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# PREVENTION OF RELAPSE IN SEX OFFENDERS



D. Richard Laws, Ph.D.

Project No.1 RO1 MH42035

National Institute of Mental Health

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**ACQUISITION**

## General Overview of the Research

There is no comprehensive and testable theory of sexual deviance in the psychological literature. What we have instead are personality-based or trait accounts of various types of sex offenders, speculative typologies used to separate subvarieties of offenders, or isolated descriptions of experiential factors or single processes of learning which are said to contribute to a sexually deviant orientation. All of these, while useful to a limited degree, are ultimately unsatisfactory. There has been little or no effort to gather together what is known empirically and theoretically into a single explanatory system to account for the genesis and modification of sexual deviance. Our contention is that sufficient, if not abundant, information presently exists to make the initial steps toward such a comprehensive theory. This program statement is our contribution to that process.

The theory statement proposed herein is intended to serve only as the guiding framework for a series of evaluative and therapeutic operations intended to bring sexually deviant behavior under control and then prevent relapse in treated outpatient sex offenders. The empirical/theoretical paradigm we propose is a learning model with its roots in conditioning theory and social learning theory. The theoretical statement is deductive, reasoning from general principles about human behavior, to specific propositions about human sexual behavior in general or deviant sexual behavior in particular, to specific hypotheses about sexual deviants. The theory is intended to comprehend how deviant behavior is acquired, how it may be modified, and how its recurrence may be prevented. The model is potentially applicable to any sexual deviation.

The major advantage of having such a guiding theory is that it clearly defines its goals and explicitly specifies a set of operations for forthrightly dealing with a pervasive social problem. The theory is parsimonious, employs the smallest number of empirical and theoretical assumptions for support, makes assertions which are grounded in observable events, and proposes hypotheses which are falsifiable. This potential for disconfirmation is essential in that it provides a corrective feedback function which demands revision of the theory statements as experience accumulates.

## Specific Aims

The intent of this program is to evaluate, treat, and prevent relapse in a group of outpatient sex offenders seen in a community-based setting. The program is guided by the specific assertions of a theoretical statement which describes (1) how deviant sexual behaviors are originally acquired, (2) how, once acquired, deviant behavior is sustained in the face of more appropriate alternatives, (3) how deviant behavior, its accompanying social styles and

deviant cognitions can be altered, and (4) how those changes can be maintained, i.e., relapse prevented.

The following are the primary aims of the program:

1. An examination of the explanatory adequacy of the first half of the theoretical model. The first two sections of the theory, acquisition and maintenance of deviant behavior, describe the influence of conditioning and social learning experiences on sexual and social development. By means of a lengthy self-report instrument, offenders will retrospectively report on the relative importance of these factors. Data so obtained cannot be used to directly substantiate the theoretical statements, and it is recognized that a proper test of the theory's assertions would be a longitudinal study. However, the accumulation of retrospective data is considered here the initial investigatory step necessary for formulating the thrust that such a longitudinal study should take.

2. A test of the practical utility of the second half of the theoretical model.

- a. The third section of the theory describes the modification of deviant sexual responsiveness by use of behavior therapy techniques, and the modification of deviant cognitions by rational-emotive therapy. We will determine here if a modest but directive package can substantially bring major features of deviant behavior under control.

- b. The fourth section of the theory, relapse prevention (short-term) is intended to follow and reinforce the basic treatment. Here we use stress inoculation, a cognitive-behavior therapy, to teach impulse control and anger management in crisis situations. The phase closes with clients being taught the rudiments of the individualized relapse prevention procedures.

3. The final section of the theory, relapse prevention (long-term) is the key element of the program and will be implemented as a long term follow up period. Unlike most follow up programs for sex offenders, we require a high level of participation by the client in a very long and interventionistic program.

### Preliminary Studies

Introduction. Two of the major dependent variables in this program are the response of penile erection and subject self-report. Both of these measures periodically come under attack by critics as being open to subject influence, the latter more often than the former. It is therefore necessary to briefly review what is known about the nature and extent of these purported problems.

Sexual arousal assessment. Of the potentially relevant physiological responses, that of penile erection has repeatedly been demonstrated to be the single best index of male sexual arousal (Abel, 1976; Bancroft & Mathews, 1971; Barlow, 1977; Freund, 1963; Masters & Johnson, 1966; Rosen & Keefe, 1978; Rosen & Rosen, 1981; Zuckerman, 1971). The response is highly specific, occurring in the presence of sexual stimuli and not in the presence of nonsexual stimuli. When the erection response has been measured concurrently with other possibly relevant physiological variables (e.g., Bancroft & Mathews, 1971), it has been the only one which was discriminative of sexual arousal. It is therefore the best available dependent variable for our purposes.

Physiological assessment of sexual arousal is now a commonly accepted procedure. Sexual arousal is assessed by means of a device called a penile transducer, a very small unit which the subject wears around his penis. The device can detect changes in the circumference of the penis, and these are expressed as changes in electrical resistance. These minute resistance changes are amplified, converted, and finally shown most commonly as a pen tracing of the response or a periodic digital readout (LEDs) or printout. Since the response has absolute 0% and 100% limits, intermediate values may conveniently be described as some percentage of the maximum response, e.g., 55% of a full erection. All data reported here are on this interval scale.

Does the penis lie? The most telling objection made against use of erection responses is that it has been established that the behavior is to some extent under voluntary control (Abel, 1976; Abel & Blanchard, 1976; Alford, Wedding & Jones, 1983; Barlow, 1977; Henson & Rubin, 1971; Laws & Holmen, 1978; Laws & Rubin, 1969). Thus the argument: if the behavior can be influenced the data are invalid, untrustworthy, and discountable.

Early studies on the topic were those of Freund (1961, 1963, 1967a) and Laws and Rubin (1969). Using a sensitive volumetric device (Freund, Sedlacek & Knob, 1965) and measuring very low levels of erection, Freund showed that homosexuals, pedophiles, and heterosexual nonoffenders could fake sexual arousal to nonpreferred stimuli. Laws and Rubin (1969), using a circumferential penile transducer (Bancroft, Jones & Pullan, 1966), measured the full range of the erection response and demonstrated that subjects could voluntarily suppress erection to preferred stimuli and

produce erection in the absence of any stimuli, although the latter effect was very weak. The suppression effect, the issue most in contention, was confirmed by Henson and Rubin (1971) and has been replicated many times (e.g., Abel & Blanchard, 1976). Seeming to confirm the reality of faking, Laws and Holmen (1978) demonstrated that a single pedophile could voluntarily suppress and produce under a wide variety of instructional sets, whether stimuli were preferred or nonpreferred. Essentially the same phenomena were later also shown by Alford et al. (1983).

Although these data are compelling, the matter is quite unsettled. The easiest way to escape detection in sexual arousal assessment is to not respond at all, precluding any judgment. It is known that hardly anyone can suppress erection to 0% all the time, particularly when powerful stimuli such as videotapes are used (Abel, Barlow, Blanchard & Mavissakalian, 1975; Abel & Blanchard, 1976; Barlow, 1977). To be sure, there are nonresponders but they are a minor problem and they are not, by definition, fakers. Of 120 clients seen in our laboratory in a recent year we found only 18% to be unarousable (Laws, 1981).

Our operating assumption is that everyone, deviant or normal, will fake if he can, attempting to respond maximally to stimuli deemed nondeviant and minimally to deviant stimuli. That this makes little difference for assessment purposes may be seen in one data analysis recently performed in our laboratory (Earls & Laws, 1981). Forty-four rapists were presented video simulations of consenting intercourse, rape, and physical assault (Abel, Blanchard, Becker & Djenderedjian, 1978). Each was told to become sexually aroused if he found the tape erotic and each was asked to give a percentage estimate of his peak arousal during the presentation. When the scene was of consenting intercourse, measured amplitudes averaged 70% of maximum erection and estimates 69%, showing a high level of awareness and no attempt to fake. When the scene was of rape, measured averages were 58% and estimates 51%, and when it was assault the values were 32% and 22%. Even if we assume that rapists will attempt to fake to the latter two scenes, the measured vs estimated discrepancy did not exceed 10% and the measured averages of 58% and 32% are sufficient for assessment purposes. The standard "faking control" is to have subjects attempt to consciously suppress erection on half of the presentations. The aroused vs suppressed differential may then suggest how much the subject could fake if he tried (Abel, Barlow, Blanchard & Mavissakalian, 1975; Abel & Blanchard, 1976). Looking again at the 44 rapists, under instructions to suppress, they produced averages of 52% to consenting intercourse, 41% to rape, and 19% to assault. If this group of rapists were faking they did rather a poor job of it. This particular data base has now been expanded to 99 (Marshall, Laws & Barbaree, 1986) and the originally measured differences were maintained when the group was more than doubled.

If one examines the very thin literature on faking it is immediately apparent that subject influence is present but it is a rather weak variable. In two of the major studies (Henson & Rubin, 1971; Laws & Rubin, 1969), 50%-60% of the subjects either had difficulty or could not maintain inhibitory control. In Freund's clinical studies (1961, 1963, 1967a) only 12 of 93 subjects (13%) could falsify nonpreferred arousal. Similarly, Abel, Barlow, Blanchard, and Mavissakalian (1975) found that none of their homosexual subjects could suppress below an average of 45% to videotape and more than 2/3s could not suppress to audiotape. The fact that Laws and Holmen (1978) and Alford et al. (1983) present dramatic evidence of single pedophiles "faking good" in no way warrants the assumption that all subjects possess equal skill. Our own observations of over 450 subjects in seven years do not support a conclusion of faking on a grand scale. The data are too variable, too often showing extremely high deviant arousal, to make that explanation credible. Faking occurs, but the cumulative evidence is unpersuasive that it has a serious biasing effect.

Offender self-report. Self-report research on deviant behavior has a quite respectable history. The method was introduced in the 1950s by Short and Nye (1957) who showed that a small pool of 23 self-report items could discriminate delinquents from nondelinquents. Importantly this research demonstrated that delinquents would self-report criminal acts and that these reports were related to official records of the behavior (Hindelang, Hirschi & Weis, 1981). Although it does lack defects or critics, Hirschi, Hindelang and Weis (1980) state that self-report has become the most frequently used method of measuring delinquency. It has been applied to theory testing, assessing the incidence of criminal behavior, and assessment of treatment. These authors ascribe its popularity to low cost, exceptional content control, broad applicability, and apparent validity.

It must be acknowledged that much of the research on the self-report method has been in the area of juvenile delinquency. Hindelang et al. (1981) state the general findings of these investigations: "The self-report method easily demonstrates that people will report crimes, that they will report crimes not known to officials, that they are highly likely to report crimes known to officials, and that their reports of crimes are internally consistent" (p. 212). Many researchers, summarizing the same findings, conclude that the self-report method is both reliable and valid (e.g., Akers, Krohn, Lanza-Kaduce & Radosevich, 1979).

In these studies reliability has been shown to be high and stable. Investigations of test-retest stability have produced gammas of .80-.90 at intervals as brief as 45 min (Hindelang et al., 1981), .86 at two weeks (Belson, 1968, cited in Hindelang et al., 1981), decreasing only to .62 at two years (Farrington, 1973). Equally impressive, split-half coefficients have ranged from .70-.92 (Kulik, Stein & Sarbin, 1968).

Hindelang et al. (1981) conducted one of the largest studies on validity of self-report and their data are illustrative, albeit with some caveats. Administering a self-report instrument, both anonymously and nonanonymously, to large numbers of delinquents these authors assessed concurrent validity, "the extent to which self-reports are consistent both with contemporary indicators of involvement in illegal activities" (p. 92). They obtained a coefficient of .83 when self-reported official contacts were compared with official measures, .70 between self-reported delinquency and self-reported official contact, and .65 between self-reported delinquency and official measures, the latter being the most common comparison in such studies. The authors conclude, "(T)he self-report method seems to behave reasonably well when judged by standard criteria available to social scientists....Reliability measures are impressive and the majority of studies produce validity coefficients in the moderate to strong range" (p. 114). That not all do, however, is apparent in the work of Gould (1969) who found a coefficient of only .16 between self-report and official records.

Aside from reliability and validity issues, there are other problems with self-report instruments, notably population characteristics, seriousness of offense reported, and manner of reporting, the latter two bearing upon scale construction. Regarding population, Hindelang et al. (1981) found that self-report of delinquency is most valid when obtained from caucasian males, in school, irrespective of socioeconomic status, who are rarely official delinquents. The least valid data are obtained from groups who have the highest rates of official delinquency, in their sample, black males. They recommend stratification by race. There is also a definitional problem regarding the seriousness of offenses reported. For example, much delinquency research reports trivial and nonactionable offense, e.g., school truancy, which is a far cry from adult sex offenses. The manner of reporting is often very global in that respondents are asked if the "ever committed" or "never committed" some offense, often in a reference period of only the preceding 12 months. This provides no information of chronicity of offense patterns. These additional problems led Hirschi et al. (1980) to recommend that, in scale construction, researchers should (1) avoid global ratings by developing homogeneous subsets of items, each set addressed to a particular domain of criminal behavior, (2) weight the items in terms of seriousness of the offense, in the manner of Sellin and Wolfgang (1964), and (3) attempt to obtain frequency estimates for each offense of interest in the research.

There are obviously striking differences between such offenses as petty shoplifting committed by adolescent delinquents and serious sex offenses committed by adults, and it is open to question whether adults will self-report on such behavior. Some researchers believe that often they

will not. Abel (1979) has contended that sexual deviants will not accurately report on past and present deviant criminal history unless they are assured that the data are shielded (Abel et al., 1981). Our experience, the data of M.R. Weinrott (personal communication, 3 February 1982) and Paitich, Langevin, Freeman, Mann and Handy (1977) from adult sex offenders and that of Hindelang et al. (1981) from delinquents, do not support this contention. Similarly, Abel et al. (1977) and Abel, Blanchard, Barlow and Mavissakalian (1978) state that sexual deviates falsely report low levels of sexual arousal to deviant stimuli even as that arousal is being measured. While this is undeniably true of some subjects, data from our laboratory (see above, Earls & Laws, 1981), indicate that offenders may attempt some falsification, but they are largely unsuccessful. We are far from disagreeing with the familiar statement that sex offenders are notorious for their attempts to deny, minimize, and rationalize their deviant acts (Burgess, Groth, Holmstrom & Sgroi, 1978; Groth, 1979). However, we have consistently observed that many inpatients seen in our laboratory were quite open about their criminal histories and even when reluctant to report, as collateral and confirmatory evidence began to build, particularly physiological assessment data, more accurate self-report was often forthcoming and often went well beyond the official record.

Empirical data have been obtained for three of the self-report instruments we use, the Clarke Sexual History Questionnaire (Langevin, Paitich, Handy & Russon, 1982; Paitich et al., 1977), the Inventory of Self-Reported Deviance (Weinrott, 1981), and the Adult Cognition Scale (Abel & Becker, 1984).

In factor analyzing the SHQ, Paitich et al. (1977) examined 113 outpatient offenders: 24 heterosexual pedophiles, 24 homosexual pedophiles, 27 heterosexual incest offenders, and 42 exhibitors. The SHQ requires reports on quite intimate behaviors and the analysis showed that it discriminated deviants from each other and from controls.

M.R. Weinrott (personal communication, 3 February 1981) administered the ISRSD to 104 convicted inpatient offenders of whom 67 were child molesters. Officially these men were involved with 136 victims (2.03/offender). They self-reported over 8,000 contacts with 959 victims (14.31/offender). Ninety percent overreported the known number of victims, 6% reported the same number as in the records, and 4% underreported. Agreeing with the data of Hindelang et al. (1981), 80% of these men reported the same number of arrests as shown in official records. When self-reporting on nonsex crimes, major and minor, the frequencies of self-reported offenses ranged from a low of 17 to a maximum of 600, while known arrests for these same offenses ranged from 6 to 78.

Abel and Becker (1984) administered the ACS to 287 adult sex offenders and 80 nonoffenders. In their responses to the 28 items the sex offenders had significantly lower average scores (indicating more cognitive distortions) than the nonoffenders ( $t = 13.2$ ,  $p < .001$ ).  $T$ -tests of the

average differences in responses to individual items showed that the two groups differed significantly ( $p < .005$ ) in their responses to every question with the sex offenders consistently showing greater distortions (Abel, 1985).

The remaining two self-report instruments, the sexual activities card sort (Abel, 1979) and the Sexual Victimization Questionnaire (Groth, 1982), require for the most part less intimate detail than the SHQ or the ISRD. The work of Paitich et al. (1977), Weinrott (1981), and Abel and his colleagues (Abel, Mittelman & Becker, 1983; Abel, Becker, Cunningham-Rathner, Rouleau, Kaplan & Reich, 1984; Abel, Rouleau & Cunningham-Rathner, 1984) all strongly suggest that sex offenders will honestly report on sex and nonsex crimes.

### Physiological Assessment Procedures

Introduction. All of the studies and procedures described in this section used direct measurement of the penile erection response (Rosen & Keefe, 1978). There are basically three ways to do this. One method employs a volumetric device (Freund, Sedlacek & Knob, 1965) which is extremely sensitive and is used to measure very low levels of arousal, often below the subject's awareness. The other, more popular devices, are circumferential transducers which measure the full range of the response from 0%-100%. One of these is a lightweight, highly flexible and expandable steel ring (Barlow, Becker, Leitenberg & Agras, 1970) which uses an electronic strain gauge as the sensing unit, and the other is a mercury-in-rubber strain gauge (Bancroft, Jones & Pullan, 1966). The latter two devices are essentially equivalent in function (Laws, 1977). All studies reported from our laboratory employed the mercury strain gauge.

Some of the assessment procedures described in this section will require revision. Those revisions are preliminarily described here as the reasons underlying them are most easily understood in this context rather than below in the Methods section. Protocols for the procedures appear in the Methods section.

Slide assessment of pedophiles (Laws & Osborn, 1983). Evaluation procedures using slides are usually designed to examine patterns of sexual arousal on the parameters of age and sex. Investigators typically divide slides of males and females by age groups (Freund, 1965, 1967a, 1967b; Laws & Osborn, 1983; Quinsey, Steinman, Burgerson & Holmes, 1975), present them to subjects for periods of a few seconds (Freund, 1965) or up to 2 min and longer (Laws & Osborn, 1983), then examine the differential arousal patterns elicited by the stimuli. Because of the age dimension such procedures are most often used with pedophiles, but our experience has shown that rapists also often show pedophilic-like arousal patterning.

Examples of typical slide assessment results may be seen in Appendix I. Figure 1 shows an individual profile for a female pedophile. While this subject showed modest arousal to very young males, it is quite clear that he is highly aroused to stimuli of females 1-17, a range of 79%-93% of full erection, which we would characterize as very high arousal. The clear distinction seen in Figure 1 is somewhat less clear when one groups such data, and especially if the groups are small, as may be seen in Figure 2. Here we see male pedophiles ( $N = 11$ ) responding at an average of about 35% to all male categories, while female pedophiles ( $N = 8$ ) do not respond to the males. On the female side, female pedophiles show an increasing gradient of response as a function of age, and surprisingly, so do the male pedophiles, a paradoxical feature we have often observed. That a slide assessment can differentiate these groups may be seen in Figure 3. Here the groups were much

larger (male pedophiles,  $N = 32$ ; female pedophiles,  $N = 50$ ), the slides for the most favored target groups have been collapsed into a single category, and the data transformed to  $z$ -scores. The male pedophiles do respond to the female stimuli but the distinction between the groups is quite clear.

Similar procedures for evaluating pedophiles have been reported by Quinsey et al. (1975) and Freund (1965, 1967a, 1967b) has demonstrated that such procedures can differentiate pedophiles from normals. Normals have been shown to be responsive to such stimuli (Freund, McKnight, Langevin & Cibiri, 1972) and they usually show a gradient similar to that on the right side of Figure 2. These data are not comparable as the Freund et al. (1972) results are based on 20 sec presentations and very low levels of arousal, while those of Figure 2 are based on 2 min presentations and a potential arousal range of 0%-100% of full erection. The responses of deviants vs normals to slide assessment stimuli remains a marginally explored area.

Experience with slide assessments has varied dependent upon the investigator's needs and the questions asked. If, as in the work of Freund and his colleagues, one measures very low levels of arousal, they are quite adequate. If one is interested in clinically significant levels of arousal, e.g., 50%-100% of full erection, they are probably less useful. Abel, Barlow, Blanchard and Mavissakalian (1975) and Abel and Blanchard (1976) have demonstrated that slides are a minimally effective modality for generating sexual arousal. Our experience has been that about 2/3s of pedophiles have been sufficiently responsive to slides to make a judgment about sexual preference (Laws & Osborn, 1983).

Revision of slide assessment. In order to save time in the assessment of over 100 clients, we have reduced the existing slide assessment by 1/3. Instead of the existing package of six slides in eight age categories, three presented under instructions to become aroused and three under instructions to suppress arousal, we present four slides per category, all under arouse instructions. It is our expectation that this change will probably not alter the obtained assessment data.

Audiotaped assessment of pedophiles (Abel et al., 1981; Avery-Clark & Laws, 1984; Marshall & Christie, 1981). The use of audiotaped descriptions of sexual activity has proven to be an extraordinarily useful stimulus modality for the evaluation of sexual arousal. Pioneered by Abel and his coworkers (Abel et al, 1977; Abel, Barlow, Blanchard, & Mavissakalian, 1975; Abel, Levis & Clancy, 1970), the method is very flexible in that the stimuli used may be prepared to be applicable to a particular offender group (Abel et al., 1977) or may be tailored to the unique interests of a single offender (Laws & O'Neil, 1981; Laws & Osborn, 1983). The flexibility lies in the fact that one may vary any parameter of the stimulus, e.g., age of victim, characteristics of

victim, characteristics of sexual activity, modus operandi of offender, use or nonuse of violence, etc., in order to relate different levels of arousal to different components of the stimulus (Abel, Barlow, Blanchard & Mavissakalian, 1975). The typical procedure is to prepare a series of audiotaped segments, usually 2-4 min in length, which describe a series of activities or characteristics along a single dimension, present these to a subject while his sexual arousal is measured, then examine the differentials between the erection measures in relation to the taped descriptions.

We have developed an audiotaped assessment procedure to demarcate pedophiles who are sexually aroused by descriptions of violent sexual activities with children from those who are not (Avery-Clark & Laws, 1984). Independently, Abel et al. (1981) prepared a similar series using six different descriptions of various consenting and nonconsenting, sexually aggressive, and purely assaultive activities with children. These tapes were then presented to heterosexual incest offenders (N = 6), heterosexual pedophiles (N = 10), and other sexual deviates with nonpedophilic diagnoses (N = 11). Although relatively low levels of arousal were measured, about 12%-25% maximum for the pedophiles and 14%-32% for the other deviants, the data clearly suggested the usefulness of the approach as the offenders did differentially respond to the various descriptions. Marshall and Christie (1981) produced very similar data from audiotaped descriptions presented concurrently with slides. Avery-Clark and Laws' (1984) study offered an improvement upon the Abel et al. (1981) approach. Their aim was to demonstrate that a similar procedure could differentiate pedophiles with a known history of sexual violence with children from those not having that history. The procedure was composed of six tapes, five of which described an escalating level of involvement in the use of violence to effect a sexual relationship with a child or commit aggression against a child. The categories were: fondling; consenting intercourse with a child; verbal and mild physical aggression to accomplish intercourse; rape; sadism; and consenting intercourse with an adult. Their investigation improved upon the Abel procedure in two ways: longer presentation times and more graphic details. We had not at that time seen Abel's pedophile scripts but we were thoroughly familiar with Abel et al.'s (1977) rapist audio assessment. We judged that the rapist scripts were too brief, provided too little detail about the offender's specific behaviors, his reactions to the victim, the victim's reactions to him; in short, they were not sufficiently explicit. In order to increase graphic detail the length of the taped segments was increased from 2 to 4 min.

The results of Avery-Clark and Laws' (1984) investigation may be seen in Figure 4. The subjects who

used violence in the past are designated "more dangerous" ( $N = 15$ ) and those who did not as "less dangerous" ( $N = 16$ ). It is apparent that all subjects produced substantial levels of arousal to these longer and more explicit tapes. When the descriptions did not contain a strong element of violence there were no differences between the groups. To the latter two categories, rape and sadism, the more dangerous subjects continued to respond at an average of 70%, while the less dangerous produced an average near 30%, a highly significant difference ( $p < .001$ ). In examining the utility of the longer scripts, 200 penile response tracings were evaluated, each of which showed at least 20% of maximum erection at the elapse of 2 min. This analysis revealed that levels of arousal greater than 20% at the elapse of 2 min occurred in only 35% of the cases. At 3 min, significant levels had been achieved in 92% of the cases. Only 23% of peak erection values were achieved prior to 2 min of exposure, 42% occurred between 2-3 min, and the remaining 35% following the 3 min mark. Thus it appears that longer scripts with more graphic detail may be desirable to generate significant levels of arousal to audio cues.

Revision of audio assessment. The existing audio package contains 24 tapes, roughly 4 min in length. There are six categories each in a heterosexual and homosexual series, two tapes per category, all presented under instructions to become aroused. While retaining the same content and highly specific and graphic detail, this package will be revised to six heterosexual and six homosexual tapes, one 3 min tape per category, all presented under arouse instructions. We argued above that 4 min tapes are superior to 2 min ones, but we also recognize that the vast majority of reported assessment studies have successfully used 2 min tapes. We have chosen the 3 min format as a realistic compromise. Two minutes are probably insufficient. Avery-Clark's data show that 92% of all cases achieved significant levels of erection ( $> 20\%$ ) at the 3 min mark, and that 65% of all cases achieved their maximums between 0-3 min. Thus, the extra minute in the 4 min tape does not produce that much more useful information. We are confident that we will be able to obtain profiles of sexual arousal patterns but we will probably not see extremely large amplitudes of response. As in the case of the slide assessment, we decided on 3 min tapes with highly graphic detail because we are faced with the clinical reality of having to assess more than 100 clients in a brief period of time.

Video assessment of pedophiles. The described slide assessment is a relatively weak instrument with about 1/3 of clients seen, and the pedophile audio assessment (Avery-Clark & Laws, 1984) is pitched more to the violence/nonviolence parameter than to sexual variety. Therefore it is advisable to construct an assessment procedure which can evaluate the specific types of sexual

activity preferred by the pedophile. Since we know that videotape and film are the most powerful media for eliciting sexual arousal (Abel, Barlow, Blanchard & Mavissakalian, 1975; Abel & Blanchard, 1976), and it has been additionally reported that moving subjects elicit more arousal than still ones (Kolarsky & Madlafousek, 1972), we will prepare a videotape similar in format to that used by Abel, Blanchard, Becker and Djenderedjian (1978) and Crawford and Bonham (1981) with rapists.

We will do this by abstracting 2 min segments from child pornographic films and recording them on videotape. We already have a large collection of male pedophilic films and we have been given access to the collection of pedophilic materials held by the Institute for Advanced Study in Human Sexuality in San Francisco (W.B. Pomeroy, personal communication, 28 May 1982). These 2 min segments will depict 14 different sexual acts involving an adult male and a boy or girl, a boy and a girl, a boy alone, and a girl alone.

### Self-Report Assessment Procedures

Card sort. The use of card sorting techniques has been a feature of multi-component behavior therapy procedures for a number of years (Barlow, Leitenberg & Agras, 1969; Barlow, Reynolds & Agras, 1973). This self-report device is usually added to a treatment package as a subjective index which can be compared with more objective indices such as the measurement of erection responses (Laws & O'Neil, 1981; VanDeventer & Laws, 1978), although it has on occasion been used as a primary indicator of treatment progress (Brownell & Barlow, 1976).

In the individualized assessment of treatment effects with sexual deviants the typical procedure is to prepare five or so cards with a few sentences descriptive of the client's deviant interests and a similar number with descriptions of nondeviant interests. Either prior to or following a session the client sorts the cards, usually on a dimension of attractiveness/unattractiveness. Figure 5 (Laws & O'Neil, 1981) shows an example of an individualized card sort compared to erection measures. In our experience with individual case studies (Foote & Laws, 1981; Kremsdorf, Holmen & Laws, 1980; VanDeventer & Laws, 1978) we have found card sorts to be excellent corroborators of other measures.

Card sorts used for general assessment purposes (e.g. Abel, 1979) are not common. Usually one finds sexual attitudes and interests assessed by self-report questionnaire or inventories (e.g. Bentler, 1968a, 1968b; Langevin, 1983; LoPiccolo & Steger, 1974; Marks & Sartorius, 1968; Paitich et al., 1977; Zuckerman, 1973). These require the respondent to endorse some position on sexual behavior and/or indicate whether he has or has not engaged in some sexual activity. The card sort we propose to use was originally developed by Abel (1979). In the original version there were 15 categories, each containing 10 or 20 items. Each card contained several sentences describing a sexual interaction and the client sorted them on a scale of attractiveness from +3 to -3. The purpose of this procedure was not necessarily to assess attitude or to obtain a "have you ever/have you never" index, but to assess the relative attractiveness of behaviors for which other, more objective assessments were not available. In general, the card sort was intended to flesh out the entire behavioral assessment picture and perhaps reveal additional areas of interest or concern.

We have made minor revisions of the original technique. The original contained 15 categories: adult hetero- and homosexuality; male and female pedophilia and incest; rape; masochism; sadism; voyeurism; exhibitionism; frottage; transvestism; and male and female transsexualism. In the revision we (1) eliminated two transsexual scales as not relevant, (2) converted the +3 to -3 scoring scale to a 1 (repulsive) to 7 (highly erotic) range, and (3) wrote additional items to bring the total in each category to 20.

Abel's frottage items dealt mostly with the New York City subway system: these were rewritten to be appropriate to Florida. The revision resulted in 260 items in 13 categories.

We have suggested elsewhere (Laws & Osborn, 1983) that self-report of sexual deviants must be judged in relation to other, more objective indices. We have found the card sort to be useful with individual clients who are willing to be open and honest about their deviant sexuality. Not all clients are open and honest, of course. The problem with the card sort seems not to be in the procedure but in the method of administration. The cards are usually given as part of a group of self-report materials at any time during an assessment period rather than at a particular point. Thus subjects receiving the card sort prior to erection response assessment will be more likely to deny attraction to deviant descriptions than those receiving it in the reverse order, especially if those subjects were high responders. Those receiving it after the physiological assessment or part way through should tend to be more honest.

Revision of card sort. In addition to changing the method of administration, we have decided to drop several categories and alter the item content of the remaining ones. Our experience over a number of years shows that three of the categories -- masochism, frottage, and transvestism -- have no value with pedophiles and these will be eliminated. The card sort items were originally developed to be descriptive of a particular type of behavior such as female pedophilia. For example:

I'm fucking a 14 year old girl. I  
feel her hot body under mine.

There was no systematic attempt to vary activities within any category. No item analysis was performed and the data were not examined for clustering except by category. The revision proposed is quite simple. We will rewrite the items, varying them on dimensions such as age group of victim, force vs consent, or type of sexual activity, e.g., fondling vs oral vs genital vs anal activity.

Etiology of Sexual Deviance Questionnaire. Quinsey and Marshall (1983) have recently observed,

With respect to the concept of inappropriate arousal itself, there are no theories of etiology which have other than laboratory demonstrations of plausibility or anecdotal support. We simply do not know how to account for individual differences in sexual arousal patterns. Clearly, developmental studies of the acquisition of sexual preferences should receive high priority....(p. 30).

Classical learning theory (e.g., Hull, 1943, 1952; Mowrer, 1960; Pavlov, 1927; Skinner, 1938, 1953, 1969; Spence, 1956) has provided much useful information on the basic processes of acquiring behavior. However, the application of these processes to the analysis of complex sequences of human behavior (e.g., Skinner, 1957) have not been altogether successful. With regard to the etiology of sexually deviant arousal and interests, little has been done. Influential studies (Kinsey, Pomeroy & Martin, 1948) have stressed the primacy of conditioning and learning influences but these still await adequate investigation. There are a handful of what Quinsey and Marshall (1983) call "laboratory demonstrations" of the role of classical conditioning (e.g., Rachman, 1966; Beech, Watts & Poole, 1971; Langevin & Martin, 1975) or operant conditioning (Quinn, Harbison & McAllister, 1970) but all of these may be faulted on issues of methodological rigor (Earls & Marshall, 1983). The influence of various social learning mechanisms is undoubtedly of great importance as suggested by Bandura's work (1973, 1977a, 1977b, 1980), but how those forces operate to produce sexual deviants is not even remotely understood. How deviant cognitive structures and their supportive justifying definitions are acquired has, to our knowledge, not been studied at all. It therefore follows that there is a similar deficiency in understanding how, once acquired, a deviant sexual orientation is maintained and shaped into a fixed behavioral repertoire.

Given the haphazard and piecemeal nature of present knowledge it does not seem regressive to begin at the beginning. Quinsey and Marshall (1983) properly advise that it is difficult for theory construction to proceed independent of empirical investigation. In the area of sexual deviation it is clear that empirical studies, such as they are, have not had a cumulative impact and have failed to generate theory. Conversely, even circumscribed theory (McGuire, Carlisle & Young, 1965), while gaining some anecdotal support (Evans, 1968) has similarly failed to generate empiricism.

Beginning at the beginning, we have constructed a tentative theory of the acquisition and maintenance of sexually deviant behavior. In so doing we have taken the position of Sidman (1960, p. 61) that "...maladaptive behavior can result from quantitative and qualitative combinations of processes which are themselves intrinsically orderly, strictly determined, and normal in origin." Taking a conditioning and social learning model as a guide, then, we are led to conclude that there is nothing whatever unique in deviant sexual behavior or cognitions, that they are acquired by exactly the same mechanisms by which other persons learn more conventional modes of sexual expression. In this tentative theory we have attempted to be comprehensive but to limit this to the smallest number of necessary statements and hypotheses. The Etiology of Sexual Deviance Questionnaire is an instrument derived from these

theoretical statements and is intended to comprehend roughly the first half of the theory, i.e., acquisition and maintenance. It is empirical in the sense that the questions posed by the various statements and hypotheses are answerable, albeit subjectively at this stage. These answers may then suggest (1) support for or refutation of some assertion of the theory, and/or (2) a direct experimental test. For example:

Hypothesis 7. Sex offenders are persons who regularly employ deviant sexual fantasies during masturbation. A majority of sex offenders will report that (1) they became attracted to deviant sexual stimuli in this way, and (2) they continue to use deviant masturbatory fantasies almost exclusively.

Should a majority of sex offender respondents in fact report such data the following conclusions appear warranted: (1) General Principle 7 is supported; (2) the observations of McGuire et al. (1965) and Evans (1968) receive further support; and (3) treatments designed to destroy deviant sexual fantasy (Abel & Annon, 1982; Marshall, 1979) or to redirect masturbatory practices in order to render deviant sexual stimuli less potent (Laws & O'Neil, 1981) should be experimentally tested. Thus theory builds upon existing theory and suggests empirical operations which can be evaluated and which can feed back to refine the guiding theory as well as extend it to future operations. It is in this sense that the ESDQ is both an instrument of theory and an empirical device.

Subjective data obtained from the ESDQ cannot totally substantiate our theoretical notions or represent an adequate test of the theory's assumptions. The data are retrospective and to some extent must be considered suspect as they are influenced by faulty recall, deliberate falsification, and refusal to report (Laws, 1983). However, it must be stressed, as Groth and Longo (1982) have reported, that sexual events often remain salient in memory with exceptional clarity and can be recalled in minute detail many years after the event while nonsexual events which occurred at the same time are less accessible. Further, it must also be emphasized that it is simple impossible to understand many aspects of human sexual behavior without resort to retrospective data. One of the most respected techniques for assessing human sexual behavior is in Kinsey interview (Kinsey et al., 1948, Kinsey, Pomeroy, Martin & Gebhard, 1953; Pomeroy, Flax & Wheeler, 1982). This procedure, in use for over half a century, relies totally upon retrospective data and was used to collect the most comprehensive body of data ever assembled on human sexual behavior. Indeed, it is difficult to imagine how one could develop information about many aspects of human sexuality without appeal to retrospective

reports such as sexual behavior questionnaires (Miller & Lief, 1976; Schmidt, 1975; Schmidt & Sigusch, 1972; Spanier & Cole, 1975), rating scales (Bentler, 1968a, 1968b; Bentler & Peeler, 1979; Feldman, MacCulloch, Mellor & Pinschoff, 1966; Harbison, Graham, Quinn, McAllister & Woodward, 1974; Kahn & Davis, 1981; Levitt & Brady, 1965; Marks & Sartorius, 1968; Newcomb & Bentler, 1982; Zuckerman, 1973), or inventories specific to sexual interests and preferences (Hite, 1981, 1982; Hoon, Hoon & Wincze, 1976; Langevin, 1983; Langevin et al., 1982; LoPiccolo & Steger, 1974; Paitich et al., 1977).

The point belabored, of course, is that there would be no progress in many areas of inquiry without resort to possibly unreliable and invalid retrospective data. Our interest in the data of the ESDQ is intended solely as an initial step toward the building of theory in an area where almost nothing is known: the genesis of sexual deviance. Although the basic framework of the instrument is a series of 11 quasi-theoretical assertions, the ESDQ is intended as a guide to theory development and not as a test of an existing theory. While this leaves us at a considerable remove from the developmental studies of sexual preference called for by Quinsey and Marshall (1983), it is a definite step in that direction.

Questionnaire sex research. Questionnaire methods for assessment of sexual attitude and experience have a relatively recent history. The pioneering work in the area was performed by Kinsey et al. (1948) in the use of their questionnaire-based interview procedure. The Kinsey technique is very complex and requires training of interviewers to ensure reliability in execution of the procedure. While many details of sexual behavior and interest can be obtained with this technique, it is highly labor intensive and cannot be quickly administered.

Most self-report procedures for assessing human sexual behavior, like the original Kinsey studies, have not focused on sexual deviants. These procedures have examined such questions as the extent of heterosexual experience using Guttman scaling techniques (Bentler, 1968a, 1968b; Zuckerman, 1973), the sexual adjustment and satisfaction of heterosexual couples (LoPiccolo & Steger, 1974), or the degree of interest a male or female expresses for a particular sexual activity (Harbison et al., 1974).

A few methods have been employed with sexual deviants, usually with limited results. The Kinsey interview questionnaire was used to interview sex offenders in the classic study of Gebhard, Gagnon, Pomeroy and Christenson (1965), an undertaking of many years' duration. Simpler approaches have included use of the semantic differential to measure concepts about sexual deviance (Marks & Sartorius, 1968), and a combination of semantic differential and personal questionnaire to assess heterosexual and homosexual orientation (Feldman et al., 1966). One of the most extensively researched instruments is The Sex Inventory

(Thorne, 1966a), a 200-item self-report inventory using a combination of direct and projective questions to assess sexual interest and a variety of psychoanalytically-based personality factors. It has been shown to be psychometrically sound (Allen & Haupt, 1966; Thorne, 1966b) and has discriminated sexual deviants from normals (Haupt & Allen, 1966; Thorne & Haupt, 1966) but not from each other. By using two of the Sex Inventory scales (29 items) Cowden and Pacht (1969) found that it could be used in a corrections setting to screen sexual deviants from other inmates. Using the same two scales and expanding the response options Johnston and Anderson (1981) found that this version could differentiate pedophiles, rapists, and exhibitionists from college students but, again, not from each other. Each of these instruments is useful for limited purposes but each either is not intended to or fails to clearly differentiate offender types or provide data on sexual history or frequency of various sexual practices.

Clarke Sexual History Questionnaire (SHQ). (Langevin, 1983; Langevin et al., 1982; Paitich et al., 1977).

Progress toward a very thorough self-report questionnaire was made by Freund (Paitich et al., 1977) in the Sexual Deviation Examination Scheme (Male). Although never completely evaluated in its entirety for its psychometric properties (Freund, Nagler, Langevin, Zajac & Steiner, 1974) and still dependent upon clinical judgment for final diagnosis, the SDES(M) represented a major contribution to objective classification.

The Clarke SHQ (Paitich et al., 1977) is a direct descendant of Freund's SDES(M). This 225-item sexual history questionnaire samples the frequency of, desire for, and disgust for a broad range of deviant and nondeviant behaviors. It has been shown to clinically discriminate 452 sex offenders from 54 normal controls. The 24 scales of the questionnaire were derived by factor analysis and were shown to have adequate discriminant and criterion validity. The SHQ appears to be the most clinically useful instrument presently available in that it can differentiate exhibitionists, heterosexual and homosexual pedophiles, incest offenders, transsexuals, and multiple deviants (more than one deviation) from each other as well as provide information on preference for various activities and frequencies of engaging in certain activities. The SHQ has recently been revised (Langevin et al., 1982) and the initial evaluation of the new version shows it to be not substantially different from the earlier one.

Sexual Victimization Questionnaire (SVQ) (Groth, 1983).

A considerable period of time will be required to bring the ESDQ to a usable state and it may therefore be introduced late in the proposed project and possibly not at all. Despite this we will have available to us other methods of gaining information on etiology. Obvious sources are the intake interview, and daily self-reports on deviant fantasies and masturbatory practices, from which inferences

could be made. Another source is the Sexual Victimization Questionnaire (Groth, 1983). Groth hypothesizes that there are a variety of ways in which a male can be sexually victimized: (1) he may witness disturbing sexual activity on the part of another person; (2) he may have someone make unwanted sexual advances toward him which, although he may be able to resist or escape, he finds frightening or disturbing; (3) he may be pressured or manipulated into engaging in unwanted sexual activity; (4) he may be forced to submit to unwanted sexual activity; and (5) he may experience trauma in less direct ways, e.g., being humiliated or ridiculed in some sexual fashion, or being punished or maltreated for normal sexual behavior such as masturbating. In the Sexual Victimization Questionnaire each of these five areas is broken down into a number of details which provide specific information on sexual behaviors, frequencies, reactions, etc. While we are not entirely in agreement with Groth and his colleagues (Burgess et al., 1978; Groth, Hobson & Gary, 1982) that there are only two types of pedophiles in the world, fixated and regressed, or that many pedophiles were themselves sexually victimized, the SVQ nonetheless provides important self-reports on early formative sexual experiences. Since we are persuaded of the primacy of a social learning model of sexuality, the SVQ provides relevant information in this area.

Inventory of Self-Reported Deviance (ISRSD) (Weinrott, 1981). This is an instrument developed and field-tested by the former Evaluation Research Group of Eugene, Oregon. The ISRSD asks questions about the frequency and nature of both known and unknown sexual and criminal offenses. Respondents are presented with 150 items related to (1) forced sexual activity with adult females, (2) sexual activity with children, and (3) nonsexual crimes. Additionally, there are items related to deviant sexual fantasy, self-labelling as a sex offender, and disinhibitors of deviant behavior, e.g., alcohol or drug abuse.

The ISRSD is computer-administered and uses a branching program which provides differing response options depending upon the amount of crime to which the respondent admits. It is therefore highly individualized and all respondents do not receive the same questions. A shortened paper-and-pencil version is also available for use in follow up situations.

The only data obtained from this instrument of which we are aware have been informally reported to us by Weinrott (1982). In this pilot study at a large state hospital the ISRSD was administered to 104 sex offenders. These men self-reported 60 times as many sex offenses as reflected in official records and eight times as many criminal, nonsex offenses. This large discrepancy between self-report and official records is consistent with prior observations by Christie, Marshall and Lanthier (1977) and Abel and his

colleagues (Abel, Becker, Cunningham-Rathner, Rouleau, Kaplan & Reich, 1984) Abel et al., 1983; Abel, Rouleau &

Cunningham-Rathner, 1984) on data obtained from sex offenders believed to be honestly reporting. Weinrott's data are similarly consistent with our clinical experience and support our contention that sex offenders will honestly report on officially known and unknown sexual and nonsexual crimes.

Adult Cognition Scale (Abel & Becker, 1984). This instrument was developed to reveal cognitive distortions common to adult sex offenders. There are 10 categories of delinquent sexual activities: child molestation, rape, incest, voyeurism, frottage, exhibitionism, transvestism, masochism, sadism, and masochism. The 28-item scale evaluates such items as the ability of a child to give consent to sexual activity with an adult, the potentially dangerous consequences of child molestation to the victim, why a child may not report his/her molestation, why children would conceal incestuous events from non-offender members of the family, etc. Initial data from the ACS were described above.

This is an apparently powerful instrument for gathering data in an area consistently overlooked until recently by behavioral investigators. It should prove a rich source of information for later use in rational-emotive therapy (see below).

Summary on assessment procedures. Some of the assessment techniques described in the preceding section have been in use for a number of years and are suitable for immediate use in the project, even though two will require fairly major revisions and one a minor revision. Another will have to be created as a separate research project. The following paragraphs will show the separation of these tasks according to their various priorities.

Basic assessment battery. The basic assessment package consists of techniques which we have used for years in our laboratory or which have been tested by other investigators and reported to be effective. They are:

Physiological assessments.

1. Pedophile slide assessment (Laws & Osborn, 1983). Requires minor revision. Repeated throughout the project as part of between-group outcome battery.
2. Pedophile audio assessment (Avery-Clark & Laws, 1984). Requires major revision. Repeated throughout the project as part of between-group outcome battery.

Self-report assessments.

1. Card sort (Abel, 1979). Requires major revision. Repeated only in

- Assessment #1.
2. Clarke SHQ (Langevin, 1983; Paitich et al., 1977). Use as is. Not repeated.
  3. Inventory of Self-Reported Deviance (Weinrott, 1981). Use as is. Not repeated.
  4. Sexual Victimization Questionnaire (Groth, 1982). Use as is.
  5. Adult Cognition Scale (Abel & Becker, 1984). Use as is.

We lack direct experience with three of the self-report procedures, the SHQ, ISRD, and ACS, but evidence exists to argue for their inclusion. The SHQ is an extremely powerful instrument and has been shown to be reliable and valid. The ISRD and the ACS have been field tested with sexual deviants and appear to be instruments of considerable promise. The SVQ was by us for a number of years and is included because of its strong etiological content.

Assessment revisions. The rationale for revisions was presented above. These revisions can be accomplished within the initial start up period of the project and the procedures will be included in the assessment battery. They are:

Physiological assessments

1. Revision of slide assessment (Laws & Osborn, 1983). Two slides will be removed from each category.
2. Revision of Avery-Clark and Laws (1984) pedophile audio assessment. Using the same content categories the six tapes in each series will be rewritten in 3 min format.

Self-report assessments

1. Revision of card sort (Abel, 1979). Content of cards will be changed to permit item analysis by examining preference for specific types of sexual activity.

Research project. This is a lengthy and detailed task and there are no plans to include the procedure in the project although it may be field tested there. The project is:

Physiological assessments

1. Pedophile video assessment. Segments of child pornographic films abstracted to create a test of pedophilic sexual preferences.

## Behavioral Treatment Procedures

Introduction. We have chosen only three treatments to deal with the problems of deviant and nondeviant arousal. They were chosen because they are simple, straightforward, easy to perform, require minimal supervision, do not require elaborate electronic supports, and are entirely portable to any clinical or nonclinical setting. We believe that this simplicity and flexibility are essential requirements for effective outpatient treatment.

Like the physiological assessment procedures, these treatments also involve use of the penile transducer. Treatments are conducted three times per week, twice at home and once in the clinic setting, the clinic session preceded by a brief evaluation session in which ongoing levels of deviant and nondeviant arousal to a variety of stimuli are monitored to provide indices of treatment progress. Two of the treatments permit measurement of the erection response during the treatment session. In what follows the literature relevant to each treatment will be reviewed. In evaluating any of these procedures it must be borne in mind that there have been no large group studies published. Instead there have been a small number of controlled and uncontrolled single case studies and a few small group studies. The results for each have been roughly equivalent but the effects of different investigators with differing emphases, inter-lab differences, minor methodological alterations, and different subject populations to some extent confound the data. Despite this, the data are remarkably consistent. We know that the methods produce the desired results, but the operative mechanisms involved for the most part remain a matter of conjecture (Quinsey & Marshall, 1983).

Orgasmic reconditioning. There are three varieties of this counterconditioning procedure. Many sexual deviates, primarily pedophiles, often show an assessment pattern of high deviant and low nondeviant arousal. Because these two response classes are competitive and cannot occur simultaneously (i.e., at the same moment in time), strengthening nondeviant arousal often has the effect of reducing deviant arousal. The following procedures can be used to accomplish this goal.

(1) Orgasmic reconditioning: thematic shift method (Marquis, 1970). Although often attributed to Marquis (1970), he was not the first therapist to use this technique and the basic idea underlying it, the pairing of nondeviant stimuli with orgasm, is over 100 years old (Charcot & Magnan, 1882, cited in Bancroft, 1974). Although procedures have varied somewhat the basic approach requires that the subject begin masturbating to deviant fantasy. He is instructed to shift the fantasy theme from deviant to nondeviant at the moment of orgasmic inevitability. As treatment progresses, he is further instructed to begin moving the introduction of the nondeviant fantasy forward in

time toward the initiation of masturbation, until ultimately he masturbates to nondeviant fantasy alone. Investigators have frequently reported that this method conditions nondeviant arousal while deconditioning deviant arousal (Davison, 1968; LoPiccolo, Stewart & Watkins, 1972; Marquis, 1970; Marshall, 1973; Thorpe, Schmidt & Castell, 1963). Because this is the most frequently reported procedure and positive outcomes are almost always reported, Conrad and Wincze (1976) performed a careful empirical evaluation and found no systematic attitudinal or behavioral changes which could be directly attributed to orgasmic reconditioning and concluded that this variation was suspect.

(2) Orgasmic reconditioning: fantasy alternation method (Abel, Blanchard, Barlow & Flanagan, 1975); Laws & O'Neil, 1981). The problem with the Marquis method is that it entrusts responsibility for the essential thematic shift to the client at the moment of maximum sexual arousal. Conrad and Wincze's (1976) subjects reported that they were performing the procedure and making progress but periodic measurement of erection responses to deviant stimuli showed that this was apparently not the case. The solution to this problem was offered by Abel, Blanchard, Barlow, and Flanagan (1975). Instead of altering the thematic content within a single masturbatory episode, these researchers alternated blocks of trials with a deviant theme with blocks of trials with a nondeviant theme. Fantasy content within an episode remained the same. Periodic measurement of sexual arousal and self-report indicated that this cycling of masturbatory fantasies produced a large decrease in deviant arousal and a large increase in nondeviant arousal. These researchers had used the method to generate nondeviant arousal; they noted that in some cases deviant arousal was suppressed although it had not been specifically treated.

We have observed this generation/suppression effect repeatedly and have found this variety of orgasmic reconditioning to be an effective modality for pedophiles with an entering configuration of low nondeviant and high deviant arousal. We have attempted numerous variations of the procedure and have replicated the basic finding of Abel, Blanchard, Barlow, and Flanagan (1975) many times (Foote & Laws, 1981; Kremsdorf et al., 1980; Laws, 1985; VanDeventer & Laws, 1978). We, like other investigators, are uncertain of the mechanism(s) which produce this paradoxical result. Abel, Blanchard, Barlow and Flanagan (1975) reported that the key appeared to be the switching back and forth between fantasies, forcing the client to confront the inappropriateness of his deviant productions and causing them to become aversive. This contrast effect explanation has also been advanced by Leonard and Hayes (1983). We have argued that the reduction in deviant arousal is the result of cognitive mediation (Laws, 1985; Vandenter & Laws, 1978), and some evidence for this was provided by Laws and O'Neil (1981), although they admit that a variety of interpretations are equally plausible.

Figure 6 shows typical data from our laboratory using the alternating fantasy method, presented here as a multiple baseline across subjects (Hersen & Barlow, 1976). Average levels of nondeviant arousal measured weekly are denoted by filled circles, and deviant arousal by open circles. Note that in each case at the pre-treatment baseline deviant arousal was at least 50% of a full erection or better and nondeviant arousal was 20% of the maximum or less. As would be expected, as treatment began nondeviant arousal increased very gradually from very low initial levels to a termination point averaging well above 50%. Conversely, deviant arousal began to decrease, in two cases increased again, then slowly declined to levels below 10% of the maximum. It is this latter effect that cannot be accounted for in this procedure as the subject masturbates to ejaculation using deviant themes an equal number of times. It is because this consistent finding flies in the face of conditioning theory (i.e., deviant arousal should stay high or increase) that we have advanced a cognitive mediation explanation for it (see Laws, 1985; VanDenventer & Laws, 1978). Figure 6 shows ideal cases where subjects met the termination criteria of nondeviant arousal above 50% and deviant arousal below 20% for the final eight weeks of treatment. Not every subject can meet these criteria, especially for nondeviant arousal, and in those cases we strive to meet the easier criterion of deviant arousal below 20%. Nor is the treatment effective in every case. Figure 7 shows an example where nondeviant arousal showed considerable increase as expected but deviant arousal was unaffected until a second treatment, olfactory aversion, was imposed and suppressed it. This simply underlines an important caveat in this work: the subject's behavior will tell us when a treatment is effective.

(3) Orgasmic reconditioning: satiation method (Abel & Annon, 1982; Marshall, 1979). Abel and Annon (1982) have recently reported a method that attempts to combine both desirable features of orgasmic reconditioning, an increase in nondeviant arousal and a decrease in deviant arousal, within a single treatment session. We have been using a variation of this procedure for a number of years. In the first treatment component the client masturbates to ejaculation using a nondeviant fantasy to ensure that orgasm is being paired with appropriate fantasy. Often clients can become rearoused immediately and in those cases they masturbate to ejaculation a second time. Twice is usually sufficient but clients repeat this component until they are refractory to further stimulation. When they are refractory they immediately begin the second component wherein they masturbate with a flaccid penis while verbalizing a deviant fantasy. This procedure produces the same effect as the fantasy alternation procedure: nondeviant arousal increases and deviant arousal decreases.

The use of prolonged periods of masturbation to deviant fantasies has been shown to reduce deviant arousal (Abel & Annon, 1982; Marshall, 1979; Marshall & Lippens, 1977).

These authors required pedophiles to speak fantasies aloud and masturbate for periods of 1-1 1/2 hours which produced a rapid suppressive effect. However, Marshall's (1979) and Abel and Annon's (1982) procedures permit the client to ejaculate one or more times during the deviant fantasy production which could be construed as a reinforcing event; in our variation the client is made refractory before the satiation period begins. It is our belief that we have combined the best features in a single session paradigm. Abel and Annon's (1982) procedure is much like ours except that they use a much longer satiation period. Marshall (1979) also used orgasmic reconditioning to increase nondeviant arousal but only after the satiation period was nearly complete. Barlow and Abel (1976, p. 538) recommend that "Clinically, the best course is to increase (nondeviant) arousal before decreasing deviant arousal." Our procedure closely approximates that suggestion.

Figure 8 shows data from the satiation procedure presented as a multiple baseline across subjects with different deviations. The designation "2 x ND + 20 min D" shown at the top of each panel indicates that each client masturbated to ejaculation twice using a nondeviant fantasy (2 x ND), then engaged in a 20 min masturbatory satiation period using a deviant fantasy (+ 20 min D). Note that the brief satiation period is at variance with the one hour recommended by Marshall (1979) and two or more hours by Abel and Annon (1982). Marshall reported that one of his clients received treatment "every second or third day" with treatment essentially complete after 26 sessions or about 13-15 weeks. The data of Figure 8 show one of our clients completing treatment in 16 weeks, another at 22, and the third at 38 weeks. It would appear that the shorter satiation period, even at a higher density of treatment sessions (3/week), takes longer to make contact with deviant arousal and produces a longer treatment period, and the effect varies between subjects (compare top with lower panel). Sometimes, as may be seen in the center panel, the 20 min period is not sufficient. After eight weeks deviant arousal bottomed out between 25%-30% and at 14 weeks it was again increasing; lengthening the satiation period to 45 min effectively reduced it to the desired level. Too few subjects were involved in any of these investigations to make a definitive judgment about the optimal length of the satiation period. The data of Figure 8 are from inpatients and they show the treatment to be effective. With outpatients, to maximize the probability of treatment compliance, it is our policy to recommend the treatment which is least demanding of the client but likely to produce the desired result, so we would opt for the shorter satiation period.

Which treatment? Although we reject the thematic shift method as unreliable, particularly with outpatient sex offenders, the remaining two methods of orgasmic reconditioning appear to be equally effective, although the

satiation method on the face of it seems to have the better theoretical and empirical support and requires no speculative inferences. The fantasy alternation method has these inferential problems but it has been replicated by different investigators in different settings with different deviations with an impressive similarity of results. (Abel, Blanchard, Barlow & Flanagan 1975; Foote & Laws, 1981; D.Green, personal communication, 15 February 1982; Laws & O'Neil, 1981; VanDeventer & Laws, 1978). Marshall's is the single account in the literature of masturbatory satiation and the conditioning + satiation paradigm we have used has not been archivally reported at all. The evidence, in our judgment, is equally persuasive. Many therapists believe it is unethical and socially dangerous to permit outpatient sex offenders to masturbate to ejaculation using deviant stimuli. The satiation method would seem to be more appropriate for workers who have this reservation.

Olfactory aversion (Colson, 1972; Laws, Meyer & Holmen, 1978; Maletzsky, 1973, 1974, 1980). Punishment is usually defined as a consequence of behavior which reduces the future probability of that behavior (Azrin & Holz, 1966). If a putatively punishing stimulus is made to accompany or follow an undesirable behavior and future instances of that behavior are seen to decrease, the stimulus is designated an aversive stimulus and the process as aversive conditioning (Rachman & Teasdale, 1969).

One variation of aversive conditioning is called olfactory aversion, the pairing of extremely noxious but harmless odors with fantasized or actual performance of undesired behaviors, resulting in the suppression of the behavior. Olfactory aversion was initially used to suppress desire for food in obese persons (Kennedy & Foreyt, 1968; Wolpe, 1969). The earliest application of the technique to sexual deviation was reported by Colson (1972) who had a homosexual client imagine sexual scenes while inhaling various noxious odors. Maletzsky (1973) augmented the power of the noxious scene in covert sensitization (Cautela, 1967) by having his client smell the gas of valeric acid during its presentation. This "assisted" covert sensitization routine was later replicated by Maletzsky and George (1973) with homosexuals and with exhibitionists (Maletzsky, 1974, 1980) using both valeric acid and placental culture. The basic Maletzsky procedure has since been extended to pedophiles (Levin, Barry, Gambaro, Wolfensohn & Smith, 1977). With only two exceptions (Levin et al., 1977; Maletzsky, 1980) these studies with sexual deviants did not index treatment progress with erection measures.

Our variation of olfactory aversion omits the covert sensitization element and more closely resembles the procedure described by Colson (1972). Our observation has been that if an inherently noxious agent (e.g., spirits of ammonia) is continuously paired with the presentation of deviant sexual stimuli, deviant sexual arousal elicited by those stimuli will decrease to a near-zero level. In the

procedure the client inhales the ammonia fumes while observing a slide, hearing a tape recording, or engaging in free fantasy, while his erection response is monitored. The effects of the treatment are mostly specific to deviant arousal and nondeviant arousal is often unaffected (Laws et al., 1978).

Figure 9 gives examples of data from the olfactory aversion procedure presented as a multiple baseline across subjects with different deviations. Note first that all subjects show high baseline levels of both deviant and nondeviant arousal. This is the desired entry configuration for this procedure as we wish to affect only deviant arousal. Two other features are worth noting. First, the introduction of the noxious agent rapidly suppresses deviant arousal within four to six weeks; it is not unusual to see a suppression effect in the first or second treatment session. Second, the treatment is very short term. In the examples shown, treatment was completed at 16 weeks, roughly 45 sessions of 20 min duration.

In the treatment of outpatients the outstanding advantage of olfactory aversion is its total portability to any environment. As the noxious agent we use crushable capsules of spirits of ammonia which may be carried on the client's person and used in the exact environmental situation where the client's behavior causes a problem. Maletzsky (1973) and Maletzsky and George (1974) have reported the use of valeric acid in vivo with homosexuals. S.B.Nixon (personal communication, October, 1981) has reported the effectiveness of ammonia capsules with exhibitionists, pedophiles, and persons prone to impulsive episodes of interpersonal violence.

Verbal satiation (Laws & Osborn, 1983). As Marshall's (1979) masturbatory satiation procedure shows, clients tire of repetitious sexual behavior and lose their arousal. The same principle of continuous repetition underlies what we have called verbal satiation. It has long been observed that the continual performance of a behavior in the same stimulus situation will finally lead to the extinction of that behavior (Dunlap, 1932; Kendrick, 1960; Pavlov, 1927; Rachman, 1976; Yates, 1958).

To our knowledge, ours is the only program employing the verbal satiation procedure and no studies of it have been published to date. Very like Marshall's (1979) and Abel and Annon's (1982) techniques, the basic procedure involves having the client continuously recite a deviant sexual fantasy aloud for periods of at least 30 min not less than three times per week. Ultimately the deviant fantasy loses its power to evoke sexual arousal and it decreases. The real benefit of the procedure seems to be that, as the subject struggles to create new fantasies to replace the now ineffective ones, the procedure catches up with the material and renders it useless before it can become completely articulated. Because of the overall aversiveness of verbal satiation, it does sometimes have an attenuating effect on

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nondeviant arousal but not such that it cannot be maintained above our terminal criterion of 50% of full erection or better.

Figure 10 gives examples of data from the verbal satiation procedure presented as a multiple baseline across subjects with different deviations. Again, as in olfactory aversion, we see that the treatment is relatively short term, ranging from 40-60 sessions of 30 min duration. Also like olfactory aversion the treatment is portable to any setting and could be used in vivo, but such use would require a high level of motivation by the client and would be more difficult to implement in the environment than use of a chemical agent. Two points should be made regarding these data. First, the impact of the satiation procedure on deviant arousal is not as sudden as with olfactory aversion. Rather it resembles the gradual decrease seen in orgasmic reconditioning. Second, the attenuating effect on nondeviant arousal is evident in all three panels of Figure 10. However, nondeviant arousal averages for the last eight weeks of treatment were, from the top down: 62% 58% and 58%, all acceptably above the terminal criterion.

### Cognitive Treatment Procedures

Introduction. We have chosen three cognitively-based treatments: (1) rational-emotive therapy (RET) (Ellis, 1962; Ellis & Grieger, 1977; Wessler & Wessler, 1980) to deal with deviant cognitive structures and the sense of inadequacy and helplessness, (2) stress inoculation training (SIT) (Meichenbaum, 1977; Novaco, 1975, 1979) to deal with interpersonal and situational stresses in impulse and anger control, and (3) relapse prevention (RP) (Marlatt, 1979, 1980; Marlatt & Gordon, 1985) to deal with tendencies toward relapse to deviant sexual behavior. Like the described behavioral treatments, these were also chosen because they are relatively simple, straightforward, easy to perform, require no supports, and are entirely portable to any setting.

This section of the program statement is concerned with what clients say to themselves as determinants of their behavior. In general, what sex offenders say to themselves adds up to a justification for being a sexual deviant. In concert with the behavioral treatments for sexual arousal problems it is appropriate to attempt to seriously undermine the deviant cognitive support system in sexual deviation. Rational-emotive therapy and stress inoculation were chosen because they were both designed to confront serious problems frankly and realistically and because they share many elements in common. Relapse prevention, the therapy used in the long-term intensive follow up, was originally developed to treat addictive behaviors. It was chosen because its hallmark is teaching the client individualized strategies to manage his behavior in high risk situations.

Unlike the behavioral treatments reviewed above, which share many underlying assumptions and procedural factors in common, the cognitive behavior literature is vast and totally confounded by the particular orientation of each therapist/researcher (often also a theorist), and so the majority of studies in any given area are comparable only in the most general sense. Therefore, in reviewing the literature relevant to the procedures we have confined ourselves to the work of the principal proponents.

Rational-emotive therapy (Ellis, 1962, 1977, 1979, 1982). There are three subject matter areas broadly grouped under this approach to treatment and they are rarely viewed separately by the founder (Ellis, 1962; Ellis & Greiger, 1977; Ellis & Whiteley, 1979). They are: rational-emotive (1) theory, (2) philosophy, and (3) therapy. Ellis' theoretical and philosophical assumptions have been strenuously criticized, particularly for looseness of theoretical statement, untestable or uninformative hypotheses, nonempirical assumptions, atheoretical predictions, inconsistencies among predictions, and failure to account for negative evidence (Eschenroeder, 1982; Ewart & Thoresen, 1979; Mahoney, 1979; Smith, 1982). Indeed, Ellis sometimes appears to enlist all of cognitive and

behavior therapy under the rational-emotive banner (see esp. Ellis, 1977a, 1979) and this has not escaped critical attention either (Mahoney, 1974, 1979; Meichenbaum, 1975).

However, theory and philosophy are one issue, and practice another. Rational-emotive therapy (RET) is a highly pragmatic clinical approach and the evidence for its efficacy, while not as "awesome" as Ellis (1979) would have us believe, has been fairly adequately demonstrated by a small body of controlled empirical research (DiGiuseppe & Miller, 1977; DiGiuseppe, Miller & Trexler, 1979). Worth mentioning in this regard is the fact that the behavior therapies commonly used with sex offenders have similarly developed with little or no theoretical support (Quinsey & Marshall, 1983), claims for their efficacy are supported by a very meager body of research, much of it uncontrolled (Earls & Marshall, 1983), yet they are widely accepted. The use of RET with sex offenders was proposed as it has been often observed that they do in fact think irrationally (Abel & Becker, 1984; Anderson, 1981) which frequently leads to self-defeating and self-destructive behavior, and they do employ common mechanisms of defense such as denial, rationalization, projection, and similar cognitive distortions (Burgess et al., 1978; Groth, 1979). These cognitive processes are believed to be ideal candidates for RET intervention.

We feel what we think, says rational-emotive theory. Events and people contribute to but do not necessarily induce emotions and accompanying or consequent behaviors. It is rather our perceptions and evaluations of events and people which produce them. Dysfunctional emotional states are the result of cognitive errors such as exaggeration, oversimplification, overgeneralization, illogic, unvalidated assumptions, faulty deductions, and absolutistic notions. These are the famous irrational ideas posited by Ellis (1962), of which there are four varieties: (1) awfulizing (i.e., catastrophizing) - statements exaggerating negative consequences; (2) shoulds, oughts, and musts - unrealistic demands of events and persons, also called demandingness; (3) overinclusiveness - global ratings that encompass an entire person or event on the basis of a single judgment, and (4) need statements - the assertion that it is absolutely necessary that things be different than they are. Rational-emotive therapy is firmly anchored in the here and now and insists that people maintain their own disturbed behavior by present adherence to irrational thinking. Life can be different but active and persistent efforts to identify, challenge, and dispute this thinking is required, thus rational-emotive therapy (Walen, DiGiuseppe & Wessler, 1980, pp. 1-4 passim).

There is nothing revolutionary about the RET model. Despite Ellis' (1979) efforts to gather all of cognitive and behavior under the mantle of RET, the notion that cognitive processes and cognitive changes alter human behavior is central to other (and some would argue, better articulated)

cognitive therapies (e.g., Beck & Emery, 1977; Beck, Rush, Shaw & Emery, 1979; Meichenbaum, 1977). And, even though they follow the basic model, many of Ellis' closest colleagues improvise and introduce their own variations on RET (e.g., Grieger & Grieger, 1982; Lange, 1977; Lange & Jakubowski, 1976; Walen et al. 1980; Wessler & Wessler, 1980).

There is a small literature supporting the therapeutic efficacy of RET, unfortunately much of it performed with nonclinical populations. Noncomparative studies have shown RET to be useful in reducing irrationality and anxiety in older persons (Keller, Crooke & Brookings, 1975), vulnerability to criticism (Yu & Schill, 1976), and public speaking anxiety (Karst & Trexler, 1970; Straatmeyer & Watkins, 1974; Trexler & Karst, 1972). Using a true clinical population Molesky and Tosi (1976) showed RET to be effective in alleviating stuttering.

A number of studies have compared RET with systematic desensitization (Wolpe, 1961). One large investigation by DiLoreto (1971) compared RET, systematic desensitization, and client-centered therapy (Rogers, 1951, 1961) as treatments for interpersonal anxiety. Systematic desensitization was shown to be most effective within treatment but RET produced the most changes post-treatment. Meichenbaum, Gilmore and Fedoravicius (1971) compared the effects of group RET with group desensitization on speech anxiety and found RET to have the most generalized effect in a variety of situations, a finding later corroborated by Meichenbaum (1973) and Lazarus (1974). Meichenbaum (1972) also compared desensitization with an RET-like therapy called "cognitive modification" and the latter proved most effective in reducing test anxiety.

RET-based techniques have also been shown to be more effective than a variety of placebo or alternative treatments in reducing self-reported test anxiety (Goldfried, Linehan & Smith, 1978), speech anxiety (Fremouw & Zitter, 1978), social anxiety (Kanter & Goldfried, 1979), circumscribed phobia (Wein, Nelson & Odom, 1975), anxiety and depression in an unselected community mental health population (Lipsky, Kassinove & Miller, 1980), and unassertiveness (Alden, Safran & Weidman, 1978; Craighead, 1979; Hammen, Jacobs, Mayol & Cochran, 1980).

In general reviews of psychotherapy outcome research RET has fared reasonably well. DiGiuseppe et al. (1979) cite a large study by Glass and Singer which compared ten types of therapy in 375 outcome studies, of which 35 used RET. In terms of significant effect over control group outcomes, RET ranked second, surpassed only by systematic desensitization.

We use RET in two new applications, treatment of the deviant cognitions (irrational beliefs) of sex offenders, and their perceptions of self-inefficacy. A third application is to beliefs about social inadequacy, which to

some extent resembles earlier work (e.g., DiLoreto, 1971; Yu & Schill, 1976).

Irrational beliefs in sex offenders. Deviant sexual behavior is socially proscribed conduct and persons engaging in it usually tend to develop a belief system based on irrational ideas in order to justify their performances. These dysfunctional cognitions include: overgeneralization, unvalidated assumptions, faulty logic and faulty deductions. They also tend to use the cognitive defense mechanisms of distortion, denial, rationalization, and projection. A pragmatic therapy such as RET is an ideal vehicle to teach sex offenders to challenge and dispute these notions and restructure their cognitions in a more reality-oriented manner.

Self-inefficacy in sex offenders.

"Self-inefficacy is concerned with judgments about how well one can organize and execute courses of action required to deal with prospective situations containing many ambiguous, unpredictable, and often stressful elements" (Bandura, 1980, p. 147). Also, "(i)n this conceptual system, expectations of personal mastery affect both the initiation and persistence of coping behavior. The strength of people's convictions in their own effectiveness is likely to affect whether they will even try to cope with given situations...." (Bandura, 1977b, p. 193). In a recent review Bandura (1982) cites numerous studies by himself and his coworkers which demonstrate that people change their expectations for success when they gain "enactive mastery" of particular social performances which has a profound effect upon future behavior.

Sex offenders often experience repeated failures in successfully initiating, performing, and sustaining reciprocal adult social and sexual relationships and are therefore likely to experience and report an expectation of self-inefficacy in those situations. Their "efficacy expectation" (Bandura, 1977b, 1980, 1982) is often that they lack the skills to succeed and their "outcome expectation" is that they will fail if they try, which can lead to the faulty deduction that they are therefore condemned to remain sexual deviants. These perceptions of self-inefficacy are, for the most part, the type of dysfunctional cognitions enumerated in the previous section and so should be amenable to RET intervention. Here, however, RET must be used in the broader model employing elements such as modeling, role playing, and behavioral rehearsal (Ellis, 1979; Lange & Jakubowski, 1976) to effect changes in efficacy and outcome expectations via enactive mastery of social performances.

Social inadequacy in sex offenders. Sex offenders may never have learned appropriate social behaviors and so possess a skills deficit. It is more likely that they have learned inappropriate behaviors in criterion situations which have been reinforced a sufficient number of times that, even if they possess the appropriate skills, the

inappropriate performances have a higher probability of occurrence.

These clients frequently report a perception of social inadequacy in sex-related situations with adults. This is often due to a misreading of social cues, a cognitive dysfunction, as well as failure to generate behaviors appropriate to that situation, a possible result of cognitive inhibition. This problem may also be seen as a candidate for RET intervention, again using the expanded model (Ellis, 1979; Lange & Jakubowski, 1976) and focusing upon appropriate reading of social cues, response generation and, if necessary, response acquisition (Curran & Wessberg, 1981).

Stress inoculation training (Meichenbaum, 1977; Meichenbaum & Cameron, 1977). The basic principle underlying stress inoculation is the analogy of medical inoculation against disease. It can provide clients with an adequate and socially appropriate future defense against interpersonal or situational stress but, unlike medical inoculation, not an immunity to it. In the course of training "a person's resistance is enhanced by exposure to a stimulus that is strong enough to arouse the defenses without being so powerful as to overcome them" (Meichenbaum, 1977, p. 182).

The direct antecedent of stress inoculation was the work of Wolpe (1961) in systematic desensitization and, in particular, Goldfried's (1971) self-control approach to that therapy employing a variety of self-relaxation skills across a variety of stress-inducing hierarchies. Of special importance was the introduction of coping skills in desensitization (Goldfried, 1971; Goldfried & Trier, 1974) which found support in the work of Goldfried and Davison (1976), Meichenbaum (1972) and Spiegler, Cooley, Marshall, Prince, Puckett and Slenazy (1976). Another important early influence was anxiety management training (Suinn, 1972; Suinn & Richardson, 1971) which differed from earlier Wolpe-like techniques in that relaxation coping skills were directed toward scenes that went beyond a client's particular problem, thus broadening the potential for generalization. This coping skills approach was shown to have wide applicability including areas such as speech anxiety (Meichenbaum et al., 1971), test anxiety (Sarason, 1973), phobias (Meichenbaum & Cameron, 1977), anger (Novaco, 1975, 1979), social inadequacy (Kazdin, 1973) and pain management (Levendusky & Pankratz, 1975).

Meichenbaum (1977) cites the common elements of coping skills training, all of which are present in stress inoculation: (1) teaching the client the role of cognitions in the problem; (2) training in the observation of self-statements and images and self-monitoring; (3) training in problem solving; (4) modeling of positive self-statements and images; (5) modeling, rehearsal, and encouragement of positive self-evaluation and of coping skills; (6) use of progressive relaxation, training of coping imagery, and

behavioral rehearsal, and (7) graded behavioral assignments to test the acquired skills. Of special importance to the notion of "inoculation" was Epstein's (1967) recommendation that the learning of coping skills should be self-paced, permitting increasingly larger increments of threat to be mastered a small step at a time.

The emergent model of stress inoculation training involved the discussion of the nature of emotional and stress reactions, rehearsing coping skills, and then testing these skills under stressing conditions. Specifically, in the (1) first phase the client is provided with a plausible rationale encouraging him to view a stress reaction in four stages: (a) preparation, (b) confrontation and coping, (c) management of failure to cope, and (d) reinforcing oneself for adequately coping. In the (2) second phase the client is provided with a variety of coping skills, including relaxation techniques (Benson, 1975; Jacobsen, 1938; Paul, 1966), control of breathing (Deane, 1964, 1965) and modification of the client's self-statements regarding stress-inducing stimuli. Finally, in the (3) third phase newly acquired skills are tested under actual stress-inducing conditions.

Stress inoculation is used here in two unique applications. First, it is applied to the stresses produced by impulses to act out sexually and, second, to the failure to properly manage anger. We consider these to be general stressors common to all sex offenders.

Impulse control in sex offenders. The problem of impulse control has been defined as the inability or unwillingness to decline immediate reinforcement in favor of more remote reinforcement (Ainslie, 1975). Our focus of concern is impulsive sexual behavior in adult sex offenders. In the stress inoculation literature the primary information on this problem comes from the early work of Meichenbaum and Goodman (1969, 1971) with hyperactive, impulsive children. Although these appear to be rather disparate groups, there are similarities. Initially it was observed that impulsive children used less verbal control over motor behavior and used private speech in a less instrumental way than nonimpulsive children. This suggested that impulsive children could profit from training to learn how to talk to themselves in a directive, self-regulatory fashion (Meichenbaum & Cameron, 1977). This eventually took the form of the therapist modeling questions about the task, providing answers in the form of cognitive rehearsal and planning, self-instructions for self-guidance, and self-reinforcement. This is a close approximation to the stress inoculation model, although obviously not intended for that application. Later research (Meichenbaum & Goodman, 1971) showed that behavioral rehearsal in self-instruction was an essential part of the procedure, and with the addition of cognitive modeling produced a slower and more accurate behavior in performance tasks. Finally, and relevant to stress inoculation, Meichenbaum and Goodman

(1971) found that it was most productive to begin with tasks at which the subject was somewhat proficient, and that it was helpful to approach the final goal through successive approximations (Epstein, 1967).

To our knowledge, the use of stress inoculation training to counter impulses to engage in deviant sexual behavior is unique. Basically we propose that urges to engage in this variety of impulsive behavior is a form of stress, and that the model proposed by Meichenbaum (1977) is applicable. In the first stage, the client must prepare himself by identification of cues which set the occasion for impulsive behavior. Second, he must use relaxation and deep breathing in the presence of the impulse-provoking imagery, and modify his private speech to counter positive appraisal and expectations about engaging in the impulsive behavior. And third, he should test these skills in situations where the cues for impulsive behavior are present.

Anger control in sex offenders. Novaco's (1975, 1976a, 1976b, 1977a, 1977b, 1978, 1980) program for the control of anger is a variation of the basic stress inoculation model. He defines anger as a particular form of the stress reaction and, like Meichenbaum, suggests that an anger-stress response should serve as a cue for initiating coping behavior rather than a cue which triggers an attack. Novaco (1979, p. 266) states: "The general goals are to prevent anger from occurring when it is maladaptive, to enable the client to regulate arousal and its concomitant cognitions when provocation occurs, and to provide the person with the behavioral skills to manage the provocation experience." The anger management program follows the cognitive preparation, skill acquisition, and application training model initially proposed by Meichenbaum (1977). In the cognitive preparation phase, clients are educated about anger arousal and its determinants, identify the circumstances which trigger anger, discriminate adaptive and maladaptive occurrences of anger, and are introduced to coping strategies as anger management techniques. In the skill acquisition phase, the client learns to modify appraisals and expectations regarding provocation (cognitive restructuring), uses relaxation and deep breathing in the presence of provocative stimuli to inculcate a sense of self-control, and uses positive self-instructional statements to counter negative appraisals and expectations. And in the third stage, the client tests these acquired proficiencies by applying anger control methods to therapist-regulated provocations (Novaco, 1979, pp. 266-272).

Sex offenders often use anger arousal elicited by a person, situation, or event as an excuse to engage in deviant sexual behavior, so the application of stress inoculation training to this problem seems justified. The evidence for the efficacy of stress inoculation for anger control at this writing is not substantial but it is persuasive. Novaco (1975) has reported success with the

method described with a large group who were identified as having anger control problems, in a case of depression (Novaco, 1977a), and in the training of persons in high stress occupations such as police officers (Novaco, 1977b), probation counselors (Novaco, 1980), and military recruits (Novaco, Cook & Sarason, 1983). Other investigators have demonstrated the superiority of Novaco's stress inoculation model over other methods for persons known to be "anger expressors" (Crain, 1977) and for stress inoculation plus social skills training for the criminally insane (Atrops, 1978).

Relapse prevention (Marlatt, 1979, 1980, 1985; Marlatt & Gordon, 1985). Marlatt's relapse prevention model was originally developed for use with alcoholics, drug abusers, and smokers. Our approach, applying RP to deviant sexual behavior, represents a new use of the treatment.

Basically the RP model "...proposes that the probability of relapse... (ed: defined here as a return to deviant sexual behavior)... will increase in a high risk situation if the individual fails to cope adequately with the problem. Failure to cope effectively leads to a decreased sense of self-efficacy wherein the individual feels less capable of handling forthcoming events or subsequent situations" (Marlatt, 1979, p. 348). The goal of RP treatment is "...teaching skills that may help an individual to cope successfully with a relapse, either in terms of preventing one from occurring altogether or of minimizing the extent of a relapse if it does occur...." (Marlatt, 1979, p. 349).

More recently Marlatt (1985) has expanded upon his earlier statements. "Relapse Prevention (RP) is a self-management program designed to enhance the maintenance stage of the habit-change process.... (R)elapse refers to a breakdown or setback in a person's attempt to change or modify any target behavior. Based on... social learning theory, RP is a self-control program that combines behavioral skill training, cognitive interventions, and lifestyle change procedures. Because the RP model includes both behavioral and cognitive components, it is similar to other cognitive-behavioral approaches that have been developed in recent years as an outgrowth and extension of more traditional behavior therapy programs" (p. 3).

Importantly, although the program was originally developed to treat major addiction problems like alcoholism and substance abuse, "...the RP model may have applications that extend beyond the traditional categories of 'drug addiction.' Habit patterns such as excessive drinking, smoking, overeating... may be considered as a subclass of a larger set of... addictive behaviors. The category of addictive behaviors may be expanded to include any compulsive habit pattern in which the individual seeks a state of immediate gratification. With many addictive behaviors ...the immediate experience of gratification (the pleasure,... tension reduction, or relief from stress

associated with the act itself) is followed by delayed negative consequences such as physical discomfort or disease, social disapproval, financial loss, or decreased self-esteem....(O)ther examples of addictive behaviors include certain eating disorders (e.g., overeating and binge eating), compulsive gambling, and other 'impulse control' problems, including some sexual disorders (e.g., exhibitionism, pedophilia, fetishisms, etc.) and impulsive aggressive acts (e.g., child abuse and rape). Since many treatment programs for these kinds of problems require clients to totally refrain from engaging in the problematic behavior, application of an RP program may turn out to be an appropriate and effective approach" (Marlatt, 1985, p. 4).

RP procedures are extremely flexible and so may be specifically tailored to an individual client's problems. They "can be applied either in the form of a specific maintenance program to prevent relapse or as a more global program of lifestyle change. In the former case, the goals of the program are (1) to anticipate and prevent the occurrence of a relapse after the initiation of a habit change attempt...; and (2) to help the individual recover from a 'slip' or lapse before it escalates into a full-blown relapse. Such RP procedures can be used regardless of the theoretical orientation or intervention methods applied during the initial treatment phase....RP methods can be applied toward the effective maintenance of ...(the behavior change)..., regardless of the methods used to initiate...(the behavior change)....In the second more general application of the RP model, the purpose is to facilitate global changes in personal habits and daily lifestyle so as to reduce the risk of physical disease and/or psychological stress. Here, the overall aim is to teach the individual how to achieve a balanced lifestyle and to prevent the development of unhealthy habit patterns. The underlying theme of this facet of the RP program is the 'middle way.' A balanced lifestyle is one that is centered on the fulcrum of moderation (in contrast with the opposing extremes of either excess or restraint). Viewed from this more global perspective, RP can be considered as a component of developing movements such as 'health psychology' or holistic medicine...." (Marlatt, 1985, p. 4).

There are two RP interventions in the program. The first is didactic instruction in the method which occurs in the final six weeks of formal group treatment. The second is implemented as the individualized follow up treatment for the experimental group. Specifically, in the didactic phase clients learn to make behavioral analyses of their habitual sexual behavior patterns, learn the methods of high risk assessment, acquire some rudimentary skills in the control of urges and temptations, and contract for abstinence. In the more individualized phase, they move to more... idiosyncratic high risk factors, and learn specific modes for dealing with each. As we will see in more detail below, five distinct dimensions of behavior are dealt with

in each RP session, and the program is actually richer in content than the brief description in this paragraph. One of those dimensions is the "global" lifestyle change of which Marlatt speaks.

It is important for the reader to remember that everything that has taken place in the program to this point has been to prepare the client for participation in relapse prevention. Relapse prevention is the goal of the program and the RP procedures are the key to the long-term success of the program.

Short-term interpersonal psychotherapy (IPT) (Klerman, Rounsaville, Chevron, Neu & Weissman, 1982. This is the major treatment modality which will be offered to the control group. Interpersonal psychotherapy is influenced by the psychiatric school associated with Harry Stack Sullivan (1953). Although it was developed as a treatment for depression (Jacobsen, Deykin & Prusoff, 1977; Klerman et al., 1982; Neu, Prusoff & Klerman, 1978; Weissman & Klerman, 1973; Weissman, Prusoff & Paykel, 1972), there is nothing about its underlying philosophy or procedures that is so specific to depression that it may not be slightly modified for use with sex offenders. Beck's cognitive therapy of depression (Beck et al., 1979), for example, has been successfully modified for use with anxiety and phobic disorders (Beck & Emery, 1977) and various types of substance abuse (Beck & Emery, 1979).

The following paragraphs will provide a brief review of the rationale and procedures of IPT. The therapy has been continuously under development and testing since 1972 and is the focus of study in the large interdisciplinary New Haven-Boston Collaborative Depression Research Project. The statements that follow were condensed from the most recent description of this treatment approach (Klerman et al., 1982; pp. 11-13, *passim*).

IPT was developed as a short-term psychotherapy and is primarily aimed at symptom reduction and improved interpersonal functioning. It makes no attempt to reorganize the client's personality. It is based on the premise that psychological difficulties occur in a psychosocial and interpersonal context. Its proponents state that renegotiation of the context associated with the disturbance is important not only to the client's improvement but to prevention of future episodes.

The main activity in IPT is intervention in symptom formation and social adjustment/interpersonal relations. The emphasis of therapeutic work is on current problems, conflicts, frustrations, anxieties and wishes defined in an interpersonal context. The influence of early experiences is recognized but not given great emphasis. Rather, IPT therapists define problems in here and now terms. The overall goals of the therapy are to encourage mastery of current social roles and adaptation to interpersonal situations.

In summary, then, the goals of IPT are:

1. Reduction of symptoms with restoration of morale and self-esteem.
2. Improvement of social adjustment and interpersonal relations. Involved here are dealing with the personal and social consequences of one's behavior, including changes in attitude, expectations, and behaviors in relationships with others.

The focus of IPT treatment is on:

1. The client's immediate problems.
2. Concern for the client's current important relations.
3. Engaging the client in evaluation of the current situation.
4. Clarification and modification of the client's interpersonal relationships, changing maladaptive perceptions, and reinforcing alternative behaviors.

We believe that it is important to emphasize that we have not selected a sham or placebo therapy for the control group. IPT is a credible treatment that has received a fair amount of empirical support (Jacobson et al., 1977; Neu et al 1978; Weissman et al., 1972; Weissman & Klerman, 1973). It has a specified set of procedures associated with it, and it embodies a treatment process that is measurable. It is, in fact, a much better therapy than a sex offender would usually receive from a nonspecialist private practitioner, and considerably superior to what he would ordinarily receive in a public outpatient clinic, mental hospital, or prison. In terms of treatment resources currently available to the sex offender, IPT represents a realistic alternative purposes of comparison with our experimental treatment.

### Methods

#### I. Participants and admission criteria.

Participants. All clients will be 18-40 years of age, of normal intelligence, in good physical health, and diagnosed as pedophiles. For these purposes "pedophile" will be defined as any person qualifying for the DSM-III designation 302.20 as a primary diagnosis. This diagnosis will comprehend heterosexual, homosexual, and bisexual offenses, but excludes incest. Persons with secondary or tertiary diagnoses of other sexual deviations will be acceptable provided that their primary deviant interests are pedophilic in nature. All participants will be free of contagious sex-related diseases, including but not limited to genital herpes, infectious hepatitis, acquired immunodeficiency syndrome, syphilis, or gonorrhea.

The two groups of participants are drawn from the same population:

Experimental. Outpatient sex offenders (N=50). These are known sex offenders who are probationers or parolees, self-referrals, or who are referred by physicians,

psychiatrists, psychologists, social workers, marriage and family counselors, attorneys, or community service agencies.

Control. Outpatient sex offenders (N=50). These persons form a treated control group. They are drawn from the same sources as the experimentals.

Entry criteria. We use two stringent entry criteria to (1) screen out persons with low motivation or disinterest in treatment, and (2) reduce staff time involvement with sexual nonresponders.

Admitter scale (Freund, Chan & Coulthard, 1979). This scale was developed to screen out subjects likely to manipulate assessment results. Endorsing the scale items requires admitting to frankly pedophilic activities. Any client who fails to endorse greater than 80% of admitter scale items is asked to reconsider. If he continues to deny he is disqualified for participation.

Sexual response criterion. A small percentage of new participants, about 15%, will eventually be classified as nonresponders in physiological measurement procedures, i.e., overall percentage of erection will be in the no arousal range of 0%-20%. A great deal of time can be used up in discovering this. Therefore, no potential subject will be admitted to assessment procedures if he produces less than 40% of a full erection (moderate arousal) to at least one category of deviant stimuli in a brief trial assessment period.

## II. Apparatus.

Behavioral assessment/treatment environment. The project will require the assembly of four client chambers. Figure 11 shows a working diagram of a subject enclosure used for behavioral assessment and behavior therapy.

Stimulus presentation equipment. All assessment and within-treatment stimuli used in physiological measurement procedures will be presented by commercial videocassette deck, audiocassette recorder/player, and slide projector.

Erection response measurement. Sexual responses are measured and recorded by the CAT-200 Computer Assisted Therapy system manufactured by Farrall Instruments, Inc (Grand Island NE). Each system contains a modified Eagle Spirit II PC with Intel 8088-based microprocessor CPU with two 5 1/4" floppy disk drives, biological signal interface for two parameters (erection + EMG) with A/D convertor, 13" diagonal RGB color monitor, Panasonic Penwriter modified as a printer, Kokak Ektagraphic 35mm slide projector, portable cassette player with plug-in modules for measuring erection and EMG stress level, software on floppy disks, with one CAL-100 circumference standard calibrator set. This system has the capability of controlling an entire assessment procedure using either slides or audiotapes.

Erection response sensor. Instead of the more common mercury-in-rubber strain gauge (Bancroft et al., 1966) we use the indium-gallium gauge, also from Farrall

Instruments. Indium-gallium is a conductive compound which is also placed in silicone rubbing tubing like the mercury gauge. It is more durable and has a longer useful life.

Self-report measurement. Subject instructions and all items, self-report or psychometric, are computer programmed and displayed on screens. Each item and its response alternatives are displayed and the client works interactively with the program by selecting his choice on the keyboard and advancing to the next item.

### III. Procedure.

#### A. Design.

A schematic of the experimental design is shown in Figure 12. The major features may be summarized as follows:

1. Baseline assessment (6 weeks). Both experimental and control groups receive the identical pre-treatment assessments. They are of two varieties:

a. Individual behavioral assessment. These are the physiological and self-report methods previously described. This battery provides information on sexual history and sexual arousal patterns permitting evaluation of current status as a sexual deviant for purposes of treatment planning. The physiological measures will be readministered at regularly schedule periods across the project.

b. Between-group therapy outcome measures. This battery of traditional clinical outcome measures (see C.3. below) is composed of psychometric and self-report outcome data from the client, psychotherapist measures, and measures of community adjustment provided by a significant other. These measures are readministered four additional times during the project.

2. Phase 1: Basic treatment (20 weeks).

a. Experimental. Based on the behavioral assessment clients enter one of the behavior therapies designed to affect sexual arousal patterns. Concurrently they participate in rational-emotive therapy (RET) in three segments directed at (1) irrational beliefs, (2) self-inefficacy, and (3) social inadequacy. They self-report daily and sexual response is evaluated weekly.

b. Control. Also for 20 weeks these clients participate in short-term interpersonal psychotherapy (IPT) only. This therapy emphasizes that psychological difficulties occur in a psychosocial and interpersonal context. IPT is aimed at symptom reduction and improved interpersonal functioning and makes no attempt to restructure the client's personality. Clients in this phase spend an equal amount of time in therapist contact as experimental clients. They also self-report daily and sexual response is evaluated weekly.

3. Assessment #1 (2 weeks). Here the physiologically-based portion of the behavioral assessment and the between-group therapy outcome measures are administered a second time to both groups. Two issues are of interest here. First, did behavior therapy for the experimentals have the effect of substantially reducing their deviant arousal? Second, do the outcome measures show a differential effect in favor of cognitive-behavior therapy vs a more traditional therapy?

4. Phase 2: Relapse prevention-short term (18 weeks). Resumption of treatment in this phase is intended to prepare the clients for eventual self-management in the community.

a. Experimental. Divided into three six-week segments, clients first participate in two varieties of stress inoculation training (SIT) directed at (1) impulse control and (2) anger management. In the final six-week segment they begin to learn the basic principles and procedures of the relapse prevention method (RP-1). Self-reporting and weekly monitoring of sexual arousal levels continues as clients are armed with specific skills to combat tendencies toward relapse.

b. Control. Interpersonal psychotherapy (IPT) resumes continuing its emphasis on symptom reduction and improved interpersonal functioning. No attempt is made to teach specific relapse prevention skills. Self-reporting and weekly monitoring of sexual arousal levels continues. Clients spend the same amount of time in therapist contact as experimental subjects.

4. Assessment #2 (2 weeks). The physiological and between-group outcome measures are administered a third time to both groups. The major question of interest here is whether the outcome measures show a differential effect in favor of the cognitive-behavior therapy interventions.

5. Phase 3: Relapse prevention-long term (RP-2) (up to 52 weeks). The program terminates with the long term follow up period. Clients entering the project early could experience up to 52 weeks of intensive follow up. Since this will not be possible with all clients an equal number of experimentals and controls will periodically enter Phase 3 together, thus equalizing the relative experience of follow up for both groups.

a. Experimental. These clients learned the basic procedures of relapse prevention in the final six weeks of Phase 2 (RP-1). Here the focus will narrow to general use of skills already acquired and more specific intervention techniques prescribed by RP treatment for dealing with emergent issues and crises. Clients meet the therapist once weekly for review of each client's self-management program at which time sexual arousal levels are also monitored. They are required to self-report daily and their rap sheets are evaluated every 90 days.

b. Control. These clients will report for a weekly interview which continues the basic IPT focus on symptom reduction and improved interpersonal functioning. Sexual arousal levels are monitored weekly. Daily self-reports are required and rap sheets will be evaluated every 90 days. Therapist contact time is equal to that for the experimental group.

6. Follow up assessments. The physiological and between-group outcome measures will be readministered for the fourth and fifth times during follow up, once at six months and again at 12 months. Two major questions are of interest here. First, do the measures show an effect in favor of the individualized cognitive-behavior therapy techniques? Second, are the observed changes in the

measures, i.e., effects of the previous treatment interventions, being maintained in the follow up period?

## B. Staff training.

There is a great deal of detail involved in all the procedures. One hundred clients will be exposed to an extensive battery of behavioral and psychological assessments, many of which will be readministered during the term of the project. Experimental clients will receive one of three behavior therapies. All clients will experience a variety of psychotherapeutic procedures in 20 five-person groups. Experimental clients receive three cognitive-behavior therapies plus a highly individualized follow up. Control clients receive a psychotherapy that provides close scrutiny of interpersonal relationships throughout. These are all intensive treatments. Given this level of complexity it is imperative that service delivery be of the highest possible quality and be consistent across the project. We believe that the best way to do this is by training of all treatment personnel in specific procedures, then periodically monitor and evaluate the quality of service delivery across the entire term.

Treatment manuals. Treatment specification is essential to treatment outcome evaluation. Kazdin (1982) has recently observed that many psychotherapeutic techniques have been formulated only in theoretical terms that describe how problems develop and treatment operates to produce change. He notes (pp. 159-160):

...Techniques that are grounded theoretically are not necessarily well specified procedurally. Increased specification of treatment is needed to ensure that techniques can be replicated in research and clinical practice. The specification of treatment procedures can be seen in the recent appearance of treatment manuals that usually develop as part of research protocols.... The purpose of the manuals is to provide explicit and often detailed guidelines for the way therapy is to be conducted, not to eliminate the need for additional training of therapists.

This specification of treatment procedure, says Kazdin (1982, p. 160) has distinct advantages: (1) the manuals facilitate replication across settings, (2) when procedures are clearly specified, it is easier to relate them to therapeutic change, and (3) they can be updated through revisions as progress and improvement of techniques occurs. Clearly, not all treatment procedures are equally amenable to manual codification. Psychotherapeutic techniques which emphasize process over product, qualitative rather than quantitative change, will be more difficult to codify than more straightforward and mechanistic behavior therapy procedures. However, difficulties emerge even in behavior therapies, particularly in procedures such as social skills training where therapist style and quality of modelled interactive episodes can be critical to the success of treatment.

Nonetheless, in less than a decade treatment manuals have emerged in a surprising variety of areas and the applicability of this approach may in fact be considerably broader than many psychotherapists suspect (or wish). Indeed, the emergence of treatment manuals has confronted some therapists (e.g., Strupp, 1982) with an unwelcome paradigm shift. That the approach is a viable one may be seen in the following sampling of available manuals. Treatment manuals have been used or are now in use for social learning vs milieu therapy for psychiatric patients (Paul & Lentz, 1977), cognitive behavior therapy of depression (Beck, Rush & Kovacs, 1975; Beck et al., 1979), interpersonal psychotherapy of depression (Klerman et al., 1977), cognitive behavior therapy of drug abuse (Beck & Emery, 1977; Luborsky, 1977; Marlatt, 1980; Woody, Stockdale & Hargrove, 1977), alcohol abuse (Marlatt, 1979, 1980), use of common behavior therapy approaches such as relaxation training, desensitization, and assertive training with neurotic clients (Sloane, Staples, Cristol, Yorkston & Whipple, 1975), stress inoculation (McKay, Davis & Fanning, 1981; Novaco, 1983), social skills training (Beidel, Bellack, Turner, Hersen & Luber, 1981; Bellack, Hersen & Himmelhoch, 1980), social learning treatment of aggressive children (Patterson, Reid, Jones & Conger, 1975), and general focus manuals for particular therapies as disparate as psychoanalytically-oriented psychotherapy (Luborsky, 1976) or rational-emotive therapy (Walen et al., 1980). Even though the scope of existing manuals is fairly broad, it should not be assumed that this indicates that there is some external standard or model for their preparation. In fact, they vary widely in quality and thoroughness. Some are little more than rules for the conduct of a treatment program (Woody et al., 1977), others give a rationale for or a general overview of a treatment approach (Luborsky, 1976), while the superior ones are extremely detailed guides for the conduct and evaluation of treatment (Beck et al., 1979; Klerman et al., 1982).

The interventions we propose -- the three behavior therapies, rational-emotive therapy, stress inoculation training, relapse prevention, and interpersonal psychotherapy -- are all sufficiently accessible conceptually and procedurally that they lend themselves well to the treatment manual approach. Treatment manuals already exist for rational-emotive therapy (Walen et al., 1980), stress inoculation (McKay et al., 1981; Novaco, 1983), relapse prevention (Marlatt, 1980), and interpersonal psychotherapy (Klerman et al., 1982). The RET and stress inoculation manuals are very general in nature, the relapse prevention manual was intended for substance abusers and a new one has recently been prepared for smoking (Marlatt, 1983), and the interpersonal psychotherapy manual was directed at depression. For our purposes new manuals have been written for RET, SIT and RP, and we have revised the Klerman et al. (1982) IPT manual to be applicable to the

problems of sex offenders. With regard to behavior therapy we have for a number of years codified our procedures and senior personnel have trained paraprofessionals by direct supervision on the job. These procedures, subject instructions, data keeping routines, etc., some of which exist in written, will now be formally organized in written procedure manuals for both assessment and treatment.

We recognize that preparing manuals is only half the job. Requoting Kazdin (1982, p. 160):

The purpose of the manuals is to provide explicit and often detailed guidelines for the way therapy is to be conducted, not to eliminate the need for additional training of therapists.

It is to this second task that we now turn.

Staff training. Treatment delivery staff are composed of one research assistant performing behavioral assessment and treatment under the direct supervision of the behavioral treatment manager, one clinical psychologist directing and supervising four therapists, two performing the cognitive-behavior therapies, and two the short-term interpersonal psychotherapy. We make no assumptions regarding the skills of the service providers and accept the responsibility of training and continuously supervising them.

Behavioral assessment and treatment. During the start up period a detailed procedure manual for all behavioral assessment and treatment procedures will be prepared. This manual will consist of explicit instructions for carrying out all procedures step by step, exact instructions to be given to clients, exact instructions for equipment operation, how to read data and transfer them to data sheets, how to make data summaries and transfer them to computer storage. Each day the operator's performance will be spot checked against the manual's prescriptions. All raw data, data transfers, and data summaries will be doubled checked for accuracy prior to storage.

Rational-emotive therapy (RET). Consultant Dr. Arthur Lange has prepared the RET manual. To maximize client participation, 10 five-person groups in the experimental condition will meet weekly for 90 min sessions throughout the 20 weeks of Phase 1. The first period, RET-1, involves basic training in the RET behavior analytic method, then applying this to irrational cognitions common to sex offenders. In the second block, RET-2, the method is applied to real life socio-sexual problems presented by each client, with emphasis on notions of self-inefficacy. In the final period, RET-3, the focus shifts to actual deficits in social performance and clients work with the therapist and confederates to practice skills. Throughout clients are required to complete homework assignments which are incorporated into the treatment sessions.

Stress inoculation training (SIT). Consultant Dr. Raymond Novaco has prepared the SIT treatment manual. Ten

five-person groups in the experimental condition will meet for 90 min weekly during the first 12 weeks of Phase 2. For theoretical purposes we have conceptualized impulse control and anger management as separate entities, although we recognize that in reality they are interwoven. The treatment as developed by Dr. Novaco takes account of this overlap. SIT is implemented as a three-phase procedure over the 12 weeks: (1) cognitive preparation or education, (2) skills acquisition, and (3) application training. Within these phases there occurs training in self-monitoring, arousal reduction skills, cognitive skills (e.g., cognitive restructuring, self-instruction), and task-oriented behavioral skills. The program is supplemented with handouts, physiological arousal measurement, audiovisual presentations, and opportunities to practice skills with confederates.

Relapse prevention (RP). Consultants Dr. Alan Marlatt and Dr. William George have prepared the RP treatment manual. Ten five-person groups in the experimental condition will meet weekly for 90 min during the final six weeks of Phase 2. Even though they occur last in the treatment sequence, the RP procedures are critical to the ultimate success of the project as they serve as the mainstay of the follow up period, the intent being continued maintenance of the gains from the formal treatment. Didactic training in RP occurs as RP-1 in the final six weeks of Phase 2. Both RP-1 and RP-2 are directly based on Marlatt's clinical use of the method with substance abusers. In RP-1 the client learns the basics of the method with heavy emphasis on self-monitoring, high risk assessment, and behavioral contracting. The method is general but the focus individualized. The individualized program then becomes the client's self-management program in RP-2, the long term follow up. This is supplemented by the intervention techniques previously described.

Interpersonal psychotherapy (IPT). Consultant Dr. Paul Walker has prepared the IPT treatment manual. Ten five-person groups in the control condition will meet for 90 min weekly for 20 weeks in Phase 1 and an additional 18 weeks in Phase 2. This manual is not an original work but a revision of the Klerman et al. (1982) manual adapted for use with a sex offender clientele. The revision is structured to roughly parallel the emphases in the experimental group treatment. In the first 20 weeks the content of the sessions focuses on symptomatic behavior and on the client's social and interpersonal problems in a deviant lifestyle. This is intended to produce symptom reduction and some understanding of personal problems. In the second 18 weeks the goal is maintenance of reduced symptoms and work directed at preventing resumption of deviant behaviors. This latter focus continues throughout the follow up phase meetings.

### C. Behavioral and Psychological Assessment.

Introduction. There are three types of assessment procedures in this project: (1) physiological measures of patterns of sexual arousal to a variety of stimuli, (2) client self-reports on sexual and social history, and (3) between-group outcome measures, a battery of traditional psychological measures. These are supplemented by daily self-reports of behaviors and cognitions in specific areas and weekly evaluation of ongoing levels of sexual arousal.

Video introduction. At entry each client views a 15 min videotape in which the PI and staff provide very general explanations of the assessment and treatment procedures, supplemented by scenes of persons apparently performing the procedures. In so doing we present the project in a positive, professional, upbeat, and matter of fact way in order to reduce apprehension and give the client a positive cognitive set toward participation.

Rationale for assessment. In addition to the video introduction clients are personally provided with a general description of the types of assessment procedures. The intention here is to provide a plausible scientific rationale for physiological, psychological, and self-report assessment and the necessity for absolute honesty.

Confidentiality of data. Data in the project are protected by a Federal confidentiality certificate. The certificate authorizes all staff members to protect the privacy of research subjects. Staff may refuse to disclose identifying characteristics of research subjects in any Federal, State, or local civil, criminal, administrative, legislative, or other proceedings to compel disclosure of those characteristics. This guaranteed protection is fully explained to all clients to underscore the need for absolute honesty in self-reporting.

Informed consent. Following explanation of the procedures, clients are requested to sign an informed consent for participation. The consent is quite lengthy and all of its specifications are actually explained by a staff member as a videotape presentation. The document that the client actually signs is a brief recapitulation of the items presented on the videotape.

Instructions. Each assessment procedure includes instructions to the client which are specific to that procedure and these are read verbatim to the client, played on audiotape, displayed on the VDT, or are an explanation given by a staff member on videotape.

1. Physiological assessment procedures. Following are brief descriptions of the physiological assessment procedures. All of the stimuli are presented under instructions to become sexually aroused if the client finds the stimuli erotic. Following each presentation the client is asked to give an estimate to the nearest 5% of his maximum arousal on the preceding trial.

a. Slide assessment of pedophiles (Laws & Osborn, 1983). The client views 32 slides of males and females in the age groups: 1-7, 8-12, 13-17 and 18+. There are four slides per group and each is presented for 2 min. Peak arousal per slide is extracted, a category mean computed, and a profile plotted showing average percent of erection to each of the eight age groups. The total stimulus exposure time is 64 minutes, plus 31 interstimulus intervals of about one minute to allow return to baseline. Total slide assessment time is approximately 95 minutes.

Audiotaped assessment of pedophiles (Avery-Clark & Laws, 1984). There are six categories of tapes, five of which describe an escalating level of the use of violence against a child: (1) fondling a child, (2) mutually consenting intercourse with a child, (3) verbal coercion and mild physical force to accomplish nonconsenting intercourse, (4) rape of a child, (5) sadistic assault on a child. The sixth tape describes consenting intercourse with an adult partner. There are a heterosexual and a homosexual series, one 3 min tape per category, all presented under arouse instructions. The total stimulus exposure time is 36 min plus 11 interstimulus intervals of about 3 min to allow return to baseline. Total audio assessment time would be approximately 100-110 min.

Physiological assessment data review. Following completion of these assessments the data will be assembled, plotted, and explained to the client. The primary reason for doing this will be treatment planning. A secondary reason will be to convince the client that we now possess sufficient information on the nature of his sexual interests that he will perceive no advantage in attempting to influence the remaining self-report and psychological assessment procedures.

2. Self-report assessment procedures. Three of the five major self-report procedures are historically-based and each has been described in a preceding section. Readers will recall that the card sort is a multi-category scaling technique and the four questionnaires employ a variety of objective items such as multiple-choice, true-false, and yes-no. These procedures are:

- a. Sexual activities card sort (Abel, 1979).
- b. Clarke Sexual History Questionnaire (Langevin, 1983).
- c. Inventory of Self-Reported Deviance (Weinrott, 1981).
- d. Sexual Victimization Questionnaire (Groth, 1982).
- e. Adult Cognition Scale (Abel & Becker, 1984).

Both the physiological and self-report procedures will be administered during Baseline Assessment (see Fig. 9) and again during Assessment #1. Of the self-report procedures, only the card sort and the Adult Cognition Scale will be readministered.

3. Between-group outcome measures. Unlike the assessment procedures just described, this battery is repeated throughout the project. The between-group assessment measures obtain data from three sources: (1) the client - sexual arousal measures, daily self-report, and psychometrics, (2) the therapist - checklist and rating scales, and (3) a significant other - level of community adjustment. The outcome battery will be administered five times (see Fig. 9): (1) Baseline Assessment prior to Phase 1; (2) Assessment #1 prior to Phase 2; (3) Assessment #2 prior to Phase 3; (4) Assessment #3, six months into follow up; and (5) Assessment #4, 12 months into follow up.

Specifically, the between-group outcome measures are:

a. Client data.

(1) Sexual arousal measures. Two types of between-group outcome measures based on sexual arousal are possible. First, in the outcome battery we will include the two pre-treatment physiological assessments: (1) the pedophile slide assessment, and (2) the pedophile audio assessment. We have stated previously (section III, design) that we will readminister the physiological assessments at the close of Phase 1 in order to determine if behavior therapy for deviant arousal was effective for the experimentals (within-group evaluation) and if any changes occurred for the controls (between-group evaluation). For these purposes we will examine all the data. The use of these two assessments in the between-group evaluation is different. The two procedures will be administered as part of the five regularly scheduled assessment periods. Here, however, we will use only two measures from each: the highest values produced to deviant and nondeviant stimuli (see below, section IV, statistical analysis, Table 1).

Second, we will also obtain an ongoing index of sexual arousal levels from the measures obtained in the weekly probe sessions. These are selected deviant and nondeviant stimuli, three or four or audiotapes in each category. These are specific to the individual client's sexual interests and are not stimuli previously used in the physiological assessments. These data will provide another viewpoint on the impact of behavior therapy in Phase 1. More importantly, they will provide a look at the course of sexual arousal changes over the entire term of the project. Separate analyses are planned from these data (see section IV, statistical analysis).

(2) Self-report. Clients self-report by mail daily. Weekly means will be computed for (1) % deviant fantasies, (2) % deviant masturbation, and (3) frequency of pedophilic incidents with physical contact.

(3) Psychometrics. Three traditional clinical measures will be used:

(a) SCL-90 (Derogatis, Lipman & Govi, 1973). This is a self-report clinical rating scale oriented toward symptomatic behavior of outpatients. It has 90 items which reflect nine primary symptom dimensions frequently observed.

Of the nine dimensions we use six: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, and hostility.

(b) Global improvement rating scale (Luborsky, 1975). This is a single dimension, 9-point rating scale used to evaluate the amount of improvement in the client from the beginning to the end of treatment.

(c) Self-efficacy scales (Bandura, 1977a, 1977b). These scales generally attempt to assess the degree to which clients believe that they will be successful in particular situations and what their expectations for outcomes will be. We use an adaptation of the self-efficacy scales from G.A. Marlatt's work with substance abusers (personal communication, April 1983). The three self-efficacy scales will assess: (1) the frequency with which the client experiences situations or feelings related to relapse, (2) the degree to which he would be tempted to relapse in each situation, and (3) the degree of confidence he holds in his ability to resist the temptation to relapse.

b. Therapist data.

(1) Brief Hopkins psychiatric rating scale (Derogatis, 1978). This is highly similar to the SCL-90 in that the same symptom dimensions are expressed as rating scales for use by the therapist. Each dimension is defined and represented on a 7-point scale with three descriptors on each scale indicating levels of severity. We use the same six scales as the SCL-90: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, and hostility.

(2) Global improvement rating scale (Luborsky, 1975). This is the single dimension rating scale described above, here completed by the therapist.

(3) Rating scales for outcome of therapy (Storow, 1960). These are 5-point scales which deal with how therapy is affecting five major areas of client behavior. We use three of the scales: symptoms or problems, interpersonal relationships, and ability to handle stress.

c. Significant other. This evaluator could be a wife, lover, roommate, close friend, sibling, or parent. The rater must be a person who has recently observed and interacted with the subject.

(1) Katz adjustment scales (KAS) (Katz & Lysterly, 1963). The KAS focuses on observed units of behavior. There are five comprehensive scales: (1) a rating of the subject's symptom and social behaviors, including dimensions of both major and minor disturbances, (2) the client's performance of social expected activities, and (3) the significant other's expectations for performance of social activities, (4) the client's free time activities, and (5) the significant other's satisfaction with his use of free time activities. All five scales are used.

4. Assessment research projects. Two projects exist as separate research endeavors. It is not anticipated that either will be completed in time for use in the battery.

a. Video assessment of pedophiles. These are proposed as 2 min videotaped sequences abstracted from child pornographic films. We envision a product with 14 sequences, two each in the following categories: (1) adult male with young girl engaged in (a) fondling, (b) oral intercourse, and (c) vaginal intercourse; (2) adult male with young boy engaged in (a) fondling, (b) oral intercourse, and (c) anal intercourse; (3) a young boy with a young girl engaged in (a) fondling, (b) oral intercourse, and (c) vaginal intercourse; (4) two boys engaged in (a) fondling, (b) oral intercourse, and (c) anal intercourse; (5) a young girl masturbating, and (6) a young boy masturbating. No assessment procedure such as this currently exists.

b. Etiology of Sexual Deviance Questionnaire (ESDQ). The behaviorist movement has paid little or no attention to etiological factors either by making theoretical formulations of the problems to be treated, or by deriving treatment operations from such formulations. This fact is clearly reflected in the behavior therapy treatment literature. In a recent survey White, Turner and Turkat (1983) examined 25 major texts in behavior therapy and the four major journals for the years 1980-81 in search of a mention of etiology in these frequently consulted sources. For the texts, only two had chapters on etiology, only two cited the word in the index, while 62% of the pages were devoted to treatment methodology. For the journals, only 1.3% of reported case studies were devoted to etiology, less than 1% of experimental studies, and 1.8% of reviews.

Development of the ESDQ represents a departure from the tradition of ignoring etiology. We believe that sex offenders present a definable and for the most part observable set of problems and we propose a counteracting set of operations to ameliorate those problems. That is standard and well within the tradition. What we do that is different is to make an initial attempt at determining the origin of those problems. This is the etiological portion of our theory from which the treatment operations are derived. In terms of the assessment of the origins of sexual deviation, especially in the absence of an existing assessment procedure, it seems clear that the best way to discover how people got the way they are is to ask them. This type of retrospective analysis is prone to error as noted previously, but one may as easily argue that a retrospective look is superior to no look at all.

The ESDQ is proposed as a questionnaire with 13 subject matter areas, based on the first 13 statements of the theory. For purposes of clarification these statements appear in abbreviated form in section III.E. below, "A Theoretical Model," so that the reader may see the entire theory and its operations in a single piece. About 1/3 of the items were written by the author and refer to the basic

processes of learning: Pavlovian and operant conditioning, extinction, differential reinforcement, punishment, chaining, and intermittent. No literature relates these specific processes to the acquisition of deviant behaviors but allusions abound ( e.g., Abel & Blanchard, 1974; Akers, 1977; Bell, Weinberg & Hammersmith, 1981; Evans, 1968; Groth, 1979; Hite, 1982; Howells, 1981; Kahn & Davis, 1981; Kinsey et al., 1948; McGuire et al., 1965; Mohr, 1981; Mohr, Turner & Jerry, 1964; Rachman, 1966; Rachman & Hodgson, 1968). The balance of the items come directly from the clinical and social psychological literature, e.g., general and specific social learning influences (Bandura, 1977a, 1977b, 1980), general and specific autoerotic influences (McGuire, Carlisle & Young, 1965), self-attribution (Bem, 1972), deviant cognitions (Anderson, 1981), or social inadequacy (Crawford & Allen, 1979). We agree with Weiss (1972, p. 34) that "It is worth a fair amount of searching to locate measures that have already proved workable, rather than create new ones." However, where there is no alternative to creating new items, we have been guided by Elliott's caution (1980, pp. 512-513):

The appropriateness of a measure must be judged by its logical relationship to the theoretical construct it is designed to represent. The selection of appropriate measures thus requires...a face validity judgment as to whether a given measure is a fair and reasonable operationalization of the relevant theoretical construct.

This device is intended strictly for heuristic purposes and is related to our theorizing about the genesis of sexual deviance. It is our intent to use it only as one of several first steps in examining the tenability of a conditioning/social learning model. The construction of the ESDQ is intended to organize some retrospective data in a very limited fashion. We have constructed a set of theoretical assertions about how tendencies toward sexual deviation are acquired, then how these could become refined and elaborated into a more or less fixed behavioral repertoire. As we have shown above (Preliminary Studies) there is every reason to believe that conditioning techniques do and social learning-based therapies should have an impact on an established deviant orientation. In terms of the ESDQ we ask if the same conditioning/social learning model is equally tenable to account for the origins of that orientation.

D. Treatment Effectiveness (Within-Treatment Measures).

We would judge our treatments to be effective if affirmative answers could be given to the following questions: (1) was deviant sexual arousal decreased?; (2) was nondeviant sexual arousal maintained or increased in strength?; (3) did rational-emotive therapy serve to dispel irrational ideas and promote self-efficacy and social adequacy?; (4) did stress inoculation control deviant impulses and anger?; (5) did the relapse prevention strategies forestall tendencies toward recidivism? and (6) did interpersonal psychotherapy result in symptom reduction and promote improved interpersonal functioning?

Overall effectiveness, of course, is measured by the rate of recidivism. We will define recidivism as rearrest for a pedophilic offense where the client admits guilt or the evidence for that guilt is unassailable. Treatment may be effective in the short but not the long run, or effects may persist for years and then erode. Precisely because we are making repeated measurements over a fairly long term we are in a good position to observe treatment deterioration and, hopefully, in a majority of cases apply remedies to halt it. Where we are unable to halt it we will be in touch with many of the factors contributing to deterioration and so can study the determinants of relapse.

This proposal reflects our belief in the necessity of multiple dependent measures which will give indications of progress toward or failure to meet therapeutic objectives (see Nelson, 1981). Similarly we believe that repeated within-group measures across time will give us good indications of that progress (Hayes, 1981). Below are descriptions of the methods we propose to use to evaluate (1) behavior therapy, (2) cognitive-behavior therapy, (3) interpersonal psychotherapy, and (4) treatment integrity, a quality assurance procedure used to evaluate the degree to which an intended intervention is in fact being delivered (Yeaton & Sechrest, 1981).

Behavior therapy. Evaluating the effectiveness of behavior therapy is very straightforward. Examination of Figures 6, 8, 9 and 10 show that we set terminal criteria (dotted lines) for each treatment. The terminal criteria state that sexual arousal levels must be stable at not less than an average of 50% to nondeviant stimuli nor greater than 20% to deviant stimuli. These criteria must be met for eight consecutive weeks for treatment to be judged effective and terminated. We can evaluate these terminal data in two ways. If we consider only the terminal levels, the smallest behavioral effect observed would be a 30% differential between the two response classes. If nondeviant arousal increased to 100% and deviant arousal decreased to 0% (rarely observed) the effect would be 100%. Alternatively, if we consider the change from baseline levels to terminal levels, the typical measurements in within-treatment evaluations, the effect can be considerable. Examination of Figure 9, center panel, shows a typical course of behavior

therapy, in this case olfactory aversion. Here nondeviant arousal increased from a baseline level of about 70% to a terminal level of about 85% (effect = +15%); deviant arousal decreased from a baseline level of 70% to a terminal level of about 5% (effect = -65%). In olfactory aversion we expect little change or an increase in nondeviant arousal and a sharp decrease in deviant arousal. This is what occurred here and this would be considered effective treatment.

These pre/post erection measures, expressed as percentages, are the criterion measures of the effectiveness of behavior therapy. Whether this treatment was effective over the longer term is in part evaluated by weekly follow up measurement sessions to determine maintenance of treatment effects, supplemented by daily self-reports which give information on fantasy and masturbatory practices.

Psychotherapy. We are proposing to evaluate two types of psychotherapeutic intervention: (1) cognitive-behavior therapy which subsumes (a) rational-emotive therapy, (b) stress inoculation, and (c) relapse prevention, and (2) short-term interpersonal psychotherapy, a single focus therapeutic approach. Following are the methods of evaluation to be used.

Cognitive-behavior therapy. To evaluate progress in rational-emotive therapy, stress inoculation, and relapse prevention we use goal attainment scales (GASs) appropriate to each. The purpose underlying goal attainment scaling is the attempt to objectify the progress of an individual client in treatment along several related dimensions of behaviorally defined treatment goals (Kiresuk & Sherman, 1968; Quinsey & Harris, 1976). The GAS method seems a feasible approach for our purposes as the therapist in each therapeutic variation is defining what is best for the client and setting therapeutic goals, e.g., learning to challenge and dispute deviant beliefs and notions of self-inefficacy and social ineptitude, learning to manage stress induced by impulsiveness and poor anger control, and forestalling tendencies toward relapse.

GAS is a numerical rating system and permits across-time and across-conditions comparisons. The treatment manuals for RET, SIT and RP include goal attainment scales appropriate to each. These are completed by both the therapist and each client in a group following the session in order to obtain two perspectives on the treatment process. The following example is illustrative of the form of GASs:

#### Rational-emotive therapy

Indicate the percent of total treatment time during which this client uses cognitive distortions to justify and rationalize his sexually deviant performances.

0 / 10 / 20 / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100

Stress inoculation training

Indicate the degree to which this client is now able to identify and label anger-inducing (impulse-inducing relapse-promoting) stressors.

never / 50/50 / always

The number of dimensions in each scale is usually determined by the number of areas in which that particular intervention is expected to produce change. For ease of recording the number should not exceed five. Since change is expected on all dimensions, the data for evaluation will be the average GAS score.

Self-reporting. Both experimental and control psychotherapy treatments require continuous risk assessment as part of the treatment. These extratherapeutic self-reports are considered along with GAS and the special IPT scores (see below) and penile erection measures as indices of therapeutic impact for clients in both groups. In the interest of self-monitoring each client completes a daily self-report and mails it in. This requires only a few minutes to complete and serves the very important function of keeping both the client and therapist aware of what is occurring outside of formal treatment. These inventories require the reporting of frequencies of some events as well as completing scaled items so that self-report data may be compared numerically to other treatment data. Following are two typical items:

Today I masturbated \_\_\_\_\_ times to sexually deviant fantasies.

Today my sexual fantasies were \_\_\_\_\_% deviant.

Hypothetical data. Figure 13 shows the combination of objective erection measures, therapist rating of progress by GAS scores, and client self-report presented as a composite figure. Assume that this is an example of progress for an experimental client receiving behavior therapy + rational-emotive therapy during Phase 1 (Fig. 12). This particular figure shows eight behavioral dimensions over 16 weeks of treatment. Reading down from the top, the first two panels show (a) the erection responses to deviant and nondeviant stimuli, (b) the client's estimates of those values. The next three panels, (c), (d), and (e) are data from the GAS ratings in rational-emotive therapy. Each panel shows progress in RET but rated cognitive change lags behind measured behavioral (erection) change. The final three panels show data from daily self-reports, in this case

(f) frequency of deviant fantasies, (g) percent of masturbations using a deviant theme, and (h) percent of masturbations using a nondeviant theme. These data show little change at first, then begin to track the erection and estimate data of panels (a) and (b). This use of multiple dependent measures across time (Hayes, 1981) provides the best combination of objective and subjective indices of progress.

Effectiveness of cognitive-behavior therapy.

The effectiveness of the psychotherapy are measured by changes in the GAS scores. These are expressed as 1-5 point scales. While we might expect many entering clients to receive the lowest GAS score, it is unlikely that an exiting client would receive the highest, or total elimination of the problem. But since goals are clearly specified and procedures clear cut, we can expect substantial improvement. We believe that it is not unreasonable to expect an average terminal GAS score of 4 as an effectiveness criterion.

Interpersonal psychotherapy (IPT). The developers and major proponents of IPT have produced a rating system for evaluating therapy process and content (Neu, Prusoff & Klerman, 1978; Weissman, Prusoff & Paykel, 1972) and this existing system may be used with minor modification. As stated above, IPT is intended as a relatively short term intervention. Psychological difficulties are viewed in a social, interpersonal context and the focus of treatment is on the here and now of the client's interpersonal relations. Evaluation of IPT emphasizes two goals in therapy sessions, the time spent on various topics and the process of the therapist-client interaction. In terms of content, the expectation for successful treatment is that discussion will move away from topics such as physical and mental symptoms, current treatment and early experiences, and toward topics related to practical current problems such as spouse, sex, children, and interpersonal relations in general. In terms of process evaluation, what is sought in successful therapy is a move from relatively low level interventions, e.g., elicitation, to rather complex ones, e.g. independent decision making by the client.

There are two dependent measures in IPT. Content is evaluated as the amount of time the client spent talking in 10 content areas. Process is evaluated by noting which of the six progressively more complex therapeutic techniques the therapist used in each of the content areas. The therapist's behavior is rated as it is assumed that the client's behavior mimics this move from simple to complex and suggests the degree to which the client recognizes the nature of his interpersonal problems. Immediately following the session the therapist rates each content area by assigning a code number from 0-3 which represent increasingly longer time blocks. The therapist then rates each topic area in terms of what sort of technique was used, again assigning a code number from 1-7, which indicates a progression from simple, descriptive techniques (1) to

complex, reflective techniques (7). This weighted score is called the TAG score (Technique for Achieving Goal score) and is the main indicator of therapeutic progress. Following is a list of the techniques with corresponding TAG scores.

<u>Technique</u>	<u>Orig. TAG</u>	<u>rev. TAG</u>
<u>Descriptive</u>		
Nonjudgmental exploration	1	1
Elicitation of material	3	2
Clarification	3	3
<u>Reflective</u>		
Direct advice	5	4
Decision analysis	7	5
Awareness	7	5

Note that the list shows "Original TAG" and "Revised TAG" scores. The original ones are those of Neu et al. (1978) and are arbitrarily weighted to reflect increasing complexity of technique and, presumably, involvement of the client. We have simply revised it to a 5-point scale for ease of comparison with the GAS ratings from cognitive-behavior therapy. The revision does no violence to IPT assumptions. We acknowledge a steady progression through the descriptive techniques by rating them 1-2-3. We give direct advice by the therapist a weight of 4 as it is less advanced than independent decision making or insightful expressions by the client, to each of which we assign a 5.

Hypothetical data. Figure 14 shows a hypothetical IPT rating sheet. Note that the left column shows the IPT content areas, the center column the coded time on topic rating, and the right column the process score or TAG rating. Across the top of the rating sheet are the time on topic codes, and below those, the TAG scores matched with the techniques. For evaluation of therapeutic progress, the TAG scores are summed and divided by 10 (the number of content areas). In this hypothetical case, the session TAG = 2.5, suggesting that the therapist and client spent much of the session in use of the more descriptive techniques. In evaluation of content time scores, it would be expected that they would more or less parallel the TAG scores in successful treatment, i.e., more time would be spent on actively exploring interpersonal problems and less on symptom description.

Figure 15 shows the mean content time scores and TAG scores from Figure 11 plotted together. Shown in this fashion the data may be used to direct therapist effort in subsequent sessions. While the two mean scores would suggest little therapeutic movement, examination of the plots suggests a more optimistic view. Indeed, the client spent too much time talking about mental and physical symptoms and the treatment process. Where the client spoke of more important spousal and sexual relations it was in such a way that it permitted use only of the descriptive techniques. However, there were sustained periods of discussion of practical problems and interpersonal relations

and here the therapist was able to use the more reflective techniques. We could conclude that there was movement here not reflected in the overall scores. This client is talking about important problems or at least is willing to do so. The therapist's job would be to keep the communication focused on interpersonal problems and away from dwelling on symptoms and encourage more independent thinking and decision making by the client.

Effectiveness of IPT. IPT meets our needs for a supportive therapy which is a credible vehicle for an outpatient offender population. It was originally developed as a treatment for depression and has frequently been used with female, inner city depressives of middle to lower social status. Such data as are available on its use suggest that great movement of content scores (Jacobsen, Deykin & Prusoff, 1977; Weissman & Klerman, 1973) or TAG scores (Neu et al., 1978) should not be expected. For a psychotherapy such as IPT to succeed with an ordinarily resistive group such as sex offenders, it is essential that the therapeutic work not be confined to the descriptive techniques only as here the therapist is doing most of the work. In this type of therapy with sex offenders effectiveness would have to be defined as the client displaying "insight," i.e., responding to therapist advice, showing independence in decision making, and showing a high level of awareness of the interrelatedness of problems. This, by definition (Neu et al., 1978) could only be shown by terminal TAG scores of 4.0 or better, and we accept this gaining of insight as the terminal criterion of effectiveness.

Treatment integrity. Associated with the emergence of treatment manuals to train and guide experienced therapists in specific techniques has been the concern for the integrity of service delivery. This concern developed as a result of the observation that even though exact procedures were specified in treatment manual form, actual within-session therapist behavior often did not match the prescriptions. This failure of correspondence has been termed lack of treatment integrity. This issue is critical in controlled clinical trials where it is essential that a treatment be administered in its purest form.

In evaluation of treatment integrity, and in particular where different treatments for the same problems are being compared, two questions may be asked (after DeRubeis, Hollon, Evans & Bemis, 1982, p. 745): (1) are therapies A and B really different or do they share so many components in common that they merely occupy slightly different positions on the same continuum? and (2) do the observed procedures closely match those specified in the treatment manual?

Two studies offer sound methodology for discriminating between types of treatment offered (DeRubeis et al., 1982) and for evaluating the most characteristic aspects of a therapy and the degree to which the treatment fits the manual specifications (Luborsky, McLellan, O'Brien & Rosenzweig, 1982). We have combined the methodology from both of these studies to form a composite technique for evaluating the integrity of cognitive-behavior therapy and psychotherapy.

Integrity of behavior therapy. Issues of integrity or fidelity are most often associated with the delivery of psychotherapy but they are of no less importance in behavior therapy. We indicated above in discussion of treatment manuals that behavioral assessments and treatments are codified as step by step routines in procedure manuals. The three behavior therapy procedures all permit within-session evaluation for integrity. Masturbatory satiation may be evaluated by spot checking fantasy production on the intercom plus weekly probe sessions. Olfactory aversion may be evaluated by monitoring erection response within treatment sessions, by audio monitoring on the intercom as the client self-administers the aversive stimulus, and by weekly probe sessions. Verbal satiation can be monitored by intercom, within-session erection measurement, and weekly probe sessions. Obvious discrepancies are usually easy to detect and most can be corrected on the spot by reinstructing the client. Clients who are enthusiastic and diligently perform the procedures inevitably talk to staff about their treatment experiences and this also permits corroboration that treatment integrity is being upheld. Client self-reports supply another source of corroboration as urges, fantasies, and masturbatory practices are affected by these treatments. If these data

are observed to track the erection measures this is a strong indication that the treatment is being delivered as intended.

Integrity of cognitive-behavior therapy and psychotherapy. Two basic questions are of interest here: (1) can IPT be clearly discriminated from RET, SIT and RP, and (2) are the procedures for IPT, RET, SIT and RP being displayed by each therapist and are these procedures consistent with treatment manual specifications? The DeRubeis et al. (1982) study compared IPT with the cognitive behavior therapy of Beck et al. (1979). Beck's therapy bears a very close resemblance to RET and is conceptually related to SIT and RP. The examples of rating scale items below come from DeRubeis et al. (1982) and are exemplary.

The authors of the treatment manuals have prepared rating scale items for (1) the most characteristic aspects of each type of therapy, e.g., the general process of RET, and (2) specific interventions prescribed by the treatment manual, e.g., RET-1 differs from RET-2 etc. Two 15 min videotaped samples of each type of therapy will be obtained which show an actual therapist working with two or three clients. Six naive professional raters not associated with the project will rate these taped segments. Each rater will be provided with a brief rationale for each procedure (IPT, RET, SIT and RP) and a rating scale containing items for evaluating all four treatments. The taped samples will be presented randomly, each rater receiving two samples of each therapy. Raters will be paired so that pair 1 receives RET-1, SIT-1, RP and IPT; pair 2 receives RET-2, SIT-2, RP and IPT; pair 3 receives RET-3, RP and IPT. DeRubeis et al. (1982) report that a similar procedure produced interrater reliabilities with a mode of .70, which would be acceptable. Items with reliabilities less than .30 will be discarded or rewritten.

Following are examples of the type of items found in such scales. These are 9-point scales taken from DeRubeis et al. (1982):

Cognitive-behavior therapy (e.g., RET)

Did the therapist (and/or) client work to set up an experiment for the client to try (i.e., testing something he believes by gathering data relevant to the belief or behaving differently than he might typically do?

- 1 - never attempted
- 9 - carefully designed (a) specific experiment(s) for the client to try

Interpersonal psychotherapy (IPT)

To what extent did the therapist encourage the client to recall important events from previous relationships?

- 1 - not at all

## 9 - extensively

Provided that interrater reliabilities are acceptable ( $\geq .70$ ) we will proceed to randomly obtain videotaped samples from the initial sessions of the therapy groups as they occur across the design. These will be evaluated by the expert consultants for each modality, using the appropriate rating scale. Provided that full scale scores average a 7 out of 9 rating, therapy may proceed according to design specifications. If the averages fall below 7, the therapist not achieving the prescribed goal will either be briefly retrained or replaced.

From this point onward, videotaped samples will be prepared in 15 min segments from the final 20 min of a session, stopping 5 min prior to session termination (Luborsky et al., 1982). The purpose is to capture a sample of the therapy occurring at possibly its highest intensity, providing a relatively "pure" sample of the technique. The four therapies will be sampled in this manner every two weeks for a total of 68 integrity evaluations throughout the term of the treatment and follow up phases. There will thus be 10 evaluations of RET, 12 of SIT, three of RP-1, 19 of IPT, and 26 of RP-2 (see Fig. 12). The samples will be mailed to and evaluated by the appropriate expert rater for each procedure. Should any integrity score again fall below an average of 7, the therapist will receive immediate reevaluation of his/her performance deficits and receive retraining or reinstruction before therapy will be permitted to resume.

### III. Procedure, cont'd.

#### E. A Theoretical Model of Sex Offense Prevention: Assessment

A theoretical-experimental paradigm. With regard to sex offenders, theory building has not been emphasized either within the behaviorist or psychodynamic traditions of psychology. What we have seen instead are the development of speculative and purely theoretical models, common to the psychodynamic tradition, the behavioral component and specific process models which are common to behaviorism, and typological classification, which is common to both. Rather than being confined by the limitations of any of these typical approaches, we have opted for an idiographic and more flexible model to describe the sex offender.

We have developed a theoretical model which describes how a person may become a sexual deviant. From this model we then derive a theoretical-experimental approach for modification of this learned behavior and a program for maintenance of more appropriate behaviors. In developing this theoretical-experimental program we have followed the developmental sequence recommended by Elliott (1980b, p. 509):

1. A causal model or theoretical paradigm which identifies a set of variables (attributes, relationships, or circumstances) connected by some logical process to criminal behavior;
2. The identification of a set of program activities or interventions which are designed to manipulate those causal variables;
3. The implementation of the program with these manipulations operationalized as program objectives;
4. Information feedback during operation to determine if the program activities are, in fact, occurring and the objectives being met (process evaluation);
5. Feedback to determine if the realization of these program objectives is having the theoretically expected effect on criminal behavior (impact evaluation); and
6. The modification of the theoretical paradigm and/or the program activities and objectives as suggested by the process and impact evaluation, in order to increase the program's effectiveness in reducing crime.

Our theoretical model is constructed to permit accumulation of evidence relative to each statement of the theory. In constructing the model, we have followed the recommendations of Glaser (1980) on how to construct a verifiable theory:

Theories may be thought of as nested, like a set of graduated boxes in which each fits into the next

larger one. The most informative theory can be conceived as the largest container, holding a series of narrower derived theories. Perhaps the most informative abstract ideas for guidance of...crime prevention...are provided by psychology's learning theory.... (p. 136).

The major advantage of nesting...applied science propositions in more abstract, pure psychology is that confidence in their validity is increased by the fact that they are implied by theory that has been widely validated. Furthermore, if evaluation research finds the propositions correct, it augments confidence not only in them, but also in the more abstract principles...from which they are derived....(I)f...these applied propositions (are) not found valid...then the negative results stimulate improvement of the abstract theory to account for these findings. Thus, applied and pure science may contribute to each other if both are guided by the same informative theory (p. 137).

The causal or theoretical paradigm is here presented as a set of 24 general principles or subprinciples, 24 derived propositions or subpropositions, and 24 hypotheses. Consistent with Glaser's (1980) recommendations for "nesting" of theoretical statements we attempted to construct the first principles, here called "general principles," on the basis of broad generalizations about human behavior. These general principles may be descriptive of a learning process, some mechanism of elaborating or refining of basic learning, or a method of behavior change. For each case we attempted to define the principle on the basis of existing theoretical statements, or confirmed observations from clinical practice. From each principle (and subprinciples) we then logically derived a set of propositions which are more specific statements about the learning of human sexual behavior, especially deviant sexual behavior, or the modification of that behavior. Finally, from the propositions we derived hypotheses about the acquisition and maintenance of deviant sexual behavior, and how a specified set of treatments would affect that behavior.

In general, the theory may be divided into two major parts: etiological factors in sexual deviance, and methodological factors in controlling sexual deviance. We have chosen to express this theoretical model in conditioning, social learning, and cognitive psychological terminology for two reasons. First, unlike psychodynamic theory, this approach is the most parsimonious method, one requiring the smallest number of empirical and abstract theoretical assumptions to support it. Where assertions are made about unobservable or cognitive processes they are described as intervening variables which are anchored in observable behaviors. Second, by grounding principles and propositions in behavior terms we were required to derive

hypotheses which are amenable to test, however limited, and therefore falsifiable.

## A Theoretical Model of Sex Offense Prevention

### Parts I and II

Introduction. Following are the first 13 statements of the theoretical structure which are related to assessment questions. They are presented here in order to tie one type of assessment approach to the theory and demonstrate how we ultimately wish to accumulate subjective data in an evidentiary fashion in seeking support for some of the basic theory statements.

All theoretical statements in Parts I and II relate to the items of the proposed Etiology of Sexual Deviance Questionnaire and examples will be given for each. We consider the information that could be provided by the ESDQ to be data of a very low order. Many investigators and theorists over the years have speculated on the role of conditioning processes, social learning influences, self-attributions and the like, on the shaping of sexual deviation. There have been no convincing empirical demonstrations of any of this and the basic origins of the behavior remain to be examined. What led us to the present subjective approach was our consistent observation that humans, whether sexually deviant or conventional, appear to have very detailed memories of sexual experiences. Since very minor and possibly irrelevant details of sexual events remain salient in memory after many years, it seemed likely that properly phrased self-report items might elicit useful data on some primary influences that shape the behavior. This is a very tentative first step and we do not attempt here to assemble a comprehensive picture. Rather we have taken a number of plausible influences which are often cited and constructed items which ask very direct questions about those influences. We expect that we can eventually eventually create a reasonably accurate chronology of the development of sexual preferences. If in so doing we are able to identify one or more critical junctures where conventional sexual development was interrupted and subsequent experiences began to turn the individual toward a deviant sexual career, that alone would justify the effort.

Hereafter, following each theoretical statement, the reader will find a single yes/no item. These are intended only as examples of the type of item that might be used. The previously described physiological and self-report instruments give us an adequate picture of the current status of the client for treatment purposes and are not related to the theoretical statement.

I. Acquisition of deviant sexual behavior.

General Principle 1: Pavlovian conditioning. A neutral stimulus repeatedly associated in time with one that can elicit a physiological response will eventually be able by itself to elicit that response or some part of it.

Proposition 1. Almost any stimulus paired with sexual arousal can come to elicit it. An unconventional stimulus, hereafter called "deviant," will eventually come to elicit sexual arousal through this pairing or by pairing with other eliciting stimuli.

Hypothesis 1. Sex offenders will report having experienced pairing of deviant sexual stimuli with sexual arousal significantly more often than normals.

Sample item: When I was a boy (or in early teens), before I had any direct sexual experience, I could become sexually aroused if I had rough physical contact with a boy my own age.

General Principle 2: Operant conditioning. If an overt behavior or cognition is followed closely in time by a stimulus and future instances of those behaviors increase, operant conditioning has occurred.

Proposition 2. If sexual acts or cognitions are followed by specific stimuli (e.g., sexual arousal, genital stimulation, ejaculation) and those behaviors are seen to increase, sexual responsiveness has been operantly conditioned.

Hypothesis 2. Sex offenders will report the operant conditioning of deviant sexual acts or cognitions more often than normals.

Sample item: When I was a boy (or in early teens), I could become sexually aroused if I masturbated while fantasizing to pictures of girls five years younger than me.

General Principle 3: Extinction. If a Pavlovian conditioned response is not occasionally re-paired with an effective eliciting stimulus, or an operantly conditioned response is not occasionally followed by a reinforcing stimulus, each will weaken and disappear.

Proposition 3. If a conditioned human sexual response is repeatedly performed in the absence of eliciting or reinforcing stimuli, it will weaken and eventually disappear.

Hypothesis 3. Sex offenders will report that deviant or conventional sexual acts which were not occasionally reinforced weakened and disappeared.

Sample item: If I do not use some of my favorite deviant fantasies during masturbation, I have found that when I try to use them later my sexual arousal to those fantasies is less than before.

General Principle 4: Differential reinforcement.  
Humans learn to respond in the presence of stimuli which signal that reinforcement is available and withhold responding in the presence of those that do not.

Proposition 4. Humans learn to respond differentially to stimuli which signal the availability of reinforcement for sexual behavior and avoid responding to those that do not.

Hypothesis 4. Sex offenders are persons who differentially respond to deviant sexual stimuli rather than conventional sexual stimuli. Given the availability of both, sex offenders will report that they have been more frequently reinforced for responding to deviant discriminative stimuli.

Sample item: When I was an adolescent (13-18) and I used pictures to stimulate me during masturbation, I began to prefer pictures of girls more than five years younger than me.

General Principle 5: Punishment and chaining.  
Punishment is defined as a consequence of behavior which reduces the future probability of that behavior. Chaining refers to serially-ordered sequences of behavior which are linked to one another. Chains are run off in serial order, each sequence triggering the next, usually culminating in some reinforcing activity.

Proposition 5. Many human social behaviors intended to gain sexual reinforcers are learned in ordered sequences or chains of behavior. If any of these initial social-sexual chains are interrupted or followed by punishment, the future likelihood of those behaviors will decrease and finally terminate.

Hypothesis 5. Sex offenders have frequently experienced punishment for engaging in social appropriate sexual behavior. They will report that they alternatively developed deviant behaviors to avoid punishment and to gain reinforcement for social and/or sexual behavior.

Sample item: Since I became an adult, there have been many occasions on which I felt uncomfortable and rejected. I found that I was much more comfortable in the company of boys 8-12 years of age.

General Principle 6: General social learning influences  
Conditioning processes play a major role in the acquisition of any human behavior, but virtually all of human social behavior is learned from other people, by observing what they do and what happens as a result.

Proposition 6. Human sexual behavior is a social behavior learned through participant modeling, vicarious learning, and symbolic modeling.

Hypothesis 6. Sex offenders will report that through their social experiences they learned to respond to deviant sexual behavior in the same way that normals learned to be responsive to conventional sexual behavior.

Sample item: In part, I originally learned about oral sexual relations with males by actually engaging in the behavior with a partner.

General Principle 7: General autoerotic influences.  
Human beings can deliberately arrange the contingencies of Pavlovian conditioning, i.e., they may consciously pair a deliberately selected stimulus with one that is capable of eliciting a primary drive condition.

Proposition 7. A previously conditioned fantasy plus masturbatory stimulation (unconditioned stimuli) can produce high sexual arousal plus orgasm (unconditioned response). Any new fantasy (conditioned stimuli) substituted for the old one and paired with masturbation can elicit the same response (conditioned response). Such use of deviant fantasy may account in large part for learning to be aroused to deviant stimuli.

Hypothesis 7. A majority of sex offenders will report that they learned in part to be attracted to deviant stimuli during masturbation and that they continue to use deviant fantasies almost exclusively.

Sample item: When I learned to masturbate, I sometimes used fantasies about genital sexual relations with underage females to excite me. Compared to fantasies about adults these were very exciting.

General Principle 8: Self-attribution influences.  
Human beings observe their own behaviors and develop a set of self-statements through which they define for themselves what sort of persons they are.

Proposition 8. By observation of their own sexual behavior people will develop a set of self-attributions about themselves as sexual persons.

Hypothesis 8. A majority of sex offenders will hold the self-attribution that they are abnormal and sexually inadequate persons in terms of conventional values and expectations.

Sample item: I find that I obtain sexual pleasure from looking at nude boys under 14 years of age. This makes me believe that I am probably a sexual deviant.

## II. Maintenance of deviant sexual behavior.

### General Principle 9: Intermittent reinforcement.

Persistence pays off. Persons whose response patterns have been reinforced only intermittently will persist in their behavior for a long time despite setbacks and infrequent reinforcement.

Proposition 9. Sexual interest and arousal never occurs on a continuous schedule of reinforcement. Therefore behaviors associated with seeking and gratifying sexual needs will be persistent, of high frequency, and will be very resistant to extinction.

Hypothesis 9. Sex offenders will report that their deviant behavior is persistent, of high frequency, and very resistant to extinction. Due to the action of differential intermittent reinforcement, they will report that their deviant behavior is prepotent among available alternatives.

Sample item: Even if I go for long periods of time without having sexual relations with underage males, when I do so my sexual interest and arousal will probably be very high.

General Principle 10: Specific social learning influences. The social influence of vicarious learning and symbolic modeling shape basic behaviors but are more central to the elaboration and refinement of behaviors already learned.

Proposition 10. Basic sexual skills may be elaborated and refined through vicarious learning provided by print and visual media and entire scenarios of sexual behavior episodes may be cognitively modeled and stored mentally for later use.

Hypothesis 10. A majority of sex offenders will report that (1) they vicariously learned many specific details of deviant sexual behavior through print and visual media, and (2) they cognitively model deviant sexual scenarios which they later use as guides for the commission of sex offenses.

Sample item: I have outlined in my mind whole stories in which I have oral sex with females. These imaginary stories were most exciting to me if they featured 8-12 years old girls as partners.

### General Principle 11: Specific autoerotic influences.

Human beings can deliberately condition themselves to be responsive to certain stimuli through conscious arrangement

of the contingencies. The eliciting power of conditioned stimuli can be increased by focusing on those aspects of the stimulus complex which produce an increase in intensity and duration of the conditioned response.

Proposition 11. Conditioned masturbatory stimuli can be made more powerful by selective focus on the most erotic features of any fantasy. The more stimulating a feature becomes the more emphasis it is given and, consequently, it becomes still more stimulating.

Hypothesis 11. A majority of sex offenders will report that (1) they selectively focus on specific components of deviant fantasies in order to increase the excitement of masturbation, and (2) the more they do this, the less attractive masturbation to nondeviant themes becomes.

Sample item: I have often masturbated to fantasies of sexual relations with young boys. If a fantasy starts to become ineffective I have found that if I concentrate on some particular feature of it its stimulating power increases a lot.

General Principle 12: Deviant cognitions. Any human behavior which produces consequences for the actor and/or other persons will require a set of supporting cognitions which define, value, and justify continued performance of the behavior.

Proposition 12. Differential reinforcement of deviant sexual behavior will, at the cognitive level, produce definitions of the behavior chosen as desirable, excusable, and justified. Whether or not these cognitions conform to objective reality, they become a guiding influence in subsequent sexual interactions.

Hypothesis 12. A majority of sex offenders will report (1) a rationalizing and justifying set of beliefs and assumptions to excuse their behavior, and (2) that due to their lack of efficacy in procuring conventional sexual reinforcement, they must therefore remain sexual deviants.

Sample item: I believe that children are really better off having sexual relations with a loving adult friend than being exploited, abused, and neglected by people who are supposed to care about them.

General Principle 13: Social inadequacy. Social adequacy may be defined as possession of the specific abilities that enable a person to perform competently at particular tasks. To the extent that those abilities are

deficient in gaining reinforcement for the person, he may be termed socially inadequate.

Proposition 13. Human sexual behavior is a social behavior and if a person lacks basic sex-related social skills he will be unable to form satisfying reciprocal adult sexual relationships. To the extent that he lacks these skills he will define himself as sexually inadequate.

Hypothesis 13. A majority of sex offenders will report that their perception of their social inadequacy is a major reason that they must remain sexually deviant.

Sample item: I would find it difficult to behave in a normal, relaxed, acceptable way if I was in a bar, saw a woman who was sexually attractive, obviously alone, and asked her if she'd like a drink.

### III. Procedure, cont'd.

#### F. A Theoretical Model of Sex Offense Prevention: Treatment

Rate of attrition. In general we estimate that we will have to see 134 clients, 34 more than we need, in order to secure the 100 required by the design. Our projection is that 10% will refuse immediately and an additional 15% will produce so little arousal that they cannot be assessed by the physiological methods. This will leave an additional 10 clients in each group to accommodate the potential but unpredictable problem of dropout due to client dissatisfaction, events beyond our control, e.g., job transfers, arrest for reoffense. The statistical design requires a minimum of 40 per group in order to detect statistically significant differences. The buffer of 10 extra subjects per group should enable us to meet or better this criterion.

About a quarter of the clients ultimately not participating will be lost on the front end, requiring small expenditure of staff time. About 14 will refuse outright due to fear of discovery, religious reasons, taking offense at the procedures, or refusal to endorse the admittance scale. Each of these persons will have to be seen for about an hour for a total of 14 hours. The next juncture where dropout will occur will be the sexual response criterion test. Here about another 20 will fail to reach the 40% deviant response entry criterion and will be terminated. This testing will require about one hour per person and so 20 hours of staff time will be expended to eliminate them. Why or in what manner the additional dropouts will occur cannot be predicted in advance.

Assignment to group therapy conditions. The preceding projections suggest that at the completion of the Baseline Assessment period (see Fig. 9) about 34 clients will have been lost due to refusals to participate and failure to meet the sexual response criterion. One hundred one clients are now left to begin the treatment period. From this pool we will then randomly assign the clients to the experimental and control conditions for group therapy in 10 five-man groups per condition.

Assignment to behavior therapy conditions. Experimental clients will not be randomly assigned to behavior therapy treatments. Selection of treatment modality will be determined by the pre-treatment assessment data. If a client shows an arousal configuration of both high deviant and nondeviant arousal, he will be assigned to either olfactory aversion or verbal satiation, both of which are effective treatments for this problem. We will make an effort to balance the number of clients in each of these groups. If he shows low nondeviant and high deviant arousal he will be placed in orgasmic reconditioning: satiation.

Informed consent. Consent to each of the various treatments will be obtained at the onset of each phase. To maintain a sense of esprit de corps and prevent within-treatment defections, each client will be reinterviewed briefly following completion of each phase, prior activities and progress reviewed, a full explanation of the succeeding phase and its rationale provided, and a separate consent for each obtained.

## A Theoretical Model of Sex Offense Prevention

### Parts III and IV

Introduction. Following is a continuation of the skeletal outline of the final 11 statements of the proposed theoretical structure related to treatment. These statements constitute the actual proposal for sex offense prevention. Here more objective data are tied to the theory in order in order to support or disconfirm the theory statements.

All theoretical statements in Parts III and IV relate, respectively, to the procedures and details of behavior therapy, rational-emotive therapy, stress inoculation, and relapse prevention. Examples are given for the implementation of each.

### III. Modification of deviant sexual behavior.

#### 1. Modification of deviant sexual responsiveness.

General Principle 14: Counter-conditioning. One way to reduce an undesirable behavior is to strengthen one that is incompatible with it. If the two behaviors compete and cannot occur together, strengthening a desirable one will reduce the other.

Proposition 14a. Deviant sexual arousal can be decreased by altering the temporal relation of deviant and nondeviant fantasies during masturbation. If during masturbation a nondeviant fantasy theme is substituted for a deviant one at the moment of orgasmic inevitability, then in future instances introduced earlier and earlier in the sequence, nondeviant arousal will be increased and deviant arousal decreased.

Proposition 14b. Deviant sexual arousal can be decreased by alternating blocks of masturbation trials with a deviant theme with blocks of trials with a nondeviant theme. This produces increases in nondeviant response and decreases in deviant response.

Proposition 14c. Deviant sexual arousal can be decreased by masturbation to a nondeviant theme a sufficient number of times to produce a refractory state, followed immediately by resumption of masturbation using a deviant theme while the subject remains refractory to further erotic stimulation. This produces increases in nondeviant arousal and extinguishes deviant arousal through satiation (see General Principle 16 below).

Hypothesis 14. Sex offenders in the experimental group showing baseline levels of deviant arousal greater than 40% and nondeviant arousal less than 40% will be assigned to orgasmic reconditioning: satiation method. In a majority of treated cases nondeviant arousal should increase to levels greater than 50% and deviant arousal should decrease to levels less than 20%.

We did not choose the treatment described in Proposition 14a, despite its popularity due to its possible unreliability with outpatient sexual deviates (Conrad & Wincze, 1976). We have no particular preference for either the alternating fantasy method (14b) or the satiation method (14c) as both produce essentially the same results. However, we will not here use the alternating fantasy method (14b) due to possible objection in the community that the project is encouraging sexual deviates to masturbate to ejaculation using deviant fantasies and "calling it treatment."

In the masturbatory satiation method the client is ordinarily seen three times per week, the third session preceded by a sexual arousal probe session. The method is the same across all trials. He is instructed to first masturbate to ejaculation using a nondeviant theme. Some offenders, especially younger ones, can become rearoused again immediately so these persons are required to repeat the initial component until they cannot become rearoused. Twice is usually sufficient. Following this component the client is instructed to continue masturbation for 20-45 min while he remains refractory but now using a deviant fantasy theme. No erection measurement is possible during the treatment itself.

Clients will have to conduct two of the three weekly sessions at home as it is logistically impossible for staff to conduct and unreasonable to ask the clients to attend three behavior therapy sessions and one group therapy session per week in the clinic, even if the latter two were back to back. Each client participating in the treatment will be loaned a portable audiocassette recorder and a cassette tape. He will be instructed on how to conduct the session at home, recording his sexual fantasies as he carries out the procedure. He will attend clinic once weekly for (1) his weekly measurement session, (2) his weekly behavior therapy session, and (3) his weekly group therapy session. Upon arrival he will give the recorded cassette to a research assistant who will spot check it for appropriate content while he is in session, bulk erase it, and return it to the client upon his departure. This arrangement will apply also to the olfactory aversion and verbal satiation treatments.

General Principle 15: Conditioned aversion.

Punishment is a consequence of behavior which reduces the future likelihood of that behavior. If a stimulus is made to accompany or follow an undesired behavior and the behavior is seen to decrease, the stimulus is called an aversive stimulus and the process aversive conditioning.

Proposition 15. If an inherently noxious odor is paired with the fantasized or actual performance of an undesired behavior, and subsequent performances decrease, olfactory aversive conditioning has occurred. If the

noxious agent is paired with high levels of deviant sexual arousal, that arousal will decrease to a near-zero level.

Hypothesis 15. Sex offenders in the experimental group showing baseline levels of deviant arousal greater than 40% and nondeviant arousal greater than 40% will be assigned to olfactory aversion treatment. In a majority of treated cases the procedure will selectively suppress deviant arousal to levels less than 20% and leave nondeviant arousal mostly unaffected.

The client performs the procedure not less than three times per week. One session occurs in the clinic and is preceded by a sexual arousal probe session. He is provided with crushable capsules of spirits of ammonia and a small jar with a screw-on lid. In the clinic session he either views a number of slides or videotapes, or hears audiotapes. In the home sessions he uses verbalized fantasies. All stimulus presentations or fantasies are deviant in nature. To conduct the session he places one capsule in the jar. At the onset of the stimulus presentation, or the beginning of fantasizing, he removes the capsule from the jar, crushes it between thumb and forefinger (the ammonia soaks into a nylon mesh covering), holds it about 2 in below his chin and inhales the fumes. This has the effect of either preventing arousal or immediately suppressing it. This may be observed within clinic sessions as erection measurement is possible in this treatment. One additional advantage of the treatment is that it can be effectively used in vivo to control urges to act out.

General Principle 16: Negative practice. The continual performance of a behavior in the same stimulus situation will ultimately lead to the extinction of that behavior through a negative conditioning process called conditioned inhibition.

Proposition 16. If a deviant sexual fantasy is spoken aloud for a long period of time not less than three times per week it will ultimately lose its power to evoke sexual arousal.

Hypothesis 16. Sex offenders in the experimental group showing baseline levels of deviant arousal greater than 40% and nondeviant arousal greater than 40% will be assigned to verbal satiation treatment. In a majority of treated cases the procedure will selectively suppress deviant arousal to levels less than 20% and leave nondeviant arousal mostly unaffected.

The client performs the procedure not less than three times per week. One session occurs in the clinic and is preceded by a sexual arousal probe session. There are no external stimulus presentations during the treatment. The client does nothing but continuously recite deviant sexual fantasies nonstop for 30 min. This is a difficult procedure

and many clients find it trying to keep up the pace of continuous recitation. In listening to them fantasize one can often hear the sentences become choppy and trail off, and some clients even go to sleep. We have solved this problem by placing a voice-operated relay in the headset mike line. If the client pauses for longer than 5 sec a high intensity signal sounds in the headset which can be terminated only by resumption of speech. Client verbalizations are frequently monitored to ensure that he is not emitting nonsense sounds to keep the relay open. Erection measurement is possible during this treatment.

Our subjective observations suggest two benefits from this procedure. First, it appears to exhaust the client's existing repertoire of deviant fantasies rather quickly, within two to three weeks. Second, it also appears that as he begins to create new fantasies to replace the old ones the procedure catches up with him and renders them useless before he can articulate them into an effective vehicle.

## 2. Modification of deviant cognitions.

General Principle 17: Irrational beliefs. Persons who engage in nonconforming social behavior will require a belief system to support that behavior. The belief system will provide definitions favorable to disapproved conduct and these will tend to be irrational.

Proposition 17. Deviant sexual behavior is socially disapproved conduct and sexual deviants develop a belief system based on irrational ideas to justify their behaviors. These ideas include oversimplification, overgeneralization, unvalidated assumptions, faulty logic, and faulty deductions.

Hypothesis 17. Sex offender clients in the experimental group will be assigned to rational-emotive therapy (RET-1) to challenge and dispute the belief system producing distortions and assumptions used to justify sexual deviance. Greater than 75% of treated clients will restructure their cognitions in a more reality-oriented and rational manner as a result of this treatment.

General Principle 18: Perceived self-inefficacy. Self-efficacy involves one's perception of how well one can organize and carry out courses of action required to deal with prospective situations. The strength of a person's convictions about his effectiveness will in large part determine whether or not he will try to cope with a given situation.

Proposition 18. Sex offenders often fail to initiate and maintain reciprocal adult sexual relationships. They are likely to report a perception of self-inefficacy, specifically that they lack the skills to succeed, will fail if they try, and so must remain sexual deviants.

Hypothesis 18. All sex offender clients in the experimental group will be assigned to

rational-emotive therapy (RET-2) to challenge the irrational basis of their perceptions of self-inefficacy and to actively employ RET analysis to sex-related social situations. Greater than 75% of treated clients will demonstrate an enhanced perception of self-efficacy as a result of this treatment.

General Principle 19: Social inadequacy. The reduction of social inadequacy requires the teaching of specific abilities to enable an individual to perform competently at particular social tasks. To the extent that those acquired abilities gain desired adult social reinforcers for the person he may be termed socially adequate.

Proposition 19. Human sexual behavior is a social behavior and if a person acquires basic sex-related social skills he will be able to form satisfying reciprocal adult sexual relationships. To the extent that he acquires those skills he will define himself as sexually adequate.

Hypothesis 19. All clients in the experimental group will be assigned to rational-emotive therapy (RET-3) to first challenge the irrational basis of perceptions of social inadequacy and then to actively engage in guided experiences directed toward appropriate reading of social cues and generation of appropriate behaviors. Greater than 75% of treated clients will (1) be able to demonstrate appropriate verbal and motor skills in social interactions, and (2) report an enhanced sense of social adequacy.

Rational-emotive therapy (RET) is conducted here as a three-component treatment, each segment related to the other, hence the designations RET-1, RET-2, and RET-3. As shown in Figure 12 they are, respectively, eleven, three, and six weeks in length. The therapies are conducted in 5-person groups meeting weekly for 90 min sessions.

Following is a brief outline of the content of this treatment phase on a session by session basis:

Week 1: Understanding the ABCs of RET. This session teaches the participants the causal relationships between occurring events, thoughts, and the resultant feelings and behaviors. It is the first step in getting clients to take responsibility for their own actions. Neutral situations are presented first and then situations which might prompt deviant behavior.

Week 2: Three types of thinking. Clients are taught to discriminate between irrational, rational, and rationalized thinking. This session is especially important because sex offenders rationalize their deviant behavior and think irrationally about adult relationships.

Week 3: Ten irrational beliefs. These beliefs are the primary cause of excessive anxiety, depression, and guilt. The first four are given heaviest emphasis: fear of

rejection, fear of failure, low frustration tolerance, and self-criticism.

Week 4: Four steps to cognitive restructuring. This session teaches the participants how to change their thinking to rational thoughts in order to better handle adult relationships and to cut off rationalizations justifying deviant behavior or denying its severity.

NOTE: The format of the first four sessions is a combination of presenting the principles and techniques of RET and discussion of their application to real situations. They provide the basic groundwork for understanding and practicing RET. The leader constantly asks questions to actively involve the participants and apply each point to real situations.

Week 5: Changing non-rational cognitions supporting sexual deviance. In the first four sessions, participants learned the basics of RET and how to change faulty thinking. This session (and the next five) focus on the application of these techniques to the non-rational thoughts that justify sexual deviance.

Week 6: Changing non-rational cognitions supporting sexual deviance.

Weeks 7-10: Practicing cognitive restructuring.

Week 11: Strengthening self-efficacy. This is the first of three sessions designed to apply RET principles to changing two types of cognitive distortions supporting self-inefficacy: (1) beliefs that one cannot control his deviant behavior and thoughts, and (2) beliefs that one is not able to have successful, pleasurable relationships with adults.

Week 12: Strengthening self-efficacy.

Week 13: Social efficacy and social adequacy. The focus here is on the second aspect of social efficacy facing sex offenders: I can have functional and pleasurable adult relationships.

Weeks 14-15: Strengthening social adequacy. These two sessions focus on the application of the cognitive restructuring steps to adult situations that have been difficult for the participants to handle.

Week 16: Nonverbal behavior; unassertive, assertive, and aggressive behavior. Behavioral training with a non-RET emphasis. Also includes conversational skills, behavior rehearsal, and combinations of techniques.

Week 17: Conversation skills. Focuses on open and closed questions, paraphrasing and reflecting.

Week 18: Practicing assertive behavior. A seven stage model for behavioral rehearsal.

Weeks 19-20: Practice of cognitive and behavior techniques and development of self-affirmation.

Control group therapy: Interpersonal psychotherapy (IPT). We have noted previously that IPT was originally developed as a short-term treatment, a typical term being about 12-16 weeks in duration. Figure 12 shows that we have scheduled two IPT treatment blocks, one of 20 weeks in Phase 1, and one of 18 weeks in Phase 2.

IPT has definite goals and specific procedures which occur, like the cognitive-behavior therapies, according to a week by week chronology. The two main goals of IPT are (1) alleviation of symptoms which here refer to reduction of tendencies toward deviant sexual behavior, and (2) helping the client develop better strategies for dealing with current social and interpersonal problems, referring to encouraging responsible and socially appropriate adult experiences rather than pedophilic ones. The IPT focus thus roughly parallels that for the experimental group. In the first block, Phase 1, the content of the sessions focuses on symptomatic behavior as well as on the client's social and interpersonal problems related to the choice of a deviant lifestyle. When IPT resumes in Phase 2, presumably some symptom reduction has occurred as well as better understanding of personal problems. In Phase 2 the focus of treatment for the controls is the same as that for the experimentals: maintenance of reduced symptoms and working toward preventing resumption of deviant behaviors. The goal of treatment -- prevention of relapse -- is identical in both groups. The major difference between the two treatment approaches is that in IPT specific strategies are not systematically brought to bear against specifically targeted problems.

Following is a general chronology of the IPT process (Klerman et al., 1982, pp. 38-45, *passim*):

1. Initial sessions (1-3). These sessions set the stage for the IPT process. The therapist in the initial sessions attempts to accomplish six major tasks: (1) getting a history of the problem and starting symptom-mitigating behaviors, (2) explaining the rationale and intent of IPT, (3) completing an interpersonal inventory, which is similar to identifying activating events and consequences in RET, (4) identifying the principal problems areas, usually two or three major ones, (5) completing a treatment contract, similar to contracting for abstinence (see below), and (6) letting the client know what he is expected to do in the treatment.

2. Intermediate sessions (4-17). The content of IPT sessions in this middle period generally follows from the original interpersonal inventory and goal-setting. The focus can change as original issues are placed in better perspective and/or additional ones introduced. But with each problem area the movement is from (1) general exploration of the problem, to (2) focusing on maladaptive behaviors, to (3) decision analysis of alternatives in handling the problem, to (4) attempts at new behavior.

3. Termination sessions (18-20). In our design we show two termination periods, at the close of Phase 1, and termination with preparation for follow up at the close of Phase 2. In either case we are interested in the extent to which the therapy has restored the client's morale and sense of self-esteem. Presumably, in both periods the client has attempted new ways of coping with his sexual deviance and these should be extensively reviewed and all remaining danger signals identified. In either case the therapist terminates therapy by strongly encouraging movement toward the client's recognition of his independent competence.

### III. Procedure, cont'd.

#### G. Prevention of relapse in sex offenders.

Introduction. In what follows we outline a follow up program for prevention of relapse in treated sex offender clients. Our interest here is in reinforcing and sustaining the gains achieved in the more basic cognitive and behavioral treatments previously described. Here we begin to shift the burden of self-management to the client, moving from what might be called an external control model to an internal control model. The relapse prevention phases (2 & 3) are an active, very interventionistic set of procedures designed to be responsive to existing crises in the client's environment and are more flexible than the more basic treatments already received. Phase 2 is divided into two treatments based on stress inoculation training (Meichenbaum, 1977), and one on the basics of the relapse prevention technique (Marlatt, 1980; Marlatt & Gordon, 1985). The first two treatments focus on the general and pervasive problems of impulse control (Meichenbaum, 1977) and anger control (Novaco, 1975, 1979), while the third is individualized and focuses on idiosyncratic factors which may induce relapse (Marlatt & Gordon, 1985). The post-treatment follow up period (Phase 3) incorporates the teachings of the third treatment module plus more specific and individualized procedures derived from Marlatt's relapse prevention model (Marlatt, 1980; Marlatt & Gordon, 1985, 1979); Pithers, Marques, Gibat & Marlatt, 1983).

We continue here with the skeletal outline of the last five assertions of the theoretical statement. The first two refer to self-monitoring and the final three to cognitive-behavioral treatment.

General Principle 20: Risk for relapse. New learning will decay over time without subsequent reinforcement or relearning and the probability of successful maintenance of the newly acquired behaviors will be greatest immediately after treatment and will then diminish. The number of situations which are high risk for relapse has been shown to discriminate relapsers from survivors.

Proposition 20. Treated sex offenders are likely to re-encounter stimuli which signal high risk(s) for triggering relapse. To the extent that they learn to identify these stimuli and use them as cues for remedial action, relapse may be prevented.

Hypothesis 20. All relapse prevention treatments require participation in high risk assessment on a continuous basis. Over 90% of clients participating will be able to identify stimuli which could trigger relapse and identify them as cues for initiating remedial behaviors.

This is a very similar application of the identification of activating events which clients have

already learned in RET. Here we are concerned with the identification of highly critical cues, discriminative stimuli in the presence of which deviant sexual behavior has previously been reinforced, very likely a considerable number of times. In this high risk assessment clients are required to clearly identify events, persons, or situations which subjectively pose high risk for each of them as a possible trigger to precipitate a relapse. Each client is required to assign a risk value to each of these events, persons, or situations. As a variation on the well known subjective units of discomfort (SUDs) ratings, we term these ratings "subjective indicators of risk" (SIRs). The risk hierarchies serve two functions. First, they keep the client in touch with the entire spectrum of risks facing him, and they can be altered as risks increase or decrease. Second, the hierarchies form a basic structure used in stress inoculation training.

General Principle 21: Contracting for abstinence.

Behavioral contracts specify the parameters of treatment and the nature of the working relationship between therapist and client. Persons with substance abuse or impulse control problems should contract for abstinence as the primary goal of relapse prevention treatment. The contract specifies exactly what behaviors will be performed in the event of threat of relapse or a single lapse, allowing early intervention in the relapse process.

Proposition 21. Sex offenders are likely to experience at least one lapse and it will therefore be useful to directly contract with them specifying the rules for management of that event. If these rules are precisely followed a total relapse may be prevented.

Hypothesis 21. All clients participating in RP treatment will be required to contract for abstinence at the beginning of the follow up phase. Over 90% of offenders who experience a first lapse and then implement all terms of the contract will not relapse.

Marlatt (1980, pp. 65-66) specifies the basic terms which should be included in a relapse prevention contract. The basic purpose of the contract is to establish a working agreement to limit the extent of indulgence in the prohibited behavior should a first lapse occur. Details based on the high risk assessment can be worked out with each client individually but the basic points which should be included are:

1. The client agrees to delay indulgence for at least 20 min following the initial temptation to relapse. The delay period is to be used as a period for reflection, to reconsider the situation, and very importantly, to see the behavior as a clear choice or decision rather than a result of intolerable external pressures or internal urges. The client must understand that if he relapses, he is

choosing to do so, that no event, person, or situation is making him do so.

2. The client agrees that if he engages in the proscribed behavior or some component of it he will do it once and once only. Obviously this does not prevent a sex offense from occurring but it may prevent a long series of subsequent offenses. The purpose of the "single dose" agreement is very straightforward. Sex offenders, like alcohol and drug abusers, often build up highly positive expectations regarding relapse, e.g., how wonderful it will be to get back into the old behavior again. The purpose of the single dose is to disconfirm those expectations as the unrealistic notions they are.

3. The client agrees to wait at least one hour before continuing to engage in the target behavior. The time period immediately following a first lapse is critical as this is when the client is most likely to experience the "abstinence violation effect" (AVE). Marlatt (1979, pp. 348-349) describes two components of the AVE, the perception of transgression: (1) guilt or conflict similar to cognitive dissonance, and (2) attributions of the cause of relapse to personal weakness or lack of will power. As he puts it, the AVE will elicit a sense of helplessness or victimization, and a sense of loss of self-control so that if continued, the relapsed behavior may be reinforced (as it probably has been many times before) as a coping response in a stressful situation.

During this delay period the client is not merely waiting for the hour to elapse, but engages in a cognitive restructuring process. This involves reading a reminder card which is intended to initiate the restructuring process, includes a list of "what to do next" suggestions, summarizes the main points of the contract, and provides an emergency call-in telephone number. The purpose of all this is to initiate a cognitive reappraisal of the whole first slip process before giving in to the temptation to continue.

4. If feasible, the contract may also specify that certain costs or fines be paid for engaging in the behavior. These might be of low value for a first lapse, increasing in severity for subsequent lapses. Additionally, the contract might specify that fines be paid to unworthy enterprises, e.g., the American Nazi Party.

As treatment for relapse prevention proceeds, this contract may be supplemented as more details become known. We feel it advisable, however, to engage the client immediately in this process by giving him specific self-management instructions, then broadening it later as needed.

General Principle 22: Impulse control in relapse prevention. Human impulsiveness is very likely a learned behavior, explainable by the principle of delay of reinforcement in learning. Delayed reward experiments show that preference between small-early and large-later rewards

can shift from the larger to the smaller simply as a function of elapsing time. Impulse control, then, requires learning to refuse these immediate reinforcers which have acquired their power due to their temporal position in the learning process.

Proposition 22. Sex offenders have learned to engage in impulsive behavior for immediate gratification (the Problem of Immediate Gratification or PIG phenomenon; Marlatt, 1980, p. 62). Due to the nature of their original learning, sex offenders deprived of familiar, immediate sexual reinforcers will experience frustration, anxiety, and stress, thus increasing the probability of relapse.

Hypothesis 22. All sex offender clients in the experimental group will be assigned to stress inoculation training (SIT-1) which will include cognitive preparation for dealing with cues for impulsive sexual behavior, acquisition of skills to counter positive appraisals and expectancies about engaging in the impulsive behavior, and application training in managing impulses. We project that greater than 75% of treated clients will demonstrate that SIT has assisted them to delay reacting to cues for impulsive behavior.

General Principle 23: Anger control in relapse prevention. Anger is one form of affective stress reaction. It is a type of emotional response produced by a person's perception that there is a relative imbalance in the ratio between environmental demands and his resources to cope with those demands. "(A)nger is fomented, maintained, and influenced by the self-statements that are made in provocative situations" (Novaco, 1975, p. 33).

Proposition 23. Sex offenders often use anger as an excuse to engage in deviant sexual behavior. This anger results from the offender's perception that the demands of persons or situations are greater than his ability to cope with them. Anger may precipitate a relapse and so reinforce deviant sexual behavior as an escape response.

Hypothesis 23. All clients in the experimental group will be assigned to stress inoculation training (SIT-2) which will include cognitive preparation for dealing with cues for anger provocation, acquisition of skills to counter negative attributions, appraisals, and expectations about anger, and application training in managing anger in therapist-controlled provocations. We project that greater than 75% of treated clients will demonstrate adequate evaluative and coping skills in anger control.

Theoretically we have considered impulsiveness and anger as separate entities although we recognize that they are often tightly interwoven in real life situations. In the actual treatment process of stress inoculation we have devised, anger and impulsiveness are seen as parts of the

same problem, and treatment for both is considered a continuous rather than a discrete problem.

Following is an outline of this treatment phase on a session by session basis:

#### Assessment

Pre-treatment testing of participants will include the following measures: (1) Novaco Provocation Inventory, (2) Buss-Durkee Hostility Inventory, (3) physiological arousal (blood pressure/heart rate), and (4) self-monitoring.

Within treatment, role play testing of situations of provocation and stress will be conducted and involve measurements of: (1) physiological arousal (blood pressure/heart rate), (2) self-ratings of anger, (3) behavioral interaction (observer ratings from videotape). Self-monitoring from daily diaries will be obtained throughout the treatment phase.

#### Treatment

The intervention will be conducted in a format of 90 min weekly sessions in groups of five persons.

The stress inoculation treatment is implemented in a three-component procedure: (1) cognitive preparation or education, (2) skill acquisition, and (3) application training. In the actual treatment procedure these components overlap to some extent, hence the apparent discontinuity below in the numbering of sessions.

#### Weeks 1-3: Cognitive preparation phase.

1. Interpretation and discussion of pre-treatment assessment.
2. Review of self-monitoring data.
3. Client education. Handouts have been developed in these areas:
  - a. "Stress and How to Cope With It"
  - b. "Anxiety and Worry"
  - c. "Anger"
  - d. "Impulse Control"

This phase is distributed over the first three sessions. The treatment manual guides the therapist in understanding and presentation of the assessment data and provides instruction for client education. The client handouts are important supplements, and the manual contains features on points for discussion and questions to anticipate from clients.

Also included here is continued assessment, i.e., more refined analysis of cognitive and behavioral deficits associated with the client's problem. This is characterized as conducting a person X situation X mode of expression analysis.

#### Weeks 2-10: Skill acquisition phase.

1. Hierarchy construction: anxiety, anger, impulse control.
2. Arousal reduction skills.

- a. Relaxation training.
- b. Lifestyle modification.
- c. Targeted program for arousal reduction (also as an alternative to deviant sexual behavior).

The construction of the stressor hierarchies and the introduction to arousal reduction occurs during sessions 2-3, thus overlapping with the cognitive preparation phase.

- 3. Cognitive skills
  - a. Attentional focus
  - b. Cognitive restructuring (expectations and appraisals)
  - c. Self-instruction
  - d. Problem solving and being task focused
- 4. Behavioral skills
  - a. Impulse control
  - b. Verbal communication
  - c. Task-oriented action

The cognitive-behavioral skill training is distributed over sessions 3-10. Arousal reduction training continues during this period as well. The skill acquisition phase involves (1) introducing the stress coping skills to the client, (2) modeling by the therapist, and (3) behavioral rehearsal by the client. As with the cognitive preparation phase, each session should begin with a review of self-monitoring diaries. Examples for modeling and rehearsal are obtained from the diary accounts.

Weeks 4-12: Application training.

- 1. Utilization of client hierarchies
- 2. Staging strategy'
  - a. Stressor sequence components
  - b. Cognitive/arousal/behavioral concomitants and sequelae
- 3. Simulated stressors
  - a. Imaginal mode
  - b. Role play mode
- 4. Audio-visual aids
  - a. Slide program for impulse control. This would utilize multiple context slides depicting situations of high cue salience for which the client could practice application of cognitive and arousal reduction skills.
  - b. Videotape vignettes. This is suggested as an experimental technique involving a small number of situations for which modeling and voiceovers could be used to depict good vs poor coping skills.

The therapist training manual also contains information on problems to anticipate in treatment and suggestions for handling refractory problems.

General Principle 24: Idiosyncratic factors--in relapse.  
 Individuals relapse in unique and idiosyncratic ways and persons quite capable of exercising generalized strategies for irrational thinking, impulse control, and anger

management will continue to experience difficulties in identifying highly specific stressors, will lack precise coping skills to deal with them, will continue to engage in cognitive distortions about positive aspects of relapse, will experience intense cravings to resume the proscribed behavior and so will, to some extent, remain at the brink of relapse.

Proposition 24a. Abstinent sex offenders may not possess an adequate repertoire of coping skills for use in unique high risk situations, despite the fact that they may generally identify stimuli discriminative of that risk. To the extent that they learn to identify and use these unique risk stimuli to signal the use of coping strategies, relapse may be prevented.

Proposition 24b. Abstinent sex offenders are likely to use cognitive distortions to cover up plans and schemes to reengage in deviant activity. To the extent that they can recognize these cognitions and use them as cues for coping, relapse may be prevented.

Proposition 24c. Abstinent sex offenders will reexperience strong cravings to resume deviant sexual activity. To the extent that they can objectively observe, accurately label these urges, and permit extinctive processes to occur, relapse will be unlikely to occur.

Proposition 24d. Abstinent sex offenders will report at some point that they are at the verge of resuming deviant sexual behavior. For such persons, individually tailored and therapist-guided experiences may prevent the onset of relapse.

Hypothesis 24. All clients in the experimental group will be assigned to relapse prevention training (RP-1) in which they will receive education in motivation, high risk assessment, coping skills for dealing with high risk situations (HRSs), enlisting social support, and construction of a balanced daily lifestyle. As a result of this initial RP training, greater than 75% of treated clients will demonstrate increased ability to deal with idiosyncratic stressors which promote relapse.

Following is a rather lengthy outline of the relapse prevention treatment (RP-1). First, the basic components of the sessions are described, followed by a session by session outline that highlights some basic topics from each. Note in the session outline that previous learning in RET and SIT is incorporated into the RP intervention.

Basic structure. Each of the six group therapy sessions in RP-1 will be organized around five structural dimensions: motivation, assessment, coping skills, social interactions, and daily lifestyle. These also serve as guidelines for the 52 weekly individual follow up sessions (RP-2). Each of the dimensions embodies basic RP principles and intervention procedures.

Motivation. The focus here is on willingness to change and take sizeable responsibility for the change process. RP techniques are based on a self-control perspective whereby the responsibility for administration of the various treatment procedures rests largely with the client.

Assessment. Continuous assessment is an important and integral component of RP. A primary assessment objective is to specify the particular high risk situations (HRSS) that characterize individual clients. Others include motivational level, urge experiences, skill deficits, and daily activities. Data obtained from the assessment process will be used to select and individually tailor various RP interventions. Self-monitoring is the primary mode of assessment.

Coping skills. These procedures teach the individual how to anticipate and more adaptively cope with HRSSs. The development of effective coping skills promotes self-efficacy and self-esteem. As the client successfully copes with more and more HRSSs, perception of control strengthens and the probability of lapse and relapse declines. Both general coping skills and more specific skills based on individual needs will be taught.

Social interactions. Interpersonal relations play an important role in determining the outcome of treatment as therapeutic gains can be seriously undermined by disruptive social influences. The emphasis here is on the development of healthy and supportive social interactions which will contribute to successful and prolonged self-improvement through RP.

Daily lifestyle. The aim here is to teach constructive lifestyle habits that will reduce life stress and lead to more acceptable forms of indulgence and gratification. The underlying principle is that a balanced lifestyle characterized by equivalent involvements in obligatory life duties and constructive self-indulgence is less likely to generate a chronic sense of deprivation and potentiation of maladaptive indulgences.

#### Week 1.

1. RP program rationale: relapse, lapse, high risk situations (HRSS).
2. Motivation: rate degree of motivation and probability of relapse; list all negative consequences of life as a sexual deviant.
3. Assessment: instructions on self-monitoring of urge and masturbatory episodes.
4. Coping skills: what to do in case of a lapse; preliminary contract; list historical HRSS.
5. Social interactions: identify people who could potentially be a source of support.
6. Daily lifestyle: generation of pleasant activities.

7. Homework: self-monitoring or urge and masturbatory activities.

Week 2.

1. Status checks, lapses, "brush fires."
2. Motivation: self-image as a sexual deviant produces resistance to change.
3. Assessment: review and troubleshoot self-monitoring data.
4. Coping skills: review any lapses; troubleshoot contract; name and describe at least two HRSs anticipated for the coming week; describe an historical HRS and describe a way it could have been avoided.
5. Social interactions: guidelines on how to ask for support.
6. Daily lifestyle: daily tension reduction = alternate relaxation with 15 min of exercise; one pleasant activity for each day.
7. Homework: prepare two autobiographies, one as a sexual deviant and one as a nondeviant; continue self-monitoring; graph frequency data (urges/day + urges/situation).

Week 3.

1. Motivation: summarize concerns about giving up sexual deviance (use RET to counter these concerns).
2. Assessment: review and troubleshoot self-monitoring data and graphs.
3. Coping skills: use self-talk to practice urge coping in real HRS.
4. Social interactions: set up buddy system with another group member; practice asking support from your buddy.
5. Daily lifestyle: Benson-type meditation; alternate meditation with 15 min exercise.
6. Homework: continue monitoring; implement urge control strategies; alternate meditation with 15 min exercise; pleasant activities.

Week 4.

1. Motivation: probe for new concerns and resistance to change.
2. Assessment: review self-monitoring data.
3. Coping skills: review of tension reducing lifestyle habits as alternative coping skills for general stress; RET-2, RET-3 and SIT-2 as alternative coping skills for intrapersonal HRSs; use of RET and SIT skills to cope with hypothetical intrapersonal HRSs.
4. Social interactions: plan inquiries regarding involvement in adult social groups.
5. Daily lifestyle: generate possible positive addiction.
6. Homework: continue monitoring; meditation/exercise; pleasant activities.

Week 5.

1. Motivation: probe for new concerns and resistance to change; list benefits of life without sexual deviance.
2. Assessment: review self-monitoring data.
3. Coping skills: rehearse use of urge coping techniques and RET-1 to cope with hypothetical interpersonal HRSS involving children.
4. Social interactions: role play assertiveness skills in situations related to pursuing memberships in adult organizations.
5. Daily lifestyle: tension reduction exercise of choice.
6. Homework: inquire about memberships and participation in adult recreational and/or educational groups; continue tension reduction; pleasant activities.

Week 6.

1. Motivation: dictate terms for extended contract.
2. Assessment: review self-monitoring data.
3. Coping skills: rehearsal of assertion skills in hypothetical HRSSs.
4. Social interactions: plan and follow through on group involvement.
5. Daily lifestyle: tension reduction exercise of choice.
6. Homework: complete extended contract and bring to first individual session; continue self-monitoring through break until long-term follow up begins; continue follow through on group involvement; continue daily tension reduction and pleasant activities.

Relapse prevention in the long-term follow up (RP-2).

In approaching each individual session, the therapist has two basic objectives: to probe and evaluate progress and to select and implement appropriate interventions. It should be noted however that these objectives are being pursued within the context of a one-to-one psychotherapeutic relationship; thus other dyadic processes and influences may have to be dealt with from time to time.

For evaluating progress, the therapist can access pertinent information formally with assessment measures or more casually through questioning and anecdotal observations. Progress can be assessed along the same five dimensions used to organize RP therapeutic interventions. Indications of lack of progress or backsliding then prompt specific remedial interventions. Depending upon the nature of the problem, the therapist may need to review or expand on previously presented RP material and/or to present new RP material. Guidelines for selecting and implementing RP materials are provided in the manual. It is also possible that the problem may require review of materials presented during earlier phases of the overall treatment program,

e.g., behavior therapy or SIT. Similarly, other difficulties may arise that require referral to other treatment agents (which would effectively terminate the client's participation in the project). These are all determinations to be made by the therapist in the follow up sessions.

As with the group sessions, structured session outlines are provided for the first five individual sessions. These early individual sessions are seen as extensions of the group meetings with regard to introductory presentations of didactic RP materials. In subsequent sessions, the therapist will have more freedom and flexibility regarding structure and organization within the confines of the RP objectives.

### III. Procedure, cont'd.

#### H. Prediction of reoffense.

Earls and Marshall (1983) note the assumption of many behavioral researchers that laboratory assessment of sexual preferences, i.e., measurement of erection responses, can describe past and present behavior and predict future extra-laboratory behavior. The quest for such a physiological "signature" is not quite wishful thinking, so let us first examine what is known about the use of erection responses for these purposes.

The evidence thus far is somewhat unclear as to how much erection responses can tell us about past behavior. Abel et al. (1977) computed a "rape index" (RI) by dividing average maximum erection responses to audiotaped rape stimuli by average erection responses to descriptions of consenting intercourse. This index separated rapists ( $RI \geq .50$ ) from nonrapists ( $RI < .50$ ). The rape index appeared to also be correlated with past history of dangerous behavior or, as the authors put it, RIs of particular values "strongly suggest" certain histories. Abel et al., 1977; Abel et al., 1978 ) state that (1) RIs of 1.5 or greater will identify histories of a high frequency of rape, (2) RIs greater than 2.0 will identify histories of excessive bodily injury to victims, and (3) RIs greater than 4.0 will identify sadistic rapists. Additionally, erection responses were shown to distribute along a gradient of age of victim, suggesting preference for children or elderly women as victims. These researchers (Abel, Blanchard, Becker & Djenderedjian, 1978) essentially replicated their earlier findings and showed similar results when consenting intercourse, rape, and physical assault stimuli were presented as video simulations. These results were questioned by Oliver (1978) who was unable to show that a similarly computed "aggression index" (assault/consenting) was related to a past history of violent behavior. Researchers have also used similar ratios with pedophiles. Abel et al. (1981) computed a "pedophile aggression index" and Avery-Clark and Laws (1984) a "dangerous child abuser index" and both were able to differentiate between pedophiles with violent and nonviolent histories. However, it should be mentioned that in the Avery-Clark and Laws (1984) study the raw erection responses performed as well as the ratio data. The data from this area, while promising and relevant, seem at present to be somewhat mixed.

In terms of description of current sexual interests, erection measures appear to be quite adequate. Numerous studies indicate that our general assessment procedures and specifically tailored stimuli used in treatment produce data which are in close agreement with subject self-report and sexual history obtained from official records (Foote & Laws, 1981; Kremser et al., 1980; Laws, 1980, 1983; Laws & O'Neil, 1981; Laws & Osborn, 1983; VanDeventer & Laws,

1978). We have, however, never attempted to use these measures to specifically predict post-treatment behavior.

The results for prediction of future behavior using erection measures are sparse and mixed. Marshall (1975), using data from an earlier study (1973), found that the most accurate predictor of future behavior were changes in the relative magnitude of arousal to deviant and/or nondeviant stimuli at the termination of treatment. He was able to predict success in follow up for 15 of 17 cases based either on decreases in deviant arousal or increases in nondeviant arousal, a rather impressive finding using a single predictor. Quinsey (1981) showed that erection measures collected before treatment predicted recidivism and that post-treatment erections were related to short-term recidivism but not overall outcome. Conversely, Quinsey, Chaplin and Carrigan (1980) were able to show that post-treatment measures were related to recidivism in 30 pedophiles. But, when an additional 102 treated and untreated pedophiles were added to this sample (Quinsey and Marshall, 1983), no relationship between post-treatment measures was observed, but pre-treatment measures were again shown to be related. So, the data go in both directions.

Our present interest is prediction of future deviant sexual behavior. Erection measures alone, while indubitably powerful, are probably unstable predictors. They are useful but should be used in combination with other known predictors of deviant sexual behavior in particular and criminal behavior in general. We have constructed a 22-item scale which combines both actuarial and clinical predictors (see Appendix III). Twenty of the items are 5-point scales, one is 7-point, and one is 4-point. The relative weighting of the items is expressed in the point value assigned to it, e.g., 5 = very serious and 1 = least serious. Based on official records, self-report, or pre- or post-treatment data the rater assigns a value to each item. The total score is then the predictor value. The summed values are then placed on a 23-125 point scale which is divided into the following categories:

23 - 40	Low risk
41 - 60	Moderate risk
61 - 80	High risk
81 - 125	Very high risk

Even with this arbitrary scaling this is a very conservative predictor instrument. The lowest possible score is 23 so no one can be rated "no risk." It is very likely that one could fall within the high risk range but very unlikely that anyone would receive a rating of 100 or more.

In the full 22-item recidivism scale, past history works against the offender. This is unfortunate but some statuses do not change. Past history of criminal activity rather accurately predicts recidivism (Petersilia, Greenwood & Lavin, 1978; Shah, 1978; Wolfgang, Figlio & Sellin, 1972).

The items in this scale were chosen either because they have been cited in the clinical literature or because they have been shown empirically to be correlated with recidivism.

We have excluded sex, age and race as major actuarial correlates even though they are frequently cited (Monahan, 1981). The reasons for this are straightforward. In 1977, nine of 10 persons arrested for violent crimes were male (Webster, 1978); all of our subjects are male. Age is not a discriminator as pedophilic acts have been shown to distribute trimodally across the age range 15-69 years (Mohr, 1981; Mohr et al., 1964). Neither is race likely to be predictive in our situation. Nonwhites may account for 46% of all violent crimes in the U.S. (Monahan, 1981) but in our eight years of laboratory experience with pedophiles fewer than 10% of referrals have been noncaucasians.

Following are the proposed potential correlates of recidivism we have chosen to use in the scale (not in order of importance): (1) current percent deviant masturbatory fantasy (Murphy, Abel & Becker, 1980); (2) duration of deviant sexual behavior (Murphy et al., 1980); (3) frequency of deviant behavior per week (Murphy et al., 1980); (4) emotional instability (Murphy et al., 1980); (5) ability to control deviant behavior (Murphy et al., 1980); (6) alcohol abuse at the time of offense, and (7) history of alcohol abuse (Monahan, 1981; Rada, 1976; Rada, Kellner, Laws & Winslow, 1978); (8) drug abuse at the time of offense, and (9) history of drug abuse (Monahan, 1981); (10) total number of previous victims (Murphy et al., 1980); (11) average percent of deviant arousal pre- and post-treatment (Marshall, 1975; Quinsey, 1981; Quinsey et al., 1980); (12) average percent of nondeviant arousal pre- and post-treatment (Marshall, 1975; Quinsey, 1981; Quinsey et al., 1980); (13) level of violence used in instant offense (Anderson & Marston, undated); (14) ritualism in modus operandi (Anderson & Marston, undated); (15) residential mobility (Anderson & Marston, undated); (16) probability of reoffense when mood is elevated, or (17) depressed, or (18) angry (Anderson & Marston, undated); (19) reoffense due to environmental reverses (Anderson & Marston, undated); (20) probability of reoffense by offense category (Anderson & Marston, undated); (21) employment stability (Monahan, 1981); and (22) number of prior arrests for deviant sexual behavior (Shah, 1978).

Twenty-two is obviously a large number of potential variables and the list could have been increased to include more speculative and theoretical ones. The ones included were chosen due to a high degree of face validity with respect to what is known of sex offenders and recidivistic patterns, and because several have been shown to be directly connected with criminal, if not sexual, recidivism. Whether the scale will predict or not is an empirical question. We thought it better to include possibly too many variables that might predict, with the aim of winnowing out the few that will (see section IV. Statistical analysis of data).

III. Procedure, cont'd.

I. Long-term follow up (RP-2).

This is the 52-week post-treatment follow up period, shown as Phase 3 in Figure 12.

Experimental. This group has now received all benefits offered by the program. In RP-1 they learned the basics of the relapse prevention methods, which here become the modified treatment modality for the follow up period. In RP-2 weekly meetings now focus on evaluations of the client's self-management of impulsiveness, anger, cognitive distortions, cravings, and temptations along the above-described dimensions of the RP model. The more drastic RP methods are employed as needed. Additionally:

1. Ongoing deviant and nondeviant sexual arousal levels are measured weekly.

2. Clients continue to self-report on a daily basis.

3. Rap sheets are evaluated every 90 days.

Control. This group has now received the complete IPT treatment, directed roughly at the same problems as the experimental treatment. Weekly meetings continue to focus on the main goals of IPT treatment -- maintenance of symptom reduction and maintenance or improvement of interpersonal relations, independent thinking and decision making. Additionally:

1. Ongoing deviant and nondeviant sexual arousal levels are measured weekly.

2. Clients continue to self-report on a daily basis.

3. Rap sheets are evaluated every 90 days.

#### IV. Statistical analysis of data.

Introduction. This section outlines the data analysis plan for the project. Five sets of data are being collected. These are: (1) descriptive data, (2) between-group outcome data, (3) within-group outcome data, (4) therapy integrity data, and (5) data related to the prediction of recidivism.

Sample size. In determining sample size for a clinical study of this type, some balance must be made between a sample size which will give adequate power and the clinical realities of intensively treating a group of clients with significant and major behavioral disorders. The clinical realities and expense associated with treating the clients to some extent limits the number of subjects that can realistically be seen.

In attempting to estimate power in the present study, a difference of one standard deviation between groups for the erection measures, self-report, and questionnaire measures was considered as the minimal difference that would be clinically significant. With a sample size of 40 per group, this would produce a power estimate of greater than .95 (Kirk, 1968) for between-group comparisons. If the minimal difference to be detected was considered at .75 and .50 standard deviations, expected power would then be reduced to .85 and .55 respectively. Therefore a sample size of 40 per group is adequate to detect differences that would be clinically meaningful. Our choice of a sample size of 50 per group to accomodate within-treatment dropout and short-term recidivism can still be realistically treated and will allow us to meet or better this statistical criterion.

However, given that the maximum possible length of follow up is about one year, and that recidivism is likely to be low during this first post-treatment year, this sample size may be insufficient to detect differences on this measure. It may be necessary to request longer term follow up if the data from the investigation warrant.

Descriptive data. Initially, to determine that the randomization procedure was effective, the following descriptive variables will be investigated: (1) age, (2) number of arrests for sexual crimes, (3) number of arrests for nonsexual crimes, (4) socioeconomic status, (5) IQ, (6) duration of deviant behavior, (7) number of victims, (8) marital status, and (9) drug and alcohol history. All continuous variables will be analyzed via independent t-tests comparing the experimental to the control group, will all nominal variables will be analyzed via chi-square procedures. If the groups are found to differ on any of these variables, the analysis related to between-group comparisons will be repeated using any significant descriptive variables as covariates to determine its influence on possible group outcome. Given the sample size, it is not expected that there will be any group differences on any of the descriptive variables listed above.

Between-group outcome data. In terms of evaluating differences between the two treatments, data will be collected from a number of sources including the client, the therapist, a significant other, and recidivism data. Also, within each of these data sources, a number of variables are being collected and these are outlined in Table 1 along with an analysis procedure for each subset of the data. All data referred to in this table, except for the clients' self-report data, are the data being collected at the regularly scheduled assessment periods: the pre-treatment baseline, following 20 weeks of treatment, following 38 weeks of treatment, and at the sixth and twelfth month of follow up (see Fig. 12).

The self-report data will be summarized as a weekly average for the preceding period. For example, for the baseline period this will represent the weekly average for each of the self-report variables for six weeks of baseline; for the first assessment period, this would represent the weekly average for the first 20 weeks of treatment, etc.

For each of the subsets of data, a similar Group X Assessment Periods repeated measures MANOVA is proposed for evaluating differences. In total, this will lead to six separate MANOVAs being conducted in addition to a chi-square analysis being performed on the recidivism data. Follow up analysis for significant MANOVAs will include Group X Treatment univariate ANOVAs and appropriate a posteriori tests for significant univariate ANOVAs.

In addition to the independent variables listed in Table 1, the erection data collected weekly in each group is available for between-group comparisons. Stimuli used in the weekly probes are different from those used during the regularly scheduled assessment periods. The scheduled assessments of erection data can be viewed as data related to generalization of treatment effects as the slide and audio assessment data listed in Table 1 come from the pre-treatment behavioral assessment battery. To analyze the weekly probes, two analytic procedures are proposed. First, during the first 20 weeks of treatment (which for the experimentals includes the behavioral treatment to reduce deviant arousal), the data will be averaged for three week periods (producing six repeated measures) for maximum arousal to both deviant and nondeviant stimuli. These two measures will be analyzed via separate Group X Trials ANOVAs. This analysis will allow tracking of changes in arousal during the treatment component that is most likely to impact on these variables. Secondly, as with the self-report data, a weekly average will be computed for each of the segments of the study (Phase 1, 20 weeks; Phase 2, 18 weeks; Phase 3, six months; Phase 3, 12 months) for both deviant and nondeviant arousal and subjected to a Group X Trials ANOVA. This analysis will permit comparisons with the generalization data collected at each regularly scheduled assessment period. All significant ANOVAs will be further analyzed via appropriate a posteriori procedures.

Justification for the above analysis plan, like the determination of sample size, represents a balancing of the realities of clinical studies versus statistical purity. Attempts have been made to minimize the number of analyses performed on the data set by grouping variables as presented in Table 1. It is recognized that this analysis plan still requires multiple analyses on the data set and that for at least two of the MANOVAs (client psychometrics and therapist data) the sample size is somewhat small for the number of variables assessed. However, we feel that the groupings of variables are logical and significant MANOVAs would be clearly interpretable within the limitations of any clinical investigation.

Within-group outcome data. Here we are interested in the extent to which each of the types of therapy led to changes in variables thought to be important for that specific treatment. Data for this question are drawn from the GAS scores for the experimental group and the TAG scores for the control group. It must be emphasized that the purpose of this analysis is not to make comparisons between groups but only to provide some data on whether changes occurred in the processes supposedly being targeted by the various therapies. Therefore, since the GAS and TAG scores are not equivalent nor are the therapeutic procedures used between groups or even within the various treatment components of the experimental group no attempt will be made to provide parallel or between-groups statistical analyses.

For the experimental group during Phases 1 and 2, a randomized block ANOVA will be performed comparing the weekly mean scores from the GASs for each of the components. Separate comparisons will be made across the blocks for RET-1, RET-2, SIT-1, SIT-2 and RP-1. For Phase 3, GAS scores will be averaged for two month periods and similarly analyzed by a randomized block ANOVA. For the control group, TAG scores will be similarly analyzed by a randomized block ANOVA. However, for Phases 1 and 2, TAG scores will be averaged for three week periods and for Phase 3, averaged over two months, providing six data points within each phase.

Treatment integrity. The question here is whether therapy was delivered in accordance with treatment manual specifications and is based on the expert consultants' ratings of videotaped samples of therapy. For this set of data, the means of the expert ratings for each of the treatment components will be presented. For the experimental group, the mean ratings will be presented for RET-1, RET-2, RET-3, SIT-1, SIT-2, RP-1 and RP-2. For the control group, the means of the expert ratings will be presented in six-week intervals for Phases 1 and 2, similar to the six-week intervals for the experimentals in these two phases. A single mean integrity score will be presented for Phase 3, again similar to the Phase 3 data for the experimental group. No attempt will be made to statistically analyze these data as their major purpose is

to describe the extent to which therapy is being implemented as designed and to provide feedback to the investigators so that therapists may be retrained or replaced if mean values fall below 7 on the 9-point rating scale.

Prediction of recidivism. The final analysis of the project will be of the Prediction of Recidivism rating form (see Appendix II). Initially, to reduce the number of items that must be considered, the responses to this 22-item scale for the 100 subjects will be factor analyzed with orthogonal rotation and factor scores will be calculated for each subject for factors with eigenvalues greater than 1. Factor scores for each client will then be submitted to a discriminate function analysis. For this analysis, a priori recidivism rates will be set using the best data in the literature at the time the analysis is conducted. It is recognized that, due to the relatively small sample size, the results of this analysis may have to be considered tentative and may need future replication. However, since some of the variables have been found positive in previous studies, this analysis will also provide the opportunity to replicate or not replicate previous research. This in and of itself may provide important information with implications for treatment recommendations in this group of clients.

Table 1

Between-Group Outcome Data

<u>Dependent variable</u>	<u># Variables</u>	<u>Analysis</u>
A. <u>Erection data</u>		
1. Deviant stimuli		
a. Slide assessment	1	Grp (2) X Assmt
b. Audio assessment	1	Pds (5) MANOVA
2. Nondeviant stimuli		
a. Slide assessment	1	Grp (2) X Assmt
b. Audio assessment	1	Pds (5) MANOVA
B. <u>Client self-report (wkly mean preceding period)</u>		
1. % deviant fantasies	1	Grp (2) X Assmt
2. % deviant masturbation	1	Pds (5) MANOVA
3. Freq incidents w/physical contact	1	
C. <u>Client psychometrics</u>		
1. SCL-90	6	Grp (2) X Assmt
2. Global imprv rating scale	1	Pds (5) MANOVA
3. Self-efficacy scales	3	
D. <u>Therapist data</u>		
1. Brief Hopkins psychiatric rating scale	6	Grp (2) X Assmt
2. Global imprv rating scale	1	Pds (5) MANOVA
3. Rating scale for therapy outcome	3	
E. <u>Significant other</u>		
1. Katz adjustment scales	5	Grp (2) X Assmt
		Pds (5) MANOVA
F. <u>Recidivism</u>		
1. Recidivism predictor	1	Chi-square

V. Human subjects.

Subjects. There is only one class of participants in this investigation.

Outpatient sex offenders (N = 100). These are males, 18-40 years of age, of mostly caucasian background, in satisfactory health, with no evidence of psychotic mental illness. They will be self-referred, or referred from departments of probation and parole, attorneys, physicians, psychiatrists, psychologists, social workers, marriage and family counselors, or children and family service agencies. Some of these persons will be convicted offenders but no one will be accepted against whom charges are pending or as a condition of probation or parole. Informed consent should pose no problem.

Recruitment. Clients will be directly referred to the Florida Mental Health Institute. Numerous community agencies have shown considerable interest in referring clients and no problem is anticipated in the flow of referrals. Existing referral sources could be supplemented by newspaper advertisements or radio and TV spots.

Compensation. All assessment and treatment through Phase 2 will be provided free of charge to all clients. During the long-term follow up period (up to 52 weeks) both experimental and control clients will be reimbursed at the rate of \$10.00 per follow up session. This is intended to defray costs of coming to the session. Provided that the client appears for all sessions within a given month he will also receive a bonus of \$25.00 per month.

Informed consent. Consents will be obtained at the following points: (1) pre-treatment determination of eligibility, (2) baseline assessment, (3) Phase 1, basic treatment, (4) Phase 2, relapse prevention, short-term, and (5) Phase 3, relapse prevention, long-term. The consent forms state specifically what the client will experience in each period. Documentation of consent will be provided by a witness countersigning with the client and a treating staff person. Each staff person will also give general consent in which he/she acknowledges the hazards of working with sex offenders. An example of a general consent may be seen in Appendix III.

Potential risks

Physical risk. No client is seriously at risk for physical injury in this project. A low intensity risk would be transmission of venereal disease via the penile transducer. All transducers are therefore cleaned after use with a powerful germicidal agent, Cidex-7. In working with over 450 sex offenders in 8 1/2 years we have never seen a single case of venereal disease transmission.

A very high intensity risk would be transmission of the AIDS virus via spilled semen. We mentioned under entry criteria above that any client testing positive for the

virus would be excluded from the project. While this is probably an event of very low probability we think it prudent to guard against it. Therefore, during any sessions where ejaculation of semen is certain (masturbatory satiation) or possible (early assessment sessions) the client will wear a condom. At the end of the session the condom will be disposed of according to standard hazardous substance procedures.

Psychological risk. There is a small psychological risk in performing erection assessments with offenders. This usually takes the form of (1) producing more arousal to deviant stimuli than the client expected, and/or (2) responding to a category of deviant stimuli unexpectedly, e.g., violence. Experience has taught that this "surprise" is usually part of the denial process and that this event is often quite useful in breaking up these distortions.

Social risk. There is a continuing risk that an outpatient offender will reoffend despite one's best efforts and we expect this to happen. This is the reason that both experimental and control treatments require such high intensity involvement with treatment staff and activities.

The social risk of performing sex research in the community is that knowledge of the activity will invite criticism from community members. The best way to handle this problem is to invite critics to directly examine what we are doing and encourage their comment and input. It is extremely important for the community to understand why we are treating sex offenders in this special fashion. Effective vehicles for accomplishing this goal include: promotional videotapes, public talks to parent/teacher organizations, victim worker groups, feminist organizations, public service organizations, newspaper and television interviews.

Legal risk. It is likely that some offender clients will participate in the project while they are actively engaging in the commission of offenses and will not divulge this even though confidentiality has been assured. We could thus become involved with legal authorities should one of them be arrested. We do not expect this to happen as we will be protected by a Federal confidentiality certificate.

Alternative methods. In order to gain the sort of information we require from assessment, there are no better existing methods of procedure. We propose to validate procedures already in use, perform needed revisions of some of these, and produce new procedures to broaden the scope of behavioral assessment. All of these are superior to existing methods of psychological testing, interview, and self-report.

The major alternatives available for the treatment of sex offenders are psychodynamically-based individual and/or group therapies. Too frequently these treatments are very time consuming and do not address the central problem of

deviant sexual interests and behaviors. These approaches have produced no persuasive evidence that they effectively impact upon the problems of sex offenders. Alternatively we are offering state of the art behavioral treatments known to affect deviant sexual arousal and interests, and cognitive-behavioral treatments modified to specifically address cognitive disorders present in most sex offenders.

Minimizing risk. The informed consent states that staff assistance is available at any time to deal with ... problems as they occur. If the offender is willing to report that he is having difficulty or is in a crisis situation, we believe that intervention as soon as possible can minimize further risks at that point.

There are, of course, considerable risks to the client in providing some of the data we seek and this information must be protected. While the project is conducted under the auspices of the Florida Mental Health Institute it will actually be conducted at a separate location off the campus of the University of South Florida. All data will be kept at the performance site in locked files. These data, physiological and subjective, will be coded to separate the client's identity from them. All client identity information, e.g., name, address, place of employment, telephone number(s), will be kept in a safe at the Florida Mental Health Institute, and only the PI, co-PI, and the Director, FMHI will be able to access it. Therefore, should any data be lost, seized, subpoenaed, or otherwise escape our control at the performance site, there will be no way to connect client identity to the data except by appeal to the PI or co-PI who will invoke the confidentiality certificate to protect them.

Benefits to subjects. The tangible benefits are two. First, the clients have here a rare opportunity to learn a considerable amount about themselves as social and sexual persons. Second, for many clients that information will be profoundly disappointing, and they will have the additional opportunity to do something about it, to directly intervene in their destructive and self-defeating lifestyles in a positive and constructive way.

Risk/benefit. The central risk is that some of the clients will inevitably reoffend during the project. Offenders actively participating in directive, interventionistic treatment are less likely to do this than those receiving indirect, ill-focused treatment, or no treatment at all. The risk, although undesirable at any magnitude, is small and the benefits to society of performing the research are considerable. In this project we are: (1) testing the effectiveness of behavioral and cognitive-behavioral treatment packages designed to forestall or eliminate recidivism, (2) examining whether high density treatment activity in a long-term follow up is more effective than traditional treatment followed up by traditional procedures, (3) validating existing assessment procedures and creating new ones, and (4) making the initial

steps toward the provision of a framework to explain how deviant sexual behavior is acquired and maintained in adult males, in the hope of eventually defining early points of intervention to slow down or halt this process.

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FIGURE 1

INDIVIDUAL ERECTION RESPONSE PROFILE SLIDE ASSESSMENT PEDOPHILIA, FEMALE  
MALE SLIDE CATEGORY FEMALE SLIDE CATEGORY

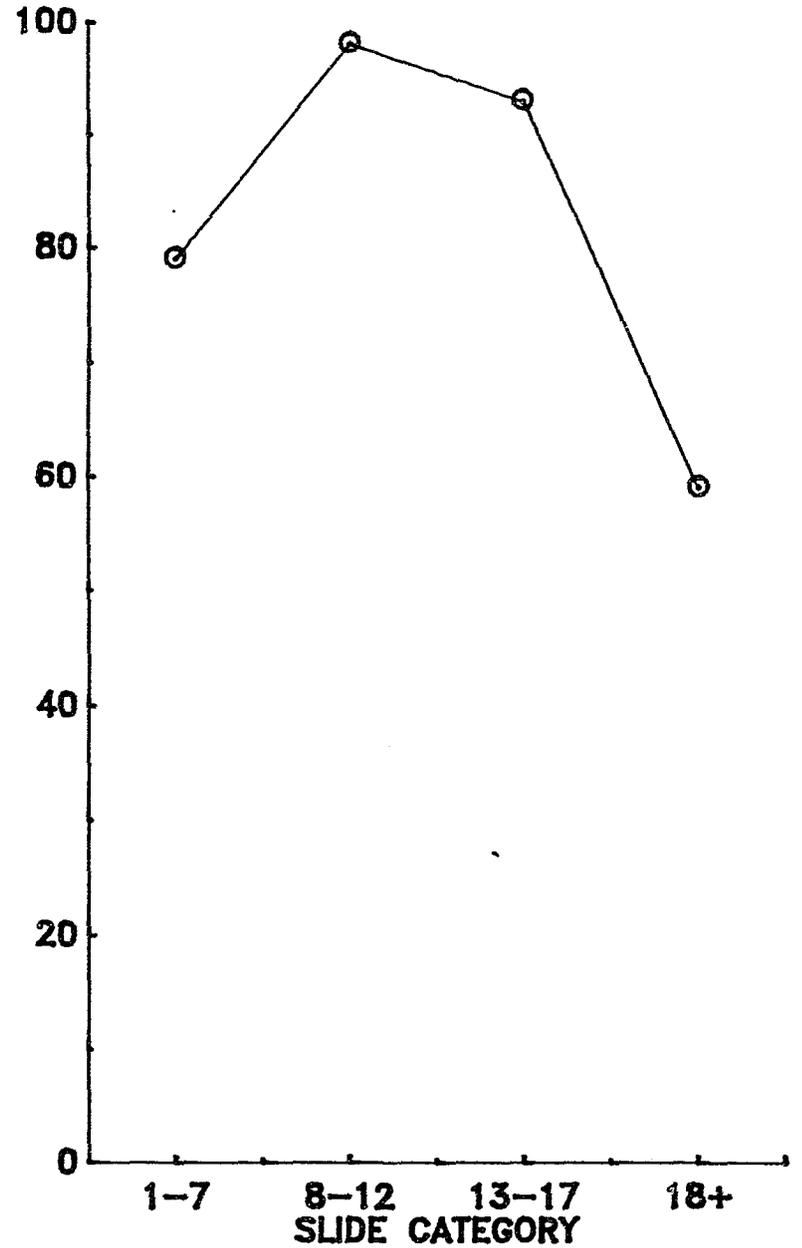
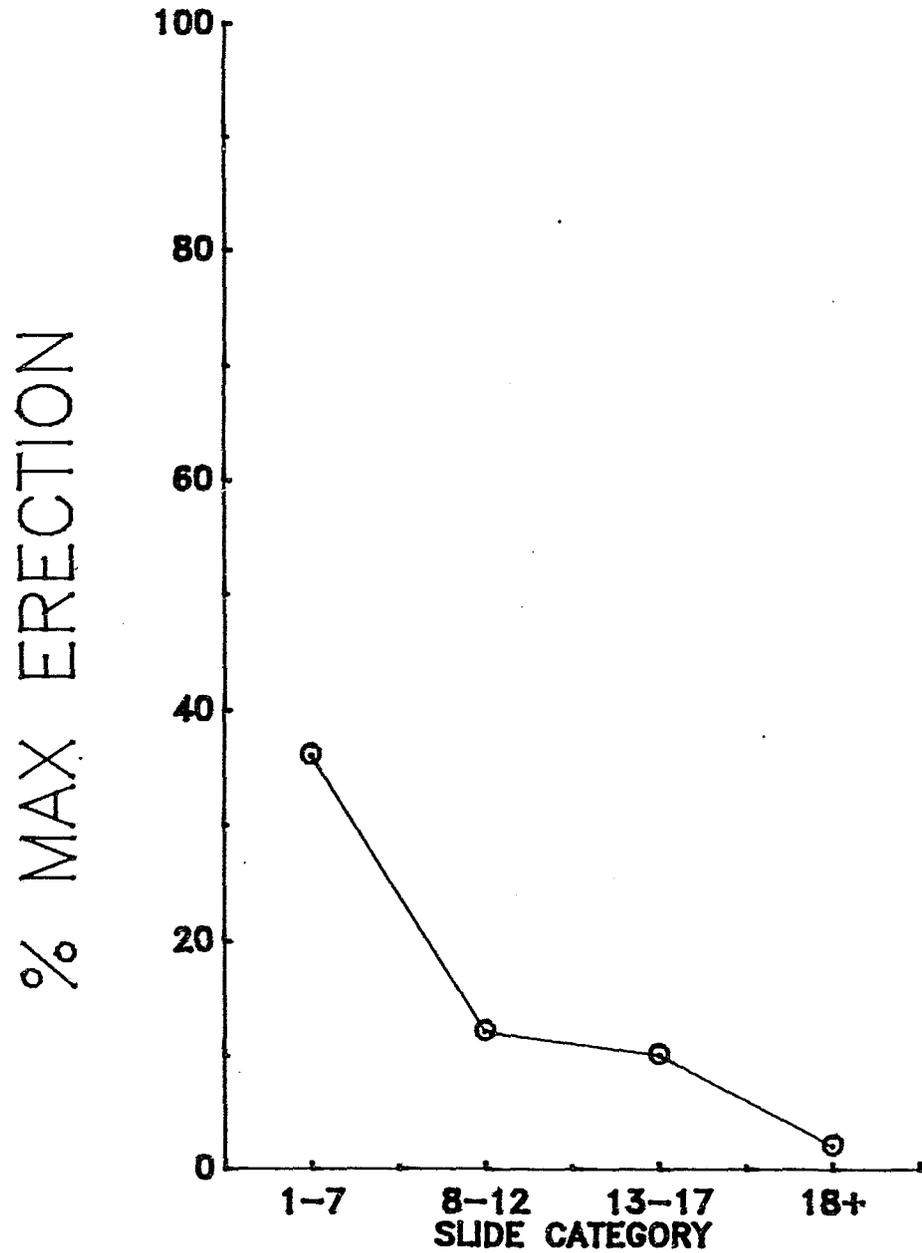
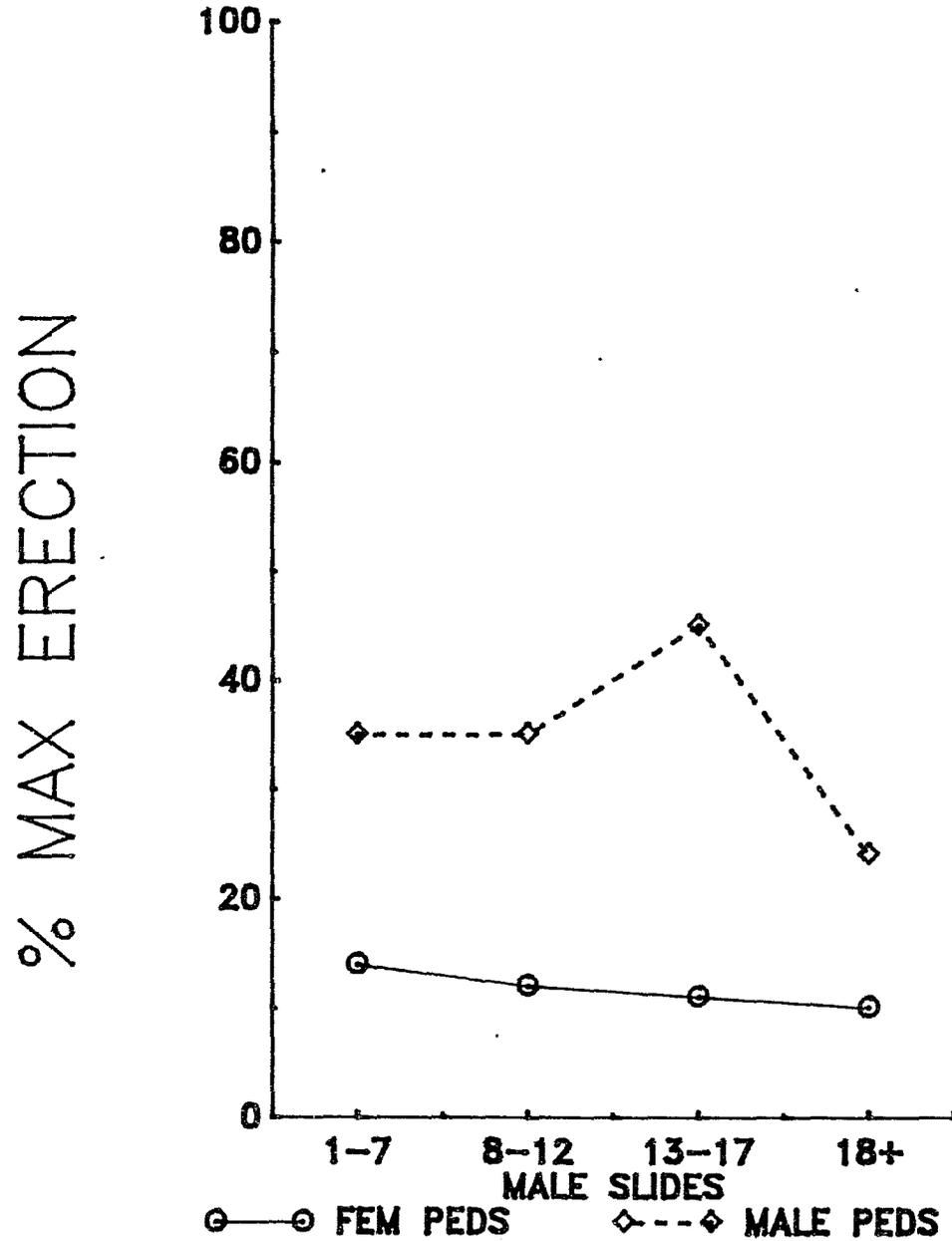


FIGURE 2

GROUP DATA, SLIDE ASSESSMENT  
MALE PEDOPHILES(N=11)



GROUP DATA, SLIDE ASSESSMENT  
FEMALE PEDOPHILES(N=8)

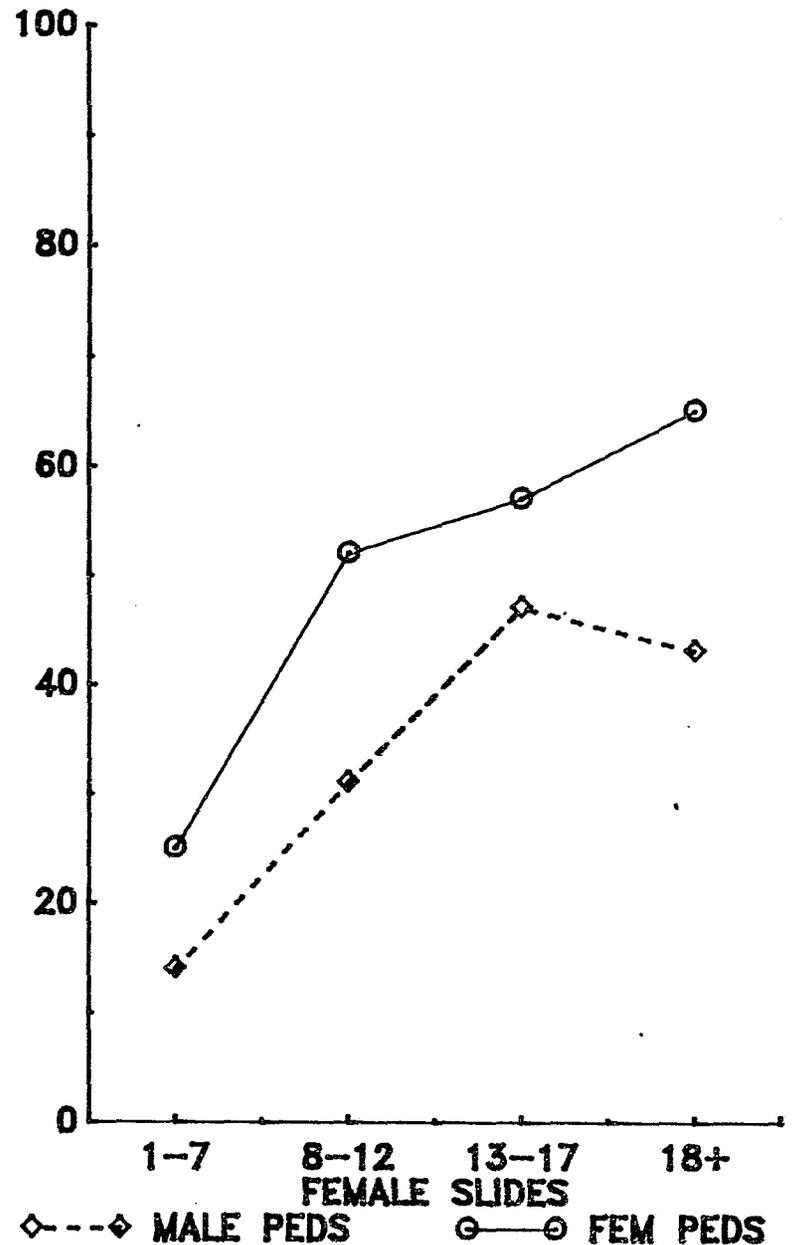


FIGURE 3. SLIDE ASSESSMENT  
TARGET CATEGORIES COLLAPSED INTO SINGLE CATEGORIES

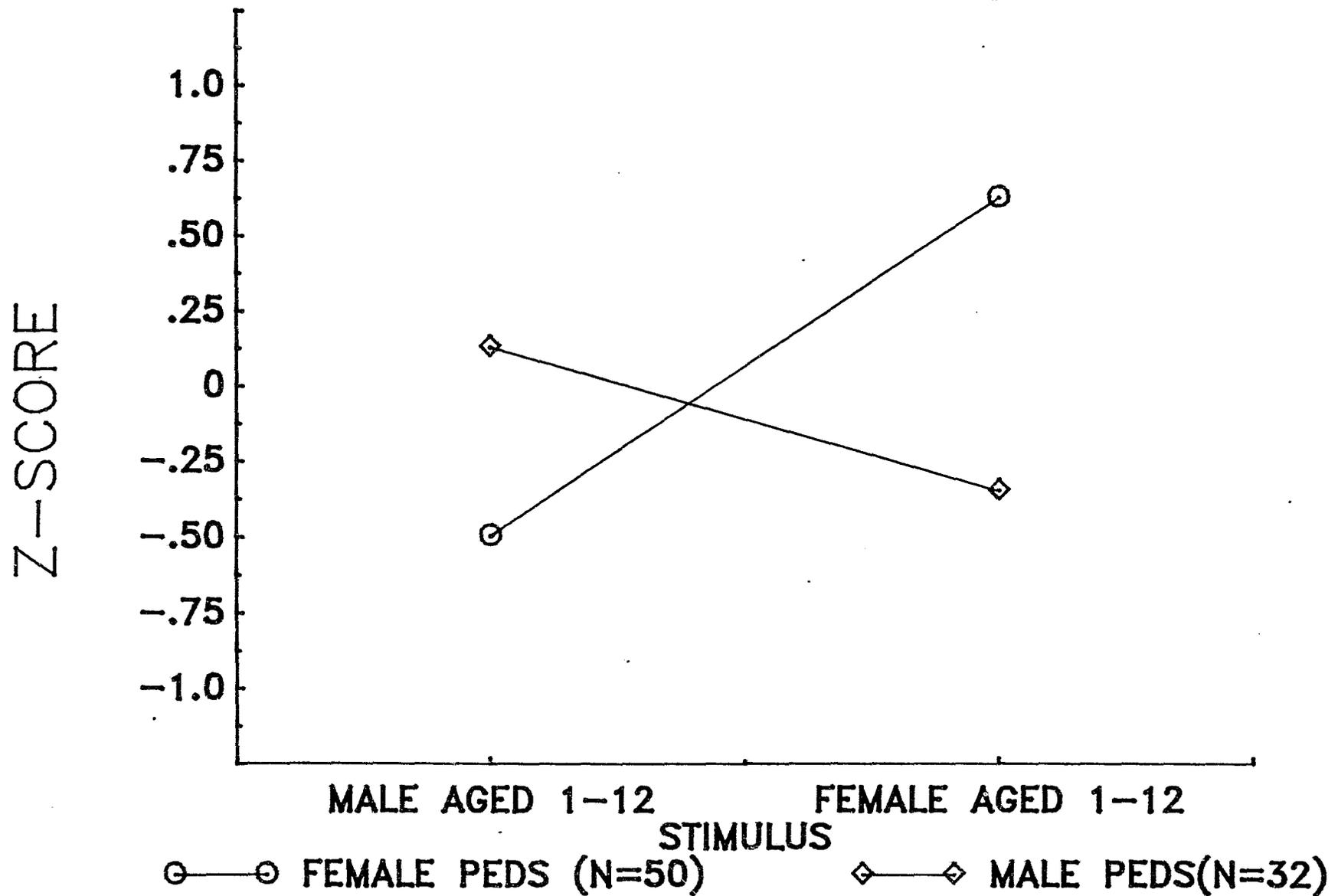
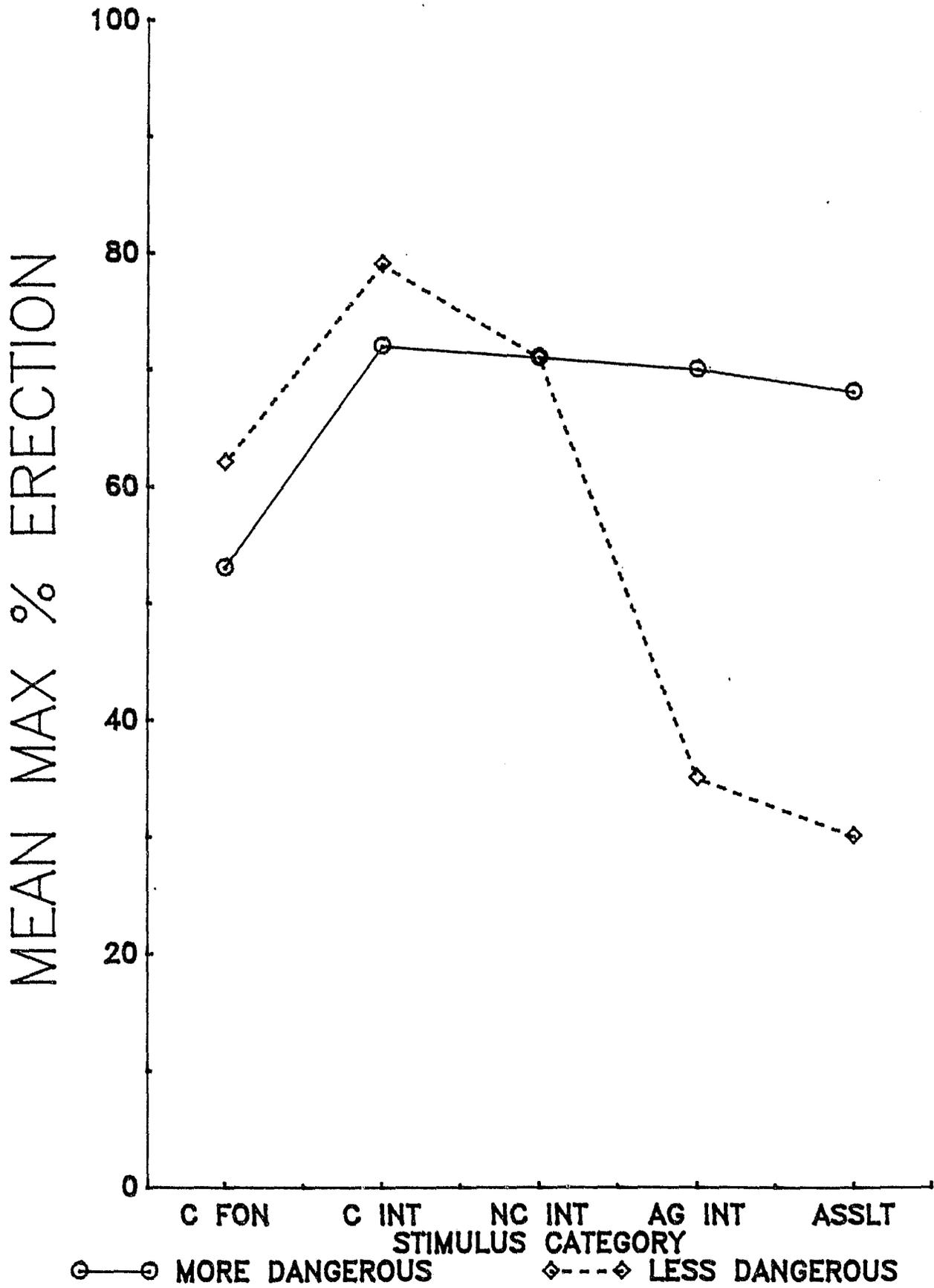


FIGURE 4  
PEDOPHILE AUDIO ASSESSMENT



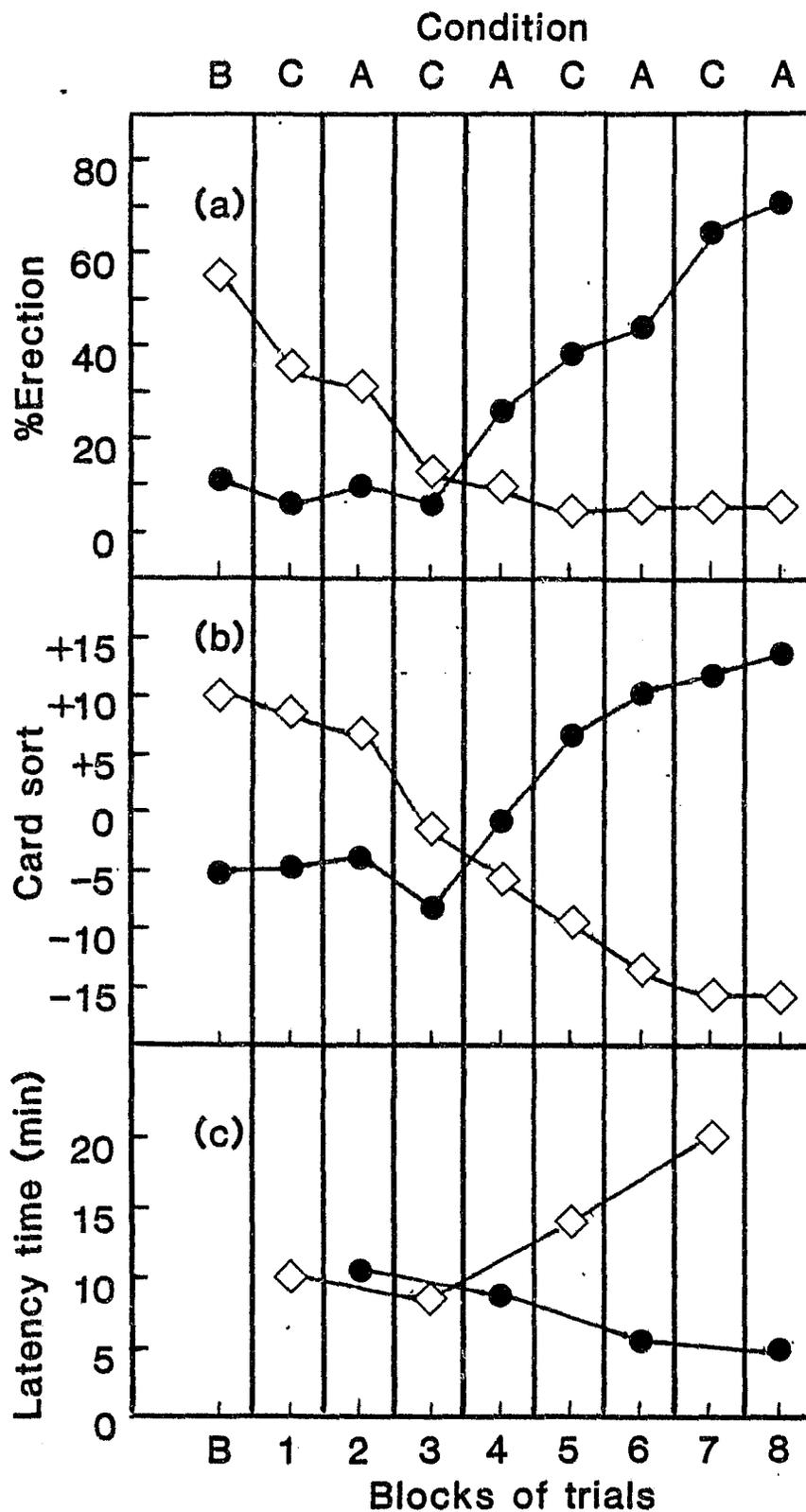


FIGURE 5. Erections to slide stimuli, card sort, and latency data from measurement sessions (VanDeventer and Laws, 1978).  $\diamond$  Deviant stimuli;  $\bullet$  Nondeviant stimuli. Center panel shows card sort data used in conjunction with objective measures.

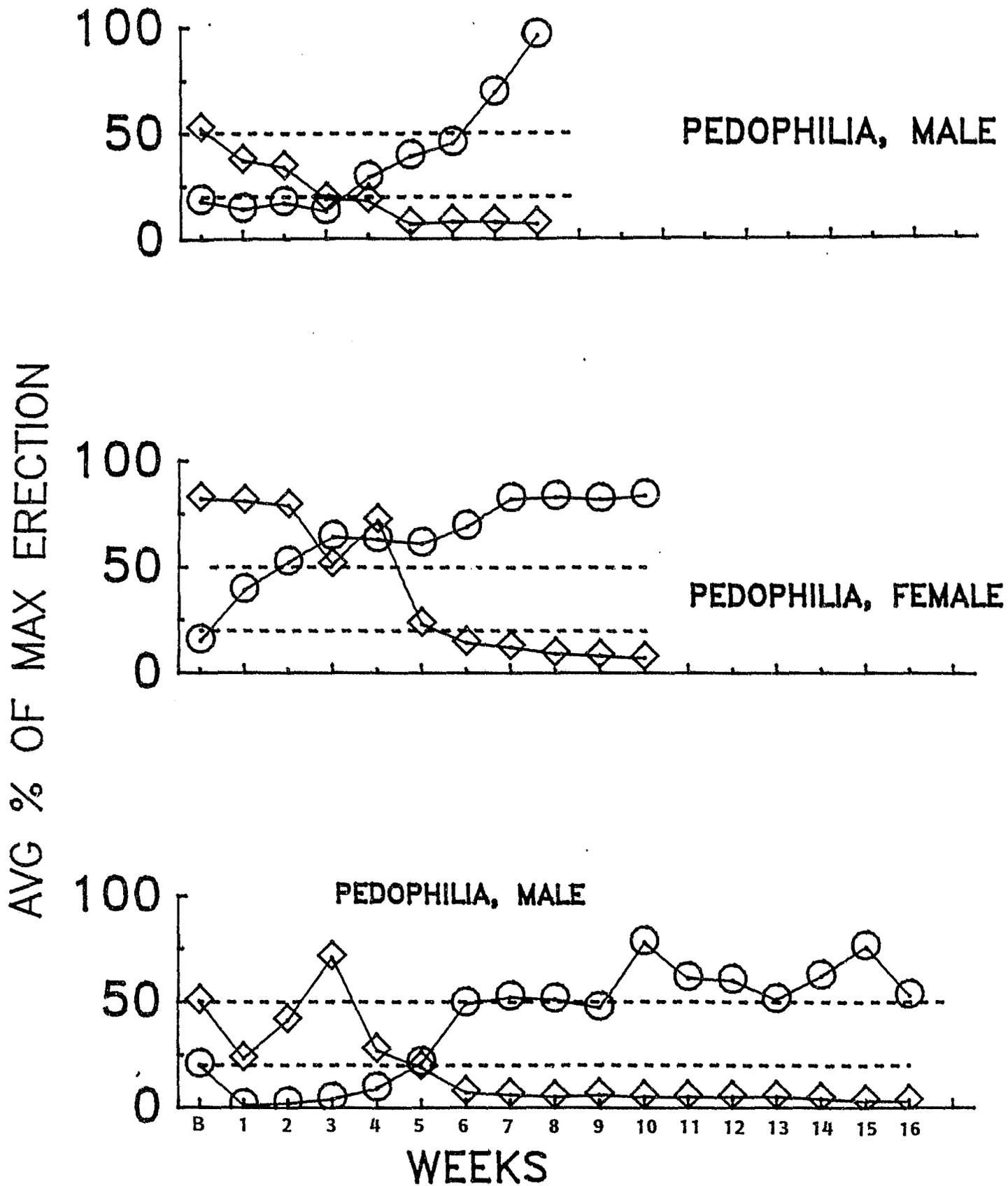
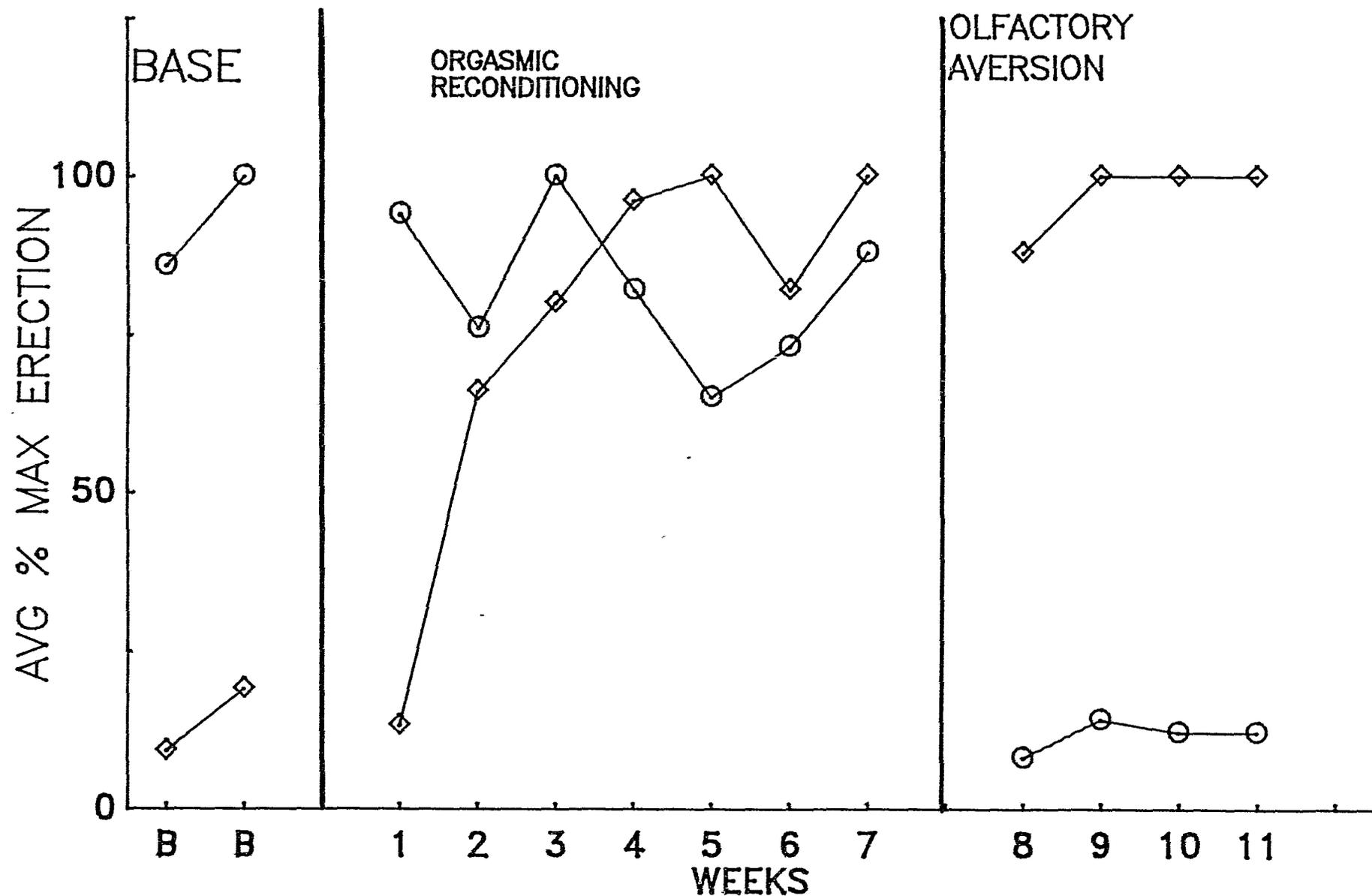


FIGURE 6. ORGASMIC RECONDITIONING: ALTERNATING FANTASY METHOD  
 MULTIPLE BASELINE ACROSS SUBJECTS.  
 DOTTED LINES INDICATE TERMINAL CRITERIA

FIGURE 7. ORGASMIC RECONDITIONING FOLLOWED BY OLFACTORY AVERSION. PEDOPHILIA, FEMALE



AVG % MAX ERECTION

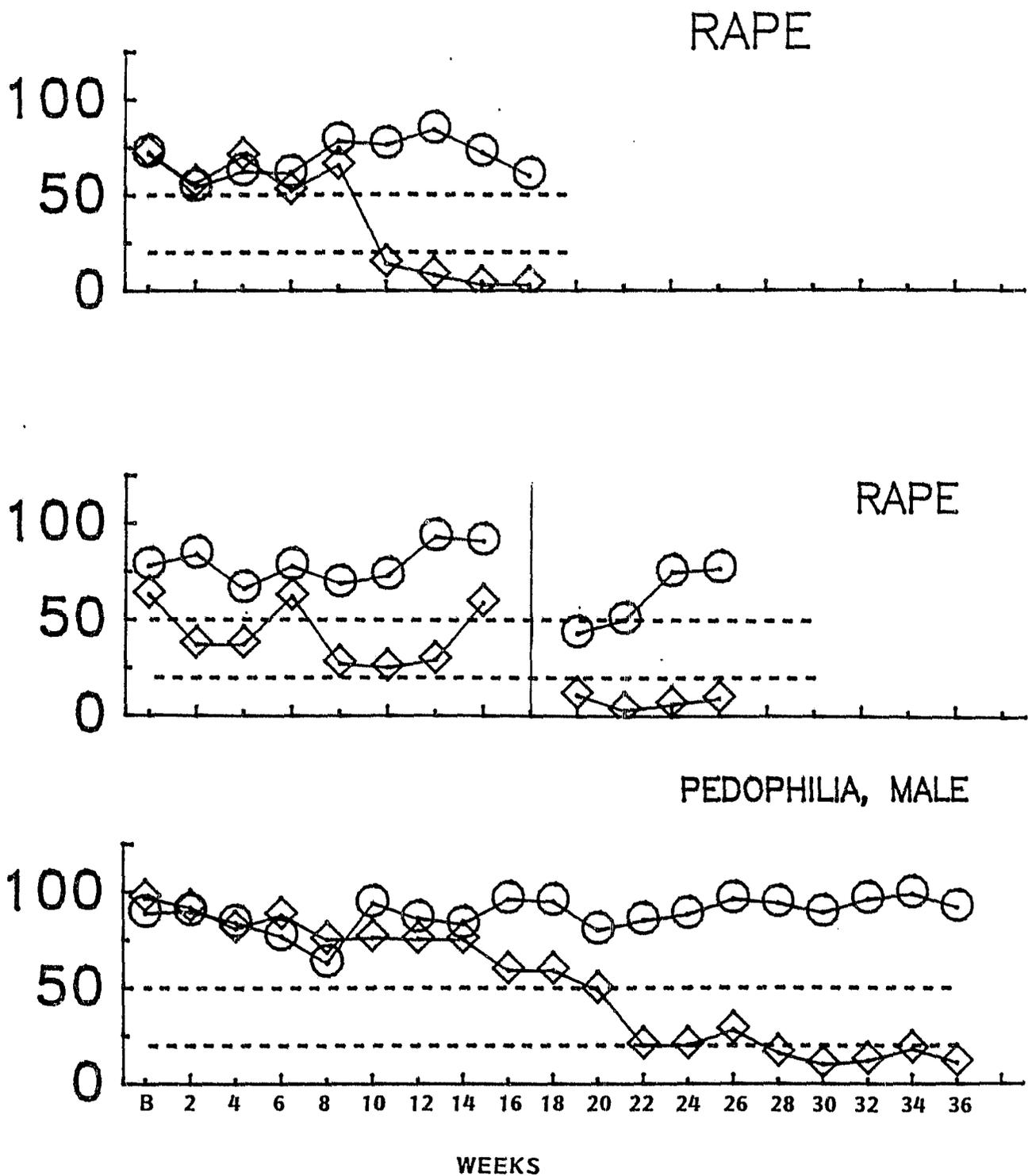


FIGURE 8. ORGASMIC RECONDITIONING: SATIATION METHOD. DATA AS MULTIPLE BASELINE ACROSS SUBJECTS. DOTTED LINES INDICATE TERMINAL CRITERIA.

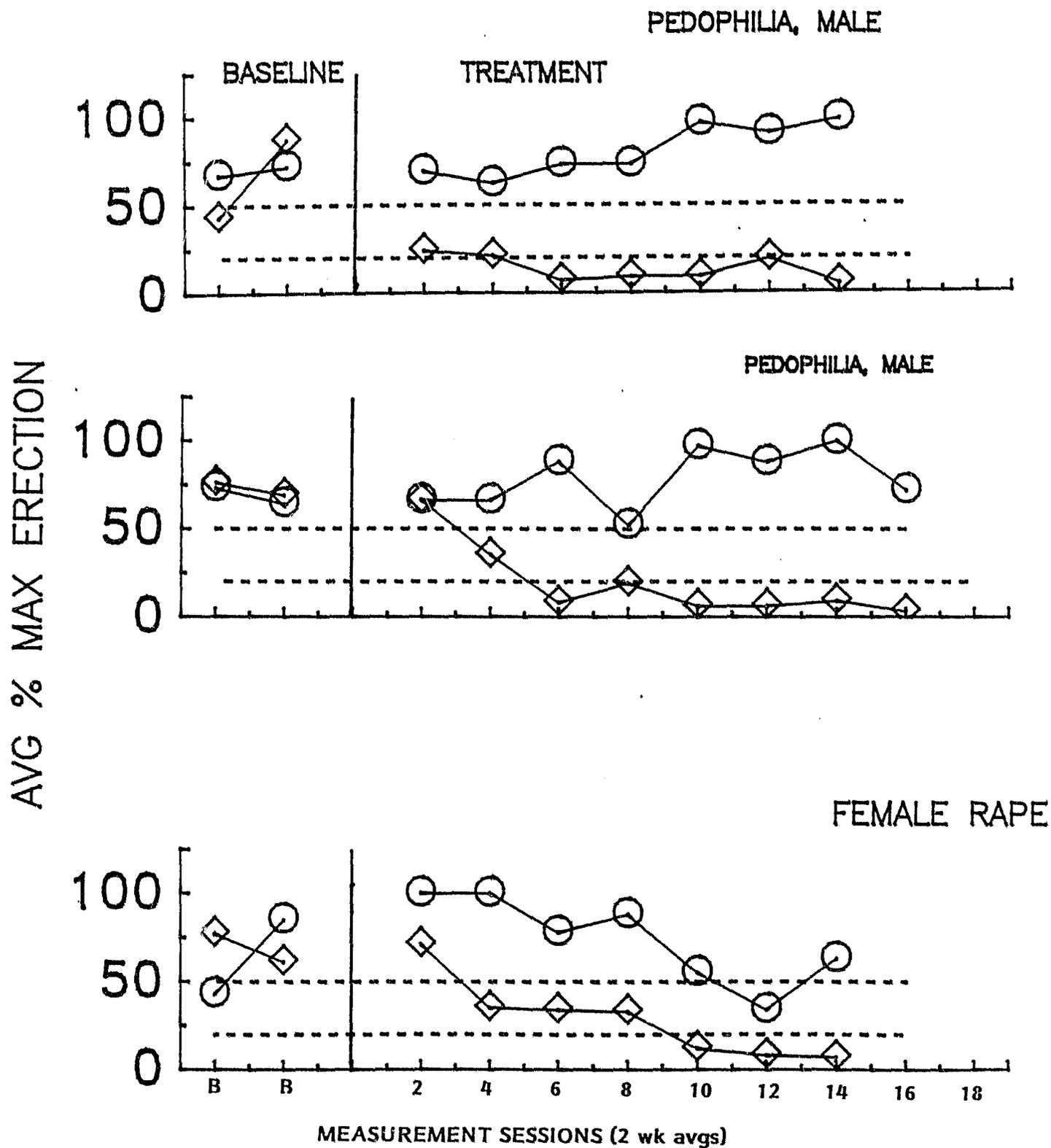
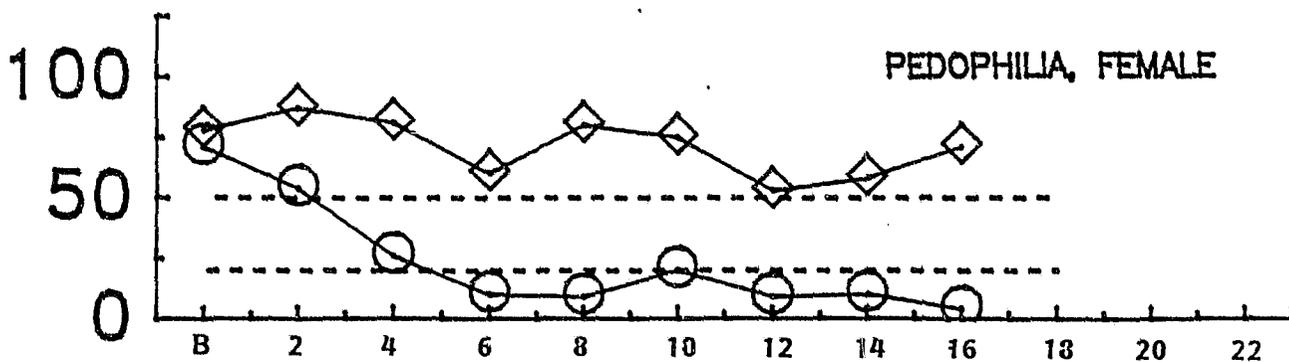
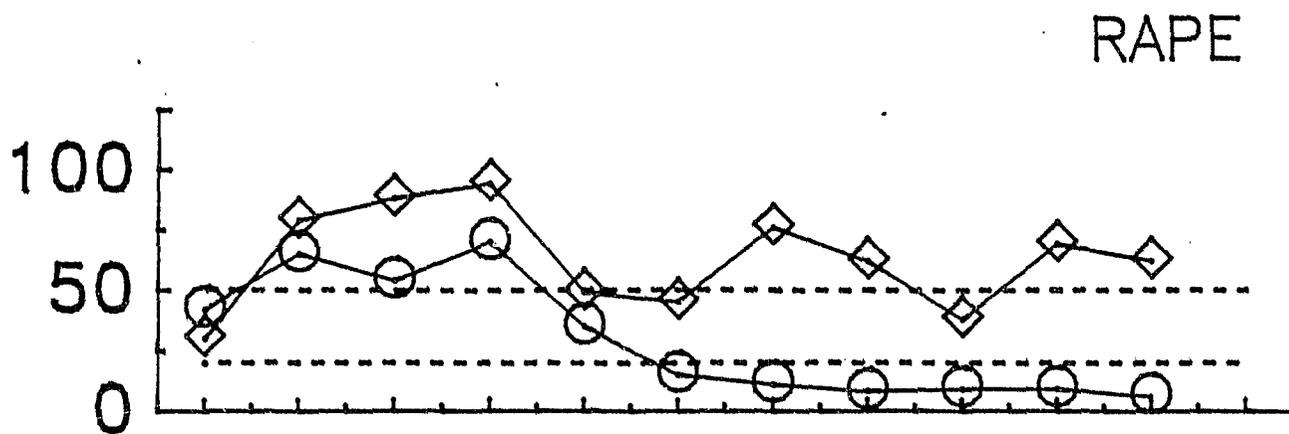
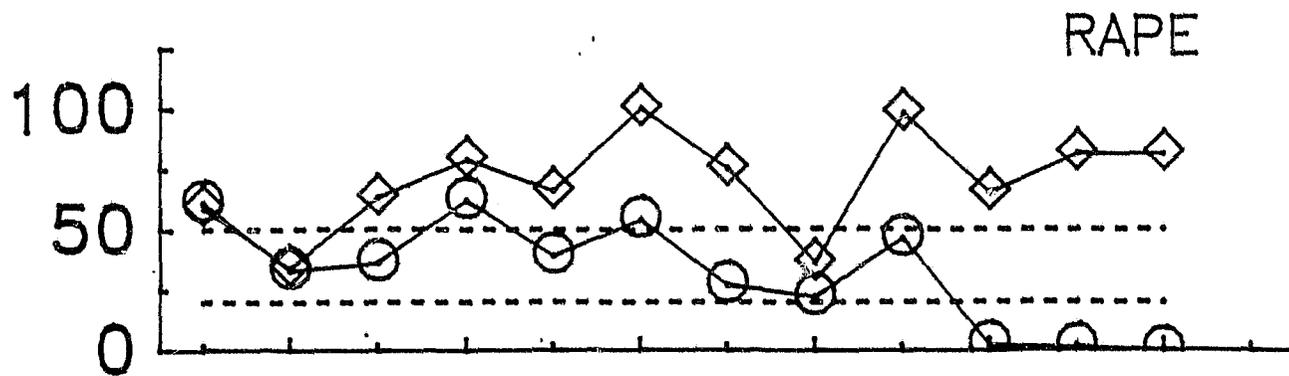


FIGURE 9. OLFACTORY AVERSION MULTIPLE BASELINE ACROSS SUBJECTS.

DOTTED LINES INDICATE TERMINAL CRITERIA

AVG % MAX ERECTION



WEEKS

FIGURE 10. VERBAL SATIATION  
MULTIPLE BASELINE ACROSS SUBJECTS.  
DOTTED LINES INDICATE TERMINAL CRITERIA

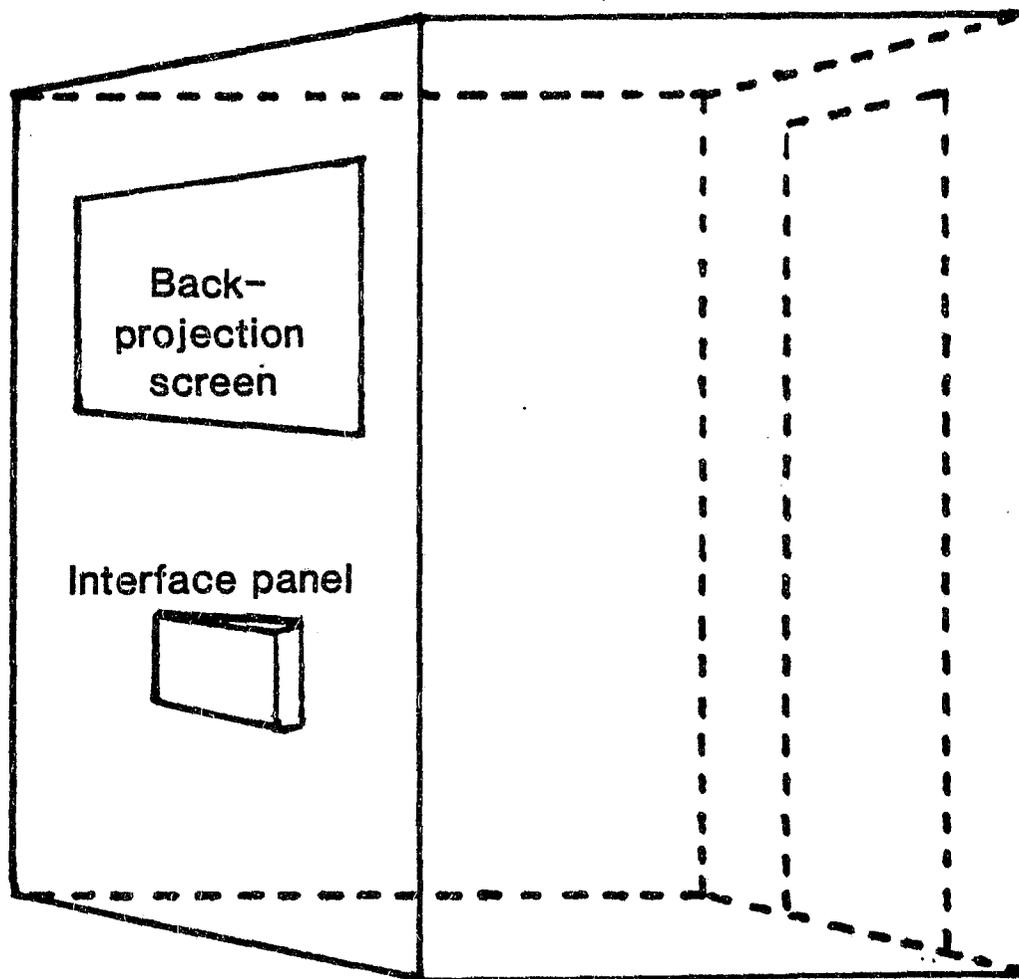
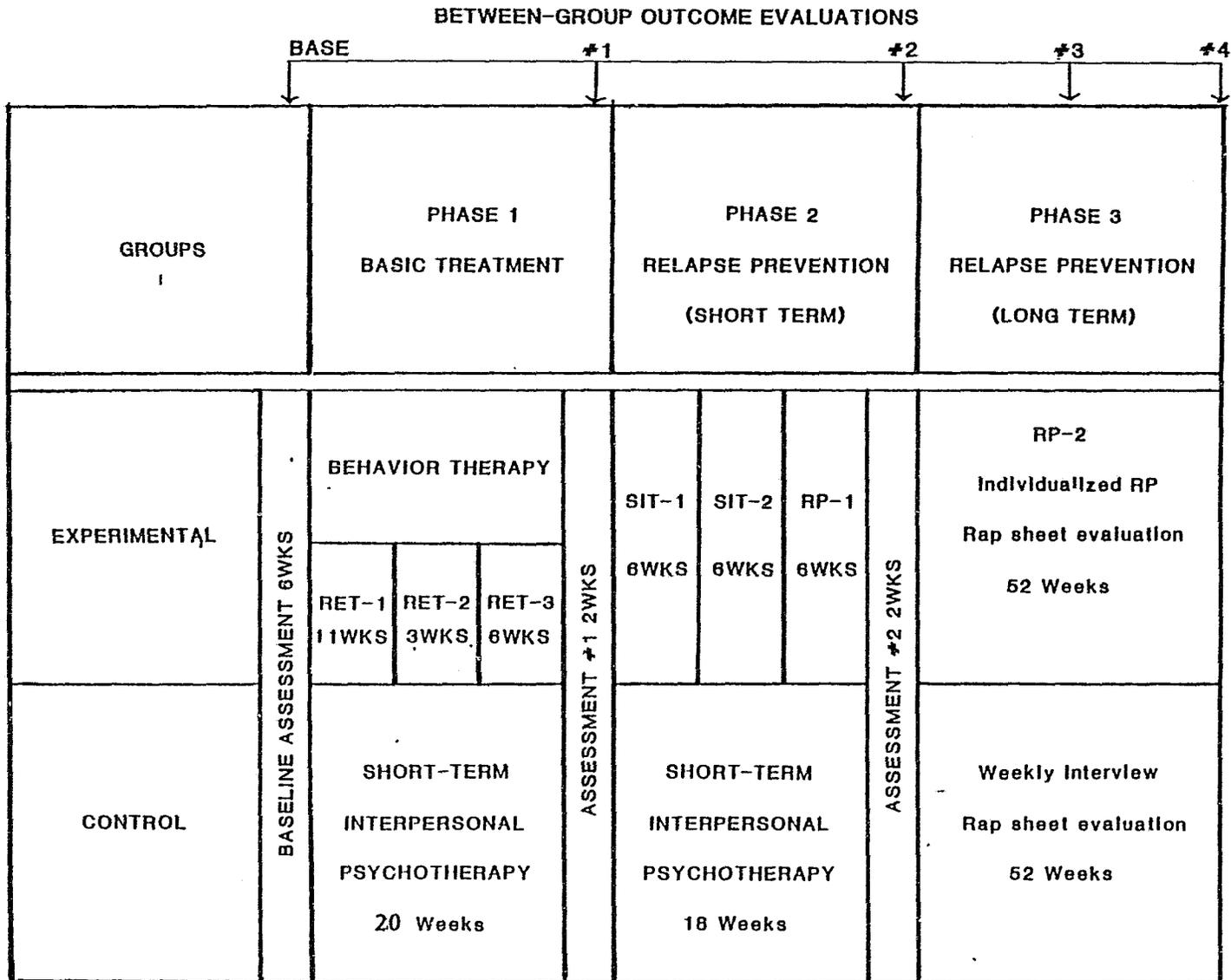


FIGURE 11 Portable subject enclosure (proposed). Dimensions are 4ft x 5ft x 7ft.

# FIGURE 12

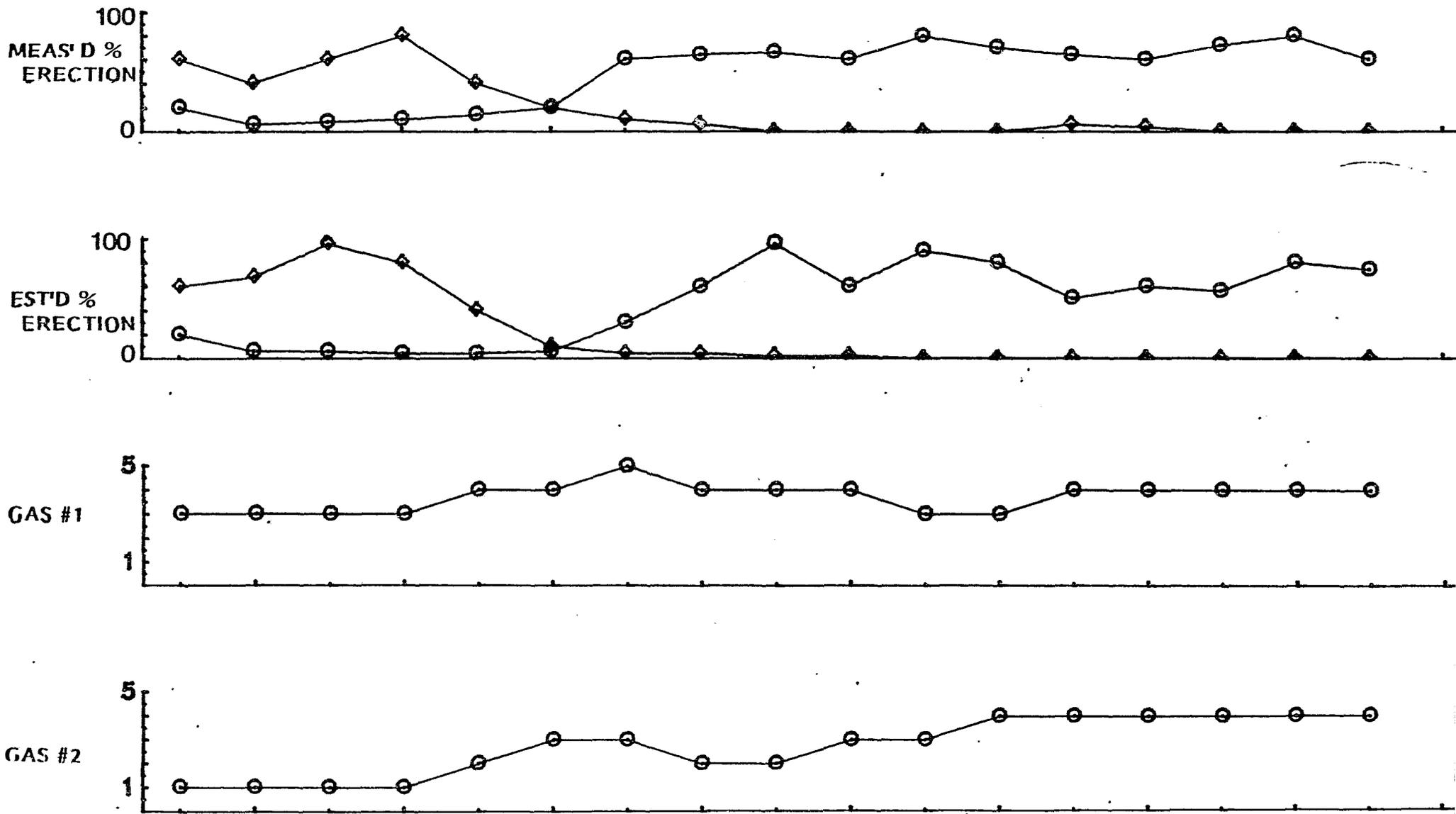
## ASSESSMENT/TREATMENT DESIGN

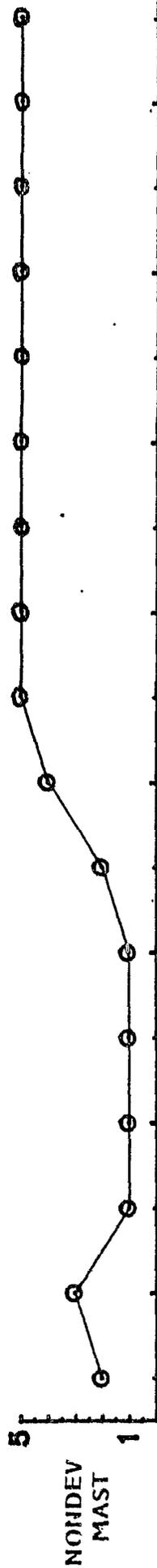
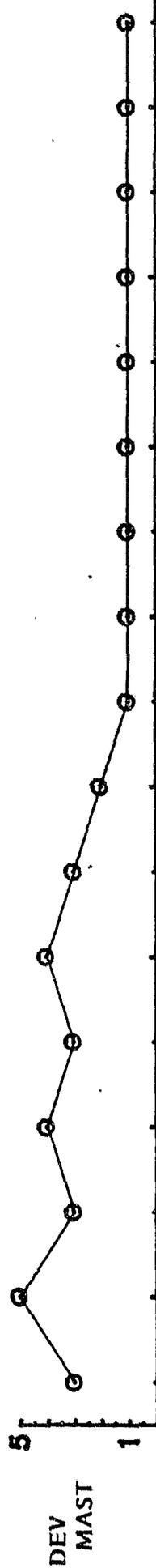
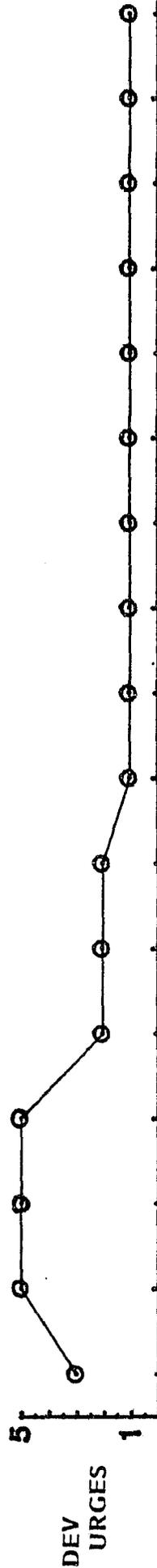
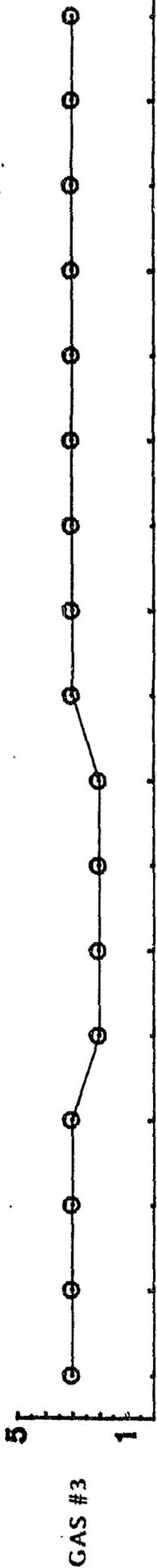


- Daily self-reporting continues throughout project for both groups
- Weekly erection measurement continues throughout project for both groups
- All interventions are equalized for time in therapist contact

ASSMT #3, 2WKS →  
 6mos.  
 ASSMT #4, 2WKS →  
 12mos.

FIGURE 13. HYPOTHETICAL DATA: BEHAVIOR THERAPY + RATIONAL-EMOTIVE THERAPY + SELF-REPORT





B 1 5 10 15

WEEKS

FIGURE 14

Hypothetical IPT rating sheet\*

Time on topic codes:    0 = None            1 = Brief            2 = Moderate            3 = Sustained  
                                   ( 3 min)            (3-5 min)            (6-15 min)            ( 15 min)

TAG scores and techniques:

<u>Technique</u>	<u>TAG Score</u>
<u>Descriptive</u>	
Nonjudgmental exploration	1
Elicitation of material	2
Clarification	3
<u>Reflective</u>	
Direct advice	4
Decision analysis	5
Awareness (insight)	5

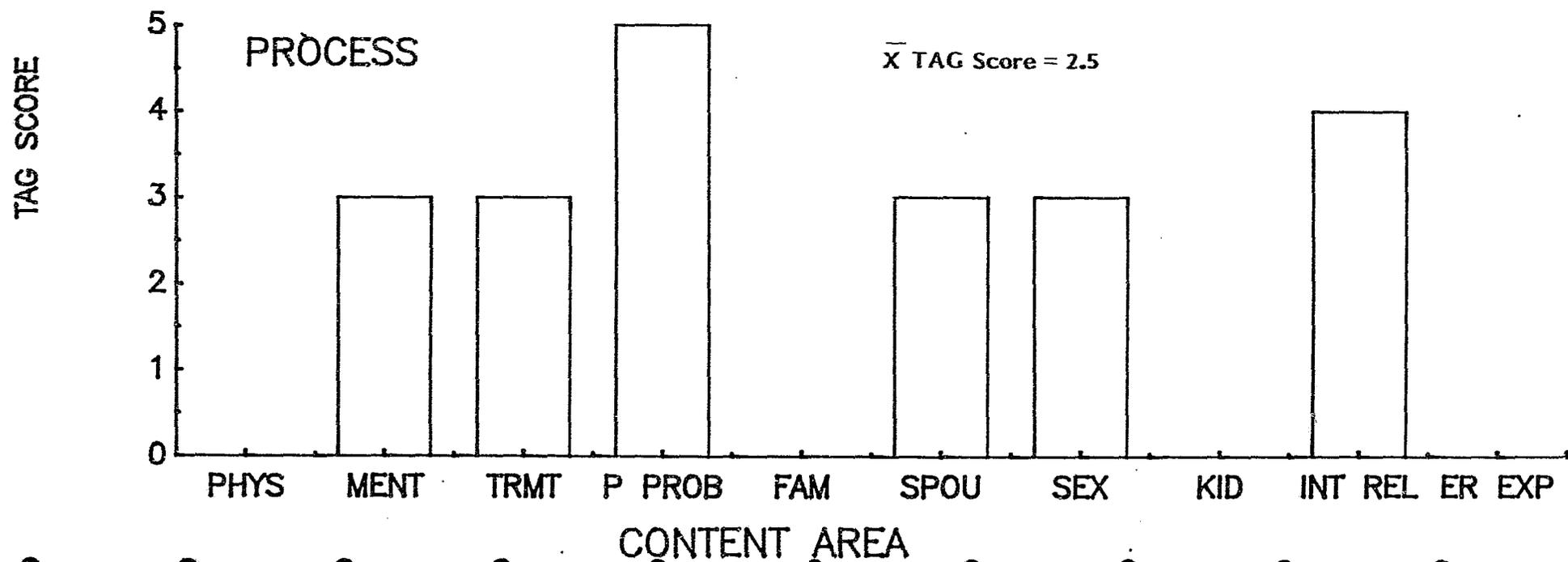
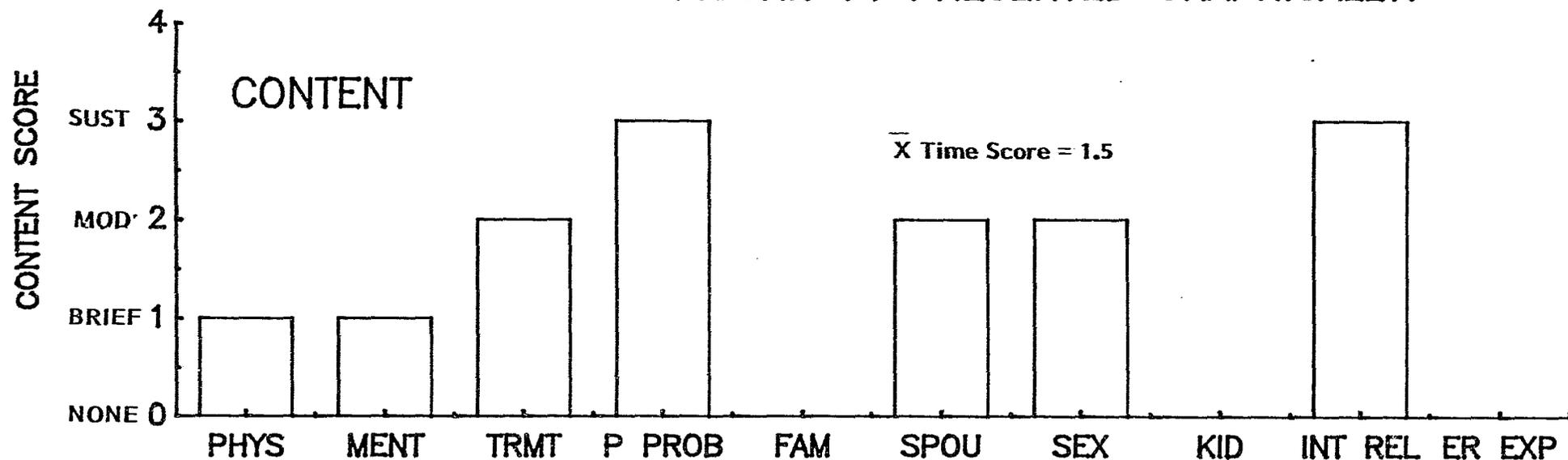
<u>Topic</u>	<u>Time in Session</u>	<u>Topic TAG</u>
1. Physical symptoms	1	1
2. Mental symptoms	1	3
3. Current treatment	2	3
4. Practical problems	3	5
5. Family of origin	0	1
6. Spouse	2	5
7. Sex	2	3
8. Children	1	1
9. Interpersonal relations	3	4
10. Early experiences	<u>0</u>	<u>1</u>
	15	25

Session TAG = 25 : 10 = 2.5

Content score =    : 10 = 1.5

\* Modified version of Neu, Prusoff and Klerman (1978) and Weissman, Prusoff and Paykel (1972).

FIGURE 15. HYPOTHETICAL DATA OF  
FIGURE 14 PRESENTED GRAPHICALLY.



Florida Mental Health Institute  
STATEMENT OF INFORMED CONSENT (CLIENTS)

I have been referred/am referring myself to the Florida Mental Health Institute for evaluation and treatment of a sex-related problem. I understand that I will be asked to participate in a research program which may change the way I think about sex and the way I act in my sexual behavior. It has been explained to me that the purpose of this research is to test the effectiveness of a number of treatments that might help me to understand and control the kind of sex problems that I have. The procedures to be used include different kinds of individual evaluations, individual behavior therapies, and several kinds of group therapy. The group therapies to be used have been available for 20-35 years, and the evaluations and behavior therapies for 20 years; I understand that none of these are considered experimental. If I participate in this project I can expect to be involved for 1½-2 years and possibly longer.

I understand that the treatments being offered to me are not the only treatments available for sex problems such as I have. It has been explained to me that there are other types of psychological and behavioral evaluation procedures, other types of behavior therapy, and other types of group therapy, any or all of which might have an effect on problems such as mine. I have also been informed that there is an experimental drug which can sometimes reduce urges to engage in sexual behavior. Some of these procedures might last a lot longer and some might be a lot shorter than the program being offered to me.

It has been explained to me that the major benefit that I can reasonably expect to gain from participating in this program is a better understanding of myself as a sexual person. I can expect a very close examination of my past sexual and social history, the way I think about sexual things, and the way I act in my sexual behavior. I understand that I will be offered treatments which may change my present sexual life if I choose to accept them.

There may be some discomforts to me if I participate in this program:  
Some of these are:

My penile erection response to sexually explicit visual and auditory materials will be measured by means of an electronic device. This device looks like a small rubber band and in complete privacy I will be required to place it around the shaft of my penis. It is connected to another piece of electronic equipment which can detect if my penis gets bigger when I get sexually excited. I understand that this is not a sexual lie detector and that the therapist(s) and assistant(s) cannot make me get a penile erection. Only I can produce a penile erection so any information obtained from me by this method is being given voluntarily by me. I also understand that this measurement system is safe for use with humans and I will not receive an electrical shock by using it.

I may be offered the opportunity to participate in one or more behavior therapies which are intended to decrease my ability to get sexually aroused by thoughts or behaviors related to deviant sex. There will be three behavior therapies used in the treatment program. In the first one, called olfactory aversion, I would be required to look at pictures of or listen to audiotaped descriptions of deviant sex while I smelled an unpleasant odor. I would be given a crushable capsule of spirits of ammonia (smelling salts) and told to crush it as soon as the presentation started, then hold the capsule below my chin and smell the odor for as long as the presentation lasted. I understand that this procedure will either prevent my getting sexually aroused at all, or if I do start to get aroused, it will stop it right away. After I do this for a while I will probably not even feel like getting sexually excited by deviant materials or thoughts. In the second one, called masturbatory satiation, I would be asked to masturbate myself until I ejaculated while I fantasized about non-deviant sex. I would do this as many times as necessary, usually not more than twice, until I could not get sexually aroused again. Then, when I could not get an erection, I would continue to masturbate but this time I would think deviant thoughts. I understand that the purpose of this procedure, through many repetitions, is to get the inability to get sexually aroused associated with deviant thoughts and make them less interesting. Over time this should decrease my ability to get sexually

excited by deviant thoughts or materials. In the third one, called verbal satiation, all I would have to do is say my favorite deviant fantasies non-stop for 30 minutes. What will probably happen after I do this for a while is that my usual fantasies will become boring, but if I try to make up new ones they will become boring too. After a while I should have trouble trying to make up any new deviant fantasies at all. Finally, I understand that none of these behavior therapies will change my sexual behavior permanently. They will have an effect on my deviant sexual arousal only if I keep practicing them. If I discontinue the treatment, then I can expect that my deviant fantasies, deviant arousal, and deviant interests will come back automatically.

I also understand that I will be asked extensive questions about my sexual history and my past and current interests. I may also be asked about non-sexual crimes that I may have committed.

As a result of the procedures in this program I recognize that I may feel anxious, ashamed, depressed and guilty because of the nature of the questions asked by the therapist(s) or by the nature of the behavioral task(s) which I may be asked to perform. The information I receive about my sexual responses may be undesirable or upsetting to me. My sexual responses may be different from those I would like to have, or different from those other people think I should have. It may be difficult and upsetting to me to talk about sexual and non-sexual crimes I may have committed. I realize that to this extent my right to privacy and my right to conceal the nature of my sexual interests or other aspects of my past and current life will be invaded. Because these things might happen to me I am also aware that I may, at any time, seek help from the professional staff for any discomfort that I may be having as a result of the procedures in this program. I can do this by calling the project office at \_\_\_-\_\_\_ during the day or \_\_\_-\_\_\_ at night and a staff member will help me.

I have been informed that all information that I give to the professional staff of the project is protected by a document called a Confidentiality Certificate issued by the Federal government. I understand that this means that the staff may not be forced to reveal to anyone any information that I give them. Nevertheless I have been cautioned not to reveal to the staff

any specific details of any illegal act that I may have committed or any information that might directly connect me with a particular crime. All information provided by me will be kept in a chart with a code number on it; personal information about me such as my name, address, place of employment, or phone number(s) will not be in the chart. The only way information about me can be released is with my written permission, and to do that I have to complete a Waiver of Confidentiality.

If I have any questions at any time about the research and my rights as a participant, I understand that I can contact the project's Legal Advocate. His/her telephone number is \_\_\_\_-\_\_\_\_.

While I am a participant in the program I understand that I am to enter the University Professional Center only through the lobby door where I will be met by a staff member or a staff assistant. I am to leave the building by the same route. If I am ever found anywhere else in the building, or loitering in the parking lot or on nearby property, I realize that my participation in the project may be terminated.

I also understand that my participation in the project will be terminated if I get strong urges to start my deviant sexual behavior again. If this happens I am to inform one of the staff. They will take me out of the project temporarily and give me special treatment to get these urges back under control. When they decide the crisis has passed they will let me back into the program. I further understand that if those urges are so strong that it is almost certain that I am a danger to a particular person, the staff will inform that individual whether I want them to or not.

I understand that in the event of physical injury resulting from research procedures, medical treatment for injuries or illness is not available from the University of South Florida. Money damages are available to the extent specified in Florida Statute, 768.28. A copy of such statute is available upon request to the Division of Sponsored Research, USF. In the event I am injured, I have been informed to notify the Insurance Coordinator (813/974-2711) at the University of South Florida.

I understand that my participation in this program is purely voluntary even though I may have been referred by legal authorities and refusal to participate will involve no penalty or loss of benefits to which I am otherwise entitled. Further, I may refuse any or all evaluation and treatment plans offered to me and I may discontinue participation at any time without penalty or loss of benefits to which I am otherwise entitled.

I believe that I have been fully informed about this research program in language that is understandable to me. I have expressed any questions that I have about the nature of this program and its possible influence on me, and these questions have been answered to my satisfaction by the professional staff. I acknowledge receipt of a copy of this agreement.

Date: \_\_\_\_\_, 19\_\_\_\_.

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
for Florida Mental Health Institute

I have witnessed the reading and explanation of the above statement to the above-named participant. I verify that he was given ample opportunity to ask any questions about this program and that these questions seemed to have been answered to his satisfaction. I witness his signature indicating that he fully understands and accepts the terms of this agreement.

\_\_\_\_\_  
Signature of Witness

10/15/85

Florida Mental Health Institute

WAIVER OF CONFIDENTIALITY

I hereby waive my right to confidentiality of records as specified in the Statement of Informed Consent signed by me on \_\_\_\_\_, 19\_\_\_\_, a copy of which is attached.

Specifically, this waiver refers to any information directly related to my treatment program at the Florida Mental Health Institute in which I was a participant from \_\_\_\_\_, 19\_\_\_\_ until \_\_\_\_\_, 19 \_\_\_\_.

I hereby give my approval to the professional staff of the Florida Mental Health Institute to release information to \_\_\_\_\_

Date: \_\_\_\_\_, 19\_\_\_\_.

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
for Florida Mental Health Institute

I have witnessed the reading and explanation of the above waiver to the above-named participant. I verify that he was given ample opportunity to ask any questions tha he may have had regarding this waiver and that these questions seemed to have been answered to his satisfaction. I hereby witness his signature indicating that he fully understood and accepted the terms of this waiver.

\_\_\_\_\_  
Signature of Witness

9/11/85

Florida Mental Health Institute  
INFORMATION FOR SEX OFFENDER TREATMENT PROGRAM STAFF

The clientele of this treatment program are sexual deviants who may have been accused of, convicted of, or admitted to crimes involving sexual and/or physical assault, or other crimes.

For security and safety reasons, you must:

1. Maintain a professional relationship with the clients at all times.
2. Never identify yourself by last name or reveal your home address or telephone number.
3. Never reveal the last names or addresses of others associated with the program.
4. Never enter a room which is lockable from the inside with the client.
5. Never participate in any portion of the research with which you are uncomfortable.
6. Keep all of your belongings in a safe place designated by the senior staff.
7. Notify senior staff immediately of the occurrence of any of the above.

All information about these clients must be kept strictly confidential. In keeping with this confidentiality requirement, you must:

1. Refer all requests for information about a client or the program to senior staff and report such requests to senior staff immediately.
2. Do not ask a client about the specifics of any illegal act (e.g., a victim's name or address, description of victim, specific behaviors of a victim, statements by the victim, or details of any act that could directly connect the client with a particular crime).
3. Do not learn the client's data code number.
4. Report any breakdown in the data protection process to senior staff.
5. Read Statement of Informed Consent (Clients).
6. Do not tell anyone any information about any client or about the research project.

If you desire to withdraw from this project for any reason, you may do so without penalty and prejudice to future employment opportunities.

Please acknowledge that you have read and understand this information by signing below.

Date: \_\_\_\_\_, 19\_\_\_\_.

\_\_\_\_\_  
Signature of Staff Member

\_\_\_\_\_  
for Florida Mental Health Institute

9/11/85



# UNIVERSITY OF SOUTH FLORIDA

TAMPA • ST. PETERSBURG • FORT MYERS • SARASOTA

THE FLORIDA MENTAL HEALTH INSTITUTE  
13301 NORTH 30TH STREET  
TAMPA, FLORIDA 33612

20 September 1985

Office of the Director  
National Institute of Mental Health  
5600 Fishers Lane  
Rockville MD 20857

Dear Sir:

RE: Confidentiality Certificate

I am herewith applying for a Confidentiality Certificate as described under Section 303(a) of the Public Health Service Act (42 U.S.C. 242(a) and the implementing regulations described in 45 CFR 46, "Protection of Human Subjects." The requested certificate is intended for the purpose of protecting information obtained in the performance of an NIMH-approved research project entitled "Prevention of Relapse in Sex Offenders" (2 R01 MH37868-02). The following information requested for issuance of the certificate is offered pursuant to the guidelines presented in the Federal Register, Vol. 44, No. 66, April 4, 1979, pp. 20382-20387.

1. Principal Investigator is D. Richard Laws. Institutional affiliation is with Dept of Crime and Delinquency, Florida Mental Health Institute, University of South Florida, 13301 North 30th Street, Tampa FL 33612.
2. The research project will be conducted under the auspices of the Florida Mental Health Institute. The project will be performed on the 4th floor of a professional office building located at 3500 E. Fletcher Ave., Tampa FL 33612, 1½ blocks from the Florida Mental Health Institute.
3. The personnel involved in the project are:
  - a. D. Richard Laws, Ph.D., Principal Investigator and Professor, Florida Mental Health Institute, University of South Florida. Dr. Laws is an experimental psychologist who has done research and treatment with sexual deviates for 15 years and has published a number of studies related to sexual deviation and sexual violence.
  - b. Co-Principal Investigator is an unfilled position. It is anticipated that this person will hold the Ph.D. in clinical psychology and have three years' relevant experience in the evaluation and treatment of sex offenders.
  - c. Group Leaders are four unfilled positions. It is anticipated that these persons will hold the Ph.D. in clinical psychology and have a minimum of two years' clinical experience with either criminal or sex offenders. Relevant experience with sex offenders may be substituted for the doctoral degree.
  - d. Additionally, there are positions for two research assistants, one computer

programmer, and two secretaries. With the exception of the programmer no specialized experience is required and the personnel will be trained by the senior staff.

4. The research protocol is intended to compare the relative effectiveness of a coordinated package of behavior therapy and cognitive-behavior therapy techniques designed specifically for use with sex offenders with a high quality interpersonal psychotherapeutic technique directed at current life problems. One hundred child molesters will be divided into two groups for treatment. They will receive an intensive clinical interview, undergo pre-treatment assessment, then enter one of the two groups. The experimental subjects will receive the Relapse Prevention treatment. This consists of one of three behavior therapies directed at altering deviant sexual arousal, and rational-emotive therapy directed at deviant cognitions and social inadequacy, stress inoculation directed at impulse control and anger management, and ending with relapse prevention, an intensive self-regulation program implemented as a long-term follow-up treatment. The control group will receive Short-Term Interpersonal Psychotherapy, a very present-oriented therapy which focuses on symptomatic behavior and the social and interpersonal problems of a deviant lifestyle, a treatment which also continues throughout the long-term follow-up. Both groups will be evaluated within-treatment throughout the project, they will self-report daily, they will have their sexual arousal levels monitored weekly, and periodically across the project both groups will be administered the same battery of between-group outcome measures. We hypothesize that the experimental group which receives a package of treatments specifically targeted on problems common to sex offenders will show more improvement during treatment and significantly lower rate of relapse during follow-up than the control group which receives a quality but less highly focused treatment.

Information obtained from project participants will include a review of criminal records, paper and pencil inventories requesting information on criminal history and deviant sexual history, self-report of current deviant sexual practices, self-report of current deviant sexual cognitions, physiological data on deviant and nondeviant sexual arousal, and possible evidence of psychological disorders obtained from pre-treatment psychological testing.

There is considerable risk to the client in providing some of the information we seek. We therefore propose to keep all data in locked files at the project site. All data, physiological and subjective, will be coded to separate the client's identity from them. All information on the client's identity, e.g., name, address, place of employment, telephone number(s), will be available to the PI only and will be kept in a safe deposit box. Should any data be lost, seized, subpoenaed, otherwise escape our control, there will be no way to connect client identity to the data except by appeal to the PI who, if this certificate is issued, will invoke it to protect the identity of the research subjects (see paragraph 9).

5. This research will take three years to complete. It is expected to start on or about 1/1/86 and be completed on 12/31/89.
6. The Principal Investigator, D. Richard Laws, specifically requests the authority to withhold the names and other identifying characteristics of the research subjects for the following reasons:
  - a. This is an investigation of sexually deviant adult males who commit

- sexual and non-sexual crimes. We need detailed information on their criminal activities as variables in a study within the project in which we will predict risk for recidivism in each client. This information is also needed to properly direct the emphasis in the various treatments. So that they will accurately report the frequency and varieties of their crimes we must be able to assure them that steps have been taken to guarantee the confidentiality of their reports.
- b. Many, if not most, of the crimes that the clients report will be unknown to legal authorities. Those authorities may attempt to gain access to the data and a means of protection of the information is necessary.
  - c. Some of the clients may be involved in legal proceedings and defense and prosecuting attorneys may attempt to gain access to the data for use in court. The data must be protected against this eventuality.
  - d. Knowledge that a person is a sexual deviant could prove embarrassing and threatening in employment, marital, and social contexts. The data must also be protected against this possibility.
7. The Principal Investigator assures that he will comply with all of the requirements of 45 CFR Part 46, "Protection of Human Subjects." Specifically, this means that he will comply with the informed consent requirements of 45 CFR 46.103(c) and document legally effective informed consent in a manner consistent with the principles stated in 45 CFR 46.110, if it is determined by the Secretary, on the basis of information submitted by the applicant, that subjects will be placed at risk. If a modification is required, the applicant will describe the change and submit it for approval.
  8. The Principal Investigator assures that if an authorization of confidentiality is given it will not be represented as an endorsement of the research project by the Secretary, nor will it be used to coerce individuals to participate in the research.
  9. The Principal Investigator assures that any person who is authorized by the Secretary to protect the privacy of research subjects will use that authority to refuse to disclose identifying characteristics of research subjects in any Federal, State, or local civil, criminal, administrative, legislative, or other proceedings to compel disclosure of the identifying characteristics of the research subjects.
  10. The Principal Investigator assures that all research subjects who participate in the project during the period that the Confidentiality Certificate is in effect will be informed that:
    - a. A Confidentiality Certificate has been issued.
    - b. The persons authorized by the Confidentiality Certificate to protect the identity of research subjects may not be compelled to identify research subjects in any civil, criminal, administrative, legislative, or other proceedings whether Federal, State, or local.
    - c. The Confidentiality Certificate does not authorize any person to which it applies to reveal identifying information concerning research subjects if the subject consents in writing to disclosure of that information.
    - d. The Confidentiality Certificate does not govern the voluntary disclosure of identifying characteristics of research subjects.
    - e. The Confidentiality Certificate does not represent an endorsement of the research project by the Secretary.

11. The Principal Investigator assures that all research subjects who enter the project after the termination of the Confidentiality Certificate will be informed that the authorization of confidentiality has ended and that the persons authorized to protect the identity of research subjects by the Confidentiality Certificate may not rely on the Certificate to refuse to disclose identifying characteristics of research subjects who were not participants in the project during the period the Certificate was in effect.

This approved application, 2 R01 MH37868-02, is in process of being transferred from California to the University of South Florida at Tampa. The application, with modifying documents, including a copy of this letter, has been forwarded for review to the Committee for the Protection of Human Subjects, University of South Florida.

If there are any questions about this application for a Confidentiality Certificate, the Principal Investigator can be reached at the address above or at 813/974-4510.

Sincerely,

DRL/r1 .

cc: James Breiling, Ph.D.  
Jack Zusman, M.D., M.P.H.  
file

D. Richard Laws, Ph.D.  
Professor  
Dept of Crime and Delinquency

## PREDICTOR EQUATION

1. Violence category of instant offense(s).
  - a. No physical threat or psychological persuasion; minimal environmental intrusion; no psychological or physical damage to victim. a. 1
  - b. Mild psychological persuasion used; psychological damage occurred. b. 2
  - c. Psychological coercion or extreme persuasion used; psychological damage occurred. c. 3
  - d. Physical threat used; psychological damage always presumed. d. 4
  - e. Physical threat used, including weapon displayed; offender intended injury. e. 5
  - f. Physical threat used; physical injury occurred. f. 6
  - g. Physical threat used; offender killed or seriously injured victim and/or proceeded in a manner conspicuous for disregard of victim's safety. g. 7
  
2. Duration of deviant sexual behavior (number of months).
  - a. 0-12 a. 1
  - b. 13-24 b. 2
  - c. 25-36 c. 3
  - d. 37-48 d. 4
  - e. Greater than 48 e. 5
  
3. Percent of current deviant masturbatory fantasy.
  - a. 0%-20% Very low a. 1
  - b. 21%-40% Low b. 2
  - c. 41%-60% Moderate c. 3
  - d. 61%-80% High d. 4
  - e. 81%-100% Very high e. 5
  
4. Present ability to exert self-control over deviant sexual behavior (expressed as 0-100 scale).
  - a. 0-20 Poor a. 1
  - b. 21-40 Modest b. 2
  - c. 41-60 Average c. 3
  - d. 61-80 Satisfactory d. 4
  - e. 81-100 Excellent e. 5

5. Drinking at the time of commission of the offense?

- |    |                                   |    |   |     |
|----|-----------------------------------|----|---|-----|
| a. | Offender was sober                | a. | 1 |     |
| b. | Offender was somewhat high        | b. | 2 |     |
| c. | Offender was slightly intoxicated | c. | 3 |     |
| d. | Offender was intoxicated          | d. | 4 |     |
| e. | Offender was very intoxicated     | e. | 5 | ___ |

6. Using drugs at the time of the commission of the offense?

- |    |                          |    |   |     |
|----|--------------------------|----|---|-----|
| a. | Not using drugs          | a. | 1 |     |
| b. | Mild drug use            | b. | 2 |     |
| c. | Moderate drug use        | c. | 3 |     |
| d. | Heavy drug use           | d. | 4 |     |
| e. | Severe drug intoxication | e. | 5 | ___ |

7. History of alcohol abuse

- |    |          |                           |    |   |     |
|----|----------|---------------------------|----|---|-----|
| a. | None     | Does not use alcohol      | a. | 1 |     |
| b. | Mild     | Primarily social drinking | b. | 2 |     |
| c. | Moderate | Occasional alcohol abuse  | c. | 3 |     |
| d. | Heavy    | Habitual alcohol abuse    | d. | 4 |     |
| e. | Severe   | Chronic alcoholic         | e. | 5 | ___ |

8. History of drug abuse

- |    |          |                           |    |   |     |
|----|----------|---------------------------|----|---|-----|
| a. | None     | Does not use drugs        | a. | 1 |     |
| b. | Mild     | Social drug use, e.g. pot | b. | 2 |     |
| c. | Moderate | Occasional drug abuse     | c. | 3 |     |
| d. | Heavy    | Habitual drug abuse       | d. | 4 |     |
| e. | Severe   | Drug addict               | e. | 5 | ___ |

9. Frequency of deviant sexual behavior per week.

- |    |                       |    |   |     |
|----|-----------------------|----|---|-----|
| a. | 0-1 occasions         | a. | 1 |     |
| b. | 2-3 occasions         | b. | 2 |     |
| c. | 4-5 occasions         | c. | 3 |     |
| d. | 6-7 occasions         | d. | 4 |     |
| e. | More than 7 occasions | e. | 5 | ___ |

10. Average percent deviant sexual arousal at treatment termination.

- |    |          |           |    |   |     |
|----|----------|-----------|----|---|-----|
| a. | 0%-20%   | Very low  | a. | 1 |     |
| b. | 21%-40%  | Low       | b. | 2 |     |
| c. | 41%-60%  | Moderate  | c. | 3 |     |
| d. | 61%-80%  | High      | d. | 4 |     |
| e. | 81%-100% | Very high | e. | 5 | ___ |

11. Average percent nondeviant sexual arousal at treatment termination.
- |    |          |           |    |   |
|----|----------|-----------|----|---|
| a. | 0%-20%   | Very low  | a. | 1 |
| b. | 21%-40%  | Low       | b. | 2 |
| c. | 41%-60%  | Moderate  | c. | 3 |
| d. | 61%-80%  | High      | d. | 4 |
| e. | 81%-100% | Very high | e. | 5 |
12. Total number of previous victims
- |    |              |    |   |
|----|--------------|----|---|
| a. | 0-5          | a. | 1 |
| b. | 6-15         | b. | 2 |
| c. | 16-30        | c. | 3 |
| d. | 31-50        | d. | 4 |
| e. | More than 50 | e. | 5 |
13. Degree of ritualism in modus operandi (estimation of possibility of escalation to more serious offense)
- |    |  |    |   |
|----|--|----|---|
| a. | No ritualistic behavior (escalation likely)                  | a. | 1 |
| b. | Rarely ritualistic   | b. | 2 |
| c. | About 50/50  | c. | 3 |
| d. | Very frequently ritualistic                                  | d. | 4 |
| e. | Always performs offense in same manner (escalation unlikely) | e. | 5 |
14. Degree of emotional instability
- |    |                     |    |   |
|----|---------------------|----|---|
| a. | Emotionally stable  | a. | 1 |
| b. | Mildly unstable     | b. | 2 |
| c. | Moderately unstable | c. | 3 |
| d. | Severely unstable   | d. | 4 |
15. Residential mobility
- |    |                                   |    |   |
|----|-----------------------------------|----|---|
| a. | Stable resident                   | a. | 1 |
| b. | Occasionally changes residence    | b. | 2 |
| c. | Frequently changes residence      | c. | 3 |
| d. | Very frequently changes residence | d. | 4 |
| e. | Unstable resident                 | e. | 5 |
16. Probability of offense when mood is elevated
- |    |           |    |   |
|----|-----------|----|---|
| a. | None      | a. | 1 |
| b. | Low       | b. | 2 |
| c. | Moderate  | c. | 3 |
| d. | High      | d. | 4 |
| e. | Very high | e. | 5 |

17. Probability of offense when mood is depressed
- |    |           |    |   |     |
|----|-----------|----|---|-----|
| a. | None      | a. | 1 |     |
| b. | Low       | b. | 2 |     |
| c. | Moderate  | c. | 3 |     |
| d. | High      | d. | 4 |     |
| e. | Very high | e. | 5 | ___ |
18. Probability of offense when mood is angry
- |    |           |    |   |     |
|----|-----------|----|---|-----|
| a. | None      | a. | 1 |     |
| b. | Low       | b. | 2 |     |
| c. | Moderate  | c. | 3 |     |
| d. | High      | d. | 4 |     |
| e. | Very high | e. | 5 | ___ |
19. Probability of offense due to other environmental reverses, e.g., separation, divorce, job loss, chronic unemployment, disability, lingering illness, etc.
- |    |           |    |   |     |
|----|-----------|----|---|-----|
| a. | None      | a. | 1 |     |
| b. | Low       | b. | 2 |     |
| c. | Moderate  | c. | 3 |     |
| d. | High      | d. | 4 |     |
| e. | Very high | e. | 5 | ___ |
20. Employment stability
- |    |   |    |   |     |
|----|---|----|---|-----|
| a. | Stable employment for preceding 12 months           | a. | 1 |     |
| b. | Changed jobs 1-2 times in preceding 12 months       | b. | 2 |     |
| c. | Changed jobs 3-4 times in preceding 12 months       | c. | 3 |     |
| d. | Changed jobs 5 times or more in preceding 12 months | d. | 4 |     |
| e. | Unemployed for preceding 12 months                  | e. | 5 | ___ |
21. Probability of reoffense by offense category
- |    |                   |    |   |     |
|----|-------------------|----|---|-----|
| a. | Forcible rape     | a. | 5 |     |
| b. | Exhibitionism     | b. | 5 |     |
| c. | Voyeurism         | c. | 5 |     |
| d. | Male pedophilia   | d. | 4 |     |
| e. | Female pedophilia | e. | 3 |     |
| f. | Male incest       | f. | 2 |     |
| g. | Female incest     | g. | 2 | ___ |
- NOTE: if >1 offense category, total score is additive

22. Number of prior arrests for deviant sexual behavior

- a. 0 or 1
- b. 2
- c. 3
- d. 4
- e. 5 or more

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5. \_\_\_\_\_

Total score : \_\_\_\_\_