhance preference for contracting by identifying and manipulating relevant contracting-related behaviors and relevant C.C.W. social behaviors.

GENERAL DISCUSSION

Study 1 clearly demonstrated that the training manual was a useful vehicle for teaching contingency contracting skills to C.C.W.s. The pretest 1-pretest 2 comparison showed that C.C.W.s were unlikely to use the minimal contracting behaviors which did exist in their repertoires prior to training until explicitly instructed to do so. The posttest data, particularly that from phase 2, showed that the manual alone was sufficient to increase both negotiation and contract writing behaviors to a level of proficiency that equalled or surpassed that of behaviorally-oriented graduate students. The generalization test data showed that negotiation and writing skills learned via the manual generalized to situations where the C.C.W.s contracted with real youths. In phase 2, the median amount of time the four C.C.W.s spent reading the manual was 24 minutes, and this was not supplemented by any additional training from the therapist. Thus, professionals responsible for staff training can rely primarily upon the manual as a training vehicle; they need not devote a large amount of time to supplementary training. However, in view of the fact that with Mr.A and Ms.G, negotiation behaviors temporarily weakened with Youth 2 and Youth 12 respectively, it is strongly recommended that therapists periodically assess C.C.W.s contracting skills via tape recordings of contracting sessions, and provide some supplementary training when necessary in order to ensure that contracting skills remain strong.

Following the completion of Study 1, the C.C.W.s were obliged to use contingency contracting only with those youths who frequently ran away from the residence, as one component of a comprehensive treatment package designed to reduce absconding that was being evaluated by the authors. Two informal observations made by the authors during this period of time are noteworthy.

First, C.C.W.s in both residences, in consultation with their supervisors, began to use contingency contracting to modify problem behaviors other than absconding. The C.C.W.s apparently considered the technique to be useful enough to extend its use to other problem behaviors, even though they were under no obligation to do so. This is desirable since it represents a behavioral correlate of the consumer satisfaction data collected by questionnaire after Study 2, and supports the contention that the manual has social validity.

Second, after some C.C.W.s had completed the generalization tests conducted in Study 1, they appeared to drift away from the specific negotiation behaviors prompted by the manual's flowchart in two main ways. The C.C.W.s never had been enthusiastic about the need to make direct behavioral observations during baseline and intervention conditions; they felt that formal observation and recording procedures were too time consuming. Consequently, data that had been obtained via formal observation and that had been recorded on special monitoring forms came to be replaced by more subjective descriptions of behavior which were entered into a youth's chart several times each day, in the same way that informal observations about a youth's progress are typically recorded in residences. In addition, there was evidence that some C.C.W.s ceased ask-

ing the youth to propose a reward and penalty, and instead began to impose these consequences. In some cases the imposed "reward" was access to standard privileges that already were loosely contingent upon other desired behaviors. In fairness to the C.C.W.s, this situation probably developed as a result of a lack of funds required to purchase extra reinforcers. These two changes in negotiation behaviors are, of course, undesirable. However, the extent to which the effectiveness of contracting was reduced by these changes is unknown because of the very fact that the data collected on problem behaviors became subjective and qualitative in nature. Interestingly, C.C.W.s continued to use the standard contract forms, probably because the forms were convenient and time efficient.

Thus, while the manual is sufficient for promoting the acquisition and generalization of negotiation and writing behaviors, maintenance of negotiation behaviors as defined by the flowchart will probably require the implementation of a special contingency. Periodic assessment of negotiation behaviors via tape recordings of negotiation sessions may help in this regard, but in addition, supervisors or clinical directors may need to establish specific contingencies in order to maintain control over negotiation behaviors.

The manual's flowchart of negotiation behaviors was developed in an effort to fulfill three objectives. The first was to ensure that negotiation per se would come to be viewed by C.C.W.s as a central feature of the contracting process. The second was to provide C.C.W.s with a negotiation procedure which they could master quickly and easily in order to maximize the applied value of the manual. The third was to make

available a standardized negotiation procedure which is amenable to procedural reliability checks so that in publications of future research, investigators can specify the extent to which the therapist's implementation of the independent variable actually conformed to the investigator's description of that variable. Objectives two and three apply to the standard blank contract form as well. In the present research, it is apparent from the generalization test data in Figures 2 and 3 that many of the C.C.W.s implemented the independent variable (i.e., contracting) with close to 100 percent adherence to protocol. Therefore, we can be reasonably confident that the respective changes in youth behavior reported in Study 2 reflect the impact of contracting as it was described in the method section of Study 1. Had C.C.W.s deviated from protocol to a large degree, that fact would be known and youth behavior change, or lack of it, could be interpreted accordingly.

It may be that other investigators will wish to revise aspects of the negotiation flowchart or standard blank contract form. This is desirable so long as the revisions meet two requirements. First, revisions should be accompanied by data which show that the modified procedure is in some way superior to the original one. Revisions based on theoretical grounds, without supporting data, will only serve to de-standardize a standardized procedure. Second, revisions supported by data must be described technologically.

Study 2 demonstrated that C.C.W.s who had learned to contract via the manual could in fact use their newly acquired skills to effect significant changes in the behavior of youths under their care. C.C.W.s did not make interobserver reliability checks, but this probably does

not constitute a serious threat to the internal validity of this study because of the highly discriminable nature of the target behaviors. Moreover, all staff members seemed to be convinced that significant behavior changes had occurred.

The behavior which was modified with three of the youths, room cleaning, likely had minimal clinical significance (see Emery & Marholin, 1977). However, "maintenance" behaviors such as room cleaning are often viewed as important to the day-to-day operation of the residence by C.C.W.s, and so they probably are representative of some of the problem behaviors which C.C.W.s will use contracting to modify. Moreover, the other four behaviors which were successfully modified (socializing; ignore teasing; appropriate school behavior; attendance at math class) are unquestionably of clinical significance. Study 2 is important because it constitutes a demonstration of the applied utility of the training manual.

The importance of Study 3 stems from the fact that the social behaviors which C.C.W.s use while contracting may be extremely relevant to the extent to which some youths find contracting to be an enjoyable and acceptable form of treatment. In general, Study 3 indicated that training in contracting via the manual has desirable effects on C.C.W. social behaviors; some youth-preferred behaviors increased in percent occurrence and all youth-disliked behaviors decreased in percent occurrence. However, some youth-preferred social behaviors decreased in frequency, and consequently the future use of the manual should be supplemented by training directed toward increasing C.C.W.s use of those particular social behaviors.

It is unclear at the present time which of the youth-preferred and youth-disliked behaviors are most related to youth preference, but Study 4 seems to indicate that youth preference for contracting is a function of both contracting-specific behaviors and C.C.W. social behaviors, at least for girls and probably for some boys. With more research, it may be possible to determine if specific social behaviors are especially relevant to enhancing youth preference, and if so, the training manual could be revised to incorporate such findings.

In summary, the present research demonstrated that the training manual alone acquires a considerable degree of control over C.C.W.s' contracting skills, although it is recommended that professionals periodically score both negotiation and writing behaviors, and provide supplementary training if necessary. Moreover, the flowchart and standard blank contract form allow for easily conducted assessment of procedural reliability which undoubtedly will facilitate the interpretation of future outcome research. Training C.C.W.s to use contingency contracting, as defined by the manual, produced highly desirable collateral changes in C.C.W.s' use of youth-preferred and youth-disliked social behaviors. However, some youth-preferred social behaviors occurred less often following training, and consequently C.C.W.s should be prompted to increase their use of those social behaviors. An assessment of youth preference revealed that all the girls and some of the boys who participated in Study 4 preferred contracting to a more traditional form of intervention. Future investigations of C.C.W. social behaviors during contracting may produce even greater youth preference, which would be expected to increase the long term effectiveness of contracting interventions.

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APPENDIX A

Review of the Literature

Review of the Literature

Contingency contracts, or behavioral contracts as they are sometimes called, are written and signed agreements between two parties which specify a behavioral requirement to be met and the consequences for the fulfillment of the requirement (DeRisi & Butz, 1975; Homme, Csanyi, Gonzales, & Rechts, 1969; Lundell, 1972). In Stuart's (1971, p. 2-3) more descriptive terms,

A behavioral contract is a means of scheduling the exchange of positive reinforcements between two or more persons.... Contracts structure reciprocal exchanges by specifying who is to do what, for whom, under what circumstances. They therefore make explicit the expectations of every party to an interaction and permit each to determine the relative benefits and costs to him of remaining within that relationship (Thibaut & Kelly, 1959).

Stuart considers contingency contracting to be a particularly useful way of scheduling the exchange of reinforcers between two individuals when more natural patterns of reciprocal reinforcement have either broken down, as in the case of troubled marriages, and families, or do not exist at all, as may occur in institutional settings. Stuart (1971, p. 2-3) maintains that the process of contingency contracting rests upon a foundation of four assumptions:

- I. Receipt of positive reinforcements in interpersonal exchanges is a privilege rather than a right.

By this Stuart simply means that individuals should not expect something for nothing. Individuals do not have an undeniable and inalienable right to reinforcers; reinforcers should be contingent upon some behavior.

- II. Effective interpersonal agreements are governed by the norm of reciprocity.

Thibaut & Kelly (1959) define a norm as a rule that is accepted to some degree by both members of a dyad. Contracting is governed by the norm of reciprocity, which is to say that an individual entering into a contractual agreement with another individual must compensate his partner fairly for any concession made by his partner, and vice versa.

III. The value of an interpersonal exchange is a direct function of the range, rate, and magnitude of the positive reinforcements mediated by that exchange.

In essence, an individual's attraction to another individual is a function of the proportion and value of positive reinforcers attained through the relationship (Byrne & Ramey, 1965). Contracting, in its ideal form, is a way of ensuring that two individuals frequently present one another with valued reinforcers, thereby increasing the value of the relationship to each individual.

IV. Rules create freedom in interpersonal exchanges.

Contracts are essentially written rules which specify relationships between behavior and consequences. Rules typically impose limits upon behavior and for this reason contracts may at first glance be seen as confining rather than as creating freedom. However, Stuart's contention is that rules always exist in interpersonal relationships, although in the absence of explicit written contracts, rules are sometimes applied inconsistently and/or changed without notice. Such a situation can lead to the accidental transgression of the rule and consequent punishment. Ambiguous or inconsistently applied contingencies tend to restrict behavior and generate anxiety. Contracts make contingencies of reinforcement and punishment explicit and consistent, thereby creating the freedom to behave in a manner which guarantees a desired consequence rather

than an undesired one. Moreover, knowing the rule allows one to make an informed choice when deciding whether or not to respond.

A number of behavior therapists have presented guidelines for designing contingency contracts (e.g., DeRisi & Butz, 1975; Homme et al., 1969; Lundell, 1972; Stuart, 1971). In general, these sets of guidelines are quite similar to one another. A popular manual by DeRisi and Butz (1975, p. 7) suggests that the following steps are essential to the process of contingency contracting:

1. Select one or two behaviors that you want to work on first.
2. Describe those behaviors so that they may be observed and counted.
3. Identify rewards that will help provide motivation to do well.
4. Locate people who can help you keep track of the behaviors being performed and who can perhaps give out rewards.
5. Write the contract so that everyone can understand it.
6. Collect data.
7. Troubleshoot the system if the data do not show improvement.
8. Rewrite the contract whether or not the data show improvement.
9. Continue to monitor, troubleshoot, and rewrite until there is improvement in the behaviors that were troublesome.
10. Select another behavior to work on.

All practitioners emphasize that the contract must be negotiated rather than imposed. In Stuart's (1971, p. 5) terms:

Just as contracts produce freedom through detailing reciprocal rule-governed exchanges, so must contracts be born of freedom, since coerced agreements are likely to be violated as soon as the coercive force is removed. Therefore, effective behavioral contracts must be negotiated....

With respect to content, DeRisi and Butz (1975, p. 43) state that a contract should contain the following elements:

1. Date agreement begins, ends, or is renegotiated.
2. Behavior(s) targeted for change.
3. Amount and kind of reward or reinforcer to be used.
4. Schedule of reinforcer's delivery.
5. Bonus clause for sustained or exceptional performance.

6. Statement of the penalties that will be imposed if the specified behavior is not performed.
7. Schedule for review of progress.
8. Signature of all those involved: client, parents, mediator, and yourself.

In addition to these elements, Stuart (1971) has suggested that a contract should outline the manner in which the behavior in question is to be monitored and recorded.

The various guidelines for the effective use of contingency contracting appear to have been derived primarily from behavioral theory and from each practitioner's clinical experience. Although contracting has been used with considerable success in treating a variety of behavior problems (as illustrated below), little in the way of process research has been conducted (Kazdin, 1980). Thus, how to make contingency contracting maximally effective is not known. This is an issue which will be examined in detail later.

Some of the kinds of behavior problems that therapists have used contingency contracting to treat include: (1) marital discord (e.g., Jacobson, 1977; Knox, 1971; Stuart, 1969, 1980; Weiss, Birchler, & Vincent, 1974); management of psychiatric patients (e.g., Bergman, 1975; O'Farrell, Goodenough, & Cutter, 1981; Upper, Lochman, & Aveni, 1977); (3) problems related to self-control such as weight control (e.g., Aragona, Cassady, & Drabman, 1975; Mann, 1972), smoking cessation (e.g., Paxton, 1981; Spring, Sipich, Trimble, & Goeckner, 1978; Winett, 1973), alcohol abuse (e.g., Gotestam & Bates, 1971; Teicher, Sinay, & Stumphauzer, 1976), and drug abuse (Boudin, 1972; Frederiksen, Jenkins, & Carr, 1976; Polakow & Doctor, 1973); and (4) school related behavior problems (e.g., Bristol & Sloane, 1974; Cantrell, Cantrell, Huddleston,

& Woolridge, 1969; Homme, 1971; Kirschenbaum, Dielman, & Karoly, 1982). In addition to these areas of application, contingency contracting has been used rather extensively in the treatment of adolescents deemed to be "delinquent" or "incorrigible." As delinquency is the area to which the research described herein relates, a review of the relevant literature is presented below. The review is divided into two sections; the first discusses research on outcome while the second discusses research on process.

A Review of the Outcome Research

Outcome research is research which relates to the effectiveness of a treatment (Davison & Neale, 1982). In the case of contingency contracting with adolescents, both uncontrolled case studies and controlled studies exist. In this review, studies are classified as "controlled" if some type of comparison group was employed in the case of large N designs, or if a reversal or multiple baseline was employed in the case of small N designs.

Uncontrolled case studies. Cantrell et al. (1969) instituted a contingency contracting procedure with children and adolescents in grades one through eleven who had problems involving truancy, aggressiveness, stealing, and underachievement. The youths were all judged to be capable of emitting more appropriate behaviors, indicating that the problem was primarily one of improper contingency management. The authors prepared the written contracts but had teachers and/or parents monitor behaviors and administer reinforcers. No data were actually presented but the authors concluded that the results of contracting were

"sufficiently encouraging to warrant recommending an experimental analysis of contingency contracting as a clinical method."

Tharp and Wetzel (1969) taught eight paraprofessionals to use behavior modification techniques with an emphasis on contingency contracting. These paraprofessionals then helped parents and teachers design treatment programs for 77 predelinquent children who had a variety of behavior problems in the home and school. Contingency contracting often was the main treatment strategy employed. The intervention was successful in reducing 89 % of the problem behaviors by 50 % or more from baseline levels.

Stuart (1971) described the case of a 16-year-old girl with a history of drug abuse, truancy, exhibitionism and promiscuity. Attempts to control her behavior by her overly strict parents had led to the development of an antagonistic relationship between the girl and her parents. Despite parental resistance, Stuart was able to negotiate a contract between parents and youth wherein reinforcers such as free time and allowance were made contingent upon adherence to curfew, schoolwork, and chores. The data indicate that the occurrence of desired behaviors increased in probability following the implementation of the contract.

Brooks (1974) employed contingency contracting to increase school attendance in two habitually truant highschool students. The first case described was that of a 15-year-old girl who had attended school only one or two full days per week during the first quarter of the school year. This youth had been counseled at school, threatened with suspension, and punished by her mother (her social activities were restricted and on one occasion she suffered corporal punishment), but she continued

to miss over three-fourths of her classes. The therapist met with the youth and her mother and designed a contract whereby the girl could earn systematic reductions in the restrictions her mother had placed on her social activities (i.e., she could earn free time). Teachers signed special cards to monitor class attendance. No data were presented but the therapist reported that the youth attended classes regularly. Contracting was discontinued after six weeks but class attendance maintained, perhaps because the girl's mother began to socially reinforce school attendance. The second case described was that of a 16 year old boy who began to miss classes following his parents' separation. The youth generally attended his homeroom period when attendance was taken and then left the school at a later time. This behavior was thought to have occurred for the entire, previous school year. The therapist met with the youth and his mother and designed a contract whereby the boy could earn money for a trip to Disneyland contingent upon attending classes. Teachers signed special cards to monitor his attendance. No data were provided but the therapist reported that the youth attended all his classes and that the behavior maintained even after the formal contracting was discontinued.

Blechman, Olson, Schornagel, and Turner (1976) discuss the case of a 14-year-old boy who had several behavior problems at home. The boy and his mother attended a clinic where they were taught to use contingency contracting in five sessions. Problem behaviors which the youth was to change included refusal to do dishes, refusal to empty garbage, and verbally insulting his mother. Problem behaviors which the mother was to change included interrupting the youth while he was doing home-

work or watching television. Frequency counts pre and post-training indicated that the problem behaviors declined significantly with both the youth and his mother.

Frederickson et al. (1976) report the successful use of contingency contracting in the treatment of a poly-drug abusing adolescent. An assessment had revealed that poly-drug usage had occurred for three years and that it was reinforced by the avoidance of family problems, peer approval, and pleasurable physical effects. Rather than attempt to decrease drug use directly, the authors negotiated a contract designed to increase attendance at a vocational school and to modify the communication skills of all family members. Urine analyses indicated a marked reduction in drug use following the initiation of contracting sessions, and change maintained at a one year follow-up. In addition, self report ratings indicated that all family members were happier with their relationship following contracting and this effect also maintained at the one year follow-up.

Stumphauzer (1976) discussed the case of a 12-year-old girl with a problem described as "uncontrollable stealing." The youth frequently stole money from home and school. Stumphauzer used an intervention consisting of training in cognitive self-control (see Meichenbaum & Goodman, 1971), contingency contracting, and family therapy, to suppress stealing from a baseline of 5 or 6 instances per week to zero. The treatment gains were maintained at an 18-month follow-up.

Teicher et al. (1976) taught paraprofessionals to use contingency contracting with adolescents and their families to treat problems related to alcohol abuse, drug abuse, truancy, and poor academic performance.

Of the ten paraprofessionals who initiated training, only four completed it. Twelve adolescents participated in the study but data were presented only for one illustrative case. Contracting was successful in increasing the youth's school attendance and decreasing his alcohol intake.

Welch (1976) reported the case of a 13-year-old boy with problems of aggression against a sibling, theft of money from family members, refusal to do chores, and refusal to speak to family members for days at a time. The intervention consisted of teaching negotiation skills and contingency contracting to the youth and his parents. The author reports that the contracting had a successful outcome but no data were provided.

Allison, Kendall, and Sloane (1979) used a token economy to increase the frequency of a number of desirable behaviors and to decrease the frequency of a number of undesirable behaviors with a group of institutionalized male and female delinquents. The investigators then changed the motivational system from a token economy to a procedure which the authors called a "standing contingency contract." Behavioral objectives were achieved more reliably with the latter system, and staff found it easier to implement. However, counterbalancing was not employed and so the effectiveness of the standing contingency contract was confounded by prior exposure to the token economy. Moreover, the term "standing contingency contract" may be a misnomer since there was no evidence that a written contract was negotiated or that the youths agreed to the terms of the contract.

Thoresen, Thoresen, Klein, Wilbur, Becker-Haven, and Haven (1979) used contingency contracting as one treatment element in their work with incorrigible children (age 6-13) living in Learning House. The children were initially treated with a comprehensive token economy and later graduated to a contingency contracting system. Thoresen et al. presented an illustrative case study of a youth with a problem of arguing with staff and other youths. Contracting reduced instances of arguing from a baseline average of about 4 per day to 0 per day. The improvement maintained even after the contracting ceased, apparently due to the positive interactions he began having with peers and staff during the contracting phase.

Controlled research. MacDonald, Gallimore, and MacDonald (1970) taught a paraprofessional how to make "deals" with six adolescents who were described as chronic, intermediate school nonattenders. "Deals" were referred to as contracts by the authors although it is not clear from their description whether or not the contract was written or verbal. The "deals" were designed to increase school attendance. Reinforcers which the youths negotiated for included money, clothes, and games of pool. The average weekly school attendance of the six youths increased considerably following implementation of the "deals". Using an ABAB design, the authors demonstrated that the increased attendance was due to the presence of the "deals". In a second study, two paraprofessionals negotiated "deals" with 20 chronic high school nonattenders as in the first study. A third paraprofessional who was not taught how to make "deals" contacted 15 other high school nonattenders and talked to them about the importance of attending school. The average weekly at-

tendance of the "deals" group showed a moderate increase from baseline while the data for the other group showed a slight decrease in attendance.

Ferdun, Webb, Lockard, and Mahan (1972, cited in Burchard & Lane, 1982) compared 452 youths who participated in a contingency contracting program in one institution with 329 control youths from another institution. Youths were not randomly assigned and they were matched on only one variable, age. Thus, the two groups may not have been equivalent at onset. A measure of parole violations favored the contracting group but a measure of recidivism did not.

Stuart and Tripodi (1973) used contingency contracting supplemented by communication skills training to treat 79 delinquents and their families who were referred to their Family and School Consultation Project due to a variety of behavior problems. Fifteen youths and their families who refused treatment were used as a comparison group. Measures of school attendance and of grades favored the contracting group. In addition, a greater percentage of the control subjects were subsequently referred to juvenile court. No difference was found in school tardiness.

Fitzgerald (1974) worked with 20 male juvenile probationers who had been ordered by the court to pay fines. All youths were provided with an opportunity to engage in yard work and house painting tasks with the money earned going directly to the court. Some boys were randomly assigned to a contracting group where working was reinforced with time off probation and/or tickets to sports events. Other boys were randomly assigned to a control group and were told that working could reduce probation time but no contract was negotiated or signed. The boys who con-

tracted for reinforcers worked significantly more hours than the boys in the control group over a 90-day period.

A series of studies by Patterson and his colleagues (Walter & Gilmore, 1973; Patterson, 1974; Wiltz & Patterson, 1974) also lend support to the utility of contingency contracting with delinquent adolescents. Patterson (1974) worked with the families of 27 boys who had a diagnosis of conduct disorder. All families were referred by agencies such as the juvenile court. Treatment consisted of teaching the parents to use basic behavioral management techniques with an emphasis on contingency contracting. Using a behavioral coding system, the authors observed and coded deviant youth behaviors in the home pre and post intervention. Parents also scored the occurrence of deviant youth behaviors each day. Both scoring systems showed significant reductions in deviant youth behavior in the home during the intervention and at a one year follow-up. Using a sample of 12 of the 27 treated families referred to above, Wiltz and Patterson (1974) demonstrated that the intervention produced significant reductions in deviant youth behavior whereas no such change occurred over a comparable time period in a waiting list control group. Walter and Gilmore (1973) compared the data from six of the 27 treated families referred to above with six families comprising an attention placebo control group who simply met with the therapist and discussed their children's problems for the same number of sessions as the treated families. Youths in treated families showed significant reductions in deviant behaviors but youths in the attention placebo group did not.

Stahl (1975, cited in Stahl, Fuller, Lefebvre, & Burchard, 1979) compared the effect of three interventions upon teacher ratings of the

classroom behavior of 40 youths attending the Hunt Youth Center. Youths in a contingency contracting group received points which could be exchanged for back-up reinforcers contingent upon positive teacher ratings. Youths in a behavioral rehearsal group were reinforced for practicing appropriate classroom behaviors outside of class. Youths in a self evaluation group were reinforced for learning to accurately self evaluate the adequacy of their classroom behavior, regardless of whether it was good or bad. Teacher ratings improved with all three groups but with those students whose ratings were lowest during baseline, the contingency contracting procedure produced the greatest improvement. Moreover, a greater improvement in grades occurred in the contingency contracting group.

Jesness (1975, 1976) compared the effectiveness of a behavior modification program at the Karl Holton School which employed contingency contracting supplemented by other behavioral techniques with a transactional analysis program at the O.H.Close School. Unfortunately the transactional analysis program also used a form of contracting; youths negotiated goals and formulated a treatment contract, although no explicit reinforcers were made contingent upon adherence to the contract. Over 400 boys were randomly assigned to each of the two programs. The programs targeted academic, social, and deviant behaviors for change. Both programs affected academic achievement in a positive way. Boys in the transactional analysis group improved more on measures of attitude whereas boys in the behavior modification group showed slightly greater improvement on ratings of behavior. At a one year follow-up, recidivism rates of both groups were superior to those of control institutions but they did not differ significantly from one another.

Weathers and Liberman (1975) initiated a behavioral intervention consisting of contingency contracting and communication skills training with 28 male and female juvenile probationers and their families. Twenty of the families dropped out of the program before treatment commenced, many during a period where the parents were required to collect baseline data. Only six families actually negotiated a contingency contract. Using a multiple baseline design across families, these researchers examined the effect of the intervention upon measures of verbal abusiveness to parents, curfew compliance, school attendance, performance of chores, and a pre-post scoring of the Jesness Behavior Checklist. Sixteen adolescents whose families had completed an initial assessment before dropping out were used as a comparison group with measures such as the Jesness Behavior Checklist, school grades, and number of probationary incidents. The intervention had no significant impact on any measures except for a modest decrease in verbal abusiveness. However, the study has been criticized by Blechman (1976) for failing to provide family members with sufficient training in contracting skills.

Stuart, Tripodi, Jayaratne, and Camburn (1976) randomly assigned 102 predelinquent adolescents and their families who were referred to the Family and School Consultation Project to an experimental group or to a waiting list control group. The random assignment yielded two groups which were demographically similar, but the experimental group had a modest overrepresentation of families described as "socially disorganized" (i.e., very low income and single parent families). This fact, plus the fact that a small number of families in the control group sought and received help elsewhere but were retained in the control

group, produced a bias against the experimental group. The intervention consisted of contingency contracting in both the home and school. Ten outcome measures were employed. These measures included grades, attendance, ratings by the teacher, ratings by the referral source, and a variety of ratings by the parents. The adolescents treated with contingency contracting improved more than the control group on eight of the ten measures, with five of the differences achieving statistical significance, despite the conservative research design.

Stuart, Jayaratne, and Tripodi (1976) randomly assigned 60 school-referred predelinquent youths to either an experimental group or a group therapy attention placebo control group. The intervention consisted of therapists meeting with the youths and their families and negotiating contingency contracts for improved school behavior. Youths in the control group were assigned to school counselors who provided them with a variety of activities thought to have minimal therapeutic potential. The experimental and control groups were similar demographically except that the experimental group had an over representation of single parent families; a fact which likely biased the outcome of the study against the experimental group. Other biases existed as well. Five of the most problematic youths in the control group were dropped from the study. In addition, some of the counselors conducting the group therapy attention placebo control informally initiated their own contingency contracts and/or provided tutoring to 13 of the control youths. Thus the research design inadvertently became a highly conservative one with several biasing factors operating against the experimental group. Thirteen dependent measures were used: six reflecting school performance (e.g.,

grades, absences); six reflecting the behavior of the youth and his family at home (e.g., parental ratings of the youth-parent relationship, ratings of marital adjustment); and a measure of court contacts. Despite the biasing factors, the youths in the contingency contracting group improved more than the youths in the control group on all 13 measures, although only four of the changes achieved statistical significance.

A series of studies conducted by Alexander and Parsons and their colleagues (Alexander & Parsons, 1973; Alexander & Barton, 1976; Alexander, Barton, Schiavo, & Parsons, 1976; Klein, Alexander, & Parsons, 1977) also support the efficacy of contingency contracting treatment programs with delinquent youths. The investigators refer to their intervention as "behavioral systems therapy for families" (Alexander & Barton, 1976). It is designed to replace maladaptive family interactions with contingency contracting skills and there is a considerable emphasis placed upon teaching the communication and negotiation skills required to establish a successful contingency contract. While contracting was the main treatment vehicle, some families also were provided with "bibliotherapy" and some were taught to use token economics with younger children.

Alexander and Parsons (1973) randomly assigned 99 male and female juveniles and their families who were referred by the juvenile court to a behavioral family therapy condition or to one of three control conditions: a client-centered family group therapy condition; a psychodynamic family condition (these first two treatments were representative of the kinds of treatment often provided to juveniles in that state and which

controlled for therapist contact and expectations of success); or to a no treatment condition which controlled for the effects of maturation. The four groups were alike demographically. The experimenters hypothesized that the behavioral training in negotiation and contracting skills would lead to increased reciprocal reinforcement and increased clarity of communication, and that this in turn would lead to decrease in delinquent acts. To assess the former two behaviors, the researchers had the families engage in 20-minute discussions where total talk time, periods of silence, and frequency of positive interruptions were measured. To assess the latter behavior, they analyzed court records to determine recidivism rates. The results of the study favored the behavior family therapy group on all measures. This group demonstrated the following significant effects: (1) more equality of talk time, indicating more participation by all family members; (2) less silence, indicating greater general family activity, and (3) a greater frequency of positive interruptions, again reflecting increased participation. The recidivism rate for the entire county was 51%. For the client-centered group it was 47%, for the psychoanalytic group it was 73%, and for the no treatment group it was 50%. In contrast, the recidivism rate for the behavioral family therapy group was 26%, a statistically significant reduction in delinquent acts. Similar findings have been obtained in replication studies by Alexander and Parsons (1976) and Alexander et al. (1976).

Klein et al. (1977) conducted a 2.5-3.5 year follow-up of the families treated by Alexander and Parsons (1973). Their interest was in examining the effect of the behavioral intervention on the recidivism rates of the siblings of the adolescents treated in that study. The si-

bling recidivism rates were: for the client-centered control group, 59%; for the psychodynamic group, 63%; and for the no treatment group, 40%. The sibling recidivism rate for the behavioral family therapy group was 20%, a statistically, lower rate. Unfortunately, this finding may not be as impressive as it first appears since it is not known whether the sibling groups were demographically similar to begin with.

Mills and Walter (1979) conducted a study with 76 delinquent adolescents referred to them by the juvenile courts' and described as being the courts most serious offenders. Fifty-three were assigned to a behavioral employment program and 23 were assigned to a control group. Assignment was not random; a youth was assigned to the control group if no job was available when he entered the program. The two groups were similar in age but no data were presented to indicate that they were similar with respect to variables such as sex distribution, socioeconomic status, job history, or type of offense. The intervention consisted of: (1) recruiting and training local employers to use social reinforcement; (2) establishing a contingency contract between the experimenter and the youths where the youth agreed to bring an evaluation sheet completed by the employer to the experimenter on a weekly basis in return for a paycheck; (3) training the youth in proemployment skills (e.g., being on time, calling in if ill, following instructions, etc.); and (4) placing the youth in a job. At one year follow-up, 90.6% of the experimental group had no further arrests and had avoided institutionalization whereas only 30.4% of the controls had no further arrests and only 47.8% had avoided institutionalization. Of those youths who were initially in school, 85.7% of the experimental youths were still in school as compared to only 33.3% of the controls. One hundred percent

of the experimental youths were placed in jobs and 34% of them were still employed at follow-up. Only 39% of the control youths obtained jobs and 0% were still employed at follow-up.

Besalel and Azrin (1981) worked with 29 youths and their parents. The youths were referred for therapy by agencies such as school guidance and probation, for problems such as chronic stealing, aggression, truancy, and incorrigibility. The youths were randomly assigned to a treatment group or a waiting list control group. Using a problem checklist, four dependent measures were obtained on a pre and post-intervention basis: (1) the mean number of problem behaviors emitted by youths as scored by parents; (2) the mean severity of those problems as scored by parents; (3) the mean number of problem behaviors emitted by parents as scored by youths; and (4) the mean severity of those problems as scored by the youths. The intervention consisted of contingency contracting, communication skills training, and overcorrection. Results indicated that the number and severity of behavior problems scored by both parents and youths decreased significantly for the treatment group but not for the waiting list control group. When the intervention was eventually implemented with the latter, a replication of the effects of treatment was achieved.

Of the controlled studies cited above, most confounded the effects of contingency contracting by supplementing this procedure with other behavioral techniques. Only Stuart, Jayaratne, and Tripodi (1976) clearly state that contingency contracting was the only intervention employed. The other studies either explicitly stated that supplementary procedures were employed (e.g., Alexander & Parsons, 1973; Jesness,

1975, 1976; Patterson, 1974) or they discussed their procedures so briefly as to preclude a determination of whether or not supplementary procedures were employed (e.g., Stahl, 1975, cited in Stahl et al., 1979).

Nevertheless, contingency contracting was usually described as the primary intervention technique. Consequently, it is apparent that contracting, at least when supplemented by other procedures, fares well in comparison to more traditional therapies, attention placebo controls, and no treatment controls (Alexander & Parsons, 1973, 1976; Fitzgerald, 1974; Klein et al., 1977; MacDonald et al., 1970; Mills & Walter, 1979; Stahl, 1975 cited in Stahl et al., 1979; Stuart, Jayaratne, & Tripodi, 1976; Stuart & Tripodi, 1973; Stuart, Tripodi, Jayaratne, & Camburn, 1976; Walter & Gilmore, 1973; Wiltz & Patterson, 1974), although several less supportive findings exist (Jesness, 1976; Weathers & Liberman, 1975a).

Two questions arise from this outcome research. (1) Why was contracting effective in most but not all of the studies? (2) How can contracting be made even more effective?

A possible answer to the first question relates to unquantified variation in the contingency contracting procedure. In general, the research reviewed above cannot be called technological in the sense that the term is used by Baer, Wolf, and Risley (1968). That is, the great majority of investigators did not specify the exact nature of the contracting procedure in a manner so precise as to unambiguously allow for direct replication of the procedure by another researcher. For the most part these researchers simply indicated that their contracting procedure

was implemented in a manner similar to that described in preceding research articles such as those by Homme et al. (1969) and Stuart (1971). Yet none of the earlier studies are completely technological themselves, for although they stress that contracts must be negotiated, they provide no operationalized procedure for the negotiation process. Consequently, it is likely that the contracting procedures employed in the research reviewed above differ from one another to an unknown degree. Variability in procedure may account for variability in outcome. This problem is further complicated by the fact that individual therapists may have deviated from protocol to an unknown degree. In other words, the independent variable (contingency contracting) may not have been presented to the youths and their families in the manner in which it was described in the method section of the respective articles. There is some evidence that this did in fact happen. In an analysis of data collected in the study by Stuart and Tripodi (1973) which was reviewed above, Stuart and Lott (1972) found that both the content of the contracts and the number of contract renegotiations were significantly affected by therapist influence. As a result of this finding, Stuart and his colleagues (Jayaratne, Stuart, & Tripodi, 1974; Stuart, Tripodi, Jayaratne, & Camburn, 1976) recommended that investigators use standardized contracting procedures in their research. However, even if standardized procedures are adopted, there would be no way of knowing the extent to which therapists conformed to those procedures unless procedural (independent variable) reliability checks were conducted in a manner analogous to the way in which dependent variable reliability checks are customarily made in behavioral research (e.g., Kazdin, 1980). Recently, several articles have

appeared in the literature which emphasize the necessity for procedural reliability checks in order to ensure the integrity of the independent variable in research (Billingsley, White, & Munson, 1980; Peterson, Homer & Wonderlich, 1982). Thus, it is apparent that the creation of a standardized contingency contracting procedure, which could be subjected to reliability tests when applied, would facilitate the interpretation of future outcome research and also the training of neophyte therapists.

In order to answer the second question as to how to make contingency contracting with delinquents even more effective, an analysis of the process of contracting must be undertaken in order to determine those aspects of the procedure which are essential to successful outcome so that they can be emphasized, and those aspects which are nonessential or even detrimental so that they can be deleted from the procedure (Davison & Neale, 1982). Relevant literature is reviewed below.

A Review of the Process Research

There are a multitude of process variables which may relate to the effectiveness of contingency contracting with adolescents. Some of these variables have been investigated, although not always with a delinquent adolescent population. Many have yet to be studied.

1. The reinforcement contingency. Winett (1973) employed a contingency contracting procedure with individuals who were trying to quit smoking. Clients deposited \$55 with the therapist and signed contracts which specified their responsibilities in terms of reducing cigarette consumption. With the experimental group, the contract specified that \$15 would be returned each time a particular reduction criterion was

achieved on schedule whereas no such clause existed in the control group who simply received \$15 each time they attended a certain number of meetings. In other words, the control group received money noncontingently with respect to smoking cessation. Results favored the contingent group.

Kanfer, Cox, Greiner, and Karoly (1974) also demonstrated the importance of the reinforcement contingency in a study with undergraduates required to engage in a cold pressor test. The dependent variable was the length of time the subjects kept their hands emersed in ice water. Subjects who were reinforced for contract fulfillment tolerated the ice water longer than subjects who received reinforcement contingent upon contract making.

Eyberg and Johnson (1974) trained two groups of parents to use behavioral techniques to modify problem behaviors emitted by their children. Both groups were required to pay a fee in advance. With the experimental group, an additional monetary deposit was required and the experimenter imposed a contract which stated that portions of the entire deposit would be returned contingent upon a number of desired behaviors such as session attendance and completion of homework assignments. Parents involved in contracting were significantly superior in assignment completion, number of child behavior problems treated, and therapist ratings of cooperation.

Spring et al. (1978) found that clients who signed a contingency contract which stipulated that they would lose deposited money if they failed to quit smoking were more likely to be abstinent at the end of treatment than clients who signed a noncontingency contract wherein they simply pledged to quit smoking.

The study by Spring et al. (1978) does not control for the effect of noncontingent reinforcement, and the study by Eyberg and Johnson (1974) suffers from the same confound, in addition to failing to control for the presence of a written contract versus no written contract. Nevertheless, the results of these studies are consistent with the results obtained by Winett (1973) and Kanfer et al. (1974) which clearly demonstrated the importance of the contingency per se.

2. The nature of the performance criteria. Kanfer et al. (1974) compared two groups of undergraduates on a cold pressor test. Group 1 received vague oral instructions which asked the subjects to keep their hands emersed "as long as you can." Group 2 received explicit written instructions asking them to try and keep their hands emersed for three minutes. These subjects also signed a contract indicating their intent to try and fulfill the behavioral requirement. No reinforcer was programmed but all subjects had volunteered for the experiment and apparently were curious and interested in participating. Subjects in group 2 kept their hands in the ice water for a significantly longer period of time. Technically the effect of the explicit written performance criteria was confounded by the fact that these subjects also signed a contract. However, this study still demonstrated that a signed contract with explicit performance criteria is more effective in promoting behavior change than less explicit verbal instructions.

Seidner and Kirschenbaum (1980) provided evidence of the importance of explicit performance criteria independent of a written contract. They conducted a study with undergraduate students who wished to improve their study habits. Using a factorial design, they compared the effect

of presenting subjects with vague performance criteria versus explicit performance criteria and the effect of having a signed contract versus no contract. Subjects in groups 1 and 2 were given vague instructions for performance. They were simply told that the treatment would improve their study habits in a manner that would become clear to them as the treatment progressed. Subjects in group 3, 4, and 5 were given explicit instructions for performance. They were told how to self-monitor study habits and how to rearrange their environment so as to make it more conducive to studying. Groups 1 and 3 did not have a contract. Groups 2 and 4 signed a contract which stated that they intended to increase their study time by a specific amount by the end of the treatment. That is, their contract specified a long term behavior change goal. Group 5 signed a contract which stated that they intended to make certain behavior changes on a daily basis. No group received any programmed reinforcer, although presumably improving their study habits would lead to improved grades. A number of measures of study behavior were made, including self-reports and changes in grades. The results of the study indicated that the subjects who received explicit performance criteria (groups 3 and 4) improved their study behavior more than subjects who received vague performance criteria, (groups 1 and 2), even though the subjects in group 3 did not have a contract. Of the groups which received explicit performance criteria (groups 3, 4, and 5), the group that signed a contract which specified daily behavioral requirements (group 5) showed the greatest behavior change. Thus, this study demonstrates that contracts with explicit and immediate performance criteria are more effective than contracts which specify vague and long term behavioral requirements.

Kirschenbaum, Dielman, and Karoly (1982) further examined the effect of explicit performance criteria and contracting upon behavior change. Five students in an educational rehabilitation facility participated. Four of the five students were over 30 years of age and were recovering alcoholics while the fifth was a divorced teenage mother. None had achieved a grade 12 education. A single case ABCBC research design was employed. In the A phase, baseline data were collected. In the B phase, the students were presented with the following explicit performance criteria: (1) attend each class; (2) be on time; (3) participate in class; (4) refrain from private conversation; (5) do homework promptly and accurately; and (6) study for tests. In the C phase, a contract was implemented to facilitate meeting some of these performance criteria. The reinforcer was a supportive letter sent to the institution which controlled the students' finances. Data on homework accuracy and classroom participation were presented for three and two students respectively. Providing explicit performance criteria alone improved performance with two students whose baseline performance was very poor and with one student whose baseline performance was already reasonably good. It failed to produce an effect with two students. Contracting improved performance even more, except where further improvement was difficult due to ceiling effects. Contracting also improved performance with two students who had not responded to the explicit performance criteria alone.

3. The nature of the behavior. Stuart (1971) cautioned that the behavioral requirement should be kept small when contracting with adolescents because adults control relatively few of the stimuli which

serve as reinforcers for teenagers. Weathers and Liberman (1978) concur with this opinion. Similarly, DeRisi and Butz (1975) maintain that it is especially important that the first behavior targeted for change be a relatively simple one. Although these contentions have not been tested experimentally within the context of contingency contracting with adolescents, they are consistent with what is known about establishing behaviors with reinforcement via noncontracting methods (e.g., Kazdin, 1980). Moreover, the impression of Weathers and Liberman (1978) is that studies of contracting with adolescents which have produced the best results have generally targeted a single discrete behavior.

4. The nature of competing contingencies. The effectiveness of any reinforcement program is partially determined by the strength of the naturally occurring contingencies which are promoting the problem behavior. Since the caretakers of adolescents control comparatively few powerful reinforcers whereas peers often control many (Stuart, 1971), certain naturally occurring albeit undesirable contingencies may be difficult, if not impossible, to counteract via contingency contracting. To date, no research has been directed towards predicting which, if any, behaviors are likely to be under such powerful control by naturally occurring contingencies so as to be unmodifiable by contingency contracting. Such a list might eventually be acquired if journals published well implemented but unsuccessful contingency contracting attempts.

5. Type of contract. Stuart (1969, 1980) identified two types of contracts, the "partitive" or "quid pro quo" contract and the "holistic" or "good faith" contract. In the case of the former, there is a point-to-point, if-then contingent relationship between the behavioral requirement and the reinforcer. An example of such a contract would be:

- (1) If Bill returns home by 11:00 P.M. each night for one week, then Mr. Brown will give Bill \$5 on Saturday morning
- (2) If Bill attends school each day for 5 days, then Mr. Brown will allow Bill to use the car on Friday night.
- (3) If Bill mows the lawn on Saturday morning, then Mr. Brown will take Bill to the football game Saturday afternoon

In the case of the latter, each party lists the reinforcers they desire and the contract simply states that each party will attempt to present the other with these reinforcers. An example of such a contract would be:

It is understood that:

Mr. Brown would like Bill to: Bill would like Mr. Brown to:

- (1) Return home by 11:00 P.M. each night. Give him \$5 allowance each week.
- (2) Attend school each weekday. Allow him to borrow the car on Friday nights.
- (3) Mow the lawn each Saturday morning. Take him to a football game on Saturdays.

Most of the studies which relate to contingency contracting with adolescents appear to have employed the quid pro quo type, whereas good

faith contracts seem to be the preferred type in the behavioral marital therapy literature (Stuart, 1980). As of yet there is no evidence that one type is more effective than the other. Jacobson (1978b) compared the two within the context of marital therapy and found no significant difference, but no such study has been done with delinquents.

7. The content of the contract. Practitioners have suggested that contracts should contain the following elements: (1) names of the parties involved; (2) specification of the desired behavior; (3) specification of the reinforcer; (4) specification of a bonus for sustained or exceptional performance; (5) specification of a penalty for failure to meet the behavioral requirement; (6) date the contract begins and is to be renegotiated; (7) specification of a monitoring system; and (8) signatures of the parties involved (DeRisi & Butz, 1975; Lundell, 1972; Stuart, 1971). It is possible that some of the elements are more essential than others but little research has been conducted to assess this possibility. Stuart and Lott (1972) examined the contracts obtained from the 79 youths and their families treated in the Stuart and Tripodi (1973) study discussed previously. They looked to see if any of the following content variables were related to outcome: (1) overall length of contract; (2) number of privileges; (3) number of bonuses; (4) number of penalties; (5) number of times contracts were renegotiated; (6) inclusion of school attendance and/or performance responsibilities; (7) inclusion of chore responsibilities; and (8) inclusion of money and/or free time privileges. The authors concluded that these contract characteristics were unrelated to treatment outcome.

6. The duration of the contracting intervention. In the treatment of 79 youths and their families, Stuart and Tripodi (1973) randomly assigned clients to a 15-day, 45-day, or 90-day time-constrained treatment group. Ten dependent measures were used to assess outcome. Only two significant differences between the three groups were obtained. The 90-day treatment led to greater improvement in school attendance while the 15-day treatment led to more positive changes on the Jesness Social Maladjustment Scale. When changes on all 10 measures were considered, the authors concluded that the three treatment conditions were of equal effectiveness. Interestingly, the analysis of Stuart and Lott (1972) indicated that during the 45 and 90-day conditions, therapists waited for a longer period of time before renegotiating the contracts than they did during the 15-day conditions. Since renegotiation usually involves making changes desired by the youth or the parents, it would seem to be most desirable to make such changes as soon as possible, yet when given extra time, therapists appear to procrastinate.

Jayaratne et al., Stuart, Tripodi, and Jayaratne (in press, cited in 1974) report on the comparison of 21-day and 60-day time-constrained contracting treatments with delinquent youths and their families. Once again, there were no significant differences between the two groups. Apparently lengthening the treatment period beyond two or three weeks does not add to the effectiveness of contingency contracting.

8. The nature of treatment termination. In a study by Stuart et al. (in press, cited by Jayaratne et al. 1974) study, two methods of treatment termination were compared; fading and nonfading. In the fading condition, the therapist slowly reduced his contact with the clients

in a systematic manner. In the nonfading condition, contact with the therapist ended abruptly at a prespecified time. Twenty-eight dependent measures were employed; 13 relating to behavior at school, eight relating to behavior at home, and seven relating to attitude change. The fading versus nonfading manipulation produced no significant differences on any dependent measure.

9. Therapist characteristics. In their analysis of the data obtained by Stuart and Tripodi (1973), Stuart and Lott (1972) analyzed the relationship between therapist characteristics and outcome. Ten therapists were involved in treating the 79 youths and their families. Four were professional social workers with from 1 to 6 years experience, five were social work students, and one was a medical student. An analysis of covariance with six dependent measures which were uniformly available for all clients yielded no significant relationships. Neither sex of therapist nor professional status was related to outcome. Consequently, Stuart and Lott (1972) concluded that therapist variables other than sex and professional status may be related to the effectiveness of contracting. Specifically, they suggested that the therapist's ability to facilitate negotiation and compromise between the youth and parents may be a critical determinant of contracting effectiveness but data related to these variables were not collected by Stuart and Tripodi (1973).

Alexander et al. (1976) conducted a more direct assessment of the relationship between therapist characteristics and the effectiveness of contingency contracting. The therapy employed was the behavioral-systems therapy for families discussed previously (Alexander & Parsons 1973) which relies heavily upon contingency contracting. Twenty-one

therapists (14 males and 7 females) were used to provide therapy to 21 delinquent adolescents and their families. Two therapists were Ph.D.'s with considerable experience, 13 were graduate students with 1-2 years experience, and 6 were undergraduates with no prior experience. Each therapist worked with one family after receiving 10 weeks of training in the behavior-systems approach. Prior to beginning therapy, each therapist was rated on eight 5-point scales which quantified the following characteristics: (1) affect-behavior integration; (2) humor; (3) warmth; (4) directiveness; (5) self-confidence; (6) self-disclosure; (7) blaming; and (8) clarity. On the basis of a subsequent correlation with outcome, these eight process variables were collapsed into two global mean scores for each therapist: (1) "relationship skills" which included the measures of affect-behavior integration, warmth, and humor; and (2) "structuring skills" which included the measures of directiveness and self-confidence. These global scores, attained before treatment, were entered as the independent variables in a multiple regression analysis where outcome was the dependent variable. Outcome was quantified by the use of a 4-point scale where: 1=terminated after first session; 2=attended several sessions but terminated against therapist's advice; 3=completed treatment, positive change in communication and contracting skills, still unable to problem-solve without assistance; 4=same as 3 but also able to problem-solve without assistance. Results indicated that the relationship and structuring scores accounted for 59.65% of the variance in outcome.

Therapists were divided between good-outcome therapists (those whose families achieved an outcome score of 3 or 4) and poor-outcome therapists (those whose families achieved an outcome score of 1 or 2).

Good-outcome therapists were found to have significantly higher relationship and structuring scores. Moreover, when recidivism at a 12 to 15 month follow-up was examined, the recidivism rates in the poor-outcome families (1's and 2's) were 60% and 50% respectively whereas the recidivism rates for good-outcome families (3's and 4's) were 0% and 0% respectively. Finally, samples of therapy sessions were scored for rates of: (1) defensive communications (aversive verbal and nonverbal behavior emitted by family members) and (2) supportive communications (empathic, reinforcing, problem-solving verbal behaviors emitted by family members), and a ratio of supportiveness/defensiveness was computed. Early in therapy there was no significant difference in these ratios between poor and good-outcome families whereas later in therapy a significant difference favoring the good-outcome families was obtained. Thus, "relationship" and "structuring" therapist skills appear to enhance the effectiveness of contingency contracting when effectiveness is measured by lower attrition, lower recidivism, decreased defensive communication and increased supportive communication.

10. The negotiation of contract contents. Practitioners who initiated the contracting approach to the treatment of adolescents' behavior problems emphasized that contracts must be negotiated rather than imposed upon the youth (e.g., Homme et al., 1969; Stuart, 1971; Weathers & Liberman, 1975). The effect of negotiation versus imposition of the terms of the contract upon outcome has not been assessed experimentally but a number of case studies exist which support the contention that negotiated contracts are more effective.

Stuart (1971) describes the case of a 16-year-old girl with a variety of behavior problems. Her parents were very controlling and resistant to the concept of negotiation. The first contract was unilateral in nature, essentially stipulating the behaviors desired by the parents with little consideration given to the daughter's desires. Not surprisingly, it failed in short order. A second contract which appeared to allow for more negotiation was considerably more successful.

In their analysis of the data collected by Stuart and Tripodi (1973), Stuart and Lott (1972) found no relationship between outcome and length of treatment or contract content. Consequently, they concluded that the process of negotiating contracts is probably a major determinant of treatment outcome.

Welch (1976) worked with a 13-year-old boy with multiple behavior problems. Initially his parents were unable to employ contingency contracting because contracting sessions rapidly broke down into name-calling and verbal abusiveness. Welch then taught the youth and his parents to negotiate using a procedure described by Kifer, Green, and Phillips (1974). Following negotiation skills training, a successful contract was implemented.

In general, a number of practitioners have mentioned the importance of the negotiation aspect of contracting (e.g., Frederiksen et al., 1976; Jacobson, 1978c), and behavior therapy texts usually emphasize the importance of negotiation as well (e.g., DeRisi & Butz, 1975; Gambrill, 1977; Weathers & Liberman, 1978). In addition, there is some evidence apart from the contingency contracting literature which suggests that clients' behavior will improve more when they have some control over treatment

contingencies than when such contingencies are imposed upon them (Brownell, Colletti, Ersner-Herschfield, Herschfield, & Wilson, 1977; Lovitt & Curtiss, 1969).

Interestingly, there is also evidence that placing some limitations on the process of negotiation may be desirable. Jayaratne et al. (1974) discuss a study which compared "fixed" contracts with "open" ones. In the fixed contract group, the number of reinforcers, behaviors, bonuses, and penalties were standardized and the therapists and families negotiated only the details of the contract. Renegotiation periods were also prespecified. In the open contract group, nothing was standardized and renegotiation could occur at any time. More positive results were obtained with the fixed contract where the contract format and schedule for renegotiation was standardized.

11. Integration with other treatment. With some exceptions, (e.g., MacDonald et al., 1970; Stuart, Jayaratne, & Tripodi, 1976) most of the studies which were reviewed supplemented contingency contracting with some other form of behavioral treatment. The supplementary treatment most often was some form of communication skills training (e.g., Alexander & Parsons, 1973; Stuart & Tripodi, 1973), although other supplementary techniques such as bibliotherapy and token economies were reported (Patterson, 1974). Investigators generally agree that contingency contracting works best when used in conjunction with other behavioral treatments (Stuart, Jayaratne, & Tripodi, 1976; Weathers and Liberman, 1978; Wells & Forehand, 1981), but no analysis has been conducted to determine which, if any, supplementary therapies facilitate or inhibit the effectiveness of contracting. The literature suggests that any therapy which teaches communication and negotiation skills should increase the

effectiveness of contracting since negotiation is an important aspect of the latter treatment (e.g., Stuart 1971; Stuart & Lott, 1972; Welch, 1976).

Parenthetically, it may be noted that while many investigators believe that negotiation skills training potentiates the effectiveness of contracting, at least one investigator has cautioned that contracting may inhibit the effectiveness of negotiation and problem-solving skills training (Jacobson, 1978b, 1978c). Working in the area of behavioral marital therapy, Jacobson has argued that stimuli which might normally be reinforcing (e.g., backrubs; expressions of affection) will sometimes lose their reinforcing potential if the delivery of such stimuli are scheduled within the context of a contract since partners will attribute the occurrence of the behavior to the contract rather than to genuine caring by the spouse. Jacobson's theory has yet to be tested in either of the realms of marital therapy or therapy with delinquents.

12. Client characteristics. Clinical lore states that contingency contracting is best suited for youths who are over 11 or 12 years of age (e.g., Weathers & Liberman, 1978; Wells & Foreland, 1981), but there appears to be little empirical evidence for this conclusion.

Patterson (1974), correlated several client variables with treatment outcome. Specifically, father-absent families and lower social class families were both associated with poor outcome. Number of siblings, ordinal rank of problem child, age of problem child, and age of mother showed no significant correlation with outcome.

Stuart, Tripodi, Jayaratne, and Camburn (1976), found that contracting was most effective with youths in the following subgroups: (1)

blacks; (2) youths 10-to-12 years of age; (3) lower income families; (4) fathers 41 and older; (5) mothers 38 and older; (6) mothers with high-school education or less; (7) youths not the eldest child; and (8) four or more children in the family; in other words with the type of youths whom the authors describe as being "most at risk." These findings conflict somewhat with those of Patterson (1974) who found that middle-class families benefited more from treatment. Stuart et. al. suggest that this is likely due to the fact that Patterson's treatment was more cognitively oriented, since it included readings and written responses to a programmed instruction manual, and therefore may have been better suited to middle class clients who generally have adequate academic skills. At the present time it is only possible to conclude that client variables will likely interact with the effectiveness of contracting, but the relevant variables have yet to be identified. Contingency contracting may be an inappropriate treatment technique for some clients, but it is also possible that it may prove to be uniformly effective if appropriate training procedures are matched with relevant client characteristics.

13. Nature of past contracting experiences. Stuart and Lott (1972) suggest that families with a strong history of constructive negotiation will benefit maximally from a contracting treatment approach. In light of what has been said regarding the importance of negotiation, this suggestion seems very reasonable but it has not been empirically tested. Similarly, it is generally accepted that the terms of a contract must be fulfilled promptly and as agreed upon if the therapy is to work (Gambrill, 1977). If parents or child-care staff break the con-

tract by not providing the reinforcer or by finding some reason to nullify the contract, then the youth will be less likely to fulfill the terms of subsequent contracts. Some support for the contention that past experiences can affect subsequent contracting efforts exists.

As will be recalled, Kanfer et al. (1974) used a cold pressor test with undergraduates. These investigators found that past experience with the experimenter affected the length of time a subject would keep her hand emersed in ice water. During an initial trial, the experimenter told subjects in one group that they had performed the task incorrectly and he then asked them to participate in a second trial. A second group of subjects were asked to engage in a second trial because the experimenter engaged in a telephone conversation instead of collecting data during the first trial; an explanation designed to annoy the subjects. Results showed that subjects who believed that they had performed the task incorrectly on the first trial tolerated the ice water significantly longer on the second trial than subjects who were able to blame the error on the experimenter. Apparently the annoying behavior of the experimenter during the first trial resulted in less cooperative subjects on the second trial.

Karoly and Kanfer (1974) asked 8 to 12-year-old girls to play a "scarecrow game" wherein they were to keep their arms extended sideways for as long as they could. Following this, the girls engaged in a monotonous letter crossing task for which they were promised candy. Four groups were utilized. In a "kept-contract" group the children were promised candy and the promise was fulfilled. In a "broken-contract-negative" group the girls were given less candy than had been promised.

In a "broken-contract-positive" group, the girls were given more candy than promised. In a "double message" group the girls were given the promised candy along with a mild verbal criticism of their performance. The scarecrow game was then played again. The "broken-contract-positive" group increased the time they kept their arms extended while the other groups remained unchanged. Surprisingly, this study does not support the contention that a history of broken contracts will have adverse effects on subsequent contracting efforts. However, the method section of this study failed to make clear whether the "contract" was negotiated versus imposed, or written versus verbal, and so it is impossible to say how relevant these findings are. With this limitation in mind, it is interesting to note that the group which received the "bonus" candy was the only group to increase its performance over baseline; a finding which may support the inclusion of a "bonus clause" in a written contract.

Beiersdorf (1975, cited in Kanfer, 1977) systematically replicated the Karoly and Kanfer (1974) study. First and fourth grade children were used as subjects and contract fulfillment was over or underpaid by large amounts. In this study, underpayment resulted in significantly lower, later performance on the scarecrow game than either overpayment or accurate payment, as would be expected. It appears as though a history with unfulfilled or broken contracts does effect performance on subsequent contracts, but there may be an interaction between the nature of the behavior required and the magnitude of the reinforcer promised but not delivered.

14. The nature of the conditions of referral. Stuart and Lott (1972) also suggest that contracting outcome may be partially determined by the nature of the referral. They speculate that a family which presents for treatment as a result of an action taken by a social agency may be more motivated to attempt contracting therapy than a family not so referred, even though some effort is required to learn how to contract and some "cost" is involved in terms of making compromises with another party. Presumably this is because the social agency implicitly or explicitly implements a contingency designed to foster compliance in the referred family. This hypothesis would appear to be at odds with the phenomenon of reactance, discussed in the social psychology literature (e.g., Brehm, 1966), and it has yet to be tested.

15. Model of service delivery. Contingency contracting services have been delivered to consumers in two different ways. According to one model which is referred to as a "dyadic model" (Tharp & Wetzel, 1969), a professional therapist meets with the youth and either his parents if he lives at home, or child-care staff if he has been incarcerated, and teaches these individuals the contracting technique. Therapist contact is frequent until the clients demonstrate that they have mastered the technique and no longer require professional help. The goal is to teach the youth and his parents/child-care workers a skill which they can continue to use on their own. This model of service delivery appears to have been employed in most of the uncontrolled case studies previously reviewed (e.g., Fitzgerald, 1974; Frederiksen et al., 1976; Stuart, 1971; Stumphauzer, 1976; Welch, 1976), although the non-technological nature of these studies often makes the model difficult to ascertain.

A second model of service delivery is known as the "triadic model" (Tharp & Wetzel, 1969). In this method of service delivery, a professional trains and then supervises several paraprofessionals referred to as "mediators", each of whom has direct contact with a number of clients. The professional's role is primarily that of consultant. This is the model which was used in the majority of the controlled research studies reviewed previously (e.g., Alexander & Parsons, 1973; Patterson, 1974; Stuart & Lott, 1972; Weathers & Liberman, 1975). Mediators are often psychology or social work students in training (e.g., Alexander & Parsons, 1973; Stuart & Lott, 1972), but individuals with less professional training have also been employed. For example, Tharp and Wetzel (1969) used as mediators a variety of individuals who previously had no training in any of the helping professions (e.g., a housewife, a cocktail waitress, a carpenter, a football player). Some of the mediators used by Alexander et al. (1976) were undergraduate students with no prior therapy experience.

The triadic model of service delivery is potentially more efficient than the dyadic model in that the use of mediators allows for the provision of service to a greater number of clients. However, one of these models may be more effective than the other in terms of outcome. It is possible that contingency contracting delivered via the dyadic model might be more effective since the therapist is a professional with more advanced training and more clinical experience than is typical of mediators. On the other hand, well trained mediators may be just as competent as professionals, and if they are indigenous to the client population, they may be able to establish rapport and foster client trust and

cooperation better than professionals (Graziano & Katz, 1982). At present the comparative effectiveness of the dyadic versus triadic models of service delivery as applied to contingency contracting with delinquents has yet to be determined.

16. The training procedure. In previous sections of this paper three related issues were discussed: (1) the belief that the negotiation aspect of contracting is critical to its success; (2) the fact that studies were generally not technological enough to allow for precise determination of the procedures used for training contracting skills; and (3) the fact that potential variability in procedure may account for some of the variability in outcome which has been noted in the literature. A standardized and technological (Baer et al., 1968) contracting procedure should help to reduce outcome variability by increasing procedural reliability (Jayaratne, Stuart, & Tripodi, 1974; Stuart, Tripodi, Jayaratne, & Camburn, 1976). Moreover, if a standardized procedure was uniformly adopted by numerous researchers, specific aspects of the procedure could be varied in a systematic and technological manner until an optimally effective procedure was developed.

As mentioned, most investigators in the studies reviewed did not describe their contracting procedure in detail. However, several more detailed descriptions of component contracting skills have been published.

Kifer, Lewis, Green, and Phillips (1974) describe a negotiation procedure which they used when teaching predelinquent youths and their parents to negotiate conflict situations. Their procedure is quite complicated and so it will be described only in brief. Each youth-parent pair was seen for a weekly training session. Each session followed a

three-step format which involved a Presession Simulation, a Discussion and Practice Simulation, and a Postsession Simulation. In the Presession Simulation the clients were asked to try and resolve a hypothetical conflict. In the Discussion and Practice Simulation the trainers followed a procedure called the "situations-options-consequences-simulation," S.O.C.S., (Roosa, 1973), in which the trainer described the problem situation, possible response options, and possible consequences of the response options. Youth and parent selected a desirable consequence and a response option which would likely lead to that consequence. Clients then practiced the S.O.C.S. model. The Postsimulation Session was conducted exactly as the Presimulation Session. Three component negotiation behaviors were measured: Complete Communication; Identification of Issues; and Suggestion of Options. A Complete Communication was defined as "statements that indicate one's position (what one thinks or wants) regarding the situation being discussed and that are followed in the same verbalization by a request for the other person to state his position or respond to the position just expressed" (p. 359). Identification of Issues was defined as "statements that explicitly identify the point of conflict in the situation" (p. 359). Suggestion of Options was defined as, "statements that suggest a course of action to resolve the conflict, but not merely restatements of that person's original position" (p. 359-360). Instructions, practice, and feedback were used to train both the youth and parent to use all three negotiation behaviors during the Discussion and Practice simulations. Training ended after two consecutive Presession Simulations in which clients used all three negotiation behaviors between the two of them. The percentage of nego-

tiation behaviors increased as a result of training and generalized from the training situation to the home situation where real conflicts were resolved.

The negotiation training procedure presented by Kifer et al. (1974) is certainly described in a more technological manner than is characteristic of most studies reviewed, but problems remain. First, the procedure is still not technological enough to be adopted as a standardized procedure. For example, negotiation does not always lead to an agreement between the youth and his parent (i.e., an agreement to a suggested response option rather than to the original position of one of the negotiators), and it is unclear what the clients are to do in such a situation, and how long they are to persist in trying to reach an agreement. Second, the investigators report that each youth-parent pair required from 9 to 10 hours of training. This is problematic for several reasons. A therapist might be willing to devote this amount of time to training if he or she was responsible for only one youth-parent pair, but if the therapist was responsible for training a number of youth-parent pairs, the time involved would be prohibitive. In a residential care setting where many youths and staff would require training, a procedure this lengthy would be extremely difficult to implement for obvious practical reasons; staff would not have the time and many youths would not have the patience. Third, Kifer et al. (1974) did not use their negotiation training procedure within the context of contingency contracting and so they provide no guidelines for writing contracts. Kifer et al.'s (1974) procedure does not appear to have been employed in any of the contracting studies reviewed above with the exception of the case study by Welch (1976).

The S.O.C.S. model employed by Kifer et al. (1974) is similar to D'Zurilla and Goldfried's (1971) model of problem-solving which includes: (1) defining the problem; (2) listing possible solutions via brainstorming; (3) predicting probable consequences; and (4) implementing the solution. Robin, Kent, O'Leary, Foster, and Prinz (1977) used D'Zurilla and Goldfried's model to teach youth-parent pairs to resolve conflicts. This model has potential as a method for training the negotiation skill aspect of contingency contracting, but like the Kifer et al. (1974) study, Robin et al. (1977) did not integrate their procedure with the other aspects of contingency contracting, and their description of their procedure is not technological enough for adoption as a standardized procedure. In addition, the training of each youth-parent pair took 5 hours, a length of time which would likely prohibit the use of the procedure in a residential setting.

Weathers and Liberman (1975b) described a contracting procedure which they called the Family Contracting Exercise. The youth constitutes one "team" and the parent(s) a second "team". The procedure consists of six phases: (1) Identifying Rewards for Others; (2) Identifying Rewards for Self; (3) Setting Priorities on Rewards; (4) Empathizing; (5) Setting Costs on Providing Rewards; and (6) Bargaining. The first two phases employ pre-printed cards which list commonly valued reinforcers for both youths and parents. Blank cards are included so that idiosyncratic reinforcers may be listed. At the end of the second phase both teams have acquired a list of five personal reinforcers, and they are aware of the contents of the other team's list. In the third phase, each team ranks their five reinforcers from most valued to least valued.

In the fourth phase, one team reads one of their cards which lists a valued reinforcer to the other team, states how difficult they believe it would be for the other team to provide them with this reinforcer and then hands the card to the other team. Teams alternate until all cards are read and exchanged. Weathers and Liberman (1975b) contend that the procedure develops empathy and that "participants learn to put themselves in the other's position" (p. 211). In the fifth phase, each team is asked to rank the cards now in their possession according to how difficult or costly it would be to provide that reinforcer to the other team. In the sixth phase the two teams negotiate a contract. They are instructed to: (1) suggest possible deals; (2) make counter-proposals; (3) make compromises, and (4) specify the details of agreements (i.e., reinforcers to be exchanged on a quid pro quo basis) by attaching the relevant cards opposite to one another on specially designed Contract Board. Specially designed Data Strips for recording contract compliance are also provided and attached to the Contract Board.

Weathers and Liberman's (1975b) Family Contracting Exercise is partially but not entirely technological, and several other problems exist. First, in phases three, four, and five, each team ranks the extent to which they value the five reinforcers, ranks the other teams desired reinforcers in terms of how difficult or costly they would be to provide, and empathizes with how difficult it would be for the other team to provide them with the reinforcers they desire. These exercises undoubtedly generate information but the authors do not specify how this information is to be used. Second, in phase six the two teams are asked to suggest deals, make counter-proposals, and make compromises, but the sequencing of these events is not specified (e.g., Who begins?). Third, the proce-

dure does not specify what is to happen if the youth or a parent fail to emit the desired behavior during any of the six phases. A fourth problem, relates to technology. Weathers and Liberman (1975b) instruct therapists to "feel free to add whatever else you think is necessary" (p. 209) to the Family Contracting Exercise in order to maximize its effectiveness. This advice, if followed, would certainly add to procedural variability. Fifth, no guidelines are provided for the production of a written contract. Sixth, Weathers and Liberman (1975a, 1975b) report that with the Family Contract Exercise, families require 1.5 hours to negotiate a contract in the presence of the therapist. Presumably the clients would eventually learn to use the exercise without the therapist but even so, a procedure which initially requires 2 hours of the therapist's time may be difficult to implement on a large scale basis such as in a residential care facility where a large number of youths and staff might require training. The Family Contracting Exercise appears to have been adopted only by Weathers and Liberman (1975a). As discussed earlier, the delinquent youths who participated in the study showed minimal change in behavior. However, no procedural reliability checks were made and so it is impossible to know if the Family Contracting Exercise was actually conducted in the manner in which it was described.

Blechman and her colleagues (Blechman, 1974; Blechman & Olson, 1976; Blechman, Olson, & Hellman, 1976; Blechman et al., 1976) described a contingency contracting procedure which they called the Family Contract Game. A brief description follows. The youth and his parent(s) constitute two teams, Red and Blue. Contract development centers around a game board. The center of the board contains: (1) Problem Cards upon

which problem behaviors are written; (2) Reward Cards upon which desired reinforcers are written; (3) Bonus Cards which contain humorous statements and/or award the player an amount of play money; and (4) Risk Cards which fine the player an amount of play money. The perimeter of the board is divided into 14 squares. Each square instructs one player (identified by a red or blue playing piece) to perform a specific action (e.g., "Red, draw a Problem Card."), to make a statement (e.g., "Red, tell Blue what to do more of and when."), or to ask a question (e.g., "Blue, ask Red if he agrees with the reward you chose."). The 14 squares are divided into four basic components of problem-solving: (1) Problem Choice (squares 1 & 2) where a Problem Card is selected; (2) Please Description (squares 3-6) where players define and agree upon a more pleasing behavior to replace the problem behavior; (3) Consequence Choice (squares 7-10) where Reward Cards are selected and players agree upon how the more pleasing behavior should be rewarded; and (4) Contract Settlement (squares 11-14) where players agree upon, write, and sign a contract. Only when players agree upon the task posed in each basic unit do they move on to the next. Agreements are "reinforced" with Bonus Cards while disagreements are "punished" with Risk Cards. The game also comes with copies of a standardized contract which the players fill in and sign, and "behavior tracking coupons" for monitoring target behaviors and rewards. Completion of square #14 results in a signed contract. The players may then "pass go and collect \$200", exchange colored pieces, and play again in order to change a problem behavior emitted by the other player, (i.e., the parent(s)).

Due to the fact that the steps involved in negotiating the contract are printed on the game board and are followed sequentially, and to the fact that a "fill in the blanks" standardized contract is provided, the Family Contract Game is probably the most technological of the contracting procedures reviewed. Despite this fact, several problems exist. First, disagreements between the players can occur during the game. When a disagreement occurs, the disagreeing player is "punished" with a Risk Card and the players are sent back several squares and instructed to begin again. The procedure does not specify what is to happen if the players continuously fail to reach an agreement; they are trapped in a "closed loop." This problem is not major and the game could easily be modified to deal with it. Second, the Bonus Cards and Risk Cards are meant to be reinforcing and punishing respectively, but this is, of course, an assumption. Consider the following illustrations. One Bonus Card reads, "While cleaning out the attic you found a valuable antique. Collect \$50 from the bank." One Risk Card reads, "You rode your bike so fast that the police told you to buy a crash helmet. Pay the Cookie Jar \$30." While it may be that the humor in these cards would appeal to younger children, parents and older adolescents may view them as immature and annoying. Similarly, there is no reason to believe that the play money will function as a reinforcer since there is no provision for it to be exchanged for any back-up reinforcer. Of course, the game could be modified to include small back-up reinforcers which might facilitate the occurrence of agreements during negotiation. Third, Blechman and Olson (1976) and Blechman, Olson and Hellman (1976) report that the family members in these respective studies were able to negotiate and write a contract in approximately 15 minutes. However, this impres-

sively brief time period should be regarded with caution because the youths who participated in these studies apparently were not delinquents; they were recruited through public announcements of a project designed to help parents and their children get along better. Blechman (1974, p. 270) notes that, "... other families require trained supervision during their first few weeks of game playing." The fourth and most critical problem with the Family Contract Game is that older or more delinquent youths may find the "game aspect" of this procedure to be childish or otherwise aversive. In addition, the reading ability of many delinquent youths is quite poor, and some would likely find it embarrassing to be required to read Problem, Reward, Bonus, and Risk Cards. With more delinquent youths, such as those living in residential care facilities, the training procedure would likely be less problematic if the game aspect were removed and if specific negotiation steps were simply upon an easy to follow flow-chart. The "fill in the blanks" standardized contract should be retained.

The Family Contract Game appears to have been adopted only by Blechman and her colleagues (Blechman, 1974; Blechman & Olson, 1976; Blechman, Olson, & Hellman, 1976; Blechman, Olson, Schornagel, Halsdorf, & Turner, 1976). Using ABA designs, the latter three studies all demonstrated that the game increased and controlled youths' and parents' problem-solving behaviors, as measured by a modified version of the Marital Interaction Coding System (MICS) developed by Hops, Wills, Patterson, and Weiss (1971). The MICS codes both on-task problem-solving behaviors prompted by the game board and more general on-task problem-solving behaviors (Blechman, Olson, Schornagel, Halsdorf, &

Turner, 1976). Consequently, it is not possible to conclude that the increased frequencies of on-task problem-solving behaviors obtained during the treatment conditions of these studies means that the youths and parents were following the rules of the game exactly; general on-task problem-solving behaviors not specifically part of the game may inflate scores. Thus, the procedural reliability of the game is not known exactly, although given the games' highly structured format, it is probably high.

The studies cited above demonstrate that youths' and parents' problem-solving behaviors, and their ability to produce a written contingency contract, are definitely enhanced by the Family Contract Game. However, only a single case study has been published to demonstrate that the contingency contract produced via the game actually results in positive changes in a youth's problem behavior (Blechman, Olson, Schornagel, Halsdorf, and Turner, 1976). This case study was described earlier.

In addition to the standardized contracting procedures discussed above, several manuals have been published to teach contracting skills (e.g., DeRisi & Butz, 1975; Lundell, 1972). These manuals provide general contracting strategies and guidelines regarding the content of contracts, but they do not specify how the terms of the contracts are to be negotiated in a standardized, technological manner. In addition, they seem to be most appropriate for training professionals; paraprofessionals such as child-care workers would likely find them to be too lengthy.

17. Youth preference. Willner, Braukmann, Kirigin, Fixsen, Phillips, and Wolf (1977) suggest that a training program for delinquent youths needs to be both effective with respect to teaching new behaviors and preferred by the youths, if it is to be successful in the long term.

According to Willner et al. (1977), the second criterion of success, youth preference, is important because if youths do not like a particular program, they may eventually withdraw from it. Withdrawal may be informal, as in the case of running away from a residential care facility, or formal, as in exercising an ethical and perhaps legal right to decline treatment. There is considerable evidence that contingency contracting is reasonably effective in modifying problem behaviors with delinquent youths, as indicated by the literature reviewed previously, but to date no study of youth preference with respect to contracting has been conducted. Such a study of contracting is needed since the optimal effectiveness is bound to be partially dependent upon the extent to which youths like the procedure. If youths dislike contracting, or any aspect of it, it may be possible to isolate the relevant variables and rectify the situation.

Conclusions

The literature indicates that contingency contracting is a relatively useful therapeutic procedure with delinquent youths but it is also obvious that considerably more research is required in order to maximize its effectiveness. No adequately technological description of a procedure for contracting has been published to date, although the procedures reported by Kifer et al. (1974), Weathers and Liberman (1975b), and particularly Blechman (1974), could be made sufficiently technological with little effort. However, these procedures were developed for use with adolescents living with their parents and they may not be appropriate for use by child-care staff with adolescents who live in

residential settings for reasons previously discussed; they are too complicated, they require too much training time, and/or the "game" aspect of them may be disliked by older or more hard-core delinquents. A standardized contingency contracting procedure for the rapid training of child-care staff needs to be developed. Moreover, such a procedure must be amenable to assessments of procedural variability, a problem which has made the research published to date difficult to interpret.

Once standardized procedures for parents and child-care staff are developed, considerably more process research is required in order to maximize the effectiveness of contracting with adolescents. In particular, research on the effect of client characteristics, model of service delivery, method of negotiation, and integration with the treatments, upon outcome and upon youth preference for contracting, is badly needed. To this end, four studies were conducted:

The purpose of the first and primary study reported herein was to field test a manual developed for the purpose of training child-care workers to use a standardized contingency contracting procedure with youths living in residential settings. The manual was designed to be an independent training vehicle requiring minimal supplementary input and time from a professional.

This study was necessary for two reasons. First, it will be impossible to interpret the variable results of outcome studies until researchers eliminate procedural variability as a possible source of outcome variability. The elimination of procedural variability will require: (1) the adoption of a standardized contracting procedure and (2) measures of procedural reliability in order to ensure that therapists and clients actually follow to the standardized procedure. Sec-

ond, adoption of a standardized procedure is essential to the development of an optimally effective contracting procedure because only then will it be possible for researchers to systematically manipulate, one at a time, individual aspects of the procedure which may be relevant to maximizing its effectiveness.

No adequately technological description of a procedure for contracting has been published, although the procedures reported by Kifer et al. (1974), Weathers and Liberman (1975b), and particularly Blechman (1974), could be made more technological with little effort. However, these procedures were developed for use with adolescents living with their parents and they may not be appropriate for use by child-care staff with adolescents who live in residential settings for reasons previously discussed; they are too complicated, they require too much training time, and/or the "game" aspect of them may be disliked by older or more hard-core delinquents. No fully standardized contingency contracting procedure for the rapid training of child-care staff has been published to date.

A second study was conducted to demonstrate that child-care staff trained via the manual could then use contracting to modify problem behaviors emitted by the youths in their care. This is a step which has been largely neglected by the authors of the other standardized procedures. Weathers and Liberman (1978) indicate that they have used the Family Contracting Exercise to produce behavior changes in delinquent youths, but the only published study which employed the procedure achieved little behavior change (Weathers & Liberman, 1975a). Blechman and her colleagues (Blechman & Olson, 1976; Blechman, Olson, & Hellman, 1976) report that the Family Contract Game has produced behavior changes

in families they have seen, but only a single published case study demonstrates this contention (Blechman, Olson, Schornagel, Halsdorf, & Turner, 1976). Similarly, only a single case study (Welch, 1976) suggests that the negotiation procedure developed by Kifer et al. (1974) can be employed to generate a written contract which produced a successful outcome.

A third study acquired data which relates to youth preference. Simulated sessions of child-care staff attempting to modify youth's problem behaviors before and after training in contingency contracting skills were analyzed for the presence or absence of previously validated "youth-preferred" and "youth-disliked" social interaction skills (Willner et al., 1977) in order to see how contingency contracting affected staffs' usage of these skills. If staff employed fewer of the youth-preferred social skills when contracting, then this situation would have to be corrected lest it jeopardize youth preference.

A fourth study assessed youth preference directly by having youths rate the extent to which they liked videotapes depicting child-care staff using contingency contracting versus a more traditional style of intervention.

APPENDIX B

1. The Revised Training Manual
2. Sample Contracts
3. Rewards and Penalties Available for Use By Child-Care Workers
During Simulations

Contingency Contracting Manual

What is a contingency contract?

In its simplest form, a contingency contract is an agreement between two people. In the case of a youth and an adult, the agreement usually takes the form of the youth agreeing to engage in a behavior in exchange for a desired reward and the adult agreeing to provide the youth with the reward in exchange for the desired behavior. This agreement is most often put into a written form and signed by both the youth and the adult. Putting the agreement into a written form makes it explicit and prevents the terms of the agreement from being distorted or forgotten with the passage of time. The signatures constitute a public statement of the fact that both parties have agreed to the terms of the contract, and this helps to ensure that both parties honor the agreement. In summary, contingency contracting is a method of motivating a youth to engage in a behavior desired by an adult which relies primarily upon rewards and which therefore is usually not unpleasant to the youth.

Does contingency contracting work?

There is quite a bit of evidence to suggest that contingency contracting works when it is done the right way. With adolescents, it has been used successfully to increase school attendance, school performance, rule following, doing chores, and proper grooming, and to decrease fighting and other problem behaviors typical of adolescents. Much of the research that has been conducted has involved adolescents and their parents but contracting has also been used successfully with youths living in residential treatment facilities.

Isn't rewarding a youth for good behavior really bribery?

No, not according to most people's definition of the word "bribery." Bribing someone usually refers to paying the person to do something which is illegal, corrupt, or otherwise bad. Rewarding someone for good behavior does not fit this definition. Consider this example. Most people work and are paid for doing so by their employer. Yet neither the employee nor the employer would likely describe themselves as being involved in an act of bribery.

Isn't it wrong to reward a youth for something he "ought to do anyway?"

When we say that adolescents "ought to do" things like go to school, obey adults, not drink alcohol and not engage in prostitution, what we really mean is that we value these things and consequently we don't think it should be necessary to reward people for doing them; they just "ought to do them". The problem is that many youths who come to live in residential treatment facilities have learned sets of values which are somewhat different from the values learned by the adults who work in those facilities. Many of these youths don't value going to school, showing respect to authority figures, being obedient, etc., and so there is no reason why they "ought to" engage in these behaviors. Moreover, values are not quickly changed, particularly not through use of force or threat of punishment. However, rewarding a youth for engaging in a behavior may help him or her come to value it, and if the behavior really is beneficial, the youths may start to value it after being induced to engage in it a few times through the use of a reward. Also, remember that peers may be actively reward the youth for doing the opposite of what adults believe he or she "ought to do." Contracting can help to overcome this situation.

Doesn't contracting teach the youth to manipulate people?

Most people use the term "manipulation" to describe a situation where an individual attempts to gain something through the use of deception or by playing one person against another. Manipulation implies dishonesty. Contracting involves honest negotiation, not manipulation. Negotiation involves an honest statement of needs or desires followed by a series of proposals and counterproposals until a compromise acceptable to both parties is achieved. Some youths may "test" the process of contracting to see if they can successfully make unreasonable demands, but they learn quite quickly that such demands will not be accepted by the other party. In general, investigators have found little evidence to suggest that reward programs turn youths into manipulators. On the other hand, there is considerable evidence that programs which emphasize rewards have the desirable effect of increasing youths' self-esteem and perception of control over their environment.

If, in the process of negotiating a contract, a youth appears to be trying to manipulate the adult by threatening some dire consequence if his or her demands are not fulfilled, it is best simply to ignore this behavior and to continue the negotiation process as it is described later in this manual. Never accuse the youth of being a manipulator. This will only lead to arguments and hurt feelings, and it may cause the process of contracting to become unpleasant to the youth.

What happens when the youth returns to his or her family or to a foster home where contracting does not occur? Won't he be disappointed?

Maybe, but negotiating a contract is a skill which a youth can take wherever he or she goes. The youth may be able to teach parents or

foster parents how to contract. At any rate, learning how to negotiate successfully is a skill that will serve the youth well long after independence from parents or foster parents is achieved. Employees frequently have to negotiate with employers, and lasting romantic relationships frequently involve negotiating and informal contracting.

Why reward desirable behavior? Why not punish undesirable behavior instead? Wouldn't that better prepare the youth for life in the real world?

In virtually all animals, including human beings, frequent punishment reliably elicits one of two responses, escape or defensive aggression. Punishment only works to suppress a behavior when escape or defensive aggression are not possible. Society can control its members to some degree through the use of punishment because you cannot escape from society (unless you become a hermit), and it is difficult to aggress effectively against governments and legal systems. However, such is not the case with youths living in treatment facilities or group homes. Active and passive forms of aggression are quite possible, as is escape by running away. Consequently, punishment alone often is not effective with youths and it may cause even greater problems. Besides, punishment used alone has a number of undesirable side effects. It generates frustration and anxiety, and it does not help to generate a positive relationship with a youth. However, mild punishment used as a supplement to a reward program often helps to increase the effectiveness of the reward program. You should never punish an undesirable behavior without providing a reward for an alternative, desirable behavior at the same time.

Okay, how do you do contingency contracting?

There are two phases to contingency contracting: (1) negotiating the terms of the contract with the youth; and (2) putting the negotiated terms into the form of a written contract.

NEGOTIATING THE TERMS OF THE CONTRACT

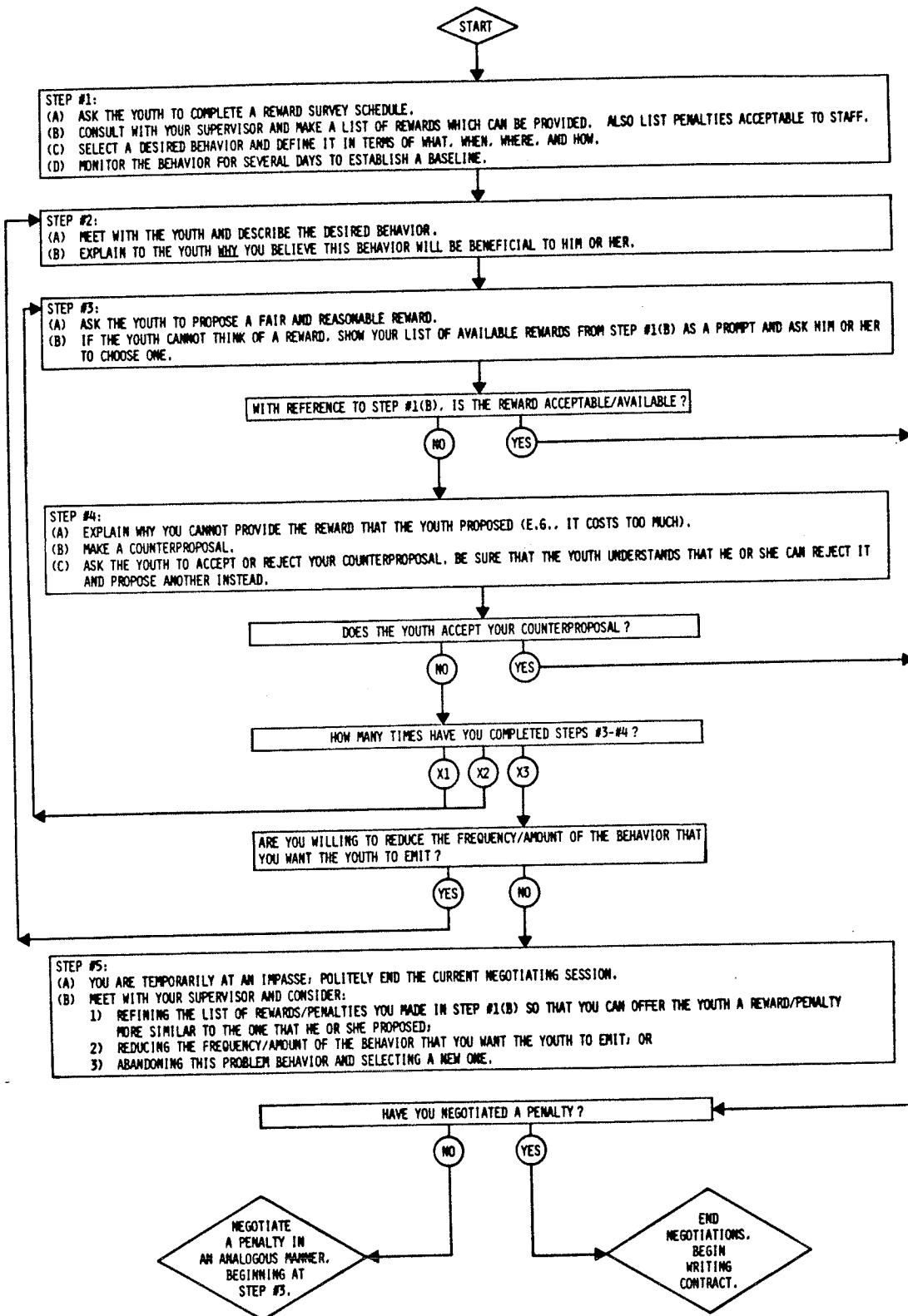
The steps to be followed during the negotiation phase are presented on the following page in the form of a flowchart. Study this flowchart and learn how to follow the steps. You do not need to memorize the flowchart; you only need to know how to use it. When you are negotiating with a youth, you should have the flowchart in front of you to use as a guide. If the youth is curious about the flowchart, just say that it is a guide for you to use during negotiation. Although there are five steps, you frequently will finish after Steps #3 or #4. PLEASE EXAMINE THE FLOWCHART NOW and then continue reading this manual.

The flowchart contains all of the basic information which you need to negotiate the terms of the contract. The next several pages of the manual provide you with additional information about the steps on the flowchart:

STEP #1 (A): A Reward Survey Schedule may be found at the back of this manual.

STEP #1 (B): You must know ahead of time which rewards (and penalties) you can promise the youth so that you do not accidentally promise

STEPS IN NEGOTIATION



something that you cannot provide. Also, it is important that you try to find a way of providing at least one or two of the rewards which the youth liked "very very much" on the Reward Survey Schedule because the youth is likely to ask for one of these during negotiation.

STEP #1(C): It is important that the youth's first one or two experiences with contracting be successful. The less you require the youth to do, the more likely that it will be done successfully. Arranging for the reward to be provided at least once per week will also increase the chances of success because the more immediate the reward, the more effective it will be. If the youth wants a reward which you can provide only once per month or less, try to make some other reward available on a weekly basis as a bonus.

Once the youth has used contracting successfully several times, you can slowly and systematically increase the frequency/amount of behavior you request. If you intend to do this, you should inform the youth of this at the time of the first contract, so that the youth will expect and be prepared for it. As you increase the behavioral requirement, you may also have to increase the frequency/amount of the reward.

Although it is best to keep the frequency/amount of behavior small in order to ensure success, it is a good tactic to ask for a little more than the minimum frequency/amount for which you will settle. Then during negotiation you can make some concession to the youth in this area if necessary.

Finally, you should define the behavior in terms of observables. "Change your attitude", "buy into our program" and "clean your room" are not good behavioral definitions because they are too vague. You should

specify the individual behaviors that you want to see the youth emit. For example, "Attend 2 group meetings each week and answer all questions asked of you." or "Every morning make your bed so that all sheets are tucked in, put all your clothes on hangers in the closet, and pick up all personal objects off the floor." Whenever possible, define the behavior in terms of what the youth should do instead of what he or she should not do. That way you are teaching the youth a skill instead of just suppressing a behavior.

STEP #1 (D): Before you begin to negotiate with the youth, you should monitor the desired behavior or the problem behavior for a few days without the youth's awareness, so that you will have a baseline measure of how often the behavior occurs before you begin contracting. (This is important!! Sometimes you will find that the "problem" does not occur often enough to warrant a special program.) When you write the contract, you should make the youth aware of how the desired behavior or problem behavior is being monitored. After the contract has been written, continue monitoring so that you will know if the reward has been earned. It is useful to give the youth daily feedback about how he or she is doing and also to praise success daily. As contracting proceeds, you can compare the youth's behavior to the baseline in order to see how effective the contracting has been.

STEP #2 (A): Describe the desired behavior to the youth in terms of observables, as discussed previously. Be very specific.

STEP #2 (B): After you have described the behavior, you should explain why it will be beneficial to the youth. Providing a plausible rationale increases the likelihood of compliance by the youth, whereas

providing no rationale may cause your request to be perceived as an attempt to make the youth conform, and that will likely generate resistance. (If you have trouble thinking of a plausible rationale, then you should question the utility of your request.)

STEP #3-#4: These steps describe the actual negotiation process to be followed. Many therapists who have experience using contingency contracting with adolescents believe that the process of negotiation may be the most critical determinant of successful contingency contracting. The youth must feel that he or she has had some say about what the reward and penalty will be. When contracting fails, it is most often because the adult has not given the youth enough say about what the terms of the contract will be. If the youth feels coerced into signing a contract that he or she is not happy with, then the contract will probably fail. On the other hand, if the youth feels that the contract is partially of his or her making, it is more likely that he or she will comply with it.

Notice that you first (STEP #3A) ask the youth to propose a fair and reasonable reward and that, if you cannot provide it, you then make a counterproposal yourself. By asking the youth to propose a reward first, you will help him or her to understand that he or she really does have some say. This is important because some youths are not used to adults allowing them to negotiate. (If the youth says that he or she cannot think of a reward, or if one minute passes without a response, then show your list of available rewards as a prompt, as indicated by STEP #3B). If you cannot provide this reward, you should explain why (STEP #4A) and then make a counterproposal (STEP #4B). Don't just ask

the youth to keep proposing rewards because he or she may continue to ask for things you cannot provide and then get frustrated. Your counterproposal will give the youth some idea of the general frequency/amount/kind of reward you can provide, even if he or she does not accept it. Be sure that the youth understands that he or she does not have to accept your counterproposal and that he or she can make another proposal if necessary (STEP #4C). Most of the time you will reach an acceptable compromise by the end of STEP #4.

Remember to negotiate the penalty in the same way that you negotiated the reward. Also remember that the penalty should be something more than simply not earning the reward. Normally you should always negotiate a penalty but there is one exception to this policy. If the rules of the youth's residence are such that a particular penalty is mandatory for a particular misbehavior, and if you are not at liberty to change this rule, then you should simply remind the youth that the mandatory penalty will be in effect and that you are not at liberty to negotiate an alternative penalty due to the rules of the residence.

STEP #5: You will reach STEP #5 very infrequently. On those occasions when you are unable to reach a compromise regarding the reward or penalty, be sure to end the session politely so that the youth does not feel as though you are mad at him or her. This is important because the youth may be unwilling to participate in a second negotiation session if the first session ends unpleasantly.

You can negotiate two kinds of contracts; an inflexible contract or a flexible contract. In an inflexible contract there is an "all-or-none" relationship between the youth's behavior and the reward/penalty.

If the youth makes one "mistake" (i.e., the occurrence of an undesired behavior or the nonoccurrence of a desired behavior), he or she receives none of the reward and all of the penalty. The problem with inflexible contracts is that once the youth makes a mistake, all incentive to continue on with the contract is lost. Due to this problem, inflexible contracts should be used only when it is very important that not even a single mistake occur. For example you might use an inflexible contract to suppress serious undesirable behaviors such as running away or severe physical assault.

In a flexible contract there is a "some-for-some" relationship between the youth's behavior and the reward/penalty. Here, a "mistake" will reduce the amount of the reward or delay its presentation, and/or produce some of the penalty. There are a number of ways to make a contract flexible; here are some hints:

(1) If the reward can be divided into small quantities, you can use that fact to make your contract flexible. Suppose that you want a youth to do three assigned chores each day for 7 days and that the youth proposes 5 hours of free time on Saturday afternoon as a reward. As a counterproposal, you might suggest that the youth earn 15 minutes of free time for each chore completed. Failure to do a chore would reduce the amount of free time earned, but there would still be considerable incentive to do the remaining chores. In addition, you might negotiate a penalty whereby the youth is grounded for the weekend if less than 4 chores are completed by the end of 7 days. This type of penalty would serve as an additional incentive to engage in the desired behavior, so that some experience with the reward is achieved.

(2) If the reward cannot be divided into smaller quantities, you can use a "point system" to make the contract flexible. If the youth in the first example had proposed that he be given two movie tickets so that he could take his girlfriend to a movie, you might counterpropose that each completed chore earn 1 point and that the movie passes be made available as soon as 21 points are earned, whether that takes 7 days or longer. You also might negotiate for a penalty to occur if 21 points are not earned within 14 days. This type of penalty would not terminate the contract, but it would serve as an added incentive to engage in the desired behavior.

You will likely think of other ways to make a contract flexible. You should use a flexible contract with all behaviors except in the case of serious problem behaviors which you do not want to occur even once.

WRITING THE CONTRACT

A good contract contains: (a) the names of the parties who are making the agreement, (b) a definition of the desired behavior, (c) a specification of the negotiated reward, (d) a specification of the negotiated penalty, (e) a description of a bonus which you should make available to the youth if he or she engages in the desired behavior more often than the contract required, or if his or her performance is qualitatively excellent (this need not be negotiated), (f) any special conditions which might affect the delivery of the reward (e.g., other kinds of misbehavior, the weather, etc.), (g) a specification of the way in which the desired behavior will be monitored (you may want to use the monitoring form at the end of this manual), (h) when the contract begins and when it is to be renegotiated, and (i) the signatures of the youth and the adult.

You do not need to memorize these nine components. Simply have with you a copy of the "standard contract" provided at the end of this manual and fill in the blank portions after you have completed the negotiation phase. Remember, if the contract is to be flexible, write it so that the flexibility is obvious.

When you complete the reward, penalty, and bonus clauses, be sure to say when these consequences will become available to the youth, if earned. For example, if you will only allow the youth to use a movie ticket on the weekend even though it may be earned on a weekday, you should specify this.

If the youth fulfills his or her part of the contract, then the reward should be provided even if the youth misbehaves in some other way unless you indicate otherwise in the special conditions clause of the contract. Any special conditions which would prevent the youth from receiving the reward once it is earned should be specified in the contract. Remember though, the more special conditions you specify, the less likely the youth will receive the reward and the less inclined he or she will be to contract with you again. It is best not to add more than one special condition. If really needed, more can be added when you renegotiate.

Contracts should be renegotiated each time a reward is earned by the youth in case he or she desires a different reward, or you desire a change in behavior. If the youth is happy with the initial reward and you are happy with the behavior, the "renegotiation" may only involve agreeing to extend the old contract over a new set of dates.

You will find a "behavior checklist" at the back of this manual. You should complete the checklist just before you and the youth sign the contract. If you notice that you forgot something during the negotiation and writing phases of the contracting process, explain this to the youth and then correct the error before you sign the contract. Once the contract is signed, it is a good idea to give a copy to the youth and to place the original in his or her file.

A number of sample contracts can be found in the back of this manual. You should study these samples and use them as models.

Most youths enjoy contracting but a small number feel that they don't need contracts because they are "mature enough" to control their own behavior without one. This may be true. In such cases, staying off a contract program can be used to reward continued good behavior. Should contingency contracting be used all by itself or in conjunction with other therapies?

Ideally contingency contracting should be used as one part of a broader treatment program. However, some youths who resist other approaches to treatment sometimes will accept a contracting approach and in such cases contracting can be used on its own.

How long do you need to continue contingency contracting with a particular youth?

Successful contracting need never end, but through systematic use it may evolve into a less structured form than that described previously in this manual. Initially the contract is in a highly structured form which states "If you do this, then I'll give you that." Although you should start off with one simple behavioral requirement, over numerous

renegotiations of the contract you may be able to systematically add more behaviors, and you may be required to systematically increase the number and range of rewards available to the youth as well. When the youth is engaging in all of the behaviors which you consider to be necessary to his or her well being and to the well being of your residence, you may find that you can change the form of the contract from the "quid pro quo" (if-then) kind of contract described in this manual to a "good faith" contract. In a good faith contract both parties make an agreement to make each other happy by engaging in certain behaviors which the other desires. A good faith contract might be worded as follows:

Due to a desire to make each other happy and to live together in harmony,

(youth's name) agrees to		(adult's name) agrees to
do the following	AND	do the following
things for (adult's name)		things for (youth's name)
1. _____		1. _____
2. _____		2. _____
etc.		etc.

In this kind of contract, both the adult and youth agree to try to provide each other with the desired behaviors/rewards as often as possible. They no longer rely upon an explicit "if-then" contingency to ensure that desired behaviors are performed and desired rewards are delivered. Instead, they provide each other with lists of desired behaviors and rewards, and then trust one another to fulfill the other's desires. There is an obvious risk involved in removing the explicit "if-then" contingency between desired behavior and reward; the youth's behavior

may revert to its precontracting levels. The success of a "good faith" contract depends upon the extent to which the youth has been taught self control skills and the extent to which he or she values the trust of the adult. Many of the youths you will work with have not learned adequate self control skills, and many have been told over and over that they are not trustworthy and consequently they have not learned to value an adult's trust. So, don't rush into "good faith" contracting. With many youths, it is best to use "quid pro quo" contracts for a long time and to teach the youth to value your trust by lavishly praising him or her for fulfilling the contract (in addition to providing the reward). This may be the best way of preparing the youth for "good faith" contracting at a later date.

REWARD SURVEY SCHEDULE

NAME: _____

DATE: _____

- I. THIS IS A LIST OF THINGS WHICH YOU MIGHT ENJOY. PLEASE RATE HOW MUCH YOU WOULD LIKE EACH OF THESE THINGS TO HAPPEN TO YOU WHILE YOU ARE LIVING AT _____ BY WRITING ONE OF THE NUMBERS 1 THROUGH 5 IN THE BOX AT THE END OF EACH LINE.

1 = WOULD NOT LIKE THIS

2 = LIKE A LITTLE

3 = LIKE A LOT

4 = LIKE VERY MUCH

5 = LIKE VERY VERY MUCH

- | | |
|---|--|
| 1. HAVING NEW RECORDS TO LISTEN TO AT _____ | |
| 2. HAVING FOOD LIKE CHEESEBURGERS OR PIZZA DELIVERED TO _____ | |
| 3. HAVING FRIENDS VISIT YOU AT _____ | |
| 4. HAVING YOUR FAMILY VISIT YOU AT _____ | |
| 5. HAVING A PARTY WITH MUSIC AND FOOD AT _____ | |
| 6. HAVING A PET AT _____ | |
| 7. BEING HELPED TO LOSE WEIGHT AND GET IN SHAPE | |
| 8. HAVING NEW CLOTHES | |
| 9. GOING HOME FOR A WEEKEND VISIT..... | |
| 10. GOING HOME FOR A FEW HOURS FOR A VISIT (NOT OVERNIGHT)..... | |
| 11. GOING DOWNTOWN FOR A FEW HOURS | |
| 12. GOING TO SEE A MOVIE | |
| 13. GOING OUT TO EAT AT A RESTAURANT | |
| 14. GOING TO A FRIEND'S PLACE FOR A FEW HOURS (NOT OVERNIGHT) | |
| 15. GOING ROLLERSKATING | |
| 16. GOING TO A SPORTS EVENT (LIKE A HOCKEY GAME) | |
| 17. GOING TO THE BEACH OR SOME PLACE LIKE THAT | |
| 18. GOING TO A ROCK CONCERT | |
| 19. GOING TO SEE A BALLET OR A PLAY AT A THEATRE | |
| 20. GOING TO A LIBRARY | |
| 21. GOING TO THE MUSEUM OF MAN AND NATURE | |
| 22. GOING TO THE PLANETARIUM | |
| 23. TAKING DANCE LESSONS | |
| 24. TAKING MUSIC LESSONS | |
| 25. TAKING "JAZZERCISE" LESSONS | |
| 26. HAVING YOUR HAIR STYLED BY A HAIR STYLIST | |
- II. WHAT OTHER SORTS OF THINGS WOULD MAKE YOUR LIFE AT _____ MORE PLEASANT? PLEASE LIST THEM BELOW:
1. _____
2. _____
3. _____

BEHAVIOR MONITORING FORM

Youth: _____

Adult(s): _____

Month: _____

Days of the Month

Desired Behavior(s)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Chores:	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1.																															
2.																															
3.																															
4.																															
5.																															
Curfew:	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1. Time returned:																															
2. Time phoned if late:																															
3.																															
Other:	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

** Contract **

161

We, the undersigned parties agree to the following:

IF

THEN

Youth's Name ↓

Adult's Name ↓

Behavior ↓

Reward ↓

↓ Bonus ↓

↓ Penalty ↓

↓ Special Conditions ↓

Monitoring System ↓

Date Contract Begins ↓

To Be Renegotiated ↓

Youth's Signature ↓

Adult's Signature ↓

NEGOTIATION BEHAVIORS

Did you:

- _____ describe the desired behavior to the youth in behavioral terms?
[Step #2(A)]
- _____ explain to the youth why this behavior will be beneficial to him or her?
[Step #2(B)]
- _____ ask the youth to propose a reward?
[Step #3(A)]
- _____ if necessary, show the youth your list of rewards?
[Step #3(B)]
- _____ if necessary, explain why you cannot provide the reward?
[Step #4(A)]
- _____ if necessary, make a counterproposal?
[Step #4(B)]
- _____ if necessary, explain that the youth can reject your counterproposal and propose a different reward?
[Step #4(C)]
- _____ if necessary, repeat Step #3 and Step #4 twice more? Reduce the behavioral requirement and begin again at Step #2? Politely end the session at Step #5?
- _____ ask the youth to propose a penalty?
[Step #3(A)]
- _____ if necessary, show the youth your list of penalties?
[Step #3(B)]
- _____ if necessary, explain why you cannot accept the proposed penalty?
[Step #4(A)]
- _____ if necessary, make a counterproposal?
[Step #4(B)]
- _____ if necessary, explain that the youth can reject your counterproposal and propose a different penalty?
[Step #4(C)]
- _____ if necessary, repeat Step #3 and Step #4 twice more? Reduce the behavioral requirement and begin again at Step #2? Politely end the session at Step #5?

CONTRACTING BEHAVIORS

- _____ fill in all the blanks on the standard form?

(If you do not want to use a section of the contract such as the bonus section, you should write "N.A." or "Not Applicable" in the blank.)

Sample Contracts

PROBLEM BEHAVIORS:

1. Curfew Violation.
2. Failure to do chores.
3. Failure to do homework.
4. Truancy.
5. Poor personal hygiene.
6. Interrupting other people.
7. Failure to attend or participate in groups.
8. Inappropriate sexual behavior.
9. "Setting up" other youths.
10. Mild aggressiveness.
11. Serious aggressiveness.
12. Running away - example a.
13. Running away - example b.

Sample Contract #1

PROBLEM BEHAVIOR: Curfew violation.

Joe is allowed to go on home visits every weekend. He is also allowed to go out on his own during weekday evenings. The problem is that Joe always returns late. During the last week he was 1/2 hour past his curfew 3 times and once he was 1 hour late. You have spoken to Joe about this problem more than once. He always claims to "lose track of the time" and he denies being late on purpose.

- You give Joe a Reward Survey Schedule to get an idea of what sorts of things he likes. Then you find out which of those rewards are available.

- You define "being late" as the number of minutes Joe is outside the door of his cottage past his curfew which is 9 p.m.. You arrange for evening staff to monitor the time Joe returns each evening.

- You have the data cited above as a baseline.

- You describe the desired behavior to Joe and you explain why it will be beneficial to him.

- You and Joe negotiate what his reward and penalty are to be and you write up the flexible contract shown on the next page.

 * Contract *

165

We, the undersigned parties agree to the following:

IF

THEN

Youth's Name ↓

Adult's Name ↓

Joe Cool

Lester Square

Behavior ↓

Reward ↓

is inside the doors of his cottage
at or before curfew for 7 days
(excluding evenings when he is
on a home visit),

will provide Joe with one movie
ticket which he can use on any
Saturday afternoon.

↓ Bonus ↓

returns at or before curfew
for 7 days in a row (excluding
home visits),

will provide Joe with \$2 to buy
popcorn, etc., at the movie.

↓ Penalty ↓

is late,

will move Joe's curfew forward by
twice the number of minutes he
was late, for the following evening
only.

↓ Special Conditions ↓

(1) is confined to cottage
during the contract, or (2) is
confined the Saturday he wants to go
to the movie.
 Monitoring System ↓

(1) will suspend the contract
until Joe is not confined; (2) will
provide the reward the next Saturday.

Joe will report to a staff as soon as he returns each evening. The staff
will record the time according to the clock in the cottage.

Date Contract Begins ↓

To Be Renegotiated ↓

March 1, 1983

after Joe earns the reward or
on March 31, whichever comes first.

Youth's Signature ↓

Adult's Signature ↓

Joe Cool

Lester Square

Sample Contract #2

PROBLEM BEHAVIOR: Failure to do chores.

Mary is assigned certain chores but she usually does them poorly. She doesn't seem to have learned how and she often argues that the chores are not important anyway. She is supposed to make her bed and hang up her clothes each morning, and to set one of the kitchen tables each evening. Each Saturday she is assigned an extra chore such as washing clothes or vacuuming. During the last week she failed to make her bed twice and on three other occasions she made it improperly. On four occasions she forgot some items when setting the table. On Saturday she vacuumed the rug in the T.V. room but when she was finished, numerous specks of dirt were still visible. You notice that she uses the vacuum in a rather haphazard way.

- You give Mary a Reward Survey Schedule to get an idea of what she likes and then you find out which of those things are available.

- You have the baseline data cited above.

- You meet with Mary and describe the desired behavior to her. In addition, you also provide Mary with written definitions of each chore and you show her how to do each one. Then you explain why it will be beneficial to her to learn how to do these chores.

- You and Mary negotiate what her reward and penalty will be and you write up the flexible contract shown on the next page.

 * Contract *

167

We, the undersigned parties agree to the following:

IF

THEN

Youth's Name ↓

Adult's Name ↓

Mary Contrary

Stella Staph

Behavior ↓

Reward ↓

does the chores listed on the next
page, in the manner described on the
next page, for 7 days and without
making more than 5 mistakes,

will give Mary permission to
visit her friend George between
12 noon and 5 p.m. on Saturday,
March 20. She will also receive
2 bus tickets,

makes 0 mistakes,

↓ Bonus ↓

will allow Mary to invite George
over for supper and T.V. on the
evening of Saturday, March 20,

makes mistakes while doing her
chores,

↓ Penalty ↓

will deduct 15 minutes per
mistake for the time that Mary
has with George on Saturday
afternoon,

↓ Special Conditions ↓

misbehaves and gets confined
on Saturday, March 20,

will postpone the reward until
the first Saturday that she is
not confined.

Monitoring System ↓

Staff will check Mary's chore performance at 8:30 a.m. 5:00 p.m., and 12
noon on Saturday, record on a monitoring form whether or not the chore
was done properly or if it was a mistake.

Date Contract Begins ↓

To Be Renegotiated ↓

March 20, 1983

on March 26, 1983

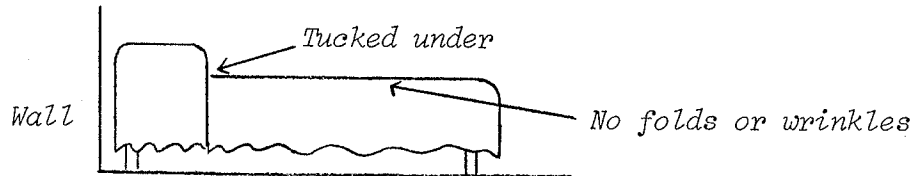
Youth's Signature ↓

Adult's Signature ↓

Mary Contrary

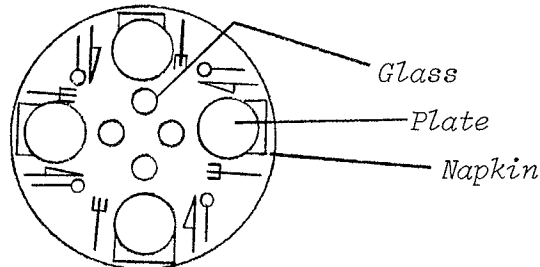
Stella Staph

1. Every morning make bed so that: (a) all sheets are tucked in and wrinkle-free, (b) the bed spread is wrinkle-free and pulled up over the pillow, as in diagram. To be done by 8:30 a.m.

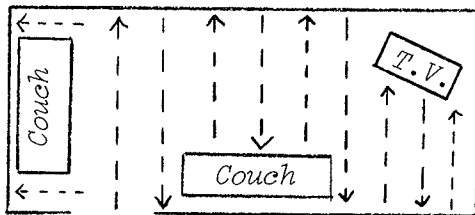


2. Every morning, put all clothes on hangers in closet or in drawers. To be done by 8:30 a.m.

3. At 5:00 p.m., set one table as in diagram:



4. On Saturday morning (before noon), vaccuum the rug in the T.V. room. Push the vaccuum in straight lines as shown, and also vaccuum under furniture. Continue until no spots or specks are visable.



Any chore not done properly = 1 mistake.

Sample Contract #3

PROBLEM BEHAVIOR: Failure to do homework.

Frank has been doing poorly in math this year and he is in danger of failing the course. His teacher believes that Frank could still pass, if he did some extra work in math. Consequently, for 6 days the teacher has given Frank 10 math questions to do as homework each night. The problem is that Frank has never completed more than three of these questions and on two occasions he did none. Frank says the questions are too hard and that he does not know how to do them. The teacher does not believe this because the few questions Frank does attempt he usually answers correctly. The teacher is aware that you usually get on well with Frank and so she has asked you to "do something" to get Frank to do his homework at night, so that he won't fail the course.

- You give Frank a Reward Survey Schedule and then you get together with your supervisor and decide which rewards you can give to Frank.

- You define "completing homework" as doing all 10 assigned homework questions and correcting any wrong answers (as determined by the teacher) from the previous night's questions. This homework is to be done right after school or immediately after supper and evening chores are completed.

- You already have the baseline data cited above.

- You describe the desired behavior to Frank and explain how it will benefit him.

- You and Frank negotiate the reward and penalty and then write up the flexible contract shown on the next page.

 * Contract *

170

We, the undersigned parties agree to the following:

IF

THEN

Youth's Name ↓

Adult's Name ↓

Frank Furtner

Lester Square

Behavior ↓

Reward ↓

(1) answers at least 8/10 math
questions each night, (2) corrects
wrong answers from the previous
nights homework, (3) does (1) and
(2) right after supper and chores,
and (4) does (1)-(3) for 5 nights,

will take Frank to a movie of
Frank's choice on a Saturday
evening of Frank's choice.
Popcorn and drink will also be
provided.

does (1)-(4) above for 5 nights
in a row (i.e., Monday to Friday,
February 21-25),

↓ Bonus ↓

will allow Frank to watch a late
movie on T.V. Friday and Saturday
night (February 25 and 26).

↓ Penalty ↓

fails to do at least 8/10
questions on a particular nights,
or fails to do his corrections,

will not allow Frank to watch
T.V. on that night.

↓ Special Conditions ↓

earns his reward but is confined
on the Saturday night he chose to
see the movie,

will take Frank on a different
Saturday night of Frank's
choice.

Monitoring System ↓

Frank will show a staff the math questions he answered, and the corrections,
and the staff will initial a monitoring sheet in Frank's chart.

Date Contract Begins ↓

Monday, February 21, 1983

To Be Renegotiated ↓

the day Frank earns his reward,
or March 7, whichever comes first.

Youth's Signature ↓

Frank Furtner

Adult's Signature ↓

Lester Square

Sample Contract #4

PROBLEM BEHAVIOR: Truancy.

Three weeks ago John began to attend public school. The first week went fine. At the end of the second week his teacher telephoned you to report that John had skipped five classes that week. You spoke to John about this problem that weekend. He said that he skipped the classes because he hates math and english. He said that he spent the classes that he skipped in a bus shelter talking to friends who had also skipped the classes. At the end of your talk with John, he agreed to not miss any more classes. However, you just found out from John's teacher that he skipped 3 classes during this past week.

- You give John a Reward Survey Schedule and then you get together with your supervisor to decide which rewards you can give to John.

- You define "attending class" as being in the classroom for the entire class, doing all assigned work (answers need not be correct), and answering all questions asked by the teacher (answers need not be correct).

- You already have the baseline data cited above.

- You describe the desired behavior to John and explain how it will benefit him.

- You and John negotiate a reward and penalty, and then write up the flexible contract shown on the next page.

 ** Contract **

172

We, the undersigned parties agree to the following:

IF

THEN

Youth's Name ↓

Adult's Name ↓

John Doe

Stella Staph

Behavior ↓

Reward ↓

does the following on Mon - Fri:

will give John 15 min of free time for

(1) attends all classes; (2) remains
in all classes for the full period;

each behavior ((1)-(5)) he performs

(3) does all work assigned in class*;

each day, Mon - Fri, for a possible

(4) answers all questions asked in

total of 6 hrs and 15 min, to be used

class*; and (5) does all homework

on Sat, Feb 26, between 10 a.m. and

questions assigned*; (*need not

5 p.m. If he earns 3 hrs or less, he

be correct)

must spend them "on grounds".

earns all 6 hrs and 15 min.,

↓ Bonus ↓

will also give John 2 bus tickets

and 1 dollar spending money.

↓ Penalty ↓

fails to do both (1) and (2)

will confine John to the cottage

on any particular day,

for the evening.

↓ Special Conditions ↓

earns his reward but is confined to

will give John his reward on the

the cottage for some other reason

first Sunday following his

on Saturday, February 26,

confinement.

Monitoring System ↓

John's teacher will monitor (1)-(5) above and record his performance on a

monitoring sheet which she will give to Stella after school each day.

Date Contract Begins ↓

To Be Renegotiated ↓

Monday, February 21, 1983

Sunday, February 27, 1983.

Youth's Signature ↓

Adult's Signature ↓

John Doe

Stella Staph

Sample Contract #5

PROBLEM BEHAVIOR: Poor personal hygiene.

One of Ralph's major problems is his appearance. He is 16 years old but he still has not learned to groom himself properly. He rarely washes or showers and consequently his face and hands always look dirty. Similarly, he rarely brushes his teeth and each year he gets many cavities. In addition, his shirt tail is always hanging out of his pants, the zipper on his pants is frequently undone, and the laces on his sneakers are usually not tied. You have spoken to Ralph about his appearance many times. Each time he tells you that he "forgot" to shower, etc.

- You give Ralph a reward Survey Schedule and then you meet with your supervisor and decide which rewards you can give to Ralph.

- You define the desired behavior as: (1) showering with soap each morning; (2) brushing teeth with toothpaste each morning; (3) having shirt tucked in pants; (4) having zipper up; and (5) having laces tied in a bow.

- To establish a baseline, you and other staff check Ralph at breakfast, lunch, and supper, and you record your findings on a monitoring sheet.

- You describe the desired behavior to Ralph and you explain how it will benefit him.

You and Ralph then negotiate a reward and penalty and you write up the flexible contract shown on the next page.

** Contract **

174

We, the undersigned parties agree to the following:

IF

THEN

Youth's Name ↓

Adult's Name ↓

Ralph Hogg

Stella Staph

Behavior ↓

Reward ↓

does a minimum of 8 of the following
11 behaviors every day for 7 days:

(1) shower in a.m.; (2) brush teeth
in a.m.; (3) shirt tucked in at
breakfast; (4) at lunch, and (5)
at supper checks; (6) zipper up at
breakfast, (7) at lunch, and (8) at

supper checks; and (9) laces tied at
breakfast, (10) lunch checks and (11)
supper checks,

does all 11 of the behaviors each
day for 7 days in a row,

does less than 8 of these 11
behaviors on any particular day,

will take Ralph out for supper at
the Pizza Place on the evening of the
7th day or the next day that Stella
works. Ralph can order for himself a
small pizza with 2 toppings and a
large Coke.

will also take him for desert at
Dairy Queen where he can order a
sundae under \$2

↓ Bonus ↓

(1) will start the 7 day sequence all
over again, and (2) will require that
Ralph write out the 11 behaviors 5 times
to help him remember them.

↓ Special Conditions ↓

earns his reward but is confined
the evening of the 7th day for some
other reason,

will take him for dinner on the first
evening that she works following his
confinement.

Monitoring System ↓

Any staff on duty will observe Ralph at breakfast, lunch, and supper, and
then place a checkmark on his monitoring form beside each behavior performed.

Date Contract Begins ↓

Sunday, February 20, 1983

To Be Renegotiated ↓

When Ralph earns his reward on
on March 15, whichever comes first.

Youth's Signature ↓

Ralph Hogg

Adult's Signature ↓

Stella Staph

Sample Contract #6

PROBLEM BEHAVIOR: Interrupting other people.

Fred has a problem with his manners. When Fred wants to speak to a staff member, he simply walks up to the person and starts talking, regardless of what the other person is doing. Staff find this annoying because Fred frequently starts talking to them when they are in the middle of a conversation with someone else. Also, during group meetings, Fred often will start talking loudly to another youth while someone else in the group is trying to discuss something. In general, Fred never waits for an appropriate time to begin talking and he also never says "excuse me" before he interrupts. On several occasions you have asked Fred not to interrupt other people's conversations, or to at least say "excuse me" before interrupting. Your talks have not had much effect. In the last week Fred has interrupted individual staff members 16 times. During the last two group meetings, Fred interrupted some five and six times respectively.

- You give Fred a Reward Survey Schedule and then you get together with your supervisor and decide which rewards you can give Fred.

- You define "appropriate interruptions" as: (1) walking up to a staff member who is talking to some one else and waiting until the staff member talks to you or (2) interrupting politely by saying "excuse me" first or (3) in a group meeting, raising hand but not speaking until told to by a staff member.

- You already have the baseline data cited above.

- You decide the desired behavior to Fred and you explain how it will benefit him.

- You and Fred negotiate a reward and a penalty and then you write up the flexible contract shown on the next page.

 * Contract *

176

We, the undersigned parties agree to the following:

IF

THEN

Youth's Name ↓

Adult's Name ↓

Fred Frantic

Lester Square

Behavior ↓

Reward ↓

does the following for 7 days when
he wants to speak while someone else
is talking: (1) walks up to a staff
and waits until the staff speaks to
him, or (2) says "excuse me" before
talking, and (3) when in a group,
raises his hand and waits until
given permission to speak,
does not interrupt once during
the 7 day period,

will give Fred up to *5 hours of
free time on Sat, Feb 26, between
11 a.m. and 4 p.m. During this time
he can visit friends as long as
he tells staff where he will
be (*see penalty)

↓ Bonus ↓

will also give Fred 2 bus tickets
and 1 dollar spending money on
Sat 26.

↓ Penalty ↓

interrupts,

will fine Fred 15 min of his
free time for each interruption
and require Fred to practice
the appropriate behavior.

↓ Special Conditions ↓

(1) earns less than 2 hours of
free time,

(1) will require that he spend
the time "on grounds".

(2) is confined on Feb 26,

(2) give him the reward on Feb 27.

Monitoring System ↓

A monitoring form will be placed in Fred's chart and staff will place
an "X" on it any time Fred interrupts.

Date Contract Begins ↓

To Be Renegotiated ↓

Saturday, February 19, 1983

Saturday, February 26, 1983

Youth's Signature ↓

Adult's Signature ↓

Fred Frantic

Lester Square

Sample Contract #7

PROBLEM BEHAVIOR: Failure to attend or to participate in groups.

The youths in your cottage are supposed to attend a group meeting on Mondays and Thursdays at 4:30 P.M. after school. Staff feel that these meetings are very useful for resolving routine problems which arise in the cottage. Dave hates these group meetings because sometimes staff confront him with a problem behavior he has and he does not like being "put on the spot". He also claims that he would rather watch T.V. or play cards during this time. Dave is very good at finding excuses for missing these meetings. Sometimes he has a headache and has to lie down, or he may have to stay late at public school for a variety of reasons. When he does attend, he usually will not answer questions. Dave has missed 3 of the last 5 groups and during the 2 he did attend he would not answer any questions except by saying, "I don't know." You have spent some time discussing this problem with Dave in the past. After each discussion with you, he attends one or two groups and answers one or two questions but then lapses back into his old pattern once again.

- You give Dave a Reward Survey Schedule and then you meet with your supervisor to decide which rewards you can provide.

- You define "attend and participate in groups" as: (1) being at each Monday and Thursday meeting at 4:00 P.M. and staying until the meeting is over; and (2) answering all questions asked without denying that you know the answer.

.sk 1

- You already have the baseline data cited above.

- You describe the desired behavior to Dave and you explain why it will be beneficial to him.

- You and Dave negotiate a reward and a penalty, and you write up the flexible contract shown on the next page.

 * Contract *

178

We, the undersigned parties agree to the following:

IF

THEN

Youth's Name ↓

Adult's Name ↓

Dave Defiant

Lester Square

Behavior ↓

Reward ↓

(1) is on time for the 4 p.m. groups
on Mondays and Thursdays (+2 min by
the cottage clock); (2) stays in
the meeting until it ends; and (3)
answers all questions without
denying that he knows the answer,
for the next 4 meetings,

will give Dave 10 min. of roller
skating time at the Roller Rink
each time he does each of (1)-(3),
to a maximum of 2 hours, to be used
on the afternoon of Saturday,
February 26.

↓ Bonus ↓

earns all 2 hours of roller
skating time.

will also pay for Dave's
admission, and will give him
1 dollar to spend at the concessions

↓ Penalty ↓stand.

fails to do (1) or (2) above,

will confine Dave to the cottage
for the next two evenings.

↓ Special Conditions ↓

earns his reward but is confined
on Saturday, February 26 for some
other reason.

will give him the reward on the
first Sunday that he is not
confined.

Monitoring System ↓

A monitoring form will be placed in Dave's chart and staff will place a
check mark on the form beside each behavior ((1)-(3)) that Dave does
during the next 4 groups.

Date Contract Begins ↓

To Be Renegotiated ↓

Monday, February 14, 1983

February 27, 1983

Youth's Signature ↓

Adult's Signature ↓

Dave Defiant

Lester Square

Sample Contract #8

PROBLEM BEHAVIOR: Inappropriate sexual behavior.

Several of the girls in your cottage have complained that Gary often "grabs them" or otherwise manages to come into physical contact with their bodies. The girls are not afraid of Gary but they do find this behavior to be annoying. Your major concern is that Gary may try this with girls from outside your residence and thereby get himself into trouble with the law. You have spoken to Gary about this problem several times but his behavior has not changed. During the last week staff have seen him "grabbing" on 4 occasions and on 2 other occasions girls have complained to staff. Your impression is that Gary does not know how to approach girls in a more appropriate way. He has never managed to acquire a girl friend.

- You give Gary a Reward Survey Schedule and then you meet with your supervisor to decide which rewards you can provide.

- You define "inappropriate physical contact" as physical contact between any part of Gary's body and any part of a girl's body with the exception of her hands and arms.

- You already have the baseline data as cited above.

- You describe the desired behavior to Gary and you explain why it will be beneficial to him.

- You and Gary negotiate a reward and a penalty. Since the problem is a serious one you decide to try an inflexible contract, as shown on the next page.

 * Contract *

180

We, the undersigned parties agree to the following:

IF

THEN

Youth's Name ↓

Adult's Name ↓

Gary Gropper

Stella Staph

Behavior ↓

Reward ↓

(1) does not touch any part of any
girl's body (hand and arms excluded),
for at least 28 days, and (2) meets
with Stella for 1 hour on Mon and
Wed to discuss and role-play more
appropriate ways of approaching
girls.

will place \$3 in an envelope in
Gary's chart every time he goes for
7 days without doing (1), and will
place \$1 in his chart every time he
attends a Mon or Wed meeting. Once
Gary has earned \$20, he can use the
money to get his hair styled.

↓ Bonus ↓

does (1) and attends both meetings
specified in (2) above, and does
all the role-playing Stella asks,
each week,

will also take Gary to McDonald's
for a Big Mac and Coke each Sunday
afternoon.

↓ Penalty ↓

If Gary is seen by a staff to be
grabbing or touching a girl anywhere
but on the hands or arms,

will start the contract all over
and Gary will lose all the money he
has earned, and he will be confined
to cottage for 1 week.

↓ Special Conditions ↓

earns the reward but is confined
for some reason on the day he is
to have his hair styled,

will reschedule his hair appointment
to a time when he is not confined.

Monitoring System ↓

A monitoring form will be kept in Gary's chart and Stella will check off
Mon and Wed meetings kept. Any staff witnessing an instance of touching
will place an "X" on the form and inform Stella.

Date Contract Begins ↓

To Be Renegotiated ↓

Saturday, February 19, 1983

every Saturday afternoon and again
when the reward is earned.

Youth's Signature ↓

Adult's Signature ↓

Gary Gropper

Stella Staph

Sample Contract #9

PROBLEM BEHAVIOR: "Setting up" other youths

The youths in your cottage complain that they are often "set up" by Harry. They say that Harry provokes them until they blow up and start a fight at which time Harry complains to staff and the other youth gets into trouble. You begin to watch Harry more closely and you find that he is "setting up" the other kids. You talk to him about this but he only stops for a few days and then begins again. He says he does it because he thinks that the other kids do not like him. You believe that this is probably true because the other kids do ignore him otherwise. During the last three days staff notice Harry "set up" another youth on 6 occasions.

- You give Harry a Reward Survey Schedule and you then meet with your supervisor to decide which reward you can provide.

- You define a "set up" as: (1) any pushing, punching or kicking, etc., Harry directs toward another youth; or (2) any antagonistic verbal remark made by Harry to another youth. This behavior must be seen or heard by a staff in order to count as a "set up." You inform the other youths that any behavior of Harry's which is not visible or audible to staff cannot possibly be that annoying and consequently they are expected to ignore it.

- You use the data cited above as your baseline.

- You describe the desired behavior to Harry and you explain why it will be beneficial to him.

- You and Harry negotiate a reward and penalty, and you write up the flexible contract shown on the next page.

 ** Contract **

182

We, the undersigned parties agree to the following:

IF

THEN

Youth's Name ↓

Adult's Name ↓

Harry Hassler

Lester Square

Behavior ↓

Reward ↓

(1) does not "set up" any other kids
(i.e., does not provoke them by
unpleasant physical contact or
verbal remarks); and (2) meets
with Lester for ½ hr on Tues, (3)
Wed, and (4) Thurs each week for
social skills training,

will write "10 points" on a special
ticket kept in Harry's chart each
day Harry does one of (1)-(4). In
4 wks Harry can earn a maximum of
400 points. If he has 340 points, he
can use the ticket to gain admission
to a "History of Rock and Roll" party
on Saturday March 26, 1983.

↓ Bonus ↓

earns 100 points in a week,

will also take Harry to McDonald's
for a Bic Mac and Coke on Sunday
of each week

↓ Penalty ↓

is seen "setting up" another
kid by any staff,

will fine Harry 10 points for each
"set up" (i.e., he does not earn his
10 points that day, plus he loses
another 10 for each "set up").

↓ Special Conditions ↓

earns the 340 points but is
confined on March 26 for some
misbehavior,

will exchange the points for 2 movie
passes, to be used when Harry is no
longer confined.

Monitoring System ↓

Any staff who sees Harry "set up" another kid will place an "X" on the
monitoring form in Harry's chart. Lester will also record an "X" if
Harry misses a Tues, Wed, or Thurs meeting.

Date Contract Begins ↓

To Be Renegotiated ↓

Saturday, February 26, 1983

Each late afternoon and again
on Saturday, March 26, 1983

Youth's Signature ↓

Adult's Signature ↓

Harry Hassler

Lester Square

Sample Contract #10

PROBLEM BEHAVIOR: Mild aggressiveness

Sam is very sensitive to criticism or teasing. Any time he thinks he is being made fun of by other youths, he begins screaming and swearing, and usually his fists start flying. Fortunately, Sam is small and his physical assaults never result in another youth being hurt. Actually, the other kids appear to find his tantrums amusing and this causes Sam to scream and swear even more. You have spoken to the other kids and asked them not to tease Sam. They inform you that they rarely tease deliberately. They insist that Sam frequently misinterprets things they say and that he believes he is being teased when he is not. You observe Sam for a while and you conclude that he does tend to misinterpret relatively innocent remarks. During a 5 day period, staff record 7 aggressive tantrums.

- You give Sam a Reward Survey Schedule and you meet with your supervisor and decide which rewards you can provide.

- You define "aggressiveness" as an instance of screaming, punching, or kicking. You define "self-control" as engaging in some behavior such as: (1) going to room to cool off; (2) punching a pillow without screaming; (3) talking to staff to get help cooling off, etc.

- You use the data cited above as a baseline.

- You and Sam negotiate a reward and a penalty. Since there is no danger of Sam seriously hurting anyone, you decide to make the contract a flexible one, as shown on the next page.

 * Contract *

184

We, the undersigned parties agree to the following:

IF

THEN

Youth's Name ↓

Adult's Name ↓

Sam Small

Stella Staph

Behavior ↓

Reward ↓

(1) engages in self-control when
mad and does not scream, punch, or
kick, etc., other kids and (2) meets
with Stella for ½ hour on Tues;
(3) Wed; and (4) Thurs each week for
training in social skills and
how to respond to teasing,

will write "1" point on a special
ticket kept in Sam's chart each day
Sam does (1), and also each day he
does (2), (3), and (4). If Sam has
34 of 40 points by April 2/83, he
can use the ticket to gain admission
to a roller skating party on April 2.

↓ Bonus ↓

earns 10 points in a week

will also take Sam to Dairy Queen
for a sundae on Sunday of each week.

↓ Penalty ↓

is seen screaming, punching,
kicking, etc., by any staff,

will fine Sam 1 point for each
"tantrum" (i.e., in addition to
failing to earn the day's point,
he loses one).

↓ Special Conditions ↓

earns the 34 points but is
confined on April 2 for some
misbehavior,

will exchange the points for 2
movie passes, to be used when
Sam is no longer confined.

Monitoring System ↓

Any staff who sees Sam's "tantrum" will place an "X" on the monitoring
form in his chart. Stella will also record an "X" if Sam misses a Tues,
Wed, or Thurs meeting.

Date Contract Begins ↓

To Be Renegotiated ↓

March 5, 1983

every Saturday afternoon and
again when the reward is earned.

Youth's Signature ↓

Adult's Signature ↓

Sam Small

Stella Staph

Sample Contract #11

PROBLEM BEHAVIOR: Serious aggressiveness.

Bill is continually getting into fights with the other kids in his cottage. Any time another youth does or says something which Bill does not like, he punches the person. You have observed that the other kids do not go out of their way to antagonize Bill. Rather, he just seems to have a short temper. In addition, the other kids are afraid of him and Bill seems to enjoy the "respect" that comes with being tough. You have had numerous talks with Bill where you have tried to explore the reasons for his aggressiveness but nothing much comes out of these talks. Bill is a strong boy and his punches often draw blood. You are concerned that he may very well break someone's nose or teeth. He has hit three kids in the last 7 days.

- You give Bill a Reward Survey Schedule and then you meet with your supervisor to decide which rewards you can provide.

- You define "aggression" as any physical contact with another youth (excluding any contact which is obviously nonaggressive such as shaking hands, etc.). Verbal abusiveness is not included in your definition. You define "self control" as engaging in some behavior other than hitting a youth such as: (1) going to room to cool off; (2) punching a pillow; (3) talking to staff to get help cooling off, etc.

- You use the data cited above as your baseline.

- You and Bill negotiate a reward and a penalty. Since in this case Bill could seriously injure another youth, you decide to make the contract an inflexible contract, as shown on the next page.

* Contract *

186

We, the undersigned parties agree to the following:

IF

THEN

Youth's Name ↓

Bill Bigg

Adult's Name ↓

Lester Square

Behavior ↓

(1) engages in self control when mad
and consequently does not hit, punch,
etc., another youth for 7 days; and
(2) meets with Lester for ½ hr on
Tues and Thurs to learn about and
practice anger-control skills,

Reward ↓

will place one movie pass into Bill's
chart. If Bill earns this pass, then
the contract will be renegotiated for
another 7 days. When a second movie
pass is earned, Bill can take his
girlfriend to a movie on a Saturday
night of his choice.

↓ Bonus ↓

cooperate with Lester during the
anger-control sessions and learns
the skills well,

will also give Bill 4 bus tickets and
\$2 spending money the night of the
movie.

↓ Penalty ↓

(1) hits, kicks, etc., another youth;
or (2) fails to attend the Tues and
Thurs meetings with Lester (without
an excuse such as sickness),

will cancel this contract. Bill will
not receive the movie ticket and he
will be confined to the cottage with
8 p.m. bed time for 1 week.

↓ Special Conditions ↓

earns the reward but is confined
for some reason other than aggression,

will give the tickets to Bill on a
Saturday following his confinement.

Monitoring System ↓

Staff will record any instance of physical aggression which they see (or
see evidence of, such as blood) on a form in Bill's chart. Lester will
be notified immediately. Lester will record any missed sessions.

Date Contract Begins ↓

Saturday, February 19, 1983

To Be Renegotiated ↓

Saturday, February 26, 1983

Youth's Signature ↓

Bill Bigg

Adult's Signature ↓

Lester Square

Sample Contract #12

PROBLEM BEHAVIOR: Running away - example a.

Veronica has run away 3 times during the last 4 months. Once she ran while on store leave, once while outside "on grounds", and once she did not return from a home visit. She says that she ran on these occasions because she wanted to "party" and be with her boyfriend. She says that she does not get to see her friends and boyfriend often enough, and she maintains that this is the main cause of her running.

- You give Veronica a Reward Survey Schedule and you find that what she wants is time to visit friends, etc.. You and your supervisor discuss this case and you decide that you will allow her to go out with her friends on Friday and Saturday evening between 6 and 11 P.M.

- You have the baseline data cited above.

- You describe the desired behavior to Veronica and you explain why it will be beneficial to her.

You and Veronica negotiate the reward and penalty. Since you do not want Veronica to run away even once, you write up an inflexible contract, as shown on the next page.

We, the undersigned parties agree to the following:

IF

THEN

Youth's Name †

Adult's Name †

Veronica Varoom

Stella Staph

Behavior †

Reward †

(1) does not run away for 7 days;
(2) meets with Stella for ½ hr on
Thurs evening to discuss methods
of coping with urges to run; and
(3) tells staff exactly where she
will be on her leave,

will give Veronica 4 hours of free
time in order to visit her boyfriend
between 6 and 10 p.m. on Fri, March
4/83. She will also receive 2 bus
tickets.

returns before or at 10:00 p.m.,

† Bonus †

will allow Veronica to invite her
boyfriend in for popcorn and T.V. until
midnight. Also, her curfew for the

(1) runs or gets into trouble with
the police while on leave,
(2) returns from her leave noticeably
drunk, etc.,

† Penalty †

next weekend will be extended to 11 p.m.
(1) will cancel this contract and
Veronica will be confined for 2 wks
(2) will not allow her boyfriend in for
T.V. and popcorn, and her curfew will
be moved forward 1 hour the next week.

(1) is confined during the week
so that she could not run,
(2) is confined on Fri, March 4/83

† Special Conditions †

(1) will suspend the contract until
confinement is over.

(2) will give her the reward on Sat,
March 5, or Wed, March 9.

Monitoring System †

Staff on duty Friday night, March 4, will record the time Veronica returns
and whether or not she is obviously drunk, etc. Runs are defined by
administration as any AWOL greater than 2 hours.

Date Contract Begins †

To Be Renegotiated †

Saturday, February 26, 1983

Friday, March 4, 1983 before supper

Youth's Signature †

Adult's Signature †

Veronica Varoom

Stella Staph

Sample Contract #13

PROBLEM BEHAVIOR: Running away - example b.

Betty has run away 3 times during the last 6 months. Five months ago she did not return from a home visit (she stayed with her mother). The other 2 times she ran while outside with a staff. On both of these occasions she attempted to get to Brandon to see her mother and friends. Betty says that she runs to see her family and friends in Brandon and she insists that she would not run away if she was allowed to see them more often.

- You give Betty a Reward Survey Schedule and you find that she really wants a weekend home visit. You and your supervisor are reluctant to give this to her because you are afraid that she might try to run away to Vancouver to see her father.

- You and your supervisor decide that you cannot give Betty a home visit just now but that you will give her one in 3 weeks, if she fulfills the terms of the contract shown on the next page.

- You describe the desired behaviors to Betty and you explain why these behaviors will be beneficial to her.

- You and Betty negotiate a reward and penalty. Since running is a serious problem, you decide to make the contract an inflexible one, as shown on the next page.

 * Contract *

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We, the undersigned parties agree to the following:

IF

THEN

Youth's Name ↓

Betty Bopper

Adult's Name ↓

Lester Square

Behavior ↓

Reward ↓

(1) does not run for 7 days (March 4);
(2) returns on time (9 p.m.) from an
"on grounds" leave with a staff on
Mon night; (3) returns on time
(9 p.m.) from an "on grounds"
leave without a staff on Wed night;
and (4) meets with Lester for 1 hr
on Thurs to leave self-control methods,
earns her first signature on
March 4,

will sign a "pass" for one weekend
home visit. If Betty earns the
signature, then this contract will
be renegotiated twice more. If Betty
earns all 3 signatures, then she can
have a home visit on March 19 and 20/83.

↓ Bonus ↓

will take Betty to McDonald's to
celebrate. She will get a Big Mac
and large Coke.

↓ Penalty ↓

(1) fails to do (1), (2), or (3)
above,
(2) fails to do (4) above,

(1) will terminate the contract and
Betty will be confined 2 wks after
her return, (2) will start the contract
over so that Betty has to go another
7 days before earning her first
signature.

↓ Special Conditions ↓

is confined the weekend of
March 19-20 for a reason other than
running, or if her parents cannot
have her visit that weekend,
 Monitoring System ↓

will re-schedule the visit until a
weekend after her confinement or when
her parents can have her.

Runs are defined by administration as any AWOL over 2 hrs duration and are
recorded in Betty's chart by any staff. Lester or any other staff on duty
will record compliance with (2), (3), and (4) above.

Date Contract Begins ↓

Friday, February 25, 1983

To Be Renegotiated ↓

Friday, March 4, 1983

Youth's Signature ↓

Betty Bopper

Adult's Signature ↓

Lester Square

Rewards and Penalties Available for Use by Child-Care Workers During Simulations

I. AVAILABLE PENALTIES

1. Total confinement to the cottage with loss of all privileges.

Duration: This is up to you.

2. Permission to attend school but confinement after school with loss of all privileges.

Duration: This is up to you.

3. Cancellation of a planned leave which was scheduled for the coming weekend.
4. Loss of a special privilege such as attending a roller skating party which is scheduled for the coming weekend.
5. Any other form of punishment which may be used at _____.

II. AVAILABLE REWARDS WHICH THE YOUTH LIKES:

1. One movie ticket per week.
2. Up to 4 extra bus tickets per week.
3. Up to 5 hours of "free time" on Saturdays.
4. A part at _____ with recorded music, soft drinks, potato chips, and 1 guest from outside _____. This can take place on Friday night from 8:00 to midnight, no more than once per every 6 weeks. Assume that other kids from _____ and their guests will be there.
5. Two tickets for roller skating, money to rent boots, and permission to take a guest from outside of _____, once per week.

6. One ticket for an "all nighter" roller skating party with other kids and staff from _____, and money to rent boots. This can take place on Friday night, no more than once every 6 weeks.
7. One ticket to the planetarium, once per week.

APPENDIX C

1. Procedure for Scoring Simulations, Generalization Tests, and Standard "Youth" Responses
2. Scoring Form for Child-Care Workers' Negotiation and Writing Behaviors
3. Scoring Form for Standard "Youth" Responses

Procedure for Scoring Simulations, Generalization Tests, and Standard
"Youth" Responses

Negotiation Behaviors

General instructions. The scorer must be familiar with the flowchart depicting the steps in negotiation (attached). The flowchart is an interactive one; sometimes certain behaviors are required and sometimes they are not required, depending upon the youth's responses to the child-care worker (C.C.W.). Thus, the scorer must follow the flowchart, determine if a particular behavior is required, and then listen to hear if the C.C.W. emits it. The scoring form (attached) lists steps which correspond to the steps on the flowchart. If a required behavior occurs, circle the "1" to the right of the behavior. Sometimes a score of "1/2" may be circled, if the required behavior occurs but is of poor quality. This is discussed below. If a required behavior is not emitted, circle the "0". If the youth responds to the C.C.W. such that a particular behavior is not required, circle "n/a" for "not applicable." Behaviors which are always required do not have an "n/a" scoring option.

Many of the behaviors required of a scorer are prompted by the scoring form. The next few pages contain some additional details required for accurate scoring. The scorer should become quite familiar with these details before attempting to score a negotiation session.

In order to receive a "1" for the behavior cued by Step #2(A), the C.C.W.'s description of the desired behavior must be primarily behavioral. That is, most of the C.C.W.'s verbalization must specify observable behaviors (e.g., "Make your bed, hang up all clothes, and empty the waste basket every day."). If the C.C.W. makes an effort to specify observable behaviors but also interjects a number of subjective terms

(e.g., "Clean your room by hanging up your clothes, making your bed, and making the room neat."), consider the description to be partly behavioral and score "1/2". If the description of the desired behavior is mostly nonbehavioral (e.g., "Your room should be neat and tidy.") or is omitted, score "0".

In order to receive a "1" for the behavior cued by Step #4(C), the C.C.W. must make explicit the fact that the youth has the option of rejecting the counterproposal and proposing another reward/penalty instead (e.g., "You don't have to accept my counterproposal. You're free to suggest something else."). If the C.C.W. makes this fact implicit rather than explicit (e.g., "Do you like that counterproposal?"), score "1/2". If behavior is required but not emitted, score "0".

If the youth's responses are such that a compromise regarding the reward/penalty is not achieved by the end of Step #4, thereby necessitating a return to Step #3, place a checkmark where indicated on the scoring form and begin scoring at Step #3 on a second (and if necessary, third) scoring form. If the youth's responses are such that the C.C.W. decides to reduce the behavioral requirement and to return to Step #2, place a checkmark where indicated on the scoring form and begin scoring at Step #2 on a second scoring form.

Four situations may arise which require special scoring rules. The first is a situation where: the C.C.W. fails to use a reward (when this occurs, it is usually during a pretest) or (2) the C.C.W. proposes a reward without first asking the youth to propose one (when this occurs, it is usually during a posttest or generalization test). The latter case amounts to imposing a reward upon the youth instead of negotiating

one. In either case, score "0" for Step #3(A), "n/a" for Step #3(B), and "0" for Step #4(A), (B), and (C). If the C.C.W. "proposes" (i.e., imposes) a reward and then tells the youth that he or she can reject the "proposal", do not score a "1" (or "1/2") by Step #4(C). However, if after imposing a reward the C.C.W. then asks the youth to propose one, consider the C.C.W. to have corrected himself or herself and change the "0" scored by Step #3(A) to "1". The "n/a" scored for Step #3(B) also may require changing if the youth is unable to think of a reward to propose. Similarly, the "0" scored for Step #4(A), (B), and (C), will usually need to be changed. These scoring rules are logical in the case of simulations since simulations are programmed such that Step #4(A), (B), and (C) would have been required had the C.C.W. asked the "youth" (i.e., experimenter) to propose a reward (this is discussed in detail below). The rules are somewhat arbitrary in the case of generalization tests since it is impossible to know which steps would have been required had the C.C.W. asked the youth to propose a reward, but they have the advantage of keeping the scoring procedure for simulations and generalization tests the same.

The rules discussed above also apply to the negotiation of the penalty except when a "mandatory penalty" is involved during a generalization test. This single exception is discussed later.

A second situation which requires a special scoring rule occurs when the C.C.W. accepts a youth's proposed reward or penalty when it should not have been accepted (i.e., when it is too costly, unethical, or not on the C.C.W.'s list of acceptable rewards and penalties). The rule is to score Step #4(A), (B), and (C) as "0" instead of as "n/a".

A third situation which requires a special scoring rule occurs when a C.C.W. asks the youth to propose a reward or penalty but then shows the youth the list, a behavior cued by Step #3(B), without first giving the youth a chance to think of and propose a reward or penalty. The scoring rule is that the C.C.W. should wait: (1) until the youth indicates that he or she cannot think of anything to propose (e.g., "I don't know") or (2) until one minute has passed. If the C.C.W. shows the youth the list before the appropriate time, score Step #3(B) as "n/a" instead of "1".

A fourth situation which requires a special scoring rule may occur during a generalization test, usually after a youth has become familiar with the negotiation process. The youth may propose a reward or penalty before the C.C.W. has the opportunity to ask the youth to do so. When this occurs, it is assumed to be due to past negotiation sessions where the C.C.W. has asked the youth to make a proposal, and so the rule is to score a "1" by Step #3(A). Similarly, a youth who has already made one proposal which has not been accepted by the C.C.W. may make a second proposal before the C.C.W. has an opportunity to make a counterproposal. When this occurs, the rules are: (1) If the youth's second proposal is acceptable, assume that the C.C.W. would have emitted the behaviors cued by Step #4(B) and (C), and score a "1" in both cases. (2) If the youth's second proposal is still not acceptable, score "n/a" for Step #4(B) and (C). The C.C.W. should then emit the behavior cued by Step #4(A) a second time, followed by behaviors cued by Step #4(B) and (C). Wait and see if these behaviors occur, and then score accordingly.

Simulations. It is not possible to emit any of the behaviors cued by Step #1 during a simulation since normally these behaviors should occur prior to the negotiation session. Thus, scoring begins at Step #2. In simulation sessions, the experimenter plays the role of the youth and consequently the "youth's" responses to the C.C.W. can be programmed and standardized prior to the simulation, so that negotiation ends at either of Steps #3, #4, or #5. In the present research, the "youth" responded such that the C.C.W. should have emitted the behaviors cued by Step #2(A) and (B), Step #3(A) (once for the reward and again for the penalty), and Step #4(A) (B), and (C) (once for the reward and again for the penalty), in order to earn a maximum of 10 points. The percent occurrence of the required behaviors is computed by dividing the actual number of points earned by 10 and multiplying by 100.

Generalization tests. During generalization tests, the C.C.W. contracts with a real youth and consequently it is not possible for the scorer to know in advance which behaviors cued by the flowchart will be required. Thus it is necessary for the scorer to determine whether or not a behavior is required (in consideration of the flowchart and the youth's responses to the C.C.W.) and then to determine whether or not the behavior occurred. The behaviors cued by Step #1(A), (B), and (D) should be scored during generalization tests. If these behaviors are emitted, a written product should be produced (i.e., a completed reward survey schedule, a list of available rewards and penalties, and baseline data), and consequently scoring may be based upon the presence or absence of a written product. The behavior cued by Step #1(C) is typically at a "private events" level during Step #1 and thus it is not scored until it reoccurs publically during Step #2(A).

Sometimes a residence will have a mandatory penalty for certain problem behaviors such as physical assault. In such cases, the C.C.W. will be unable to negotiate a penalty and consequently all the behaviors which relate to the negotiation of the penalty in Step #3 and #4 should be scored as "n/a". This situation could arise during a generalization test with a real youth but it should not arise during a simulation. The percent occurrence of required behaviors is computed by dividing the actual number of points earned by the number of points that could have been earned and multiplying by 100.

Contract Writing Behaviors

In general, if a required textual response is present on a written contract produced during the simulation or generalization test, score a "1". If a required textual response is present only in part or is qualitatively poor, score "1/2" when that option is available (see scoring forms). If a required textual response is missing or is of very poor quality, score "0". The required textual responses are:

1. Names. Score "1" if the names of both the youth and the C.C.W. are present in such a manner as to indicate that the contract is between those two parties (first names are sufficient). If the names are present but it is not clear that the contract is between these two parties (e.g., the names are not "connected" to the contract with an appropriate phrase), or if only one name is present, score "1/2". Otherwise score "0".
2. Statement of contingency. Score "1" if a phrase is present to indicate that the consequences are contingent upon the behavior. A typical phrase is of the "if-then" variety. Otherwise score "0".

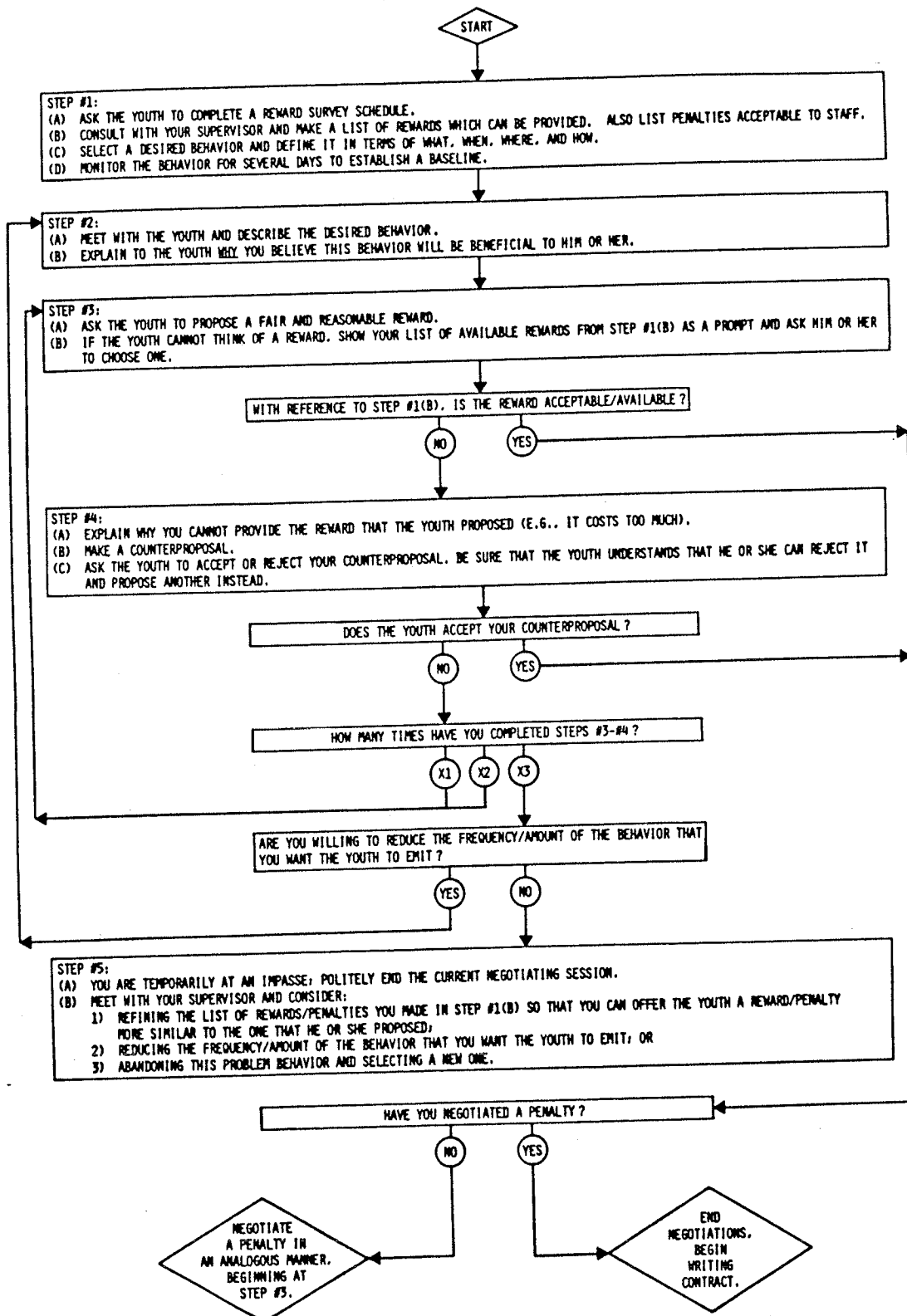
3. Definition of the behavior. Score "1", "1/2", or "0" using the same criteria as used when scoring the behavior cued by Step #2(A) of the flowchart.
4. Specification of the reward. Score "1" if the reward is described and if the day when the reward will occur is also indicated. Score "1/2" if the reward is described but it is not clear when it is to occur. Otherwise score "0".
5. Bonus. Score "1" if a bonus is described. Score "n/a" if the C.C.W. verbalizes that he or she has considered a bonus but has chosen not to provide one due to the expense of the reward. In such cases, if the blank standard contract form is being used, the C.C.W. should cross out the bonus section or otherwise indicate that it has been deleted. This should not happen during simulations but it could happen during a generalization test with a real youth. Otherwise score "0".
6. Penalty. Score in manner analogous to the way the reward is scored. Note that the penalty is to be something more than simply not earning the reward or bonus. Sometimes a C.C.W. will write that if the desired behavior does not occur, then the youth will lose the reward and bonus, but those contingencies already exist and consequently this does not constitute a true penalty. If during a generalization test a penalty was not negotiated because of the existence in the residence of a mandatory, nonnegotiable penalty, then a description of that mandatory penalty should appear in the appropriate place on the contract and it should be scored as above.

7. Special conditions. Score "1" if the contract indicates that if the youth is unable to partake of the reward/bonus due to some other misbehavior (e.g., the youth earns a movie ticket for Saturday by engaging in behavior X but then gets grounded on the weekend for engaging in behavior Y), then the reward/bonus will be postponed until the youth is able to partake of the reward. Otherwise score "0".
8. Monitoring system. Score "1" if the contract contains at least a brief description of how the desired behavior will be monitored. Otherwise score "0".
9. Dates. Score "1" if both the day the contract begins and the time for renegotiation are specified. Specific dates are not essential; phrases like "renegotiated next Friday" are sufficient. If only one of these days is specified, score "1/2". Otherwise score "0".
10. Signatures. Score "1" if the signatures of both the youth and the C.C.W. are present. If only one signature is present, score "1/2". Otherwise score "0".
11. Flexible/inflexible. Score "1" if a contract is appropriately flexible or inflexible (refer to the training manual for details). Sometimes C.C.W.s make contracts flexible in rather complicated ways. They should not be penalized for not noticing a less complicated way of making a contract flexible, even when the less complicated way is very apparent to the scorer. Otherwise score "0".

Standard "Youth" Responses

The scorer must be familiar with the flowchart depicting the steps in negotiation (attached). During pretest and posttest simulations, the "youth" (i.e., experimenter) should respond to the C.C.W.'s verbalizations in the following manner: (1) If the C.C.W. proposes a reward without asking the "youth" to propose one first, the "youth" should accept the imposed reward. (2) If the C.C.W. asks the "youth" to propose a reward, as prompted by Step #3(A) of the flowchart, the "youth" should propose a reward which is clearly excessive and not on the list of available rewards which was presented to the C.C.W.. (3) If the C.C.W. makes a counterproposal, as prompted by Step #4(B) of the flowchart, the "youth" should accept the reward. The "youth" should emit three more responses, analogous to the three above, when the penalty is being determined. Thus, the scorer must follow the flowchart, determine if one of the six standard "youth" responses is required, and then listen to hear if the "youth" emits the required response. The scoring form (attached) lists the six standard "youth" responses. If a particular response was not required (e.g., the C.C.W. did not attempt to use a reward), score "n/a" for "not applicable." The percent occurrence of the required standard "youth" responses is computed by dividing the actual number of points earned by the number that could have been earned and multiplying by 100.

STEPS IN NEGOTIATION



Scoring Form for Child-Care Workers' Negotiation and Writing Behaviors

SCORING FORM

C.C.W.: _____ YOUTH: _____ SCORER: _____ DATE: _____

Each step below corresponds to a step on the flowchart. If a behavior is required and the C.C.W. emits the behavior, circle 1 or $\frac{1}{2}$ (refer to the Scoring Manual for details). If a behavior is required and the C.C.W. fails to emit it, circle 0. If a behavior is not required, circle n/a.

NEGOTIATION BEHAVIORS - REWARD

STEP #1:
 (A) Youth/reward survey schedule..... 1 0
 (B) Supervisor/list rewards and penalties..... 1 0
 (C) Select problem/define..... - -
 (D) Establish baseline..... 1 0

STEP #2:
 (A) Describe behavior to youth..... 1 $\frac{1}{2}$ 0
 (B) Explain why beneficial..... 1 0

STEP #3:
 (A) Ask youth to propose reward..... 1 0
 (B) Show list if necessary..... 1 0 n/a

STEP #4:
 (A) Explain why cannot provide..... 1 0 n/a
 (B) Make counterproposal..... 1 0 n/a
 (C) Ask youth/accept or reject/understands..... 1 $\frac{1}{2}$ 0 n/a

If C.C.W. should return to STEP #3, check (✓) here ___ and begin scoring on a new form.

If C.C.W. should return to STEP #2, check (✓) here ___ and begin scoring on a new form.

STEP #5:
 (A) Politely end negotiating session..... 1 0 n/a
 (B) Meet with supervisor and consider alternatives..... 1 0 n/a

NEGOTIATION BEHAVIORS - PENALTY

STEP #3:
 (A) Ask youth to propose penalty..... 1 0 n/a
 (B) Show list if necessary..... 1 0 n/a

STEP #4:
 (A) Explain why cannot provide..... 1 0 n/a
 (B) Make counterproposal..... 1 0 n/a
 (C) Ask youth/accept or reject/understands..... 1 $\frac{1}{2}$ 0 n/a

If C.C.W. should return to STEP #3, check (✓) here ___ and begin scoring on a new form.

If C.C.W. should return to STEP #2, check (✓) here ___ and begin scoring on a new form.

STEP #5:
 (A) Politely end negotiating session..... 1 0 n/a
 (B) Meet with supervisor and consider alternatives..... 1 0 n/a

TOTAL POINTS: _____ %: _____

WRITING BEHAVIORS

Circle the appropriate score (refer to the Scoring Manual for details).

1. Names..... 1 $\frac{1}{2}$ 0
 2. Statement of contingency..... 1 0
 3. Definition of behavior..... 1 $\frac{1}{2}$ 0
 4. Specification of reward..... 1 $\frac{1}{2}$ 0
 5. Bonus..... 1 0 n/a
 6. Specification of penalty..... 1 $\frac{1}{2}$ 0
 7. Special conditions..... 1 0
 8. Monitoring system..... 1 0
 9. Dates..... 1 $\frac{1}{2}$ 0
 10. Signatures..... 1 $\frac{1}{2}$ 0
 11. Flexible/inflexible..... 1 0

TOTAL POINTS: _____ %: _____

Scoring Form for Standard "Youth" Responses

Date: _____ Scorer: _____

C.C.W.: _____ Simulation: _____

1. If the C.C.W. imposed a reward, the "youth" accepted it.

1 0 n/a

2. If the C.C.W. asked the "youth" to propose a reward [Step #3(A)] the "youth" proposed something unacceptable (not on the list.)

1 0 n/a

3. If the C.C.W. counterproposed a reward [Step #4(B)], the "youth" accepted it.

1 0 n/a

4. If the C.C.W. imposed a penalty, the "youth" accepted it.

1 0 n/a

5. If the C.C.W. asked the "youth" to propose a penalty [Step #3(A)], the "youth" proposed something unacceptable (not on the list).

1 0 n/a

6. If the C.C.W. counterproposed a penalty [Step #4(B)], the "youth" accepted it.

1 0 n/a

TOTAL POINTS: _____ %: _____

APPENDIX D

1. Operational Definitions of Youth-Preferred and Youth-Disliked Staff Social Behaviors - Modified Versions of Those Provided by Willner et al., (1977)
2. Scoring Form for Child-Care Worker Social Behaviors

Operational Definitions of Youth-Preferred and Youth-Disliked Staff
Social Behaviors - Modified Versions of Those Provided by Willner et
al. (1977)

Youth-Preferred Social Behaviors 1. CALM PLEASANT VOICE TONE

Score occurrence if the child care worker's (C.C.W.'s) tone of voice is mainly calm, pleasant, or neutral. Do not score occurrence if the tone of voice is notably not calm, is upset, or unpleasant at any time during the interaction. Note: firmness of voice tone is not scored as upset or unpleasant.

2. ENTHUSIASM

Enthusiasm refers to an eager, pleased or excited tone of voice and facial expression. Score occurrence if this is present.

3. SMILING

Score occurrence if the C.C.W. smiles while looking at the youth. If smiling and laughing occur at the same time, score joking only. Note though, the smiling may occur after laughing has ceased.

4. POSITIVE FEEDBACK

Score occurrence of positive feedback when the C.C.W. gives the youth verbal praise. This includes complimenting the youth, congratulating the youth on a job well done, or giving approval to the youth. Examples: "You've done a fine job."; "Good. That's fine."; "I appreciate your help."; "I can see that you're trying. That's very nice."

5. POLITENESS

Score occurrence if the C.C.W. behaves in a courteous manner. Generally, this involves the use of such courteous phrases as "please" and "thank you".

Note: the presence of rudeness, harsh criticism, or raised/disrespectful voice tone disqualified scoring of occurrence of politeness.

6. OFFERING OR PROVIDING HELP

Score occurrence when the C.C.W. offers to help youth or says that he/she would like to help, or asks how he/she can be of help. Words analogous to "help" are acceptable.

7. EXPLAIN HOW/WHAT

Score occurrence if the C.C.W. describes the behavior he wants the youth to emit. The C.C.W. may either give a demonstration to the youth (i.e., show him) or verbally describe what the youth should do or how to do it. These explanations must involve specific behaviors required of the youth (for example, "Look me in the eye" "Now, pick up the ash tray"; "say 'hello' when I come into the room"). A nonverbal demonstration of the behavior is also sufficient to score occurrence.

Do not score occurrence if the specific behavior is not requested or described. For example, "You need to improve ... change your attitude ... do it better ... acknowledge my presence ... act as though you're glad to see me." These are not specific behaviors.

8. EXPLAIN WHY

Score occurrence if the C.C.W. gives a rationale or reason (to the youth) for why he or she is asking the youth to engage in (or learn) an appropriate behavior or to follow an instruction. The reason must be something other than earning the reward or avoiding the penalty; it should indicate the possible natural consequence which may occur, if the youth engages in the behavior (i.e., either immediately or in the future). This need not occur immediately after a description of a desired behavior, although that is when it will most likely occur.

Examples: "People will be impressed with you, if you know how to greet them properly."; "These skills will help you get a job someday."

9. FAIRNESS

Fairness refers to treating the youth in a just and reasonable manner. Score occurrence when the C.C.W. attempts to negotiate or compromise with the youth (e.g., "Well, I'll do this for, you if you do this for me"); or indicates the intention of negotiating or compromising (e.g., "I'd like for you and I to work out some sort of compromise."); or if the C.C.W. inquires of the youth concerning the acceptability of the transaction (e.g., "Do you think this is fair?"); or asks for the youth's opinion regarding the situation at hand. Note, however, if the youth refuses (i.e., to compromise, accept the situation, or give his opinion) or claims that the C.C.W. is unfair, this does not affect the C.C.W.'s score of fairness. The youth's response is independent of what the teaching-parent does (and therefore the youth's response should not be considered in your scoring).

10. CONCERN

Concern refers to the C.C.W. treating the youth in an understanding manner; trying to understand the youth's position, or expressing concern for the youth. Any sort of verbal response which reflects empathy is sufficient to score an occurrence.

11. JOKING

Score occurrence of joking if the C.C.W. was laughing or acting in a jovial or witty manner. The youth need not be laughing. Do not score, if the "joke" involved an unkind "put down" of the youth.

12. GETTING RIGHT TO THE POINT

Score occurrence if the C.C.W. begins to describe either the youth's inappropriate or the appropriate behavior desired of the youth within 60 seconds of the onset of the interaction. Youth-Disliked Social Behaviors

1. DESCRIBING ONLY WHAT YOUTH DID WRONG (No recognition of accomplishment)

Score occurrence if the C.C.W. describes what the youth did wrong without also praising the youth for something he or she did right, with the latter occurring within one minute of the former.

Examples: "You did a poor job. Work on it some more."; "I hear that you have been fighting again."

2. NEGATIVE FEEDBACK

Score occurrence if the C.C.W. expresses dissatisfaction with the youth's behavior.

Examples: "Don't you know how to answer a simple question?"; "I was disappointed to hear that you ..."

Note: This goes beyond describing only what the youth did wrong which may occur with or without an expression of dissatisfaction. Thus, describing only what the youth did wrong and negative feedback can be scored at the same time.

3. ACCUSING, BLAMING STATEMENTS

Score occurrence if the C.C.W. accuses the youth of something or blames him for something.

Examples: "It's your fault if you mess up like this."; "You never seem to do it right."; "Your problem is that you don't listen."; "The reputation of the home is falling apart because of you."

4. LACK OF UNDERSTANDING

Score occurrence if the C.C.W. drew conclusions about the youth's motives without asking her or him or considering the circumstances involved. Usually this involves a response to an excuse offered by a youth which is not empathic or which actually negates the excuse.

5. BOSSY-DEMAND VS. REQUEST

Score occurrence if the C.C.W. demands, orders, or tells the youth to follow an instruction, rather than asking or requesting her or him to do it.

Examples: "In the future, I want you to ..."; "Make sure you do it."

Requests, however are often accompanied by: "Please ..."; "Could you ..."; "I'd like for you to ..."; "Say, how about if ..."; "Would you mind ..."; "I'd appreciate it if ..."; and these would not be scored.

6. UNFRIENDLY

Score occurrence if the C.C.W.'s nonverbal behavior (e.g., tone of voice, facial expression, gestures) is unpleasant or hostile.

7. ANGER

Score occurrence of anger, if C.C.W. exhibits an emotional expression of anger through voice tone, facial expression or gestures. This is an escalation of unfriendly. Do not score both.

8. UNPLEASANT

Score occurrence if the C.C.W.'s words are offensive or irritating. Examples: "Look, you have to shape up"; "That's not good enough." Do not score if a more specific behavior such as bossy-demand, or mean, insulting remarks, bad attitude, or profanity is scored.

9. MEAN, INSULTING REMARKS

Score occurrence if the C.C.W. calls the youth derogatory names

Examples: "You like playing the tough guy."; "You're just a punk."

10. BAD ATTITUDE

Score occurrence when the C.C.W. makes a statement such as "I don't care," or "I'm just doing my job."

11. NO OPPORTUNITY TO SPEAK

Score occurrence if the C.C.W. constantly or repeatedly interrupts the youth to the point where the youth has no opportunity to explain his or her position or speak.

12. SHOUTING

Score occurrence if the C.C.W. raises his or her voice, yells, screams, or shouts above the level (range) necessary for verbal conversation. This refers to volume and tone of voice only-not content. This is an escalation of anger do not score both.

13. PROFANITY

Score occurrence if the C.C.W. uses obscene language or cusses at the youth. Even mild profanities such as "hell" and "damn" should be scored as occurrence.

14. UNPLEASANT PHYSICAL CONTACT

Score occurrence if the C.C.W. pushes, shoves, shakes or pulls the youth; if he grabs the youth (e.g., by the arm) or physically manipulates the body in order to induce compliant behavior (e.g., pushes the youth's cheek to produce a smile, or holds the head to facilitate eye contact).

15. THROWING OBJECTS

Score occurrence if the C.C.W. throws any objects at or towards the youth (rather than handing it or placing it). Do not score occurrence if object is playfully tossed to the youth.

C.C.W.: _____ Pretest: _____ Posttest: _____ Scorer: _____

YOUTH-PREFERRED

Minute Intervals

[illegible]

Minute Intervals

YOUTH-DISLIKED

[illegible]

APPENDIX E

1. Instructions Read to the Youths During Study 4.
2. Form for Youths' Comments.
3. Form for Youths' Ratings.

Instructions to Youths

(1) I am going to show you a short video where I play the role of a teenager named _____ who has _____. The other person on the video is a staff member who has talked to me about _____ several times already. Your job is to watch the T.V. and pick out the things that you LIKE and DO NOT LIKE about the way the staff member handles the problem.

(2) When you see something that you LIKE or DO NOT LIKE, write it down.

For example:

(a) You might think that the staff seems to be concerned about the teenager so you would write "seems concerned" under the word LIKE.

(b) OR, you might think that the staff is being fair so you would write "seems fair" under the word LIKE.

(c) OR, you might think that the staff is being bossy so you would write "too bossy" under the words DO NOT LIKE.

(d) OR, you might think that the staff sounds unfriendly so you would write "unfriendly" under the words DO NOT LIKE.

(3) Don't worry about spelling. If you want help, raise your hand. We will spell or write for you, if you want.

(4) Don't talk to each other, just watch and listen to the T.V.

(5) If you do this task, you will receive a free movie pass and one dollar as payment.

Form for Youths' Comments

NAME: _____

AGE: _____

AS YOU WATCH THE T.V., PLEASE WRITE DOWN THE THINGS THAT YOU
LIKE AND DO NOT LIKE ABOUT THE WAY THE STAFF MEMBER HANDLES THE
SITUATION.

LIKEDO NOT LIKE

Form for Youths' Ratings

NAME: _____

AGE: _____

PLEASE SHOW HOW MUCH YOU LIKE THE WAY THE STAFF MEMBER HANDLED
THE SITUATION YOU JUST SAW ON THE T.V. BY GIVING HIM/HER ONE OF THE
"GRADES" BELOW. CIRCLE YOUR CHOICE.

A = EXCELLENT

B+

B = GOOD

C+

C = AVERAGE

D+

D = POOR

F+

F = TERRIBLE