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The Cross-Sex Effect In Children's Learning As A Function of Experimenter Affect And Children's Responsiveness To Social Reinforcement

by

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Social feedback from adults, in terms of approval or disapproval, is one of the most frequently used methods of effecting changes in children's behavior (Stevenson,1965). However, it is only within the last fifteen years that researchers have undertaken a systematic investigation of the interpersonal variables which may contribute to the complex interactions found in this area of children's learning.

Among variables which have received frequent attention with respect to social feedback have been: age of subject (e.g. Stevenson,1961); birth order (e.g. Gilmore and Zigler, 1963); mental age (e.g. Stevenson and Allen,1964); peers as reinforcing agents (e.g. Patterson and Anderson, 1964); parents as reinforcing agents (e.g. Patterson, Littman, and Hinsey, 1964); race of experimenter (e.g. Yando, Zigler and Gates, 1971); sex of subject (e.g. Gerwirtz and Baer, 1958a); sex of experimenter (e.g. Stevenson and Allen, 1964); and, social class (e.g. Zigler and Kanzer,1962).

McKeachie and Lin (1971) have noted that early psychologists and educators were not interested in systematic differences associated with gender concept, except in some

instances to control them in their experimental designs. One interesting result, however, that has emerged from the literature on children's learning has been the finding that children in simple learning situations do not respond in the same manner to an adult of the same sex as they do to an adult of the opposite sex (e.g. Stevenson,1961; Gewirtz and Baer, 1958a, 1958b; Cieutat,1965). These studies have shown that for many of the experimental tasks, higher performance was achieved when the adult experimenter was of the opposite sex as the child. It is, however, unclear from the available data whether this cross-sex effect (sex of subject by sex of experimenter interaction) is truly a function of gender differences, or correlates which may be independent of, but perhaps associated with the gender of the experimenter or subject.

Analogous artifacts have been discovered in other areas of children's learning. For example, Yando et al. (1971), while investigating the effect of teacher's race on children's measured I.Q., found that the only significant main effects were due to the teacher's rated effectiveness, not their racial characteristics, per se. A review of the literature reveals that comparable confounds

may have been present in those studies which have reported a cross-sex effect.

The cross-sex effect was first reported in studies exploring social reinforcer effectiveness from the theoretical position of social drive (Gewirtz and Baer, 1958a). This position holds that there is a secondary drive for social reinforcement that follows the same general principles as those for primary drives. As extended to social reinforcement, this theory implies that the social interaction between an experimenter and a subject affects the subject's responsiveness to social reinforcement by altering the level of social drive (Gewirtz and Baer, 1958a, 1958b, Erickson, 1962; Berkowitz,1964). Within this model, social deprivation was conceptualized as leading to increased responsiveness to social reinforcement (just as food deprivation leads to increased effectiveness of food as a reinforcer). Social interaction with adults, on the other hand, should lead to a condition of drive satiation and decrease the effectiveness of social reinforcement.

There have been several criticisms of this position. For example, the effectiveness of the 20-minute social deprivation period employed by Gewirtz and Baer (1958a, 1958b) in their original studies has been reinterpreted to

support other theoretical positions. Walters and his associates (Walters and Ray, 1964; Walters and Karal, 1960; and Walters and Parke, 1964) have objected to the concept of social drive on the grounds that its existence is implied solely from the behavior it is called upon to explain and is therefore somewhat circular. They suggest that the results obtained by Gewirtz and Baer (1958a, 1958b) were actually the result of generalized arousal caused by the isolation period, while the social satiation condition led to a reduced level of arousal. In other words, Walters et al. have claimed that it was not social deprivation per se, but differential amounts of anxiety caused by a threatening situation which led to differential responsiveness in the experimental condition.

A position similar to Walters et al. has been supported by Hartup and Himeno (1959) and Cairns (1963). They have maintained that it is generalized anxiety caused by the isolation period, not social deprivation, which contributed to the original Gewirtz and Baer results.

Another reinterpretation of the original Gewirtz and Baer results by Stevenson and Odom (1961) has suggested that it was not only social deprivation which was generated by the isolation period, but also generalized stimulus deprivation. Support for this position has been provided by Hill and Stevenson (1964), who demonstrated that social reinforcement was less effective for children who were shown a film during social isolation than for those who waited without seeing a film.

More recently, Gewirtz (1967) has modified his theoretical conceptualizations and experimental procedures. He no longer uses social drive theory to explain motivational changes within the child. Instead, he explains his findings in terms of an inverse functional relationship between social stimulus availability and reinforcer effectiveness, thereby avoiding the use of intervening variables. His experimental procedures no longer use social isolation to create a deprivation condition. Instead, the availability of the social stimulus (i.e. "good") is varied during the fixed treatment period. Thus, children in a high satiation condition are expected to have decreased responsiveness to the social stimulus relative to children who are in a low satiation condition. Predictions based on this revised theory have been supported by Gewirtz (1969) and Babad and Weisz (1976).

Babad (1972, 1973) has viewed treatment sessions involving adults dispensing social reinforcers to children as constituting "dyadic interpersonal interactions," in which the child infers information about the nature of the adult and the perceived contingencies of the interactions and reaches a conclusion regarding the adult's reinforcement value for him.

Within this model, children are not viewed as being in a deprived or satiated motivational state, nor as deprived or satiated with the social stimuli involved. Rather, they are seen as satiated, in a relative sense, with the experimenter per se, i.e., with the person of the experimenter, not the reinforcers dispensed by that experimenter.

Evidence supporting this position also indicates that this relative satiation is quite "person-specific" and not generalizable to other adults who interact with the child subsequent to the initial social encounter (Babad, 1972).

This position is similar to the valence position held by Zigler and his associates (e.g. Berkowitz and Zigler, 1965; McArthur and Zigler, 1969). According to the valence model, the nature of the social interaction within the experimental setting is thought to influence

the valence of the experimenter for the subject; that is, the subject's attitude toward the experimenter, and that a previously established attitude or valence determines the subject's subsequent responsiveness to the social reinforcers dispensed by that experimenter (Berkowitz and Zigler, 1965; McArthur and Zigler, 1969; McCoy and Zigler, 1965; Shallenburger and Zigler, 1961; Zigler, 1961).

According to this position, positive interaction with an adult will lead to enhancement of social reinforcer effectiveness, whereas negative interaction will lead to decreased reinforcer effectiveness. This position had been supported in several studies in which the type and amount of prior contact and the familiarity with the adult were varied (Berkowitz and Zigler, 1965; Berkowitz, Butterfield, and Zigler, 1965). These studies supported the model that the child's attitude toward the reinforcing agent should be viewed as mediating the effectiveness of the social reinforcement administered by that reinforcing agent.

A final theoretical position that must be considered in a discussion of interpersonal variables related to children's learning is derived from Freudian Oedipal Theory (Stevenson, 1961). In general, this theory predicts that from birth until age three,

both male and female children should prefer (and hence show a heightened sensitivity to) the mother, through her role as provider of need satisfaction and nourishment. From age three to five (the actual Oedipal period), males should demonstrate similar, though heightened, preference for the mother, while for girls there should be a shift in preference to the father. From age six, children should begin to identify with, and show a heightened sensitivity to, the same sexed parent, while maintaining a positive relationship with the opposite sexed parent (Hall and Lindzey, 1957).

Stevenson (1961) tested predictions generated from Oedipal theory with respect to social reinforcement. Children in three age ranges (3-4; 6-7; and 9-10 years) received social feedback for participating in a marble-dropping game with one of six male or female adults. The first prediction, which was supported, was that female adults would be more effective than male adults for both boys and girls in the 3-4-year-old group. The second prediction, which was only partially supported, was that a cross-sex effect would be found in the 6-7-year-old group. In fact, while female adults were more effective with boys, adult males were equally effective with both girls and boys. The third prediction, which was not supported,

was that children in the 9-10-year-old group would demonstrate a same-sex effect--that is, their performance should have been better when tested by the same-sexed adult. Instead, the results were the same as the 6-7-year-old group.

While Stevenson's results do not support his predictions based on Freudian Oedipal Theory, it can be argued that the age ranges selected as a test of the cross-sex effect (6-7 years) were in fact post-Oedipal. As such, a same-sex effect would have been predicted by Oedipal theory. However, as indicated previously, this prediction was not supported (Stevenson, 1961).

Within the social drive framework, it is possible to conceive of social deprivation in a relative sense, wherein children may be exposed to adults of one sex a greater proportion of the time than to adults of the other sex (Stevenson, 1965). They should, if this is the case, respond at a higher rate for the adult with whom they have the least contact. Thus, it would be expected that as adult male contact increased over time relative to the predominant adult female contact during the preschool years, a relative decline in adult male social reinforcer effectiveness would be evidenced.

Additionally, it has been proposed that during the course of normative sex role development, children tend to satiate on same-sex adults (e.g.Willis, 1975). In this case, social drive theory would predict that children would respond at a lower rate for the adult of the same sex as a consequence of their relative satiation.

Specific predictions relative to the cross-sex effect based on valence theory cannot be associated directly with gender differences. Since the valence theory proposes that an adult's effectiveness as a social reinforcer is dependent on the child's perception of that adult within the experimental situation, it would be expected that children's responsiveness would be related to the specific interpersonal interaction of each session or on a previously established valence toward that adult.

It is possible, within the framework of valence theory, to postulate that children may develop a valence toward adult gender per se, rather than towards an individual adult, and that this valence may generalize to other adults of that gender. However, it is difficult to generate directional predictions in this case without knowing the reinforcement/interactional history of each child.

The cross-sex effect has been demonstrated in several different experimental settings. The effect was first specifically noted by Gewirtz (1954), using children ranging from 4.0 to 5.7 years of age. These children were involved in a painting task while an adult either paid attention to the child or to paper work in another area of the room. In a later portion of the investigation, it was noted that boys made more attention bids when the adult was female, but that girls made more attention bids when the attending adult was male.

Similar results were obtained by Gewirtz and Baer (1958a), using children ranging from 3.10 to 5.3 years of age. The study involved a pre-experimental session in which the type and degree of social deprivation were varied. During a subsequent session in which children were given social reinforcement for correctly dropping a marble into one of two holes, a sex of adult by deprivation interaction was discovered, indicating that the cross-sex effect was more pronounced after deprivation for boys tested by female adults. Interestingly, female adults had little effect on boys in the non-deprivation condition, but were quite effective in the deprivation condition. In a replication and extension of this investigation, Gewirtz and Baer

(1958b) found social reinforcement to be most effective following social deprivation, and least effective following social interaction.

Gewirtz, Baer and Roth (1958) used two different tasks in an effort to provide supportive evidence for the cross-sex effect: a marble game described previously, and an easel painting task, with children ranging in age from 3.10 to 5.7 years (in reality, the combination of two sub-studies), and varying the availability of an adult. In both tasks they found a definite cross-sex effect, lending support to the generality of the effect.

Evidence that the cross-sex effect may not be limited to those situations employing simple learning tasks has been provided in the literature on intelligence testing. Cieutat (1965) has shown that there were significant differences in measured Binet I.Q. of 4-year-old children attributable to the sex of the adult tester. A marginally significant cross-sex effect was also demonstrated. The evidence is not unequivocal, however, as Cieutat and Flick (1965), using essentially the same population, found no comparable cross-sex effect. The latter study did, however, demonstrate significant variability in individual adult tester abilities relevant to the experimental task. The discovery

of significant variability in tester abilities, in addition to those described in the previous study, provide further evidence that adult characteristics may prove to be important variables in those areas of children's learning involving social interaction.

The possibility exists that a cross-sex effect would have been evidenced in many studies if they had included appropriate cells (i.e., counterbalancing male and female experimenters across all treatments). Unfortunately, such studies can only suggest that a cross-sex effect would have been present, since half of the paradigm is missing. For example, Walters and Ray (1960) used an adult male in an anxiety-arousing condition, while an adult female (a familiar school secretary) was used in the non-anxiety condition. As all subjects were male, their findings regarding learning following exposure to the two pre-experimental conditions were obviously limited by the gender of the adult. In another anxiety study, Winkle and Sarason (1964) reported data that could have been interpreted as a partial cross-sex effect. Their unbalanced design, however, resulted in both girls and boys being tested by an adult male. Consequently, the higher performance scores by girls are open to several possible explanations.

A further example was provided in a verbal conditioning study by Binder, McConnell, and Sjoholm (1957). No difference in the production of hostile verbs (the dependent variable) was attributed to the gender of the subject. However, a significant increase in the use of hostile verbs was evidenced for all subjects tested by both experimenters, with subjects tested by a female experimenter achieving a higher final rate than those tested by the male experimenter. When interpreting these results, it is important to note the physical description of the two experimenters as reported by the authors. The female experimenter was described as attractive and soft-spoken, while the male experimenter was a 6'5", 220-pound, ex-marine captain. It is possible to speculate that his overbearing manner may have inhibited subjects' responsiveness relative to the female experimenter.

A final example of a possible cross-sex effect within an incomplete experimental design is provided by a study by Hill and Dusek (1969), in which subjects' expectation of success and failure on future tasks was found to vary, depending on their pre-training success. A significant sex-of-subject effect could have been interpreted as suggesting that girls were more susceptible to external reinforcement than boys, or that a

partial cross-sex effect had been demonstrated. Since the experimenter was male, it is impossible to confirm the latter speculation.

The question posed by such studies is whether differential learning rates attributed to male and female subjects were the result of the experimental procedures, the gender of the experimenter or subject, or other as yet unexplored variables associated with the personality characteristics of the experimenter.

A review of the literature reveals that task variables may also be important in understanding the cross-sex effect. Children do not respond in the same manner to live experimenters, for example, as they do to filmed experimenters (Stevenson, Hale, Hill and Moely, 1967). Additionally, evidence indicates that only active reinforcement leads to a cross-sex effect, while neutral (modeling) conditions lead to a same-sex effect (Hill and Stevenson, 1965; Stevenson and Fahel, 1961). These investigations support the hypothesis that a reinforcement/interactional condition is a necessary (though not necessarily sufficient) condition for the occurrence of the cross-sex effect.

Hill and Moely (1969) have demonstrated that task instructions regarding the specific name given a task are also important variables in the cross-sex

effect. They varied the presentation of a task so that half of the children thought that they were participating in a test, while the other half thought that they were participating in a game. For children in the game format, the results were comparable to those of Hill and Stevenson (1965) and Stevenson and Fahel (1961), namely, that a cross-sex effect was demonstrated. However, the results of the children in the test format contradicted those findings. It is apparent that the participation in a test introduces a new set of variables which may not be present when children are informed that they are playing a game. Such procedural differences may prove to be important and must be considered explicitly in future investigations of the cross-sex effect.

Two additional studies in this area demonstrate another procedural difficulty which might influence results in this area of investigation. McCoy and Zigler (1965) used three experimental conditions varying adults' familiarity with first and second-grade children. Children in a familiar-positive condition performed significantly better than children in a familiar-neutral condition who, in turn, performed better than children in a stranger condition. Stevenson and Snyder (1960),

however, found that children in a neutral condition performed better than those in a positive condition. In discussing this point, Stevenson and Snyder (1960) reported that children in the positive condition in their investigation had been "off task" for a large portion of the time trying to discuss personal matters with the experimenter, thereby decreasing their total score relative to children in the neutral condition. Additionally, girls outperformed boys in the neutral condition, while boys and girls performed equally in both positive and negative conditions (the experimenter was female). These findings support those previously reported concerning a same-sex effect in conditions lacking social reinforcement; but more importantly, they indicate that children did not demonstrate a sex of subject by type of reinforcement interaction. This implies that variables other than overt positive or negative feedback may underlie the differential responses by girls and boys in examples of the cross-sex effect.

The discovery of individual experimenter effects in many of the studies reporting a cross-sex effect corresponds to the discovery of similar experimenter effects in other research areas (e.g. Rosenthal, 1966; Silverman, Shulman, and Wiesenthal, 1972). Stevenson

(1961), for example, found direct evidence that individual experimenters contributed to a significant proportion of the variance in both baseline and experimental conditions. Inspection of the reported analysis of variance tables for the above study revealed that all significant interactions involved individual adult experimenters as a component.

Stevenson and Allen (1964) found a significant effect for adult experimenters and a cross-sex effect during the baseline period that carried over into the experimental session. Additional correlational data reported in this study support the proposition that there may be stable experimenter effects which occur across conditions (i.e., male experimenters who were most effective with girls were also effective with boys).

Berkowitz et al. (1965) presented evidence that differences in a negative pre-experimental condition were caused by differences between the two female experimenters (i.e., one of the two women was not as negative as the other). Significant experimenter effects have also been reported and used as explanations for experimental differences by: Cieutat and Flick (1967); Rowley and Stone (1964); and Gewirtz and Baer (1958b).

It is possible that the cross-sex effect may be wholly or partially dependent on the quality of the interaction between the adult and the child. Gender may enter the model in the sense that adults tend to respond in an explicitly differential manner to children as a consequence of their gender (Rothbart and Maccoby, 1966). It is possible, then, that subtle differences may be present in the manner adults react to a child of the opposite sex relative to their reaction to a child of the same sex within any given experimental condition. As Gurwitz and Dodge (1975) concluded from their investigation of adult evaluation of children based on the child's gender: "If adults prefer opposite-sexed children, it is likely . . . that they will behave more positively toward them."

That such differences may be associated with the experimenter's warmth has also been suggested by studies investigating the effects of rapport in intelligence testing (e.g. Sacks, 1952), and by subjects' association with a warm, positive experience in a pre-experimental condition (e.g. McCoy and Zigler, 1965). McKeachie and Lin (1971) have also shown that warmth of male teachers was associated with higher grades for female than for male students. Finally Allan (1966) found that kindergarten

children persisted on simple tasks for a longer period of time when the attending adult was supportive.

The evidence is somewhat contradictory when parents are used as reinforcing agents. For example, Patterson et al. (1964) using a marble dropping game found a cross-sex effect only in those conditions where the home environment was rated cool and restrictive, while a same-sex effect was present in those conditions where the home environment was rated warm and permissive. Cairns (1963), however, found no comparable effects for parental warmth and permissiveness. It would appear that some factors such as long term familiarity and preceding reinforcement history must be taken into consideration in cases involving children's interactions with parents.

The present study was designed to test the hypothesis that the cross-sex effect in children's learning is functionally dependent on the perceived warmth of the attending adult, regardless of that adult's gender. Specifically, the question is whether children perceive the gender of the adult per se, or the valence attributed to the adult's affect as important factors in determining that adult's effectiveness as an agent of social reinforcement. It was hypothesized that children's learning rates would vary as

a function of the attending adult's warmth, with children in the warm adult condition performing at a higher rate than children in the cool adult condition, regardless of the gender of the adult or the gender of the child. This investigation was viewed as a necessary step in determining the extent to which individual experimenter characteristics interact with and determine children's performance on simple learning tasks. This hypothesis grew out of the mounting evidence that variables such as warmth of experimenters were important parameters in many of the studies reviewed and should, therefore be investigated directly in a cross-sex paradigm. It is also seen as a further test and extension of the valence hypothesis of child/adult interaction.

Method

Subjects. 36 male and 36 female six- to seven-year-old first- and second-grade students were randomly selected from a population of Caucasian first-grade students attending a Northern New Jersey public school. As all adult experimenters were Caucasian, the use of Caucasian students eliminated possible confounds caused by racial differences between experimenters and subjects.

Experimenters. Two male and two female Caucasian graduate and undergraduate students were selected, so that overt differences regarding height, weight, coloring and observable age were minimized. None of the experimenters wore or used eyeglasses during the study. Such matching of experimenters was necessary to reduce the possibility of confounds caused by gross differences in physical appearance.

Raters. Seven male and seven female raters were randomly selected from an undergraduate general psychology class from those who volunteered to rate videotaped interactions between an adult and a child.

Task. The standard marble-in-the-hole (MITH) game was used in this investigation. According to Stevenson (1965), this task met most of the conditions deemed desirable

for investigating social interactions in children's learning, which were:

> 1. The task must not possess high intrinsic interest if the effects of social reinforcement are to be maximized.
>
> 2. The task should not have a clear terminus or visible product.
>
> 3. The task should minimize the effects of earlier learning.
>
> 4. The task should permit the adult to dispense supportive comments arbitrarily.
>
> 5. The task should utilize discrete responses (that can be counted rather than scored or rated). pp. 98-99.

Apparatus. The apparatus with which the above task was effected was based on that used by Gewirtz and Baer (1958b). It consisted of a plywood box measuring 31cm x 30cm x 22cm high, painted with red and white glossy stripes (giving it a carnival atmosphere). Two holes were drilled into the top of the box of such size to permit a marble to be dropped easily through them. A chute was constructed beneath these holes which returned the marbles to a container placed in front of and attached to the box, which held 15 marbles--thereby creating an inexhaustible supply.

Additionally, a Sony portable videotape recorder was used to record the experimenter's behavior and the number of marbles dropped into the two holes of t[illegible]bobe apparatus,

while also permitting exact timing via a 10cm sweep hand electric timer within a direct line of the camera.

Procedure. All experimenters were trained in the two experimental conditions so that, in the first they acted in a warm, friendly manner, while in the second condition they acted in an impersonal, businesslike manner (cool). Warm behavior was operationally defined as using the following (either together or in sequence):

1. Enunciating clearly, separating syllables--voice rising and falling.
2. Speaking loudly.
3. Voice raised at the end of a word.
4. Smiling, raised eyebrows, maintaining eye contact, pursed lips.
5. Nodding head and gesturing.

Cool behavior was operationally defined as using the following (either together or in sequence):

1. Speaking in a flat tone of voice.
2. Acting calmly and undemonstratively.
3. Lack of facial expressiveness.
4. Little eye contact.
5. Not using gestures.

(Patterson, et al. 1963)

Prior to the collection of any data, all experimenters were videotaped in a situation exactly like that to be encountered in the actual investigation. This procedure

permitted both the individual experimenters and the investigator to ensure that their behavior matched the above operational definitions of warm and cool.

Children were then randomly assigned to one of the two experimental conditions with the stipulation that equal numbers of girls and boys be assigned to each condition. Trials were counterbalanced for position of the correct hole; and sex of child and affective mode were randomized.

All children were then taken individually from the classroom by the experimenter who, from their first interaction, assumed the appropriate experimental role. The children were then taken to a room isolated, as far as possible, from ongoing school activity. The children sat at a student table on which was placed the experimental apparatus. The experimenter sat opposite the child, facing the videotape camera, which was hidden under a cardboard box on top of a movable cart. The camera was angled so that it clearly pictured the experimenter, the top of the box, and the clock. The task was introduced as a game the experimenter would like the child to play. The instructions given to the children were:

> "This is a game I would like you to play. In this game I would like you to drop the

marbles you see in front of you into the two holes on top of the box. Please use only one hand and drop only one marble at a time. Remember, you may drop marbles into either hole. Do you have any questions? If not, then I have some work I must do for a minute but please begin putting marbles into the holes."

If children put six consecutive marbles into one hole, they were reminded that they could use either hole. This procedure was used only one. When the child began dropping marbles into the holes, the experimenter started the clock.

For the first minute, the experimenter attended to a clipboard without paying any attention to the child. During the remaining four minutes, the experimenter verbally reinforced the child for placing the marbles in the hole which had been randomly designated correct for that child. (i.e. one hole was consistently reinforced as correct but the child was not informed that this was to be the procedure). Regardless of the affective mode, all experimenters used the same

words to reinforce a correct response. Among the words used as reinforcers were: "that's right," "good," "great," "OK," "very good," "fine," "right," etc. After a total of five minutes, the child was thanked for playing the game and returned to the classroom.

When data had been collected for all children, random samples of videotaped experimenter behavior interacting in each condition with boys and girls, was dubbed onto a videotape (i.e., for each experimenter, two-minute segments of their behavior in the warm and cool modes with girls and boys was dubbed from the original tape onto a secondary tape). This procedure consisted of randomly selecting one of four subsets of experimenter/child interaction for each experimenter in each experimental condition (i.e. cool mode/girl; cool mode/boy; warm mode/girl; warm mode/boy. These were then counterbalanced so that each condition was presented to raters in a varied order.

Inspection of the segments of videotaped experimenter behavior suggested that a consistent rating could be established with two minute segments. Since minute one was a non-interactive period and minute five showed a general attenuation, the choice of two continuous minutes was made randomly as minutes two and three.

This tape was shown to independent raters (7 males

and 7 females) who knew nothing of the purpose or design of the study. They were asked to rate the experimenter's behavior on a seven-point rating scale, using the operational definitions of warm and cool explained previously. (See sample of rating sheet in appendix). These ratings then formed the objective basis for determining whether each experimenter performed as expected in each of the conditions in the experimental design. The instructions given to all raters were as follows:

> "Thank you for volunteering to observe these videotapes for me. You will see an adult interacting with children, however you will only see the half of the television screen showing the adult. The purpose of this task is to provide anonymous feedback to these adults concerning how warm or cool they appear to act toward these children. This is the rating sheet I would like you to use (showing them a copy of the rating sheet). You will see a general description of what I am calling warm and cool on the bottom of the sheet. The scale is based from one (very cool) to seven (very warm). After you have

seen an adult I will ask you to make a rating using these seven numbers. Please do not make a rating until I stop the videotape. Are there any questions? If not, I will show you the first adult."

Design. The study was conducted as a 2 x 2 x 2 x 5 repeated measures analysis of variance (sex of experimenter x sex of child x experimenter's affect x time blocks). The dependent measures were the number of marbles placed in the correct hole during each minute and the overall rate determined by the total number of marbles placed in both holes during each minute.

Predictions:

1. Children in the warm experimenter condition would perform at a higher rate than children in the cool experimenter condition during reinforcement periods.

2. The number of correct responses per minute would increase from baseline period throughout the reinforcement periods.

Results

Validation of experimental condition. An analysis of variance was conducted on independent ratings of videotaped samples of experimenters in both warm and cool roles (sex of rater x sex of experimenter x experimenter's affect x sex of subject), since use of ratings such as those used in the present study have been supported in the literature (e.g. Hsu and Feldt, 1969). This analysis demonstrated a significant main effect for experimenter's affect F (1,208)= 1433.375, $p < .001$ (see Table 1).

Mean ratings of experimenters in the warm mode were 6.187, while those for the cool mode were 1.839. There was also a significant main effect for sex of experimenter $F(1,208) = 10.159$, $p < .01$, showing that female experimenters were rated as warmer overall ($\overline{X} = 4.169$) than were male experimenters ($\overline{X} = 3.830$). There were no other significant main effects or interactions (see Table 2).

Subsequent to this analysis data for male and female experimenters was further divided to reflect the influence of each experimenter. An analysis of variance was then conducted on ratings of each individual experimenter.

Table 1

Analysis of Variance for Ratings of Individual Experimenters

Source	Sum of Squares	DF	Mean Square	F-Test
Sex of Rater	1.004	1	1.004	1.360
Sex of Experimenter	7.504	1	7.504	10.159**
Affect	1058.791	1	1058.791	1433.375***
Sex of Subject	0.004	1	0.004	0.006
Sex of Rater x Sex of Experimenter	0.004	1	0.004	0.006
Sex of Rater x Affect	0.754	1	0.754	1.021
Sex of Experimenter x Affect	1.290	1	1.290	1.747
Sex of Rater x Sex of Subject	1.612	1	1.612	2.182
Sex of Experimenter x Sex of Subject	0.540	1	0.540	0.731
Affect x Sex of Subject	0.004	1	0.004	0.006
Sex of Rater x Sex of Experimenter x Affect	0.219	1	0.219	0.296
Sex of Rater x Sex of Experimenter x Sex of Subject	0.540	1	0.540	0.731
Sex of Rater x Affect x Sex of Subject	0.040	1	0.040	0.054
Sex of Experimenter x Affect x Sex of Subject	0.004	1	0.004	0.006
Sex of Rater x Sex of Experimenter x Affect x Sex of subject	1.004	1	1.004	1.360
Unit	153.643	208	0.739	NOT TESTED
Total	1226.961	223	5.502	

**$p < .05$
***$p < .001$

Table 2

Mean Ratings of Warm and Cool Affect Displayed by Male and Female Experimenters Testing Boys and Girls

Experimenter	Warm	Cool	Total
Male			
Boys	5.964	1.786	3.875
Girls	5.893	1.679	3.786
Total	5.929	1.732	3.830
Female			
Boys	6.393	1.893	4.143
Girls	6.500	2.000	4.250
Total	6.446	1.946	4.196
Grand Total	6.187	1.839	4.013

This analysis demonstrated a significant main effect for experimenter affect $F(1,192) = 1520.307$, $p < .001$, showing that all experimenters were rated significantly higher in the warm condition ($\overline{X} = 6.187$) than in the cool condition ($\overline{X} = 1.839$).

This analysis also revealed a significant main effect for individual experimenters $F(3,192) = 9.254$, $p < .001$, showing that one male experimenter ($\overline{X} = 3.714$) was rated significantly lower, overall, than one female experimenter ($\overline{X} = 4.500$). There were no other significant main effects or interactions (see Table 3).

Correct responses. Results of a repeated measures analysis of variance of correct responses on the marble-dropping task demonstrated a significant main effect for experimenter's affect $F(1,56) = 7.096$, $p < .01$. Mean correct responses for children in the warm condition were 16.187, while those in the cool condition had a mean of 13.406 (see Table 4).

This analysis also demonstrated a significant main effect for time blocks $F(4,224) = 40.999$, $p < .001$. A post hoc Sheffe (Winer,1962) demonstrated that the baseline period ($\overline{X} = 10.766$) differed significantly from all other time blocks ($\overline{X}_2 = 13.922$; $\overline{X}_3 = 15.844$; $\overline{X}_4 = 16.672$; $\overline{X}_5 = 16.781$) Time block two also differed significantly with time

Table 3

Mean Ratings of Warm and Cool Affect Displayed by Individual Experimenters Testing Boys and Girls

Experimenter	Warm	Cool	Total
Sid[1]			
Male	6.071	2.000	4.036
Female	5.786	1.929	3.857
Total	5.929	1.964	3.946
Len[1]			
Male	5.857	1.571	3.714
Female	6.000	1.429	3.714
Total	5.929	1.500	3.714
Pat[2]			
Male	6.071	1.714	3.893
Female	6.286	1.500	3.893
Total	6.179	1.607	3.893
Jan[2]			
Male	6.714	2.071	4.393
Female	6.714	2.500	4.607
Total	6.714	2.286	4.500
Grand Total	6.187	1.839	4.013

[1] Male experimenter

[2] Female experimenter

Table 4

Analysis of Variance Table for Correct Responses Over Minutes One through Five

Source	Sum of Squares	DF	Mean Square	F-Test
Sex of Experimenter	100.128	1	100.128	1.148
Affect	618.824	1	618.824	7.096*
Sex of Subject	136.502	1	136.502	1.565
Sex of Experimenter x Affect	0.703	1	0.703	0.008
Sex of Experimenter x Sex of Subject	39.903	1	39.903	0.458
Affect x Sex of Subject	75.078	1	75.078	0.861
Sex of Experimenter x Affect x Sex of Subject	31.878	1	31.878	0.366
Unit	4883.934	56	87.213	NOT TESTED
Timeblock	1636.216	4	409.054	40.999***
Sex of Experimenter x Timeblock	46.356	4	11.589	1.162
Affect x Timeblock	119.656	4	29.914	2.998*
Sex of Subject x Timeblock	29.856	4	7.464	0.748
Sex of Experimenter x Affect x Timeblock	7.594	4	1.898	0.190
Sex of Experimenter x Sex of Subject x Timeblock	5.144	4	1.286	0.129
Affect x Sex of Subject x Timeblock	51.094	4	12.773	1.280
Sex of Experimenter x Affect x Sex of Subject x timeblock	29.981	4	7.495	0.751
Timeblock x Unit	2234.885	224	9.977	NOT TESTED
Total	10047.707	319	31.498	

* $p < .05$

*** $p < .001$

blocks four and five. There was a significant experimenter affect by time block interaction $F(4,224)= 2.998$, $p < .03$. This interaction demonstrated that, while there were no differences in the mean number of marbles dropped into the correct hole by children in the warm and cool conditions during the baseline period, significant differences were found for these groups in all other time blocks (see Table 5).

Subsequent to this analysis, data for minutes two, three, and four were collapsed and reanalyzed to determine whether any of the above mean differences were affected by the baseline period (an essentially non-interactive, non-reinforcement period which demonstrated no difference between groups) and the fifth minute (which showed a tendency toward a ceiling effect). The result of this analysis of variance (sex of experimenter x experimenter affect x sex of child) demonstrated a significant main effect for experimenter affect $F(1,56) = 8.300$, $p < .007$, with children in the warm condition achieving a mean correct response of 51.60, while children in the cool condition achieved a mean of 41.31 correct responses (see Table 6). There were no other significant main effects or interactions.

Table 5

Mean Correct Responses for Boys and Girls Tested by Male and Female Experimenters in Warm and Cool Modes

	Minutes					
Experimenter	1	2	3	4	5	Total
Warm Mode						
Male						
Boys	12.125	16.875	19.625	20.375	20.375	17.875
Girls	10.125	15.375	17.875	17.375	16.875	15.525
Total	11.125	16.125	18.750	18.875	18.625	16.700
Female						
Boys	10.375	14.875	18.000	19.875	20.750	16.775
Girls	11.375	14.000	15.625	16.375	15.500	14.575
Total	10.875	14.483	16.813	18.125	18.125	15.675
Total	11.00	15.281	17.781	18.500	18.375	16.187
Cool Mode						
Male						
Boys	11.125	14.125	16.000	16.750	16.250	14.850
Girls	9.625	12.875	13.750	15.000	14.625	13.175
Total	10.375	13.500	14.875	15.875	15.438	14.013
Female						
Boys	10.750	11.250	12.000	13.375	14.125	12.300
Girls	10.625	12.000	13.875	14.250	15.750	13.300
Total	10.688	11.625	12.938	13.813	14.938	12.800
Total	10.531	12.563	13.906	14.844	15.188	13.406
Grand Total	10.766	13.922	15.844	16.672	16.781	14.797

Table 6

Mean Correct Responses Collapsed Over Minutes Two, Three, and Four for Boys and Girls Tested by Male and Female Experimenters in Warm and Cool Modes

Experimenter	Warm	Cool	Total
Male			
Boys	56.875	46.875	51.875
Girls	50.625	41.625	46.125
Total	53.750	44.250	49.000
Female			
Boys	52.750	36.625	44.687
Girls	46.000	40.125	43.062
Total	49.375	38.375	43.874
Totals	51.563	41.313	46.438

To determine the effect of individual experimenters, a repeated measures analysis of variance was conducted on correct responses (individual experimenter x experimenter affect x sex of subject x time blocks). This analysis revealed the same general results reported previously regarding the significant main effects of experimenter affect and time blocks, and the significant experimenter affect by timeblock interaction. The analysis also demonstrated a significant main effect for individual experimenters $F(3,48) = 3.731$, $p < .019$. Post hoc analysis indicated that one female experimenter ($\overline{X} = 12.412$) was significantly less effective than one male experimenter ($\overline{X} = 16.537$) in reinforcing correct responses in children she tested, and was generally less effective than the other male and female experimenters (means of 14.175 and 16.062 respectively). (See Table 7).

An analysis of variance was conducted on correct responses collapsed over minutes two, three, and four to determine whether individual experimenters contributed to a significant portion of the variance in that previous analysis. This analysis (individual experimenter x experimenter affect x sex of subject) again indicated the overall greater effectiveness of reinforcement in

Table 7

Mean Correct Responses for Boys and Girls Tested by Individual Experimenters in Warm and Cool Modes

Experimenters	Minutes 1	2	3	4	5	Total
Warm Mode						
Sid[1]						
Boys	10.250	19.000	20.250	22.000	21.000	18.5
Girls	9.750	15.750	21.250	21.250	20.250	17.65
Total	10.000	17.375	20.750	21.625	20.625	18.075
Len[1]						
Boys	14.000	14.750	19.000	18.750	19.750	17.250
Girls	10.500	15.000	14.500	13.500	13.500	13.400
Total	12.250	14.875	16.750	15.125	16.625	15.325
Pat[2]						
Boys	8.500	12.750	16.000	19.000	20.250	15.300
Girls	10.750	12.500	15.250	15.500	15.000	13.800
Total	9.625	12.625	15.625	17.250	17.625	14.550
Jan[2]						
Boys	12.250	17.000	20.000	20.750	21.250	18.250
Girls	12.000	15.500	16.000	17.250	16.000	15.350
Total	12.125	16.250	18.000	19.000	18.625	16.800
Total	11.000	15.281	17.781	18.500	18.375	16.187
Cool Mode						
Sid[1]						
Boys	10.250	12.750	14.750	16.250	16.250	14.050
Girls	11.500	15.500	17.000	18.250	17.500	15.950
Total	10.875	14.125	15.875	17.250	16.875	15.000
Len[1]						
Boys	12.000	15.500	17.250	17.250	16.250	15.650
Girls	7.750	10.250	10.500	11.750	11.750	10.400
Total	9.875	12.875	13.875	14.500	14.000	13.025
Pat[2]						
Boys	10.000	9.250	10.250	11.000	12.750	10.650
Girls	7.250	9.000	10.250	10.250	12.750	9.900
Total	8.625	9.125	10.250	10.625	12.750	10.275
Jan[2]						
Boys	11.500	13.250	13.750	15.750	15.500	13.95
Girls	14.000	15.000	17.500	18.250	18.750	16.700
Total	12.750	14.125	15.625	17.000	17.125	15.325
Total	10.531	12.563	15.844	16.672	16.781	13.406

[1] Male experimenters

[2] Female experimenters

Table 8

Mean Correct Responses Collapsed Over Minutes Two, Three and Four for Boys and Girls Tested by Individual Experimenters in Warm and Cool Modes

Experimenter	Warm	Cool	Total
Sid[1]			
Boys	60.500	43.750	52.125
Girls	58.250	50.750	54.500
Total	59.375	47.250	53.312
Len[1]			
Boys	53.250	50.000	51.625
Girls	43.000	32.500	37.750
Total	48.125	41.250	44.688
Pat[2]			
Boys	47.75	30.500	39.125
Girls	43.250	29.500	36.375
Total	45.500	30.000	37.750
Jan[2]			
Boys	57.750	42.750	50.250
Girls	48.750	50.750	49.750
Total	53.250	46.750	50.000
Grand Total	51.562	41.313	46.438

[1] Male Experimenters

[2] Female Experimenters

the warm mode, but also demonstrated a significant main effect for individual experimenters $F(3,48) = 4.140$, $p < .012$. Post hoc analysis revealed that one female experimenter achieved fewer overall responses ($\bar{X} = 37.75$) from children with whom she interacted than the other female experimenter ($\bar{X} = 50.00$) and one of the male experimenters ($\bar{X} = 53.313$) (see Table 8).

Incorrect responses. Results of a repeated measures analysis of variance of incorrect responses indicated that there were no significant main effects or interactions for sex of experimenter, experimenter affect, sex of subject, or time blocks (see Table 9).

Subsequent to this analysis, data for minutes two, three, and four were collapsed and reanalyzed. This analysis demonstrated a main effect for sex of experimenter which approached but did not reach significance $F(1,56) = 3.371$, $p < .073$ showing a tendency for children tested by male experimenters ($\bar{X} = 26.906$) to make fewer errors than children tested by female experimenters ($\bar{X} = 34.00$) (see Table 10).

A repeated measures analysis of variance was conducted on incorrect responses to determine the effect of individual experimenters (individual experimenter x experimenter affect x sex of subject x time block). This analysis demonstrated a significant main effect for individual

Table 9

Mean Incorrect Responses for Boys and Girls Tested by Male and Female Experimenters in Warm and Cool Modes

Experimenter	Minutes 1	2	3	4	5	Total
Warm Mode						
Male						
Boys	12.000	8.375	8.500	8.125	8.125	9.025
Girls	13.000	9.250	10.250	11.500	12.000	11.200
Total	12.500	8.813	9.375	9.813	10.063	10.112
Female						
Boys	9.000	10.000	9.500	9.125	8.625	9.250
Girls	13.500	12.875	12.125	13.625	12.125	12.850
Total	11.250	11.438	10.813	11.375	10.375	11.050
Subtotal	11.875	10.125	10.094	10.594	10.219	10.582
Cool Mode						
Male						
Boys	9.750	8.250	8.125	7.375	9.250	8.550
Girls	9.875	8.875	9.625	9.375	8.875	9.325
Total	9.813	8.563	8.875	8.375	9.063	8.937
Female						
Boys	11.375	11.500	11.250	12.000	11.875	11.600
Girls	10.500	11.875	11.375	10.750	11.625	11.225
Total	10.938	11.688	11.313	11.375	11.750	11.412
Subtotal	10.375	10.125	10.094	9.875	10.406	10.175
Grand Total	11.125	10.125	10.094	10.234	10.313	10.378

Table 10

Mean Incorrect Responses Collapsed Over Minutes Two, Three, and Four for Boys and Girls Tested by Male and Female Experimenters in Warm and Cool Modes

Experimenter	Warm	Cool	Total
Male			
Boys	25.000	23.750	24.375
Girls	31.000	27.875	29.437
Total	28.000	25.812	26.906
Female			
Boys	28.625	34.750	31.687
Girls	38.625	34.000	36.312
Total	33.625	34.375	34.000
Grand Total	30.812	30.093	30.453

experimenters $F(3,48) = 3.187$, $p<.033$. Post hoc analysis revealed that children tested by one male experimenter ($\overline{X} = 7.425$) made fewer incorrect responses than children tested by the other male experimenter ($\overline{X} = 11.625$) and one of the female experimenters ($\overline{X} = 11.862$).(See Table 11).

There was also a significant independent experimenter by time block interaction $F(12,192) = 2.767$, $p<.003$, indicating that one male experimenter elicited significantly fewer incorrect responses during reinforcement periods than all other experimenters, but statistically equivalent incorrect responses during the baseline period .

There was also a significant independent experimenter by experimenter affect by time block interaction $F(12,192) = 2.131$, $p<.018$, indicating that children's incorrect responses varied by independent experimenter and experimenter affect across time blocks. Specifically, while there were nosignificant differences in minute one, children tested by one male experimenter tended to make fewer incorrect responses than children tested by other experimenters in minutes two, three, four, and five (see Figure 1).

Subsequent to this analysis data for independent experimenters was collapsed across minutes two, three, and four and reanalyzed. This analysis of variance (individual experimenter x experimenter affect x sex

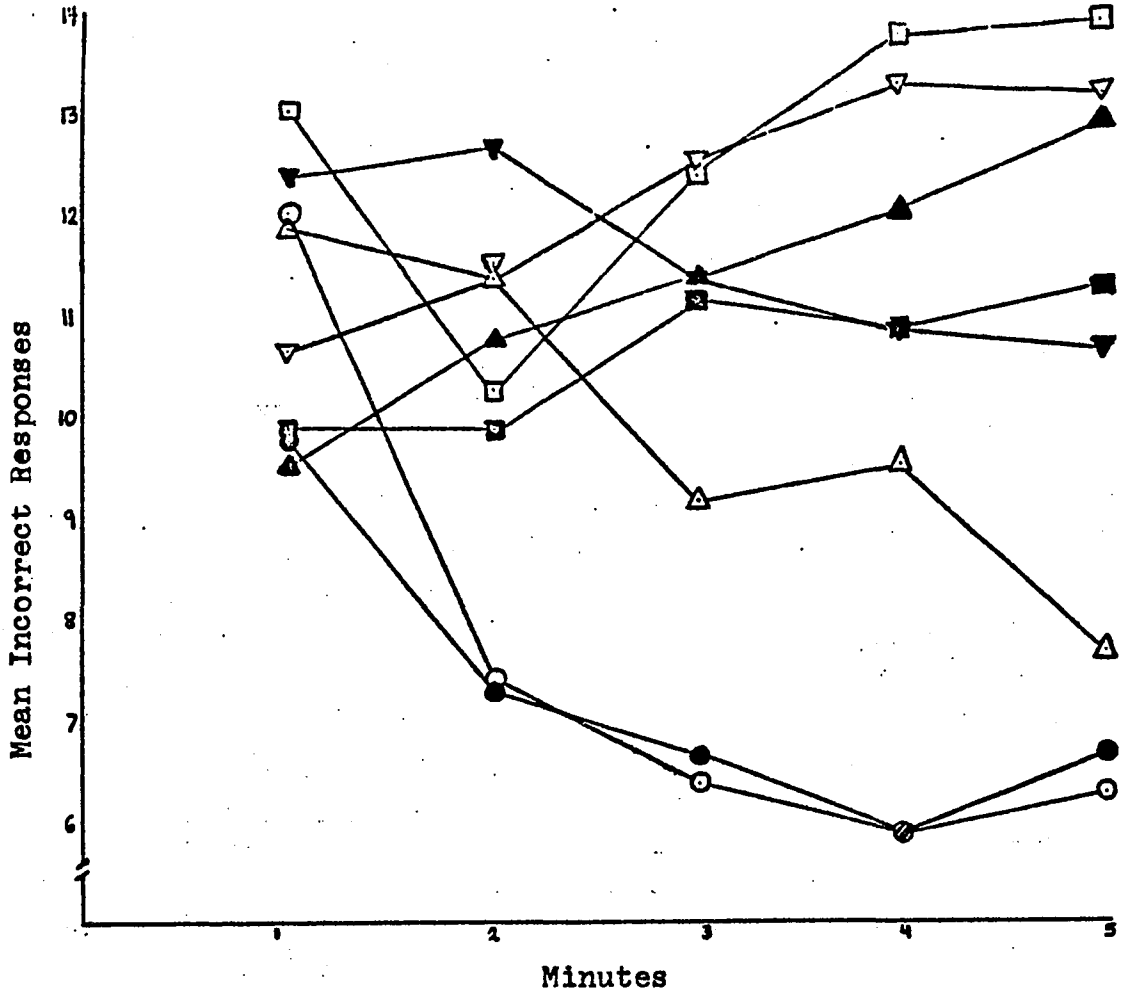

Figure 1. Mean incorrect responses across timeblocks for children tested by individual experimenters in warm and cool conditions.

Sid (warm/cool) ○ ●
Len (warm/cool) □ ■
Pat (warm/cool) △ ▲
Jan (warm/cool) ▽ ▼

Table 11

Mean Incorrect Responses for Boys and Girls Tested by Individual Experimenters in Warm and Cool Modes

Experimenters	Minutes 1	2	3	4	5	Total
Warm Mode						
Sid[1]						
Boys	11.250	5.750	5.500	4.250	5.250	6.400
Girls	12.750	9.000	7.250	7.500	7.250	8.750
Total	12.000	7.375	6.375	5.875	6.250	7.575
Len[1]						
Boys	12.750	11.000	11.500	12.000	11.000	11.650
Girls	13.250	9.500	13.250	15.500	16.750	13.650
Total	13.000	10.250	12.375	13.750	13.875	12.650
Pat[2]						
Boys	8.750	11.000	9.000	7.500	6.250	8.550
Girls	15.000	11.750	9.250	11.250	9.000	11.250
Total	11.875	11.375	9.125	9.500	7.625	9.900
Jan[2]						
Boys	9.250	9.000	10.000	10.500	11.000	9.950
Girls	12.000	14.000	15.000	16.000	15.250	14.450
Total	10.625	11.500	12.500	13.250	13.250	12.200
Subtotal	11.875	10.125	10.094	10.594	10.219	10.581
Cool Mode						
Sid[1]						
Boys	9.750	7.250	6.250	4.250	7.000	6.900
Girls	9.750	7.250	7.000	7.500	6.750	7.650
Total	9.750	7.250	6.625	5.875	6.875	7.275
Len[1]						
Boys	9.750	9.250	10.000	10.500	11.500	10.200
Girls	10.000	10.500	12.250	11.250	11.000	11.000
Total	9.875	9.875	11.125	10.875	11.250	10.600
Pat[2]						
Boys	11.750	11.250	11.000	13.750	13.750	12.300
Girls	7.250	10.250	11.750	10.250	12.000	10.300
Total	9.500	10.750	11.375	12.000	12.875	11.300
Jan[2]						
Boys	11.000	11.750	11.500	10.250	10.000	10.900
Girls	13.750	13.500	11.000	11.250	11.250	12.150
Total	12.375	12.625	11.250	10.750	10.625	11.525
Subtotal	10.375	10.125	10.094	9.875	10.406	10.175
Grand Total	11.125	10.125	10.094	10.234	10.313	10.378

[1]Male experimenters [2]Female experimenters

of subject) demonstrated a significant main effect for independent experimenter $F(3,48) = 3.679$, indicating that one male experimenter elicited fewer errors ($\overline{X} = 19.688$) from children tested than one female experimenter ($\overline{X} = 35.938$). There were no other significant main effects or interactions (see Table 12).

Overall rate. Repeated measures analysis of variance (sex of experimenter x experimenter affect x sex of subject x time blocks) for overall rate of response (total of all correct and incorrect responses during each minute) demonstrated a significant main effect for experimenter affect $F(1,56) = 7.700$, $p<.009$, with children in the warm condition responding at a higher rate ($\overline{X}= 26.769$) than children in the cool condition ($\overline{X} = 23.569$) (see Table 13).

There was also a significant main effect for time blocks $F(4,224) = 48.829$, $p<.001$, with the mean rate of response for each minute being, respectively: 21.891; 24.047; 25.938; 26.875; 27.094. Post hoc analysis revealed that the rate of response during minute one was significantly lower than all other time periods, and that rate during minute two was significantly lower than rate during minute three. There were no other significant mean differences.

Table 12

Mean Incorrect Responses Collapsed Over Minutes Two, Three, and Four for Boys and Girls Tested by Individual Experimenters in Warm and Cool Modes

Experimenter	Warm	Cool	Total
Sid[1]			
Boys	15.500	17.750	16.625
Girls	23.750	21.750	22.750
Total	19.625	19.750	19.687
Len[1]			
Boys	34.500	29.750	32.125
Girls	38.250	34.000	36.125
Total	36.375	31.875	34.125
Pat[2]			
Boys	27.750	36.000	31.875
Girls	32.250	32.250	32.250
Total	30.000	34.125	32.062
Jan[2]			
Boys	29.500	33.500	31.500
Girls	45.000	35.750	40.375
Total	37.250	34.625	35.937
Grand Total	30.812	30.094	30.453

[1] Male experimenters

[2] Female Experimenters

Table 13

Analysis of Variance Table for Rate of Response over Minutes One through Five

Source	Sum of Squares	DF	Mean Square	F-Test
Sex of Experimenter	26.450	1	26.450	0.249
Experimenter Affect	819.198	1	819.198	7.700**
Sex of Subject	4.050	1	4.050	0.038
Sex of Experimenter x Affect	35.112	1	35.112	0.330
Sex of Experimenter x Sex of Subject	46.512	1	46.512	0.437
Affect x Sex of Subject	12.012	1	12.012	0.113
Sex of Experimenter x Affect x Sex of Subject	0.050	1	0.050	very small
Unit	5958.184	56	106.396	not tested
Timeblock	1229.605	4	307.401	48.829***
Sex of Experimenter x Timeblock	19.269	4	4.817	0.765
Affect x timeblock	60.394	4	15.098	2.398
Sex of Subject x timeblock	11.231	4	2.808	0.446
Sex of Experimenter x Affect x timeblock	26.356	4	6.589	1.047
Sex of Experimenter x sex of subject x timeblock	30.519	4	7.630	1.212
Affect x sex of subject x timeblock	40.644	4	10.161	1.614
Sex of Experimenter x Affect by sex of subject x timeblock	76.981	4	19.245	3.057*
Timeblock x unit	1410.188	224	6.295	not tested
Total	9806.727	319	30.742	

* $p<.05$ ** $p<.01$ *** $p<.001$

This analysis also revealed a significant sex of experimenter by experimenter affect by sex of subject by time block interaction $F(4,224) = 3.057$, $p < .019$. Post hoc analysis revealed that all significant differences between individual means within minutes two, three, four, and five involved differences between warm and cool conditions (i.e. no cases were found where children in a cool condition performed at a higher rate than children in a warm condition). However, during the baseline period (minute one), it was found that boys who would be receiving warm affective interaction by female experimenters demonstrated the lowest overall rate of response ($\bar{X} = 19.375$)--significantly lower than two other warm treatment groups: boys who would be receiving warm affective interaction from adult males ($\bar{X} = 24.125$), and girls who would be receiving warm affective interaction from adult females ($\bar{X} = 24.875$) (see table 14).

This analysis also revealed that the only significant increase in rate from one time period to the next involved the group of boys who received warm affective interaction with female experimenters between minute one and minute two (means of 19.375 and 24.875 respectively.).

Additionally, there was an experimenter affect by

Table 14

Mean Rate of Response for Boys and Girls Tested by Male and Female Experimenters in Warm and Cool Modes

	Minutes					
Experimenter	1	2	3	4	5	Total
			Warm Mode			
Male						
Boys	24.125	25.250	28.125	28.500	28.500	26.900
Girls	23.125	24.625	28.125	28.875	28.875	26.725
Total	23.625	24.938	28.125	28.688	28.688	
Female						
Boys	19.375	24.875	27.500	29.000	29.375	26.025
Girls	24.875	26.875	27.750	30.000	27.625	27.425
Total	22.125	25.875	27.625	29.500	28.500	
Subtotal	22.875	25.406	27.875	29.094	28.594	26.769
			Cool Mode			
Male						
Boys	20.875	22.375	24.125	24.125	25.500	23.400
Girls	19.500	21.750	23.375	24.375	23.500	22.500
Total	20.188	22.063	23.750	24.250	24.500	
Female						
Boys	22.125	22.750	23.250	25.375	26.000	23.900
Girls	21.125	23.875	25.250	24.750	27.375	24.475
Total	21.625	23.313	24.250	25.063	26.688	24.475
Subtotal	20.906	22.688	24.000	24.656	25.594	23.569
Grand Total	21.891	24.047	25.938	26.875	27.094	25.169

timeblock interaction which approached significance $F(4,224) = 2.394$, $p<.053$, showing a general trend for rate of response to increase more sharply across time blocks in the warm condition than in the cool condition.

Subsequent to this analysis, data for rate of response over minutes two, three, and four was collapsed and re-analyzed. This analysis of variance (sex of experimenter x experimenter affect x sex of subject) revealed a significant main effect for experimenter affect $F(1,56)= 10.518$, $p<.003$, with mean rate of response in the warm condition ($\bar{X}= 82.375$) greater than rate of response in the cool condition ($\bar{X}= 71.094$). There were no other significant main effects or interactions (see Table 15).

To determine the influence of individual experimenters a repeated measures analysis of variance was conducted on rate of response (individual experimenter x experimenter affect x sex of subject x time blocks). This analysis demonstrated a significant main effect for individual experimenters $F(3,48)= 4.134$, $p<.012$, showing that one female experimenter ($X= 23.012$) elicited a significantly lower rate than the other female experimenter ($X= 27.900$) The analysis also demonstrated a significant main effect for experimenter affect $F(1,48)= 9.095$, $p<.006$, showing that children in the warm mode responded at a higher rate

Table 15

Mean Rate of Response Collapsed Over Minutes Two, Three, and Four for Boys and Girls Tested by Male and Female Experimenters in Warm and Cool Modes

Experimenter	Warm	Cool	Total
Male			
Boys	81.875	70.625	76.250
Girls	81.625	69.500	75.625
Total	81.750	70.062	75.906
Female			
Boys	81.375	70.125	75.750
Girls	84.625	74.125	79.375
Total	83.000	72.125	77.562
Grand Total	82.375	71.094	76.734

($\bar{X}$= 26.769) than children in the cool mode ($\bar{X}$= 23.569). This analysis also demonstrated a significant main effect for time blocks $F(4,192)=54.228$, $p<.001$, showing that rate during the baseline period ($\bar{X}$= 21.891) was significantly lower than rate in minute two ($\bar{X}$=24.047) which was, in turn, significantly lower than rate of response in minutes three ($\bar{X}$=25.938), four ($\bar{X}$= 26.875), and five ($\bar{X}$=27.094).

The significant experimenter affect by time block interaction $F(4,192)=2.663$, $p<.035$ showed that, while no significant differences existed between rate of response during the baseline periods for children in warm and cool modes, significant differences existed between rate of response in these conditions during minutes two, three, four, and five (see Table 16).

The significant individual experimenter by experimenter affect by timeblock interaction $F(12,192)= 2.692$, $p<.004$ demonstrated: During minute one, children tested by one male and one female experimenter had a significantly higher rate in the warm mode than in the cool mode, while for the other male experimenter there were no significant differences, and for the other female experimenter the effects were reversed; during minute two children tested by all experimenters except one female experimenter had a

Table 16

Mean Rate of Response for Boys and Girls Tested by Individual Experimenters in Warm and Cool Modes

Experimenters	Minutes 1	2	3	4	5	Total
Warm Mode						
Sid[1]						
Boys	21.500	24.750	25.750	26.250	26.250	24.900
Girls	22.500	24.750	28.500	28.750	27.500	26.400
Total	22.000	24.750	27.125	27.500	26.875	25.650
Len[1]						
Boys	26.750	25.750	30.500	30.750	30.750	28.900
Girls	23.750	24.500	27.750	29.000	30.250	27.050
Total	25.250	25.125	29.125	29.875	30.500	27.975
Pat[2]						
Boys	17.250	23.750	25.000	26.500	26.500	23.850
Girls	25.750	24.250	24.500	26.750	24.000	25.050
Total	21.500	24.000	24.750	26.750	25.250	24.450
Jan[2]						
Boys	21.500	26.000	30.000	31.250	32.250	28.200
Girls	24.000	29.500	31.000	33.250	31.250	29.800
Total	22.750	27.750	30.500	32.250	31.750	29.000
Subtotal	22.875	25.406	27.875	29.094	28.594	26.769
Cool Mode						
Sid[1]						
Boys	20.000	20.000	21.000	20.500	23.250	20.950
Girls	21.250	22.750	24.000	25.750	24.250	23.600
Total	20.625	21.375	22.500	23.125	23.750	22.275
Len[1]						
Boys	21.750	24.750	27.250	27.750	27.750	25.850
Girls	17.750	20.750	22.750	23.000	22.750	21.400
Total	19.750	22.750	25.000	25.375	25.250	23.625
Pat[2]						
Boys	21.750	20.500	21.250	24.750	26.500	22.960
Girls	14.500	19.250	22.000	20.000	24.750	20.200
Total	18.125	19.975	21.625	22.625	25.625	21.575
Jan[2]						
Boys	22.500	25.000	25.250	26.900	25.500	24.850
Girls	27.750	28.500	28.500	29.000	30.000	28.750
Total	25.125	26.750	26.875	27.500	27.750	26.800
Subtotal	20.906	22.688	24.000	24.656	25.594	23.569
Grand Total	21.891	24.047	25.938	26.875	27.094	25.169

[1] Male Experimenter [2] Female Experimenter

significantly higher rate in the warm mode; during the third and fourth minutes children tested by all experimenters had higher rates in the warm mode; and, during the fifth minute this significant difference was maintained for all except one female experimenter (see figure 2).

This analysis also demonstrated a significant independent experimenter by experimenter affect by sex of subject by time block interaction $F(12,192)=2.732$, $p<.003$ indicating a complex sequence of increases and decreases of rate across time blocks for experimenters testing boys and girls (see figure 3). In general, significant increases across time blocks were shown by the same sex children tested by one male and one female experimenter in the warm but not cool modes; and, for the other experimenters, in both warm and cool modes for opposite sexed children, and in the cool mode for same sexed children.

Subsequent to this analysis, data for minutes two, three and four were collapsed and reanalyzed to determine whether any of the mean differences were affected by the baseline period and fifth minute. This analysis of variance (individual experimenter x experimenter affect x sex of subject) revealed a significant main effect for individual experimenters $F(3,48)=4.374$, $p<.007$ demonstrated that one

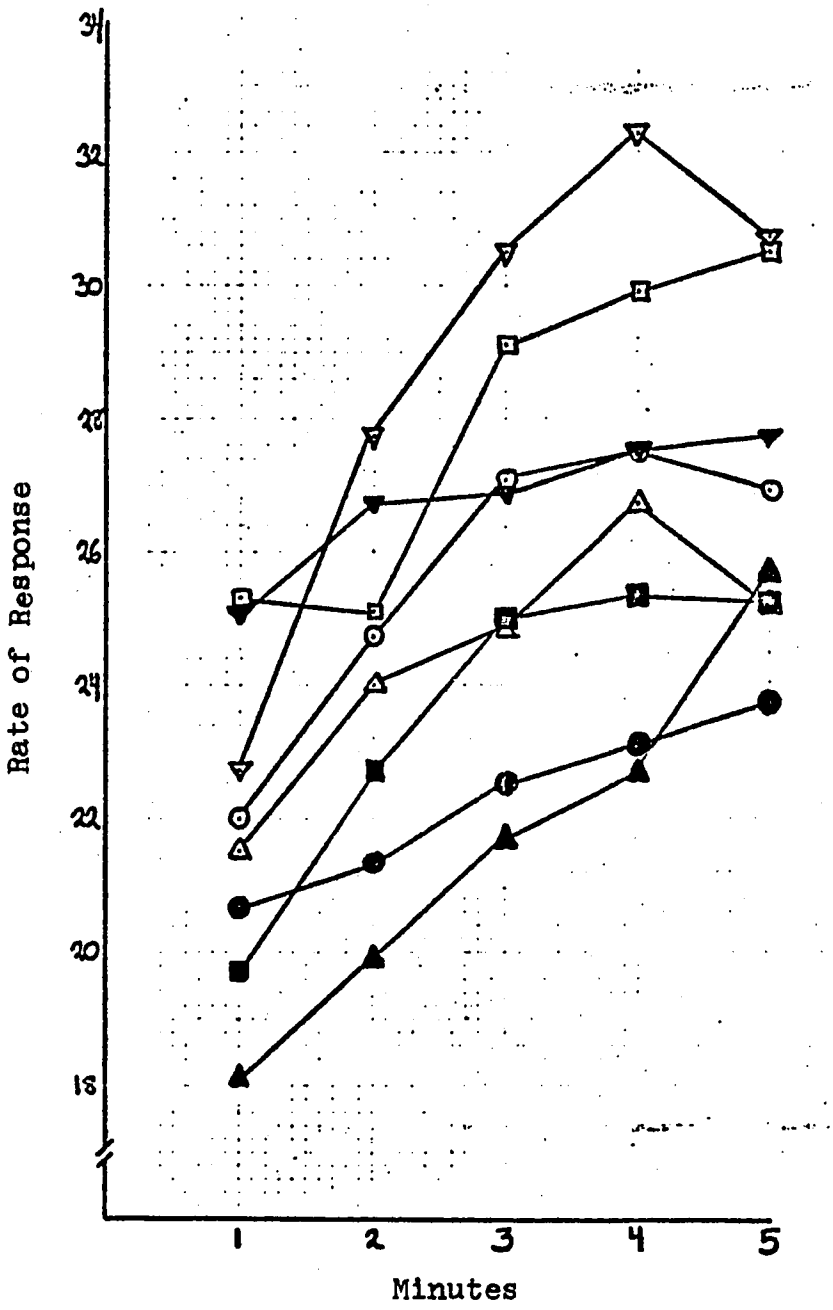

Figure 2. Mean rate of response across timeblocks for children tested by individual experimenters in warm and cool modes.

Sid (warm/cool)
Len (warm/cool)
Pat (warm/cool)
Jan (warm/cool)

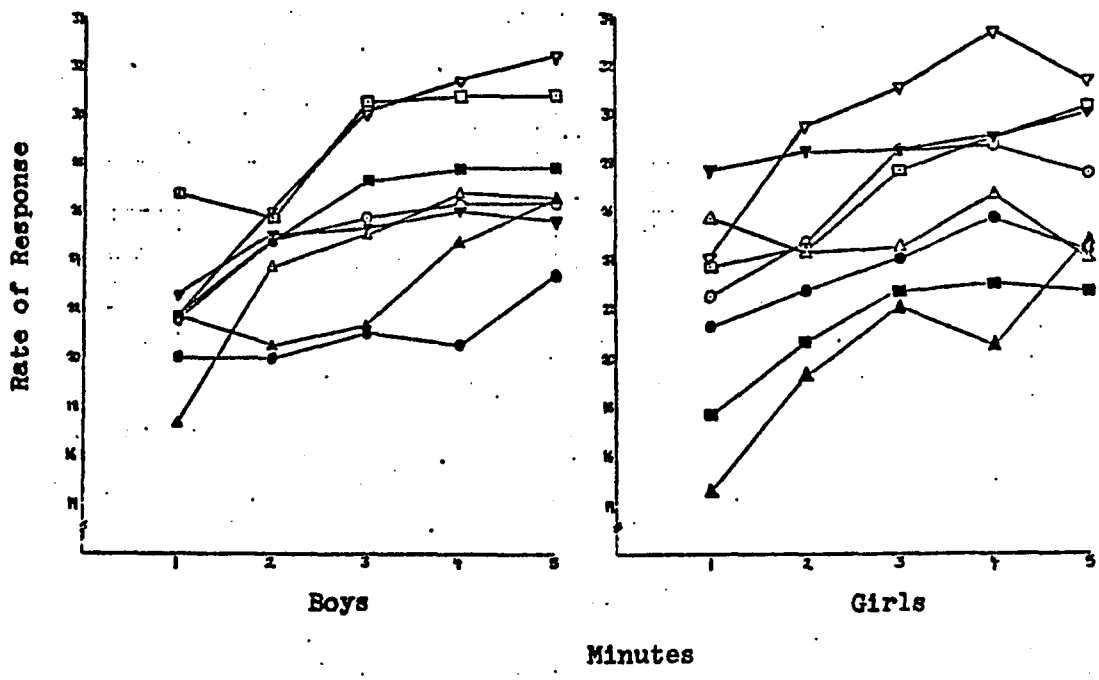

Figure 3. Mean rate of response for boys and girls across timeblocks tested by individual experimenters in warm and cool conditions.

Sid (warm/cool)
Len (warm/cool)
Pat (warm/cool)
Jan (warm/cool)

female experimenter elicited a lower rate of response from children than the other female experimenter (means of 69.813 and 85.313 respectively) (see table 17).

This analysis also demonstrated a significant main effect for experimenter affect $F(3,48)=12.932$, $p<.001$, showing that children in the warm mode responded at a higher rate than children in the cool mode (means of 82.375 and 71.094 respectively).

Interrelationships among dependent measures. The analyses reported previously demonstrated that, while correct responses generally increased across time blocks, incorrect responses did not generally show a corresponding decrease across time blocks (see figure 4). The reported increase in rate of response across time blocks could have been the result of two possible occurences: Children could have either shown an increase in correct responses with a corresponding decrease in incorrect responses, or they could have shown a general increase in both correct and incorrect responses. Both methods would have yielded increases in overall rate and correct responses, but would have generally the opposite effect on incorrect responses.

In a two choice discrimination task, there is theoretically a 50% probability that either choice will

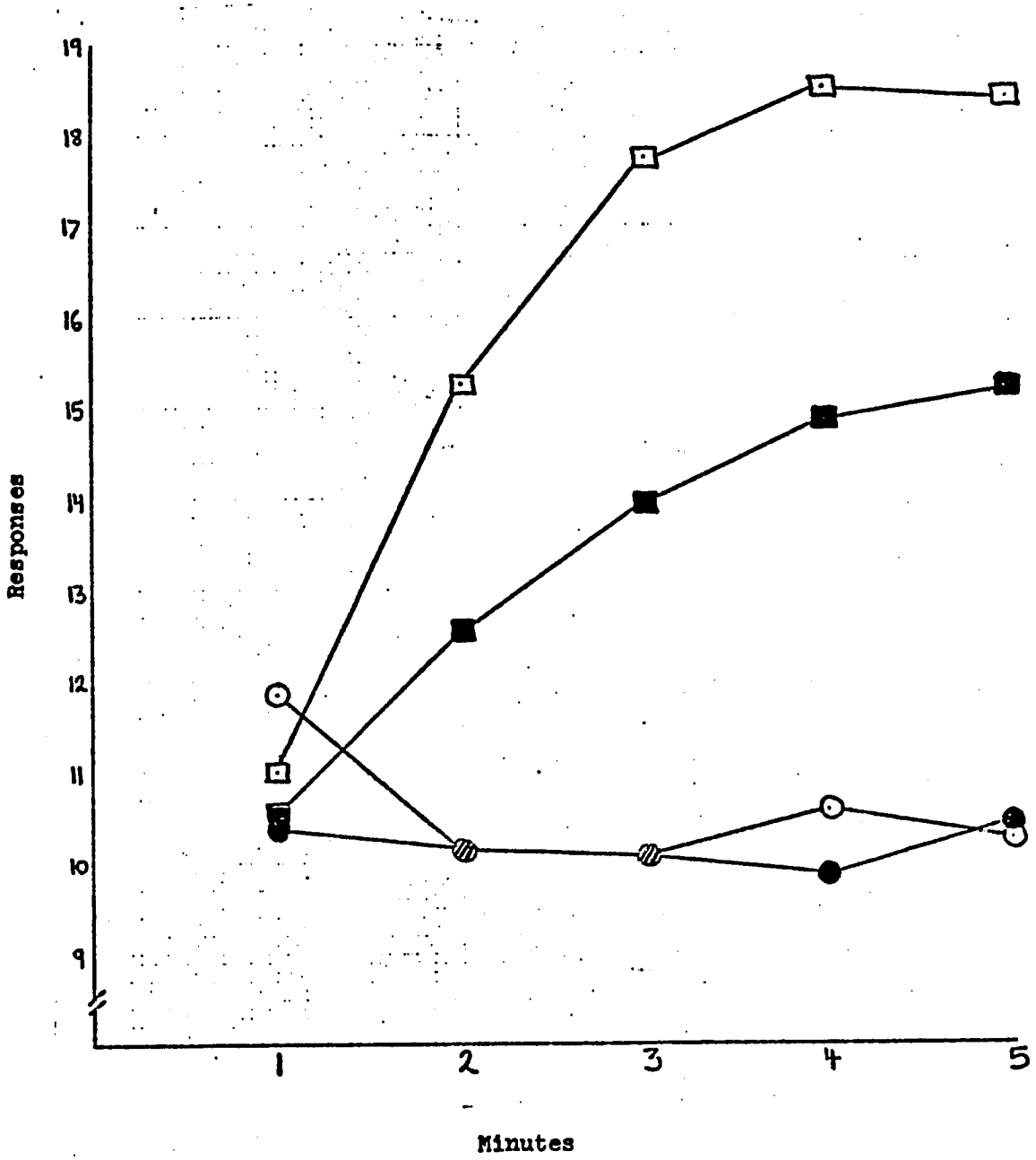

Figure 4. Mean correct and incorrect responses in warm and cool conditions across timeblocks.

correct (warm/cool)
incorrect (warm/cool)

Table 17

Mean Rate of Response Collapsed Over Minutes Two, Three, and Four for Boys and Girls Tested by Individual Experimenters in Warm and Cool Modes

Experimenter	Warm	Cool	Total
Sid[1]			
Boys	76.000	61.500	68.750
Girls	82.000	72.500	77.250
Total	79.000	67.000	73.000
Len[1]			
Boys	87.750	79.750	83.750
Girls	81.250	66.500	73.875
Total	84.500	73.125	78.813
Pat[2]			
Boys	75.500	66.500	71.000
Girls	75.500	61.750	68.625
Total	75.500	64.125	69.813
Jan[2]			
Boys	87.250	73.750	80.500
Girls	93.750	86.500	90.125
Total	90.500	80.125	85.313
Grand Total	82.375	71.094	76.734

[1] Male experimenters

[2] Female experimenters

be made by any given child. To demonstrate that a given child has learned a discrimination, it is necessary to show that the proportion of correct choices differs significantly from that expected by chance alone. Transformation of the non-reinforced baseline proportions of correct responses to z-scores indicated that a child would need to choose the correct response 69% of the time to reject the null hypothesis at the 5% level of confidence.

Using this criterion to determine which children learned a correct discrimination, children were divided into two groups consisting of those whose proportions of correct responses fell above or below the criterion of 69%. These two groups were designated as discrimination oriented (above 69%) and arousal oriented (below 68%). When this distinction was made, 28.2% of the children could be described as discrimination oriented and 71.8% as arousal oriented.

No significant differences were found between the proportions of correct responses for warm and cool conditions for either group, or for changes across time blocks for arousal oriented children. However, a one-way repeated measures analysis of variance for discrimination oriented children across time blocks demonstrated a significant main effect for time blocks $F(4,68)=171.067, p<.001$

showing that the proportion of correct responses increased significantly from minute one to minute two, and from minute two to minute three; but that minutes three through five were statistically equivalent (see Table 18).

A repeated measures analysis of variance (individual experimenter x experimenter affect x sex of subject x time block) was conducted to determine whether any differences between experimenters existed in the area of proportions of correct responses that might have contributed to the above phenomenon. This analysis demonstrated a significant main effect for individual experimenters $F(3,48)=4.112$, $p<.013$, indicating that one male experimenter elicited a significantly higher proportion of correct responses from children tested ($\bar{X}=0.695$) than the other three experimenters (means of 0.546, 0.530 and 0.580 respectively). There was also a significant main effect for time blocks $F(4,192)= 18.205$, $p<.001$ showing that the proportion of correct responses in the baseline period was significantly lower than in all other time blocks (see Table 19). Additionally, there was a significant independent experimenter by time block interaction $F(12,192)=2.974$, $p<.001$ indicating that while no differences existed between proportions elicited by different experimenters in the baseline period, one experimenter elicited a significantly higher proportion in the

Table 18

Repeated Measures Analysis of Variance for Proportions of Correct Responses for Discrimination Oriented Children Across Timeblocks

Source	Sum of Squares	DF	Mean Square	F
Between Subjects	1.5797	17		
Within Subjects	2.3093	72		
Timeblocks	2.1006	4	0.5251	171.067***
Residual	0.2087	68	0.0031	
Total	6.1982	89		

***$p < .001$

Table 19

Mean Proportion of Correct Responses for Boys and Girls Tested by Individual Experimenters in Warm and Cool Mode

Experimenter	Minutes 1	2	3	4	5	Total
Warm Mode						
Sid[1]						
Boys	.453	.757	.768	.816	.784	.716
Girls	.444	.669	.762	.758	.754	.677
Total	.446	.713	.765	.787	.769	.696
Len[1]						
Boys	.523	.585	.636	.638	.658	.608
Girls	.448	.602	.522	.471	.444	.497
Total	.485	.594	.579	.555	.551	.553
Pat[2]						
Boys	.490	.537	.644	.705	.776	.630
Girls	.418	.515	.624	.589	.629	.555
Total	.454	.526	.634	.647	.703	.592
Jan[2]						
Boys	.584	.678	.665	.668	.666	.652
Girls	.500	.524	.517	.518	.512	.514
Total	.542	.601	.591	.593	.589	.583
Subtotal	.482	.608	.642	.645	.653	.606
Cool Mode						
Sid[1]						
Boys	.514	.651	.725	.784	.718	.678
Girls	.559	.726	.755	.750	.759	.710
Total	.537	.688	.740	.767	.739	.964
Len[1]						
Boys	.555	.619	.620	.611	.564	.593
Girls	.437	.494	.467	.511	.518	.485
Total	.494	.557	.543	.561	.541	.539
Pat[2]						
Boys	.483	.420	.480	.444	.477	.451
Girls	.418	.462	.464	.500	.515	.485
Total	.547	.441	.472	.472	.496	.468
Jan[2]						
Boys	.495	.532	.553	.607	.620	.561
Girls	.530	.534	.634	.633	.638	.594
Total	.512	1533	.593	.620	.629	.577
Subtotal	.500	.555	.587	.605	.601	.570
Grandtotal	.491	.582	.615	.625	.627	.588

four reinforced time periods. Additionally, the proportions for this experimenter were significantly higher in all reinforced periods, while the proportion of correct responses for one female experimenter differed only in comparison of minutes one and five. No other experimenters showed a significant increase over their baseline period

Relationships between correct responses and rate. Pearson product moment correlations were conducted to determine the relationship between correct responses and rate of response for discrimination and arousal oriented children (see Table 20). Comparison of overall correlations between correct response and rate for each time period indicated that significant differences existed between arousal and discrimination oriented children for minutes one ($z = 3.96$, $p<.01$) and two ($z = 3.32$, $p<.01$) but that the other three time periods were statistically equivalent.

For discrimination oriented children there were no significant differences between the correlations for warm and cool modes. Arousal oriented children, however, demonstrated significant differences in correlations between warm and cool modes in the baseline period ($z = 2.10$, $p<.05$) and minute four ($z = 2.14$, $p<.05$).

Table 20

Correlations between correct responses and rate for discrimination and arousal oriented children in warm and cool conditions across time blocks.

Condition	Minutes 1	2	3	4	5
			Discrimination Oriented		
Warm[1]	.20	.61	.90	.83	.87
Cool[2]	.42	.71	.83	.79	.98
Total	.23	.63	.86	.80	.88
			Arousal Oriented		
Warm[3]	.79	.92	.89	.63	.85
Cool[4]	.94	.95	.91	.89	.83
Total	.89	.94	.92	.77	.85

1 n= 11

2 n= 7

3 n= 21

4 n= 25

Comparisons of correlations in baseline and reinforcement periods demonstrated no significant differences for arousal oriented children. Discrimination oriented children, however, demonstrated significant differences between baseline and minutes three ($z = 2.90, p < .01$), four ($z = 2.36, p < .05$) and five $z = 3.12, p < .01$).

Ranking of Experimenters on dependent measures.

Experimenters were rank ordered on all dependent measures to determine whether consistencies existed across measures which could help interpret the general analyses. Additionally, experimenters were rank ordered on the number of children who learned the correct discrimination, and all rankings were correlated with the rank ordering of ratings by independent raters.

Spearman rank order correlations between ratings and incorrect responses, correct responses, rate, and number of children achieving a correct discrimination were, respectively: $r = 0.20$, $z = 0.1433$; $r = 0.60$, $z = 0.4901$; $r = 0.40$, $z = 0.2995$; $r = -0.25$, $z = 0.1806$.

Discussion

The purpose of this invesgitation was to determine whether what has previously been labeled the cross-sex effect in children's learning was actually a function of gender, per se, or the result of differential affect displayed by the experimenter toward the children in the experimental task.

The results clearly support the latter alternative. It was apparent that, except for incorrect responses, all analyses involving experimenters grouped by gender, demonstrated the greater effectiveness of a warm mode of interaction. That is, both boys and girls learned more correct responses, and responded at a higher rate in the warm condition than in the cool condition, regardless of the gender of the experimenter.

Although all experimenters acted in their appropriate roles from the first moment of interaction with the children, they tended to act in a generally neutral manner during the baseline period, as they did not attend to the child but to other, non-interactive tasks. Under these conditions, it was expected, and found that there were no differences in children's performance during that time period. In subsequent time blocks, performance

clearly varied as a function of the experimenter's affect.

The results of the two minute segments (minutes 2 and 3), which were independently rated, demonstrated that all experimenters were acting in clearly differentiated roles corresponding to those previously labeled "warm" and "cool." The mean difference of 4.348 on a seven-poing scale indicated that roles were perceived to be as differentiated as they were originally conceptualized.

One interesting finding was that the significant main effect of rated warmth for sex of experimenter showed that female experimenters were perceived by the raters as warmer, overall, than male experimenters. That this perception of greater female warmth was not influential in the learning trials was apparent from the non-significant sex of experimenter by experimenter affect interactions. These findings do, however, lend support to Sarason and Winkel's (1966) findings that female experimenters were rated as friendlier, overall, than male experimenters by both male and female raters.

When the ratings of individual experimenters were analyzed, it was clear that the overall higher ratings of female experimenters resulted primarily from the

generally higher rating given one of the two experimenters involved. Children tested by this experimenter also had the highest overall rate of response. Since rate was determined by combining correct and incorrect responses, children tested by this experimenter also had the highest number of incorrect responses and the second highest number of correct responses.

Since this experimenter ranked lowest in eliciting a correct discrimination from the children she tested, it might suggest that perceived warmth was associated more with what has been called arousal oriented children (that is, may have an arousal function). This conclusion, however, cannot be drawn from this data as the male experimenter who achieved the second highest overall rating of perceived warmth ranked first in eliciting a correct discrimination. This inconsistency is also reflected in the relatively low correlation ($r = 0.25$) between ratings and rank in eliciting correct discriminations.

The only evidence which suggests that ratings of perceived warmth were associated with children's learning involved the relatively high ($r = 0.60$), though non-significant, correlation between ratings and rank on ability to elicit correct responses. Clearly, the low number of experimenters involved in these calculations

reduces the chances of discerning significant differences between them in these rank order correlations. However, the generally inconsistent rankings on the various dependent measures suggests that those aspects of experimenter affect reflected in the ratings by independent observers may have been different than those acted upon by children in the MITH game. These findings do, however, support the proposition that differences in children's learning were not a result of gender differences, but rather differences between individual experimenters and the children with whom they interacted.

The evidence also supports the interpretation that children employed clearly different strategies in playing the MITH game and could be divided into two basic groups on the basis of whether or not they exceeded chance responding in the two hole discrimination task. That these different approaches may have been caused by differential action on the part of the experimenters has been discussed previously. The correlation of correct responses and rate in the baseline period, though, suggests that children interpreted the meaning of the MITH game in different ways even prior to the introduction of reinforcement. Children who learned the correct discrimination had a low correlation of correct response and rate in the baseline period

which never varied significantly in any of the reinforcement periods.

The clearest explanation of this phenomenon is that children who learned the correct discrimination approached the game with a strategy that there was a correct response that could be discovered through variation in their response, and used the verbal reinforcers as a means of testing various strategies. This group showed clearly that they recognized the expected correct response and as these increased, incorrect responses decreased (usually to zero). Children who did not learn the correct discrimination employed a strategy of left-right alternation throughout the five time periods. They appeared to interpret the verbal reinforcers as a mechanism of arousal urging them to place more marbles into both holes and generally to increase their rate of response.

These two groups, therefore, contributed to the overall results in very different ways. Both contributed to the increase in correct responses and overall rate of response, but tended to contribute generally opposite effects for incorrect responses. Additionally, all children tested by one male experimenter showed a significant overall decrease in errors across time periods, as did children in the warm mode tested by one female experimenter. These two findings help in the interpretation of why, overall ,

incorrect responses did not decrease as correct responses increased.

There are still several questions which cannot be answered from the present data, such as why incorrect responses did not decrease for children tested by all experimenters when, except for the one female experimenter who elicited the overall highest rate, discrimination oriented children were equally distributed among experimenters. This implies that while some children began to recognize that a discrimination was being called for, they could not entirely break the pattern of alternation established during the baseline period.

Within the learning trials collapsed over minutes two, three, and four (which provides the best overall picture of verbal reinforcer effectiveness), the significant effect for individual experimenters resulted from one female experimenter consistently achieving both a lower rate of response and fewer correct responses from the children she tested, compared to some other experimenters. While this experimenter was generally less effective than the others, her patterns of responsiveness were in the same direction as all the others. It is clear from this and from the analyses comparing proportions of correct responses by each experimenter that some experimenters

are more effective social reinforcers than are others, which probably reflects personality characteristics not specifically controlled in the present investigation.

The present results support neither psychoanalytic nor strict social drive interpretations. Predictions generated from these two theories would have called for a significant sex of experimenter effect. In no analysis was such an effect found. Certainly the results of this investigation do not rule out the validity of such interpretations, nor was the design intended to be a critical test of these theories. However, within the context of this experimental design, neither theory is supported.

The present findings are, however, consistent with the valence theory described previously. In the present study it was clear that the children were responding to the affect they perceived in the experimenter's behavior. While the main thrust of those studies previously investigating the valence position has been to consider children's responsiveness over two different experimental sessions (e.g. Roodin and Simpson, 1976), it is clear from the present results that a directional valence may be established within one relatively short experimental session and directly influences the results of that session.

This in no way contradicts findings supporting the valence position, but offers further evidence that affective variables have short, as well as long-term effects on children's behavior which influence their performance within certain, and perhaps all, experimental sessions.

Further support for a valence position was provided through incidental observations by the experimenters in the present study who occasionally met children with whom they had previously interacted. During such encounters, children who had been in the warm mode greeted the experimenter with smiles and positive verbalizations, while children who had been in the cool mode greeted the experimenter with glum silence. This lends support to the general conclusions that experimenters were viewed as representatives of their assigned affective mode, and that this perception directly controlled their behavior toward the experimenter both in the experimental task and in other casual interactions.

This issue of why, in other experimental settings, adult experimenters might have been responding differentially on the warmth continum for boys and girls may be related to the tendency in western culture to make such differentiations on the basis of gender (e.g. Gurwitz and Dodge,

1975). Rosenthal (1967), for example, has found that female experimenters were friendlier to male than to female subjects in areas such as tone of voice, but less friendly to males than females when such considerations as body position relative to the subject were taken into account. Since warmth of the experimenter does affect subjects' responsiveness, it would be necessary to determine to which of the experimenter characteristics the subjects were attending (e.g. in the above example, different predictions would be generated if the subjects were attending to voice or body characteristics).

The issue of whether, in reality, gender differences exist in interactions of this type is not supported in the present investigation. The rankings of the individual experimenters on the dependent measures showed wide variation, but were not linked to gender, per se. It is important to recognize that the experimenters in this investigation were highly cognizant of their expected role and it is certainly clear that untrained experimenters might well have displayed differential warmth to male and female subjects, thereby generating the data originally supporting the cross-sex effect. In reviewing the data on adults reaction to children, Maccoby and

Jacklin (1974) conclude that on the whole parents and other adults tended to treat boys and girls similarly, but that strangers tended to react more to the child's gender than did parents. What is called for in future investigations is a clearer determination of the effects of trained versus untrained experimenters in relation to children's performance.

Those behaviors which have been previously defined as "warm" and "cool" have been the subject of other investigations which show that they also have an effect on subjects' performance. Two studies have directly investigated eye contact (one of the behaviors differentiating the warm and cool conditions in the present investigation). Fry and Smith (1975) found that male college students performed significantly better on a digit coding task with a female experimenter as a function of the experimenter's eye contact. Similarly, Thayer and Schiff (1975) found that estimation of elapsed time was greater for female college students tested by both male and female experimenters under a minimal eye contact condition. Thayer and Schiff suggest that this might be interpreted as greater unpleasantness or discomfort by these students.

The results of the current investigation suggest other variables which should be subjected to future investigation to accurately delineate whether children responded to any particular segment of the experimenter's behavior more than to other segments or to the entire gestalt of those behaviors termed warm and cool. Among those variables which will provide valuable information within a cross-sex paradigm are: eye contact, body position, use of gestures, and type of feedback or reinforcement provided to the child (i.e. use of words connoting "correctness" or "encouragement").

This study should also be replicated over other experimental tasks. The MITH game, by meeting the criteria for measuring social reinforcer effectiveness, is by its very nature an arbitrary task. As such it is possible that children may not respond to this task in the same manner that they respond to other real world tasks, nor may they see it as a realistic demand by the adult involved. However, for children in this age group, many demands within the school setting are similarly arbitrary (such as reading from left to right rather than right to left or learning the rules to a new game). As such, at least until they can recognize a reason, they accept the instructions of the adult as meaningful. The

use of the marble-dropping game permitted the present findings to be more easily related to earlier studies which demonstrated a cross-sex effect. However, use of tasks more directly related to most children's actual learning experiences will provide valuable evidence relative to teachers' affective interactions with students in real educational settings.

This investigation has provided evidence that it may not be gender, per se, of either adult or child which affects the nature of the interaction between them. Rather, affect, which is a product of cultural determination may prove to be one of the most important variables in determining the effectiveness of similar interactions between adults and children.

If the cross-sex effect has been demonstrated in previous investigations, why has it not evidenced itself in such areas of school performance? That is, why has the prevailing evidence shown that elementary-school-age-boys do not receive some type of education benefit from predominantly female teachers? Certainly the preponderance of evidence is clear: boys have much greater difficulty with the entire range of school related behaviors than do girls.

Perhaps the reason for this phenomenon is reflected by the words of Patricia Sexton (1969). In reviewing the realm of academia, she points to the fact that schools are highly feminized institutions in that success involves some type of conformity to a stereotyped female role: e.g. "....polite, clean, obedient, neat and nice...."

In support of this concept Brophy and Good (1973) have noted that both male and female teachers expect essentially the same behaviors from all children. That is, they expect them to exhibit a "student role" which may be equated to a feminine role expectation. The fact that boys have substantially greater proportions of behavior problems in the classroom (i.e. do not meet the feminine role expectation of teachers) may in itself explain why the cross-sex phenomenon has not been evident in classroom situations. Teachers tend to respond to children first on the basis of achievement, and then on the basis of gender (Good and Brophy,1973). It is, apparently, in those situations where there are overriding contingencies that the gender of a child is of secondary issue. In other cases, the response to gender may, again be the consequence of culturally determined patterns of behavior.

This is not meant to imply that there may not be specific gender related differences in behavior between

males and females. However, this investigation has supported the conclusion that responsiveness to social reinforcement was not based on the specific sex of the experimenter. Rather, it was based on the warmth shown by each experimenter, and on other factors not specifically identified in this investigation which were in some ways idiosyncratic to each individual experimenter.

Appendix A

Analysis of variance table and means for ratings of videotaped samples of experimenters interacting with children.

Table 1

ANALYSIS OF VARIANCE TABLE FOR RATINGS

CLASSIFYING FACTORS

SEXRATER	SEX OF RATER
SEXEXPTR	SEX OF EXPERIMENTER
WARMCOLD	EXPERIMENTERS AFFECT
SEXSUBJT	SEX OF SUBJECT
UNIT	SUBJECTS OR UNITS OF ANALYSIS

SOURCE	SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
SEXRATER	1.004	1	1.004	1.360	0.245	0.08
SEXEXPTR	7.504	1	7.504	10.159**	0.002	0.61
WARMCOLD	1058.791	1	1058.791	1433.375***	UNDER 0.001	86.29
SEXSUBJT	0.004	1	0.004	0.006	OVER 0.500	0.00
SEXRAT X SEXEXP	0.004	1	0.004	0.006	OVER 0.500	0.00
SEXRAT X WARMCO	0.754	1	0.754	1.021	0.314	0.06
SEXEXP X WARMCO	1.290	1	1.290	1.747	0.188	0.11
SEXRAT X SEXSUB	1.612	1	1.612	2.182	0.142	0.13
SEXEXP X SEXSUB	0.540	1	0.540	0.731	0.394	0.04
WARMCO X SEXSUB	0.004	1	0.004	0.006	OVER 0.500	0.00
SEXRAT X SEXEXP X WARMCO	0.219	1	0.219	0.296	OVER 0.500	0.02
SEXRAT X SEXEXP X SEXSUB	0.540	1	0.540	0.731	0.394	0.04
SEXRAT X WARMCO X SEXSUB	0.040	1	0.040	0.054	OVER 0.500	0.00
SEXEXP X WARMCO X SEXSUB	0.004	1	0.004	0.006	OVER 0.500	0.00
SEXRAT X SEXEXP X WARMCO X SEXSUB	1.004	1	1.004	1.360	0.245	0.08
* UNIT	153.643	208	0.739	NOT TESTED		12.52
TOTAL	1226.961	223	5.502			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

224 UNITS WERE READ IN FOR THIS ANALYSIS.
224 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS FOR RATINGS

SEXRATER SEX OF RATER			SEXEXPTR SEX OF EXPERIMENTER MALE 1	FEMALE 2	ROW MARGINALS
MALE	1	MEAN	3.893	4.268	4.080
		EFFECT	-0.004	0.004	0.067
FEMALE	2	MEAN	3.768	4.125	3.946
		EFFECT	0.004	-0.004	-0.067
COLUMN MARGINALS		MEAN	3.830	4.196	4.013
		EFFECT	-0.183	0.183	

SEXRATER SEX OF RATER			WARMCOLD EXPERIMENTERS AFFECT WARM 1	COOL 2	ROW MARGINALS
MALE	1	MEAN	6.196	1.964	4.080
		EFFECT	-0.058	0.058	0.067
FEMALE	2	MEAN	6.179	1.714	3.946
		EFFECT	0.058	-0.058	-0.067
COLUMN MARGINALS		MEAN	6.187	1.839	4.013
		EFFECT	2.174	-2.174	

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD EXPERIMENTERS AFFECT WARM 1	COOL 2	ROW MARGINALS
MALE	1	MEAN	5.929	1.732	3.830
		EFFECT	-0.076	0.076	-0.183
FEMALE	2	MEAN	6.446	1.946	4.196
		EFFECT	0.076	-0.076	0.183
COLUMN MARGINALS		MEAN	6.187	1.839	4.013
		EFFECT	2.174	-2.174	

TWO-WAY STATISTICS FOR RATINGS

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2	ROW MARGINALS
MALE	1	MEAN	3.875	3.786	3.830
		EFFECT	0.049	-0.049	-0.183
FEMALE	2	MEAN	4.143	4.250	4.196
		EFFECT	-0.049	0.049	0.183
COLUMN MARGINALS		MEAN	4.009	4.018	4.013
		EFFECT	-0.004	0.004	

SEXRATER SEX OF RATER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2	ROW MARGINALS
MALE	1	MEAN	4.161	4.000	4.080
		EFFECT	0.085	-0.085	0.067
FEMALE	2	MEAN	3.857	4.036	3.946
		EFFECT	-0.085	0.085	-0.067
COLUMN MARGINALS		MEAN	4.009	4.018	4.013
		EFFECT	-0.004	0.004	

WARMCOLD EXPERIMENTERS AFFECT			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2	ROW MARGINALS
WARM	1	MEAN	6.179	6.196	6.187
		EFFECT	-0.004	0.004	2.174
COOL	2	MEAN	1.839	1.839	1.839
		EFFECT	0.004	-0.004	-2.174
COLUMN MARGINALS		MEAN	4.009	4.018	4.013
		EFFECT	-0.004	0.004	

THREE-WAY STATISTICS FOR RATINGS

SUB-TABLE NO. 1 WARM ON WARMCOLD

SEXRATER SEX OF RATER			SEXEXPTR MALE 1	SEX OF EXPERIMENTER FEMALE 2
MALE	1	MEAN	5.964	6.429
		EFFECT	0.031	-0.031
FEMALE	2	MEAN	5.893	6.464
		EFFECT	-0.031	0.031

SUB-TABLE NO. 2 COOL ON WARMCOLD

SEXRATER SEX OF RATER			SEXEXPTR MALE 1	SEX OF EXPERIMENTER FEMALE 2
MALE	1	MEAN	1.821	2.107
		EFFECT	-0.031	0.031
FEMALE	2	MEAN	1.643	1.786
		EFFECT	0.031	-0.031

THREE-WAY STATISTICS FOR RATINGS

SUB-TABLE NO. 1 MALE ON SEXSUBJT

SEXRATER SEX OF RATER			SEXEXPTR MALE 1	SEX OF EXPERIMENTER FEMALE 2
MALE	1	MEAN	4.071	4.250
		EFFECT	0.049	-0.049
FEMALE	2	MEAN	3.679	4.036
		EFFECT	-0.049	0.049

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

SEXRATER SEX OF RATER			SEXEXPTR MALE 1	SEX OF EXPERIMENTER FEMALE 2
MALE	1	MEAN	3.714	4.286
		EFFECT	-0.049	0.049
FEMALE	2	MEAN	3.857	4.214
		EFFECT	0.049	-0.049

THREE-WAY STATISTICS FOR RATINGS

SUB-TABLE NO. 1 MALE ON SEXSUBJT

SEXRATER SEX OF RATER			WARMCOLD WARM 1	EXPERIMENTERS AFFECT COOL 2
MALE	1	MEAN	6.286	2.036
		EFFECT	0.013	-0.013
FEMALE	2	MEAN	6.071	1.643
		EFFECT	-0.013	0.013

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

SEXRATER SEX OF RATER			WARMCOLD WARM 1	EXPERIMENTERS AFFECT COOL 2
MALE	1	MEAN	6.107	1.893
		EFFECT	-0.013	0.013
FEMALE	2	MEAN	6.286	1.786
		EFFECT	0.013	-0.013

THREE-WAY STATISTICS FOR RATINGS

SUB-TABLE NO. 1 MALE ON SEXSUBJT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	EXPERIMENTERS AFFECT COOL 2
MALE	1	MEAN	5.964	1.786
		EFFECT	-0.004	0.004
FEMALE	2	MEAN	6.393	1.893
		EFFECT	0.004	-0.004

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	EXPERIMENTERS AFFECT COOL 2
MALE	1	MEAN	5.893	1.679
		EFFECT	0.004	-0.004
FEMALE	2	MEAN	6.500	2.000
		EFFECT	-0.004	0.004

FOUR-WAY STATISTICS FOR RATINGS

SUB-TABLE NO. 1 WARM ON WARMCOLD
MALE ON SEXSUBJT

SEXRATER SEX OF RATER			SEXEXPTR MALE 1	SEX OF EXPERIMENTER FEMALE 2
MALE	1	MEAN	6.214	6.357
		EFFECT	0.067	-0.067
		SD	0.802	0.745
		N	14.000	14.000
FEMALE	2	MEAN	5.714	6.429
		EFFECT	-0.067	0.067
		SD	1.069	0.938
		N	14.000	14.000

SUB-TABLE NO. 2 WARM ON WARMCOLD
FEMALE ON SEXSUBJT

SEXRATER SEX OF RATER			SEXEXPTR MALE 1	SEX OF EXPERIMENTER FEMALE 2
MALE	1	MEAN	5.714	6.500
		EFFECT	-0.067	0.067
		SD	0.726	0.519
		N	14.000	14.000
FEMALE	2	MEAN	6.071	6.500
		EFFECT	0.067	-0.067
		SD	0.730	0.760
		N	14.000	14.000

SUB-TABLE NO. 3 CCOL ON WARMCOLD
MALE ON SEXSUBJT

SEXRATER SEX OF RATER			SEXEXPTR MALE 1	SEX OF EXPERIMENTER FEMALE 2
MALE	1	MEAN	1.929	2.143
		EFFECT	-0.067	0.067
		SD	0.829	0.770
		N	14.000	14.000
FEMALE	2	MEAN	1.643	1.643
		EFFECT	0.067	-0.067
		SD	0.842	1.082
		N	14.000	14.000

SUB-TABLE NO. 4 CCOL ON WARMCOLD
FEMALE ON SEXSUBJT

SEXRATER SEX OF RATER			SEXEXPTR MALE 1	SEX OF EXPERIMENTER FEMALE 2
MALE	1	MEAN	1.714	2.071
		EFFECT	0.067	-0.067
		SD	0.726	0.997
		N	14.000	14.000
FEMALE	2	MEAN	1.643	1.929
		EFFECT	-0.067	0.067
		SD	1.008	0.997
		N	14.000	14.000

Appendix B

Analysis of variance table and means for ratings of each individual experimenter interacting with children in all experimental conditions.

ANALYSIS OF VARIANCE TABLE FOR RATINGS

CLASSIFYING FACTORS

SEXRATER	SEX OF RATER
INDEXPTR	INDIVIDUAL EXPERIMENTER
WARMCCLD	EXPERIMENTERS AFFECT
SEXSUBJT	SEX OF SUBJECT
UNIT	SUBJECTS OR UNITS OF ANALYSIS

SOURCE		SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
SEXRATER	(SEXRAT)	1.004	1	1.004	1.442	0.232	0.08
INDEXPTR	(INDEXP)	19.335	3	6.445	9.254***	UNDER 0.001	1.58
WARMCCLD	(WARMCC)	1058.792	1	1058.792	1520.307***	UNDER 0.001	86.29
SEXSUBJT	(SEXSUB)	0.004	1	0.004	0.006	OVER 0.500	0.00
SEXRAT X INDEXP		0.799	3	0.266	0.382	OVER 0.500	0.07
SEXRAT X WARMCC		0.754	1	0.754	1.083	0.300	0.06
INDEXP X WARMCC		2.942	3	0.981	1.408	0.242	0.24
SEXRAT X SEXSUB		1.612	1	1.612	2.314	0.130	0.13
INDEXP X SEXSUB		1.085	3	0.362	0.519	OVER 0.500	0.09
WARMCC X SEXSUB		0.004	1	0.004	0.006	OVER 0.500	0.00
SEXRAT X INDEXP X WARMCC		2.406	3	0.802	1.152	0.330	0.20
SEXRAT X INDEXP X SEXSUB		0.621	3	0.207	0.297	OVER 0.500	0.05
SEXRAT X WARMCC X SEXSUB		0.040	1	0.040	0.058	OVER 0.500	0.00
INDEXP X WARMCC X SEXSUB		1.728	3	0.576	0.827	0.481	0.14
SEXRAT X INDEXP X WARMCC X SEXSUB		2.121	3	0.707	1.015	0.388	0.17
* UNIT		133.715	192	0.696	NOT TESTED		10.90
TOTAL		1226.961	223	5.502			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

224 UNITS WERE READ IN FOR THIS ANALYSIS.
224 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS FOR RATINGS

			WARMCOLD	EXPERIMENTERS AFFECT	
INCEXPTR			WARM	COOL	ROW
INDIVIDUAL EXPERIMENTER			1	2	MARGINALS
LEN	1	MEAN	5.929	1.500	3.714
		EFFECT	0.040	-0.040	-0.299
SID	2	MEAN	5.929	1.964	3.946
		EFFECT	-0.192	0.192	-0.067
PAT	3	MEAN	6.179	1.607	3.893
		EFFECT	0.112	-0.112	-0.121
JAN	4	MEAN	6.714	2.286	4.500
		EFFECT	0.040	-0.040	0.487
COLUMN MARGINALS		MEAN	6.187	1.839	4.013
		EFFECT	2.174	-2.174	

TWO-WAY STATISTICS FOR RATINGS

			SEXSUBJT	SEX OF SUBJECT	
INCEXPTR			MALE	FEMALE	ROW
INDIVIDUAL EXPERIMENTER			1	2	MARGINALS
LEN	1	MEAN	3.714	3.714	3.714
		EFFECT	0.004	-0.004	-0.299
SID	2	MEAN	4.036	3.857	3.946
		EFFECT	0.094	-0.094	-0.067
PAT	3	MEAN	3.893	3.893	3.893
		EFFECT	0.004	-0.004	-0.121
JAN	4	MEAN	4.393	4.607	4.500
		EFFECT	-0.103	0.103	0.487
COLUMN MARGINALS		MEAN	4.009	4.018	4.013
		EFFECT	-0.004	0.004	

			SEXSUBJT	SEX OF SUBJECT	
WARMCOLD			MALE	FEMALE	ROW
EXPERIMENTERS AFFECT			1	2	MARGINALS
WARM	1	MEAN	6.179	6.196	6.187
		EFFECT	-0.004	0.004	2.174
COOL	2	MEAN	1.839	1.839	1.839
		EFFECT	0.004	-0.004	-2.174
COLUMN MARGINALS		MEAN	4.009	4.018	4.013
		EFFECT	-0.004	0.004	

TWO-WAY STATISTICS FOR RATINGS

SEXRATER SEX OF RATER			SEXSUBJT SEX OF SUBJECT MALE 1	FEMALE 2	ROW MARGINALS
MALE	1	MEAN	4.161	4.000	4.080
		EFFECT	0.085	-0.085	0.067
FEMALE	2	MEAN	3.857	4.036	3.946
		EFFECT	-0.085	0.085	-0.067
COLUMN MARGINALS		MEAN	4.009	4.018	4.013
		EFFECT	-0.004	0.004	

SEXRATER SEX OF RATER			WARMCOLD WARM 1	EXPERIMENTERS AFFECT COOL 2	ROW MARGINALS
MALE	1	MEAN	6.196	1.964	4.080
		EFFECT	-0.058	0.058	0.067
FEMALE	2	MEAN	6.179	1.714	3.946
		EFFECT	0.058	-0.058	-0.067
COLUMN MARGINALS		MEAN	6.187	1.839	4.013
		EFFECT	2.174	-2.174	

SEXRATER SEX OF RATER			INDEXPTR INDIVIDUAL EXPERIMENTER LEN 1	SID 2	PAT 3	JAN 4	ROW MARGINALS
MALE	1	MEAN	3.821	3.964	3.893	4.643	4.080
		EFFECT	0.040	-0.049	-0.067	0.076	0.067
FEMALE	2	MEAN	3.607	3.929	3.893	4.357	3.946
		EFFECT	-0.040	0.049	0.067	-0.076	-0.067
COLUMN MARGINALS		MEAN	3.714	3.946	3.893	4.500	4.013
		EFFECT	-0.299	-0.067	-0.121	0.487	

THREE-WAY STATISTICS FOR RATINGS

SUB-TABLE NO. 1 WARM ON WARMCOLD

SEXRATER SEX OF RATER			INDEXPTR LEN 1	INDIVIDUAL EXPERIMENTER SID 2	PAT 3	JAN 4
MALE	1	MEAN	6.071	5.857	6.214	6.643
		EFFECT	0.094	-0.031	0.094	-0.156
FEMALE	2	MEAN	5.786	6.000	6.143	6.786
		EFFECT	-0.094	0.031	-0.094	0.156

SUB-TABLE NO. 2 COOL ON WARMCOLD

SEXRATER SEX OF RATER			INDEXPTR LEN 1	INDIVIDUAL EXPERIMENTER SID 2	PAT 3	JAN 4
MALE	1	MEAN	1.571	2.071	1.571	2.643
		EFFECT	-0.094	0.031	-0.094	0.156
FEMALE	2	MEAN	1.429	1.857	1.643	1.929
		EFFECT	0.094	-0.031	0.094	-0.156

SUB-TABLE NO. 1 MALE ON SEXSUBJT

SEXRATER SEX OF RATER			INDEXPTR LEN 1	INDIVIDUAL EXPERIMENTER SID 2	PAT 3	JAN 4
MALE	1	MEAN	3.929	4.214	3.929	4.571
		EFFECT	0.022	0.076	-0.049	-0.049
FEMALE	2	MEAN	3.500	3.857	3.857	4.214
		EFFECT	-0.022	-0.076	0.049	0.049

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

SEXRATER SEX OF RATER			INDEXPTR LEN 1	INDIVIDUAL EXPERIMENTER SID 2	PAT 3	JAN 4
MALE	1	MEAN	3.714	3.714	3.857	4.714
		EFFECT	-0.022	-0.076	0.049	0.049
FEMALE	2	MEAN	3.714	4.000	3.929	4.500
		EFFECT	0.022	0.076	-0.049	-0.049

THREE-WAY STATISTICS FOR RATINGS

SUB-TABLE NO. 1 MALE ON SEXSUBJT

			WARMCOLD	EXPERIMENTERS AFFECT
SEXRATER SEX OF RATER			WARM 1	COOL 2
MALE	1	MEAN	6.286	2.036
		EFFECT	0.013	-0.013
FEMALE	2	MEAN	6.071	1.643
		EFFECT	-0.013	0.013

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

			WARMCOLD	EXPERIMENTERS AFFECT
SEXRATER SEX OF RATER			WARM 1	COOL 2
MALE	1	MEAN	6.107	1.893
		EFFECT	-0.013	0.013
FEMALE	2	MEAN	6.286	1.786
		EFFECT	0.013	-0.013

SUB-TABLE NO. 1 MALE ON SEXSUBJT

			WARMCOLD	EXPERIMENTERS AFFECT
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
LEN	1	MEAN	5.857	1.571
		EFFECT	-0.067	0.067
SID	2	MEAN	6.071	2.000
		EFFECT	0.058	-0.058
PAT	3	MEAN	6.071	1.714
		EFFECT	-0.103	0.103
JAN	4	MEAN	6.714	2.071
		EFFECT	0.112	-0.112

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

			WARMCOLD	EXPERIMENTERS AFFECT
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
LEN	1	MEAN	6.000	1.429
		EFFECT	0.067	-0.067
SID	2	MEAN	5.786	1.929
		EFFECT	-0.058	0.058
PAT	3	MEAN	6.286	1.500
		EFFECT	0.103	-0.103
JAN	4	MEAN	6.714	2.500
		EFFECT	-0.112	0.112

FOUR-WAY STATISTICS FOR RATINGS

SUB-TABLE NO. 1 WARM ON WARMCOLD
MALE ON SEXSUBJT

SEXRATER SEX OF RATER			INCEXPTR. INDIVIDUAL EXPERIMENTER LEN 1	SID 2	PAT 3	JAN 4
MALE	1	MEAN	6.143	6.286	6.000	6.714
		EFFECT	0.022	0.112	-0.156	0.022
		SD	0.900	0.756	0.577	0.756
		N	7.000	7.000	7.000	7.000
FEMALE	2	MEAN	5.571	5.857	6.143	6.714
		EFFECT	-0.022	-0.112	0.156	-0.022
		SD	1.272	0.900	1.215	0.468
		N	7.000	7.000	7.000	7.000

SUB-TABLE NO. 2 WARM ON WARMCOLD
FEMALE ON SEXSUBJT

SEXRATER SEX OF RATER			INCEXPTR INDIVIDUAL EXPERIMENTER LEN 1	SID 2	PAT 3	JAN 4
MALE	1	MEAN	6.000	5.429	6.429	6.571
		EFFECT	-0.022	-0.112	0.156	-0.022
		SD	0.577	0.787	0.535	0.535
		N	7.000	7.000	7.000	7.000
FEMALE	2	MEAN	6.000	6.143	6.143	6.857
		EFFECT	0.022	0.112	-0.156	0.022
		SD	0.577	0.900	0.900	0.378
		N	7.000	7.000	7.000	7.000

SUB-TABLE NO. 3 CCCL ON WARMCOLD
MALE ON SEXSUBJT

SEXRATER SEX OF RATER			INDEXPTR LEN 1	INDIVIDUAL EXPERIMENTER SID 2	PAT 3	JAN 4
MALE	1	MEAN	1.714	2.143	1.857	2.429
		EFFECT	-0.022	-0.112	0.156	-0.022
		SD	0.756	0.900	0.690	0.787
		N	7.000	7.000	7.000	7.000
FEMALE	2	MEAN	1.429	1.857	1.571	1.714
		EFFECT	0.022	0.112	-0.156	0.022
		SD	0.535	1.069	1.134	1.113
		N	7.000	7.000	7.000	7.000

SUB-TABLE NO. 4 CCCL ON WARMCOLD
FEMALE ON SEXSUBJT

SEXRATER SEX OF RATER			INDEXPTR LEN 1	INDIVIDUAL EXPERIMENTER SID 2	PAT 3	JAN 4
MALE	1	MEAN	1.429	2.000	1.286	2.857
		EFFECT	0.022	0.112	-0.156	0.022
		SD	0.535	0.816	0.488	0.690
		N	7.000	7.000	7.000	7.000
FEMALE	2	MEAN	1.429	1.857	1.714	2.143
		EFFECT	-0.022	-0.112	0.156	-0.022
		SD	1.134	0.900	0.951	1.069
		N	7.000	7.000	7.000	7.000

Appendix C

Analysis of variance table and means for correct responses over minutes one through five.

ANALYSIS OF VARIANCE TABLE

CLASSIFYING FACTORS

SEXEXPTR	SEX OF EXPERIMENTER
WARMCOLD	AFFECTIVE MODE
SEXSUBJT	SEX OF SUBJECT
TIMEBLOC	TIME BLOCK
UNIT	SUBJECTS OR UNITS OF ANALYSIS

	SOURCE	SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
	SEXEXPTR	100.128	1	100.128	1.148	0.289	1.00
	WARMCOLD	618.824	1	618.824	7.096*	0.011	6.16
	SEXSUBJT	136.502	1	136.502	1.565	0.217	1.36
	SEXEXP X WARMCO	0.703	1	0.703	0.008	OVER 0.500	0.01
	SEXEXP X SEXSUB	39.903	1	39.903	0.458	OVER 0.500	0.40
	WARMCO X SEXSUB	75.078	1	75.078	0.861	0.358	0.75
	SEXEXP X WARMCO X SEXSUB	31.878	1	31.878	0.366	OVER 0.500	0.32
*	UNIT	4883.934	56	87.213	NOT TESTED		48.61
	TIMEBLOC	1636.216	4	409.054	40.999***	UNDER 0.001	16.28
	SEXEXP X TIMEBL	46.356	4	11.589	1.162	0.329	0.46
	WARMCO X TIMEBL	119.656	4	29.914	2.998*	0.020	1.19
	SEXSUB X TIMEBL	29.856	4	7.464	0.748	OVER 0.500	0.30
	SEXEXP X WARMCO X TIMEBL	7.594	4	1.898	0.190	OVER 0.500	0.08
	SEXEXP X SEXSUB X TIMEBL	5.144	4	1.286	0.129	OVER 0.500	0.05
	WARMCO X SEXSUB X TIMEBL	51.094	4	12.773	1.280	0.279	0.51
	SEXEXP X WARMCO X SEXSUB X TIMEBL	29.981	4	7.495	0.751	OVER 0.500	0.30
*	TIMEBL X UNIT	2234.885	224	9.977	NOT TESTED		22.24
	TOTAL	10047.707	319	31.498			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

64 UNITS WERE READ IN FOR THIS ANALYSIS.
64 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS

			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2	ROW MARGINALS
AFFECTIVE MODE					
WARM	1	MEAN	17.325	15.050	16.187
		EFFECT	0.484	-0.484	1.391
COOL	2	MEAN	13.575	13.237	13.406
		EFFECT	-0.484	0.484	-1.391
COLUMN MARGINALS		MEAN	15.450	14.144	14.797
		EFFECT	0.653	-0.653	

			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2	ROW MARGINALS
SEX OF EXPERIMENTER					
MALE	1	MEAN	16.362	14.350	15.356
		EFFECT	0.353	-0.353	0.559
FEMALE	2	MEAN	14.537	13.937	14.237
		EFFECT	-0.353	0.353	-0.559
COLUMN MARGINALS		MEAN	15.450	14.144	14.797
		EFFECT	0.653	-0.653	

			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2	ROW MARGINALS
SEX OF EXPERIMENTER					
MALE	1	MEAN	16.700	14.012	15.356
		EFFECT	-0.047	0.047	0.559
FEMALE	2	MEAN	15.675	12.800	14.237
		EFFECT	0.047	-0.047	-0.559
COLUMN MARGINALS		MEAN	16.187	13.406	14.797
		EFFECT	1.391	-1.391	

TWO-WAY STATISTICS

			TIME BLOCK					
			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
SEX OF EXPERIMENTER								
MALE	1	MEAN	10.750	14.813	16.813	17.375	17.031	15.356
		EFFECT	-0.575	0.331	0.409	0.144	-0.309	0.559
FEMALE	2	MEAN	10.781	13.031	14.875	15.969	16.531	14.237
		EFFECT	0.575	-0.331	-0.409	-0.144	0.309	-0.559
COLUMN MARGINALS		MEAN	10.766	13.922	15.844	16.672	16.781	14.797
		EFFECT	-4.031	-0.875	1.047	1.875	1.984	

			TIME BLOCK					
			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
SEX OF SUBJECT								
MALE	1	MEAN	11.094	14.281	16.406	17.594	17.875	15.450
		EFFECT	-0.325	-0.294	-0.091	0.269	0.441	0.653
FEMALE	2	MEAN	10.438	13.563	15.281	15.750	15.688	14.144
		EFFECT	0.325	0.294	0.091	-0.269	-0.441	-0.653
COLUMN MARGINALS		MEAN	10.766	13.922	15.844	16.672	16.781	14.797
		EFFECT	-4.031	-0.875	1.047	1.875	1.984	

			TIME BLOCK					
			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
AFFECTIVE MODE								
WARM	1	MEAN	11.000	15.281	17.781	18.500	18.375	16.187
		EFFECT	-1.156	-0.031	0.547	0.438	0.203	1.391
COOL	2	MEAN	10.531	12.563	13.906	14.844	15.188	13.406
		EFFECT	1.156	0.031	-0.547	-0.438	-0.203	-1.391
COLUMN MARGINALS		MEAN	10.766	13.922	15.844	16.672	16.781	14.797
		EFFECT	-4.031	-0.875	1.047	1.875	1.984	

THREE-WAY STATISTICS

SUB-TABLE NO. 1 MALE ON SEXSUBJT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	17.875	14.850
		EFFECT	-0.316	0.316
		SD	4.527	5.585
		N	8.000	8.000
FEMALE	2	MEAN	16.775	12.300
		EFFECT	0.316	-0.316
		SD	4.442	3.095
		N	8.000	8.000

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	15.525	13.175
		EFFECT	0.316	-0.316
		SD	4.700	3.650
		N	8.000	8.000
FEMALE	2	MEAN	14.575	13.300
		EFFECT	-0.316	0.316
		SD	2.142	4.307
		N	8.000	8.000

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	11.125	10.375
		EFFECT	0.187	-0.188
FEMALE	2	MEAN	10.875	10.688
		EFFECT	-0.188	0.188

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	16.125	13.500
		EFFECT	-0.000	0.0
FEMALE	2	MEAN	14.438	11.625
		EFFECT	-0.000	0.0

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	18.750	14.875
		EFFECT	0.047	-0.047
FEMALE	2	MEAN	16.813	12.938
		EFFECT	-0.047	0.047

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	18.875	15.875
		EFFECT	-0.281	0.281
FEMALE	2	MEAN	18.125	13.813
		EFFECT	0.281	-0.281

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	18.625	15.438
		EFFECT	0.047	-0.047
FEMALE	2	MEAN	18.125	14.938
		EFFECT	-0.047	0.047

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	11.625	9.875
		EFFECT	0.194	-0.194
FEMALE	2	MEAN	10.563	11.000
		EFFECT	-0.194	0.194

SUB-TABLE NO. 2 SECCND MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	15.500	14.125
		EFFECT	-0.025	0.025
FEMALE	2	MEAN	13.063	13.000
		EFFECT	0.025	-0.025

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	17.813	15.813
		EFFECT	0.084	-0.084
FEMALE	2	MEAN	15.000	14.750
		EFFECT	-0.084	0.084

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	18.563	16.188
		EFFECT	-0.087	0.088
FEMALE	2	MEAN	16.625	15.313
		EFFECT	0.088	-0.087

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	18.313	15.750
		EFFECT	-0.166	0.166
FEMALE	2	MEAN	17.438	15.625
		EFFECT	0.166	-0.166

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	11.250	10.750
		EFFECT	-0.563	0.562
CCOL	2	MEAN	10.938	10.125
		EFFECT	0.562	-0.563

SUB-TABLE NO. 2 SECCND MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	15.875	14.688
		EFFECT	-0.250	0.250
CCCL	2	MEAN	12.688	12.438
		EFFECT	0.250	-0.250

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	18.813	16.750
		EFFECT	-0.016	0.016
CCOL	2	MEAN	14.000	13.813
		EFFECT	0.016	-0.016

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	20.125	16.875
		EFFECT	0.219	-0.219
CCOL	2	MEAN	15.063	14.625
		EFFECT	-0.219	0.219

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	20.563	16.188
		EFFECT	0.609	-0.609
CCOL	2	MEAN	15.188	15.188
		EFFECT	-0.609	0.609

FOUR-WAY STATISTICS

SUB-TABLE NO. 1 MALE FIRST MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	12.125	11.125
		EFFECT	0.519	-0.519
FEMALE	2	MEAN	10.375	10.750
		EFFECT	-0.519	0.519

SUB-TABLE NO. 2 MALE SECOND MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	16.875	14.125
		EFFECT	0.144	-0.144
FEMALE	2	MEAN	14.875	11.250
		EFFECT	-0.144	0.144

SUB-TABLE NO. 3 MALE THIRD MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	19.625	16.000
		EFFECT	-0.278	0.278
FEMALE	2	MEAN	18.000	12.000
		EFFECT	0.278	-0.278

SUB-TABLE NO. 4 MALE FOURTH MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	20.375	16.750
		EFFECT	-0.075	0.075
FEMALE	2	MEAN	19.875	13.375
		EFFECT	0.075	-0.075

SUB-TABLE NO. 5 MALE FIFTH MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	20.375	16.250
		EFFECT	-0.309	0.309
FEMALE	2	MEAN	20.750	14.125
		EFFECT	0.309	-0.309

FOUR-WAY STATISTICS

SUB-TABLE NO. 6 FEMALE FIRST MIN ON SEXSUBJT ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX OF EXPERIMENTER				
MALE	1	MEAN	10.125	9.625
		EFFECT	-0.519	0.519
FEMALE	2	MEAN	11.375	10.625
		EFFECT	0.519	-0.519

SUB-TABLE NO. 7 FEMALE SECOND MIN ON SEXSUBJT ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX OF EXPERIMENTER				
MALE	1	MEAN	15.375	12.875
		EFFECT	-0.144	0.144
FEMALE	2	MEAN	14.000	12.000
		EFFECT	0.144	-0.144

SUB-TABLE NO. 8 FEMALE THIRD MIN ON SEXSUBJT ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX OF EXPERIMENTER				
MALE	1	MEAN	17.875	13.750
		EFFECT	0.278	-0.278
FEMALE	2	MEAN	15.625	13.875
		EFFECT	-0.278	0.278

SUB-TABLE NO. 9 FEMALE FOURTH MIN ON SEXSUBJT ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX OF EXPERIMENTER				
MALE	1	MEAN	17.375	15.000
		EFFECT	0.075	-0.075
FEMALE	2	MEAN	16.375	14.250
		EFFECT	-0.075	0.075

SUB-TABLE NO. 10 FEMALE FIFTH MIN ON SEXSUBJT ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX OF EXPERIMENTER				
MALE	1	MEAN	16.875	14.625
		EFFECT	0.309	-0.309
FEMALE	2	MEAN	15.500	15.750
		EFFECT	-0.309	0.309

Appendix D

Analysis of variance table and means for correct responses collapsed over minutes two, three, and four.

ANALYSIS OF VARIANCE TABLE FOR CORRECT

CLASSIFYING FACTORS

SEXEXPTR	SEX OF EXPERIMENTER
WARMCOLD	AFFECTIVE MODE
SEXSUBJT	SEX OF SUBJECT
UNIT	SUBJECTS OR UNITS OF ANALYSIS

	SOURCE	SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
	SEXEXPTR	420.250	1	420.250	2.075	0.156	3.01
	WARMCOLD	1681.000	1	1681.000	8.300**	0.006	12.05
	SEXSUBJT	217.563	1	217.563	1.074	0.305	1.56
	SEXEXPTR X WARMCOLD	9.000	1	9.000	0.044	OVER 0.500	0.06
	SEXEXPTR X SEXSUBJT	68.063	1	68.063	0.336	OVER 0.500	0.49
	WARMCOLD X SEXSUBJT	126.563	1	126.563	0.625	0.433	0.91
	SEXEXPTR X WARMCOLD X SEXSUBJT	85.563	1	85.563	0.422	OVER 0.500	0.61
*	UNIT	11341.750	56	202.531	NOT TESTED		81.30
	TOTAL	13949.750	63	221.425			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

64 UNITS WERE READ IN FOR THIS ANALYSIS.
64 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS FOR CORRECT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD / AFFECTIVE MODE: WARM 1	COLD 2	ROW MARGINALS
MALE	1	MEAN	53.750	44.250	49.000
		EFFECT	-0.375	0.375	2.563
FEMALE	2	MEAN	49.375	38.375	43.875
		EFFECT	0.375	-0.375	-2.563
COLUMN MARGINALS		MEAN	51.563	41.313	46.438
		EFFECT	5.125	-5.125	

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT / SEX OF SUBJECT: MALE 1	FEMALE 2	ROW MARGINALS
MALE	1	MEAN	51.875	46.125	49.000
		EFFECT	1.031	-1.031	2.563
FEMALE	2	MEAN	44.688	43.063	43.875
		EFFECT	-1.031	1.031	-2.563
COLUMN MARGINALS		MEAN	48.281	44.594	46.438
		EFFECT	1.844	-1.844	

WARMCOLD AFFECTIVE MODE			SEXSUBJT / SEX OF SUBJECT: MALE 1	FEMALE 2	ROW MARGINALS
WARM	1	MEAN	54.813	48.313	51.563
		EFFECT	1.406	-1.406	5.125
COLD	2	MEAN	41.750	40.875	41.313
		EFFECT	-1.406	1.406	-5.125
COLUMN MARGINALS		MEAN	48.281	44.594	46.438
		EFFECT	1.844	-1.844	

THREE-WAY STATISTICS FOR CORRECT

SUB-TABLE NO. 1 MALE ON SEXSUBJT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COLD 2
MALE	1	MEAN	56.875	46.875
		EFFECT	-1.156	1.156
		SD	17.545	19.037
		N	8.000	8.000
FEMALE	2	MEAN	52.750	36.625
		EFFECT	1.156	-1.156
		SD	14.626	9.561
		N	8.000	8.000

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COLD 2
MALE	1	MEAN	50.625	41.625
		EFFECT	1.156	-1.156
		SD	16.283	12.397
		N	8.000	8.000
FEMALE	2	MEAN	46.000	40.125
		EFFECT	-1.156	1.156
		SD	6.414	13.590
		N	8.000	8.000

Appendix E

Analysis of variance table and means of correct responses for each experimenter over minutes one through five.

ANALYSIS OF VARIANCE TABLE

CLASSIFYING FACTORS

INDEXPTR	INDIVIDUAL EXPERIMENTER
WARMCOLD	AFFECTIVE MODE
SEXSUBJT	SEX OF SUBJECT
TIMEBLOC	TIME BLOCK
UNIT	SUBJECTS OR UNITS OF ANALYSIS

SOURCE		SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
INDEXPTR	(INDEXP)	856.282	3	285.427	3.731*	0.018	8.52
WARMCOLD	(WARMCO)	618.824	1	618.824	8.090**	0.007	6.16
SEXSUBJT	(SEXSUB)	136.503	1	136.503	1.784	0.198	1.36
INDEXP X WARMCO		85.110	3	28.370	0.371	OVER 0.500	0.85
INDEXP X SEXSUB		308.484	3	102.828	1.344	0.272	3.07
WARMCO X SEXSUB		75.078	1	75.078	0.981	0.327	0.75
INDEXP X WARMCO X SEXSUB		134.959	3	44.986	0.588	OVER 0.500	1.34
* UNIT		3671.714	48	76.494	NOT TESTED		36.54
TIMEBLOC	(TIMEBL)	1636.215	4	409.054	39.817***	UNDER 0.001	16.28
INDEXP X TIMEBL		170.606	12	14.217	1.384	0.177	1.70
WARMCO X TIMEBL		119.656	4	29.914	2.912*	0.023	1.19
SEXSUB X TIMEBL		29.856	4	7.464	0.727	OVER 0.500	0.30
INDEXP X WARMCO X TIMEBL		65.719	12	5.477	0.533	OVER 0.500	0.65
INDEXP X SEXSUB X TIMEBL		37.969	12	3.164	0.308	OVER 0.500	0.38
WARMCO X SEXSUB X TIMEBL		51.094	4	12.773	1.243	0.294	0.51
INDEXP X WARMCO X SEXSUB X TIMEBL		77.180	12	6.432	0.626	OVER 0.500	0.77
* TIMEBL X UNIT		1972.492	192	10.273	NOT TESTED		19.63
TOTAL		10047.715	319	31.498			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

64 UNITS WERE READ IN FOR THIS ANALYSIS.
64 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS

			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2	ROW MARGINALS
INDEXPTR INCIVIDUAL EXPERIMENTER					
SID	1	MEAN	18.075	15.000	16.537
		EFFECT	0.147	-0.147	1.741
LEN	2	MEAN	15.325	13.025	14.175
		EFFECT	-0.241	0.241	-0.622
PAT	3	MEAN	14.550	10.275	12.412
		EFFECT	0.747	-0.747	-2.384
JAN	4	MEAN	16.600	15.325	16.062
		EFFECT	-0.653	0.653	1.266
COLUMN MARGINALS		MEAN	16.187	13.406	14.797
		EFFECT	1.391	-1.391	

			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2	ROW MARGINALS
INDEXPTR INCIVIDUAL EXPERIMENTER					
SID	1	MEAN	16.275	16.800	16.537
		EFFECT	-0.916	0.916	1.741
LEN	2	MEAN	16.450	11.900	14.175
		EFFECT	1.622	-1.622	-0.622
PAT	3	MEAN	12.975	11.850	12.412
		EFFECT	-0.091	0.091	-2.384
JAN	4	MEAN	16.100	16.025	16.062
		EFFECT	-0.616	0.616	1.266
COLUMN MARGINALS		MEAN	15.450	14.144	14.797
		EFFECT	0.653	-0.653	

			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2	ROW MARGINALS
WARMCOLD AFFECTIVE MODE					
WARM	1	MEAN	17.325	15.050	16.187
		EFFECT	0.484	-0.484	1.391
COOL	2	MEAN	13.575	13.237	13.406
		EFFECT	-0.494	0.484	-1.391
COLUMN MARGINALS		MEAN	15.450	14.144	14.797
		EFFECT	0.653	-0.653	

TWO-WAY STATISTICS

TIMEBLOC TIME BLOCK

INDEXPTR INDIVIDUAL EXPERIMENTER			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
SID	1	MEAN	10.438	15.750	18.313	19.438	18.750	16.537
		EFFECT	-2.069	0.097	0.728	1.025	0.228	1.741
LEN	2	MEAN	11.063	13.875	15.313	15.313	15.313	14.175
		EFFECT	0.919	0.575	0.091	-0.738	-0.847	-0.622
PAT	3	MEAN	9.125	10.875	12.938	13.938	15.188	12.412
		EFFECT	0.744	-0.663	-0.522	-0.350	0.791	-2.384
JAN	4	MEAN	12.438	15.188	16.813	18.000	17.875	16.062
		EFFECT	0.406	0.000	-0.297	0.063	-0.172	1.266
COLUMN MARGINALS		MEAN	10.766	13.922	15.844	16.672	16.781	14.797
		EFFECT	-4.031	-0.875	1.047	1.875	1.984	

TIMEBLOC TIME BLOCK

WARMCOLD AFFECTIVE MODE			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
WARM	1	MEAN	11.000	15.281	17.781	18.500	18.375	16.187
		EFFECT	-1.156	-0.031	0.547	0.438	0.203	1.391
COOL	2	MEAN	10.531	12.563	13.906	14.844	15.188	13.406
		EFFECT	1.156	0.031	-0.547	-0.438	-0.203	-1.391
COLUMN MARGINALS		MEAN	10.766	13.922	15.844	16.672	16.781	14.797
		EFFECT	-4.031	-0.875	1.047	1.875	1.984	

TIMEBLOC TIME BLOCK

SEXSUBJT SEX OF SUBJECT			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
MALE	1	MEAN	11.094	14.281	16.406	17.594	17.875	15.450
		EFFECT	-0.325	-0.294	-0.091	0.269	0.441	0.653
FEMALE	2	MEAN	10.438	13.563	15.281	15.750	15.688	14.144
		EFFECT	0.325	0.294	0.091	-0.269	-0.441	-0.653
COLUMN MARGINALS		MEAN	10.766	13.922	15.844	16.672	16.781	14.797
		EFFECT	-4.031	-0.875	1.047	1.875	1.984	

THREE-WAY STATISTICS

SUB-TABLE NO. 1 MALE ON SEXSUBJT

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	18.500	14.050
		EFFECT	0.203	-0.203
		SD	6.380	3.530
		N	4.000	4.000
LEN	2	MEAN	17.250	15.650
		EFFECT	-0.834	0.834
		SD	2.462	7.657
		N	4.000	4.000
PAT	3	MEAN	15.300	10.650
		EFFECT	-0.297	0.297
		SD	3.349	3.612
		N	4.000	4.000
JAN	4	MEAN	18.250	13.950
		EFFECT	0.928	-0.928
		SD	5.387	1.427
		N	4.000	4.000

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	17.650	15.950
		EFFECT	-0.203	0.203
		SD	5.369	3.202
		N	4.000	4.000
LEN	2	MEAN	13.400	10.400
		EFFECT	0.834	-0.834
		SD	3.270	0.542
		N	4.000	4.000
PAT	3	MEAN	13.800	9.900
		EFFECT	0.297	-0.297
		SD	1.883	1.653
		N	4.000	4.000
JAN	4	MEAN	15.350	16.700
		EFFECT	-0.928	0.928
		SD	2.357	3.118
		N	4.000	4.000

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	10.000	10.875
		EFFECT	-0.819	0.819
LEN	2	MEAN	12.250	9.875
		EFFECT	1.194	-1.194
PAT	3	MEAN	9.625	8.625
		EFFECT	-0.481	0.481
JAN	4	MEAN	12.125	12.750
		EFFECT	0.106	-0.106

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	17.375	14.125
		EFFECT	0.119	-0.119
LEN	2	MEAN	14.875	12.875
		EFFECT	-0.119	0.119
PAT	3	MEAN	12.625	9.125
		EFFECT	-0.356	0.356
JAN	4	MEAN	16.250	14.125
		EFFECT	0.356	-0.356

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	20.750	15.875
		EFFECT	0.353	-0.353
LEN	2	MEAN	16.750	13.875
		EFFECT	-0.259	0.259
PAT	3	MEAN	15.625	10.250
		EFFECT	0.003	-0.003
JAN	4	MEAN	18.000	15.625
		EFFECT	-0.097	0.097

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	21.625	17.250
		EFFECT	0.212	-0.212
LEN	2	MEAN	16.125	14.500
		EFFECT	-0.775	0.775
PAT	3	MEAN	17.250	10.625
		EFFECT	0.737	-0.737
JAN	4	MEAN	19.000	17.000
		EFFECT	-0.175	0.175

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	20.625	16.875
		EFFECT	0.134	-0.134
LEN	2	MEAN	16.625	14.000
		EFFECT	-0.041	0.041
PAT	3	MEAN	17.625	12.750
		EFFECT	0.097	-0.097
JAN	4	MEAN	18.625	17.125
		EFFECT	-0.191	0.191

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	10.250	10.625
		EFFECT	0.400	-0.400
LEN	2	MEAN	13.000	9.125
		EFFECT	-0.012	0.013
PAT	3	MEAN	9.250	9.000
		EFFECT	-0.113	0.112
JAN	4	MEAN	11.875	13.000
		EFFECT	-0.275	0.275

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	15.875	15.625
		EFFECT	0.681	-0.681
LEN	2	MEAN	15.125	12.625
		EFFECT	-0.731	0.731
PAT	3	MEAN	11.000	10.750
		EFFECT	-0.144	0.144
JAN	4	MEAN	15.125	15.250
		EFFECT	0.194	-0.194

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	17.500	19.125
		EFFECT	-0.459	0.459
LEN	2	MEAN	18.125	12.500
		EFFECT	0.629	-0.628
PAT	3	MEAN	13.125	12.750
		EFFECT	-0.294	0.284
JAN	4	MEAN	16.875	16.750
		EFFECT	0.116	-0.116

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	19.125	19.750
		EFFECT	-0.319	0.319
LEN	2	MEAN	18.000	12.625
		EFFECT	0.144	-0.144
PAT	3	MEAN	15.000	12.875
		EFFECT	0.231	-0.231
JAN	4	MEAN	18.250	17.750
		EFFECT	-0.056	0.056

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	18.625	18.875
		EFFECT	-0.303	0.303
LEN	2	MEAN	18.000	12.625
		EFFECT	-0.028	0.028
PAT	3	MEAN	16.500	13.875
		EFFECT	0.309	-0.309
JAN	4	MEAN	18.375	17.375
		EFFECT	0.022	-0.022

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

			SEXSUBJT: MALE 1	SEX OF SUBJECT: FEMALE 2
WARMCOLD AFFECTIVE MODE				
WARM	1	MEAN	11.250	10.750
		EFFECT	-0.563	0.562
COOL	2	MEAN	10.938	10.125
		EFFECT	0.563	-0.563

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

			SEXSUBJT: MALE 1	SEX OF SUBJECT: FEMALE 2
WARMCOLD AFFECTIVE MODE				
WARM	1	MEAN	15.875	14.688
		EFFECT	-0.250	0.250
COOL	2	MEAN	12.688	12.438
		EFFECT	0.250	-0.250

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

			SEXSUBJT: MALE 1	SEX OF SUBJECT: FEMALE 2
WARMCOLD AFFECTIVE MODE				
WARM	1	MEAN	18.813	16.750
		EFFECT	-0.016	0.016
COOL	2	MEAN	14.000	13.813
		EFFECT	0.016	-0.016

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

			SEXSUBJT: MALE 1	SEX OF SUBJECT: FEMALE 2
WARMCOLD AFFECTIVE MODE				
WARM	1	MEAN	20.125	16.875
		EFFECT	0.219	-0.219
COOL	2	MEAN	15.063	14.625
		EFFECT	-0.219	0.219

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

			SEXSUBJT: MALE 1	SEX OF SUBJECT: FEMALE 2
WARMCOLD AFFECTIVE MODE				
WARM	1	MEAN	20.563	16.188
		EFFECT	0.609	-0.609
COOL	2	MEAN	15.188	15.188
		EFFECT	-0.609	0.609

FOUR-WAY STATISTICS

SUB-TABLE NO. 1 MALE FIRST MIN ON SEXSUBJT ON TIMEBLOC

			WARMCOLD: WARM 1	WARMCOLD: COOL 2
INCEXPTR INDIVIDUAL EXPERIMENTER			AFFECTIVE MODE	
SID	1	MEAN	10.250	10.250
		EFFECT	0.313	-0.313
LEN	2	MEAN	14.000	12.000
		EFFECT	0.725	-0.725
PAT	3	MEAN	8.500	10.000
		EFFECT	-0.875	0.875
JAN	4	MEAN	12.250	11.500
		EFFECT	-0.162	0.163

SUB-TABLE NO. 2 MALE SECOND MIN ON SEXSUBJT ON TIMEBLOC

			WARMCOLD: WARM 1	WARMCOLD: COOL 2
INCEXPTR INDIVIDUAL EXPERIMENTER			AFFECTIVE MODE	
SID	1	MEAN	19.000	12.750
		EFFECT	1.063	-1.063
LEN	2	MEAN	14.750	15.500
		EFFECT	-0.775	0.775
PAT	3	MEAN	12.750	9.250
		EFFECT	0.063	-0.062
JAN	4	MEAN	17.000	13.250
		EFFECT	-0.350	0.350

SUB-TABLE NO. 3 MALE THIRD MIN ON SEXSUBJT ON TIMEBLOC

			WARMCOLD: WARM 1	WARMCOLD: COOL 2
INCEXPTR INDIVIDUAL EXPERIMENTER			AFFECTIVE MODE	
SID	1	MEAN	20.250	14.750
		EFFECT	-0.359	0.359
LEN	2	MEAN	19.000	17.250
		EFFECT	-0.197	0.197
PAT	3	MEAN	16.000	10.250
		EFFECT	0.016	-0.016
JAN	4	MEAN	20.000	13.750
		EFFECT	0.541	-0.541

SUB-TABLE NO. 4 MALE ON SEXSUBJT
FOURTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	22.000	16.250
		EFFECT	-0.219	0.219
LEN	2	MEAN	18.750	17.250
		EFFECT	0.069	-0.069
PAT	3	MEAN	19.000	11.000
		EFFECT	0.281	-0.281
JAN	4	MEAN	20.750	15.750
		EFFECT	-0.131	0.131

SUB-TABLE NO. 5 MALE ON SEXSUBJT
FIFTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	21.000	16.250
		EFFECT	-0.797	0.797
LEN	2	MEAN	19.750	16.250
		EFFECT	0.178	-0.178
PAT	3	MEAN	20.250	12.750
		EFFECT	0.516	-0.516
JAN	4	MEAN	21.250	15.500
		EFFECT	0.103	-0.103

SUB-TABLE NO. 6 FEMALE ON SEXSUBJT
FIRST MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	9.750	11.500
		EFFECT	-0.312	0.312
LEN	2	MEAN	10.500	7.750
		EFFECT	-0.725	0.725
PAT	3	MEAN	10.750	7.250
		EFFECT	0.875	-0.875
JAN	4	MEAN	12.000	14.000
		EFFECT	0.163	-0.162

SUB-TABLE NO. 7 FEMALE ON SEXSUBJT
SECOND MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	15.750	15.500
		EFFECT	-1.062	1.062
LEN	2	MEAN	15.000	10.250
		EFFECT	0.775	-0.775
PAT	3	MEAN	12.500	9.000
		EFFECT	-0.062	0.063
JAN	4	MEAN	15.500	15.000
		EFFECT	0.350	-0.350

SUB-TABLE NO. 8 FEMALE ON SEXSUBJT
THIRD MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	21.250	17.000
		EFFECT	0.359	-0.359
LEN	2	MEAN	14.500	10.500
		EFFECT	0.197	-0.197
PAT	3	MEAN	15.250	10.250
		EFFECT	-0.016	0.016
JAN	4	MEAN	16.000	17.500
		EFFECT	-0.541	0.541

SUB-TABLE NO. 9 FEMALE ON SEXSUBJT
FOURTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	21.250	18.250
		EFFECT	0.219	-0.219
LEN	2	MEAN	13.500	11.750
		EFFECT	-0.069	0.069
PAT	3	MEAN	15.500	10.250
		EFFECT	-0.281	0.281
JAN	4	MEAN	17.250	18.250
		EFFECT	0.131	-0.131

SUB-TABLE NO. 10 FEMALE ON SEXSUBJT
FIFTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	20.250	17.500
		EFFECT	0.797	-0.797
LEN	2	MEAN	13.500	11.750
		EFFECT	-0.178	0.178
PAT	3	MEAN	15.000	12.750
		EFFECT	-0.516	0.516
JAN	4	MEAN	16.000	18.750
		EFFECT	-0.103	0.103

Appendix F

Analysis of variance table and means for correct responses collapsed over minutes two, three, and four for individual experimenters.

ANALYSIS OF VARIANCE TABLE FOR CORRECT

CLASSIFYING FACTORS

INDEXPTR	INDIVIDUAL EXPERIMENTER
WARMCOLD	AFFECTIVE MODE
SEXSUBJT	SEX OF SUBJECT
UNIT	SUBJECTS OR UNITS OF ANALYSIS

	SOURCE	SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
	INDEXPTR	2215.875	3	738.625	4.140*	0.011	15.88
	WARMCOLD	1681.000	1	1681.000	9.422**	0.004	12.05
	SEXSUBJT	217.563	1	217.563	1.219	0.275	1.56
	INDEXPTR X WARMCOLD	226.125	3	75.375	0.422	OVER 0.500	1.62
	INDEXPTR X SEXSUBJT	606.313	3	202.104	1.133	0.346	4.35
	WARMCOLD X SEXSUBJT	126.563	1	126.563	0.709	0.404	0.91
	INDEXPTR X WARMCOLD X SEXSUBJT	312.813	3	104.271	0.584	OVER 0.500	2.24
*	UNIT	8563.500	48	178.406	NOT TESTED		61.39
	TOTAL	13949.750	63	221.425			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

64 UNITS WERE READ IN FOR THIS ANALYSIS.
64 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS FOR CORRECT

AFFECTIVE MODE

INDIVIDUAL EXPERIMENTER			WARM 1	COLD 2	ROW MARGINALS
SID	1	MEAN	59.375	47.250	53.313
		EFFECT	0.938	-0.938	6.875
LEN	2	MEAN	48.125	41.250	44.688
		EFFECT	-1.688	1.688	-1.750
PAT	3	MEAN	45.500	30.000	37.750
		EFFECT	2.625	-2.625	-8.688
JAN	4	MEAN	53.250	46.750	50.000
		EFFECT	-1.875	1.875	3.563
COLUMN MARGINALS		MEAN	51.563	41.313	46.438
		EFFECT	5.125	-5.125	

SEX OF SUBJECT

INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2	ROW MARGINALS
SID	1	MEAN	52.125	54.500	53.313
		EFFECT	-3.031	3.031	6.875
LEN	2	MEAN	51.625	37.750	44.688
		EFFECT	5.094	-5.094	-1.750
PAT	3	MEAN	39.125	36.375	37.750
		EFFECT	-0.469	0.469	-8.688
JAN	4	MEAN	50.250	49.750	50.000
		EFFECT	-1.594	1.594	3.563
COLUMN MARGINALS		MEAN	48.281	44.594	46.438
		EFFECT	1.844	-1.844	

SEX OF SUBJECT

AFFECTIVE MODE			MALE 1	FEMALE 2	ROW MARGINALS
WARM	1	MEAN	54.813	48.313	51.563
		EFFECT	1.406	-1.406	5.125
COLD	2	MEAN	41.750	40.875	41.313
		EFFECT	-1.406	1.406	-5.125
COLUMN MARGINALS		MEAN	48.281	44.594	46.438
		EFFECT	1.844	-1.844	

THREE-WAY STATISTICS FOR CORRECT

SUB-TABLE NO. 1 MALE ON SEXSUBJT

			AFFECTIVE MODE	
			WARM 1	COLD 2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	60.500	43.750
		EFFECT	0.906	-0.906
		SD	24.118	13.226
		N	4.000	4.000
LEN	2	MEAN	53.250	50.000
		EFFECT	-3.219	3.219
		SD	10.079	25.390
		N	4.000	4.000
PAT	3	MEAN	47.750	30.500
		EFFECT	-0.531	0.531
		SD	12.258	10.630
		N	4.000	4.000
JAN	4	MEAN	57.750	42.750
		EFFECT	2.844	-2.844
		SD	16.800	0.500
		N	4.000	4.000

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

			AFFECTIVE MODE	
			WARM 1	COLD 2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	58.250	50.750
		EFFECT	-0.906	0.906
		SD	18.875	11.413
		N	4.000	4.000
LEN	2	MEAN	43.000	32.500
		EFFECT	3.219	-3.219
		SD	10.360	2.517
		N	4.000	4.000
PAT	3	MEAN	43.250	29.500
		EFFECT	0.531	-0.531
		SD	5.188	4.726
		N	4.000	4.000
JAN	4	MEAN	48.750	50.750
		EFFECT	-2.844	2.844
		SD	6.994	10.372
		N	4.000	4.000

Appendix G

Analysis of variance table and means for incorrect responses over minutes one through five.

ANALYSIS OF VARIANCE TABLE

CLASSIFYING FACTORS

SEXEXPTR	SEX OF EXPERIMENTER
WARMCOLC	AFFECTIVE MODE
SEXSUBJT	SEX OF SUBJECT
TIMEBLOC	TIME BLOCK
UNIT	SUBJECTS OR UNITS OF ANALYSIS

	SOURCE		SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
	SEXEXPTR	(SEXEXP)	232.904	1	232.904	2.194	0.145	2.59
	WARMCOLD	(WARMCO)	13.203	1	13.203	0.124	OVER 0.500	0.15
	SEXSUBJT	(SEXSUB)	190.652	1	190.652	1.796	0.186	2.12
	SEXEXP X WARMCO		47.278	1	47.278	0.445	OVER 0.500	0.53
	SEXEXP X SEXSUB		0.378	1	0.378	0.004	OVER 0.500	0.00
	WARMCO X SEXSUB		144.453	1	144.453	1.361	0.249	1.61
	SEXEXP X WARMCO X SEXSUB		33.153	1	33.153	0.312	OVER 0.500	0.37
*	UNIT		5944.901	56	106.157	NOT TESTED		66.07
	TIMEBLOC	(TIMEBL)	46.575	4	11.644	1.209	0.308	0.52
	SEXEXP X TIMEBL		78.737	4	19.684	2.044	0.090	0.88
	WARMCO X TIMEBL		31.625	4	7.906	0.821	OVER 0.500	0.35
	SEXSUB X TIMEBL		10.425	4	2.606	0.271	OVER 0.500	0.12
	SEXEXP X WARMCO X TIMEBL		11.112	4	2.778	0.288	OVER 0.500	0.12
	SEXEXP X SEXSUB X TIMEBL		13.762	4	3.441	0.357	OVER 0.500	0.15
	WARMCO X SEXSUB X TIMEBL		24.500	4	6.125	0.636	OVER 0.500	0.27
	SEXEXP X WARMCO X SEXSUB X TIMEBL		16.612	4	4.153	0.431	OVER 0.500	0.18
*	TIMEBL X UNIT		2157.040	224	9.630	NOT TESTED		23.97
	TOTAL		8997.188	319	28.204			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

64 UNITS WERE READ IN FOR THIS ANALYSIS.
64 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2	ROW MARGINALS
WARM	1	MEAN	9.137	12.025	10.581
		EFFECT	-0.672	0.672	0.203
COOL	2	MEAN	10.075	10.275	10.175
		EFFECT	0.672	-0.672	-0.203
COLUMN MARGINALS		MEAN	9.606	11.150	10.378
		EFFECT	-0.772	0.772	

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2	ROW MARGINALS
MALE	1	MEAN	8.787	10.262	9.525
		EFFECT	0.034	-0.034	-0.853
FEMALE	2	MEAN	10.425	12.037	11.231
		EFFECT	-0.034	0.034	0.853
COLUMN MARGINALS		MEAN	9.606	11.150	10.378
		EFFECT	-0.772	0.772	

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD AFFECTIVE MODE WARM 1	COOL 2	ROW MARGINALS
MALE	1	MEAN	10.112	8.937	9.525
		EFFECT	0.384	-0.384	-0.353
FEMALE	2	MEAN	11.050	11.412	11.231
		EFFECT	-0.384	0.384	0.353
COLUMN MARGINALS		MEAN	10.581	10.175	10.378
		EFFECT	0.203	-0.203	

TWO-WAY STATISTICS

SEXSUBJT SEX OF SUBJECT			TIMEBLOC FIRST MIN	TIME BLOCK SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
MALE	1	MEAN	10.531	9.531	9.344	9.156	9.469	9.606
		EFFECT	0.179	0.179	0.022	-0.306	-0.072	-0.772
FEMALE	2	MEAN	11.719	10.719	10.844	11.313	11.156	11.150
		EFFECT	-0.178	-0.178	-0.022	0.306	0.072	0.772
COLUMN MARGINALS		MEAN	11.125	10.125	10.094	10.234	10.313	10.378
		EFFECT	0.747	-0.253	-0.284	-0.144	-0.066	

WARMCOLD AFFECTIVE MODE			TIMEBLOC FIRST MIN	TIME BLOCK SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
WARM	1	MEAN	11.875	10.125	10.094	10.594	10.219	10.581
		EFFECT	0.547	-0.203	-0.203	0.156	-0.297	0.203
COOL	2	MEAN	10.375	10.125	10.094	9.875	10.406	10.175
		EFFECT	-0.547	0.203	0.203	-0.156	0.297	-0.203
COLUMN MARGINALS		MEAN	11.125	10.125	10.094	10.234	10.313	10.378
		EFFECT	0.747	-0.253	-0.284	-0.144	-0.066	

TWO-WAY STATI

SEXEXPTR SEX OF EXPERIMENTER			TIMEBLOC FIRST MIN	TIME BLOCK SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
MALE	1	MEAN	11.156	9.688	9.125	9.094	9.563	9.525
		EFFECT	0.884	-0.584	-0.116	-0.297	0.103	-0.853
FEMALE	2	MEAN	11.094	11.563	11.063	11.375	11.063	11.231
		EFFECT	-0.884	0.584	0.116	0.297	-0.103	0.853
COLUMN MARGINALS		MEAN	11.125	10.125	10.094	10.234	10.313	10.378
		EFFECT	0.747	-0.253	-0.284	-0.144	-0.066	

THREE-WAY STATISTICS

SUB-TABLE NO. 1 MALE ON SEXSUBJT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	9.025	8.550
		EFFECT	0.322	-0.322
		SD	5.362	5.352
		N	8.000	8.000
FEMALE	2	MEAN	9.250	11.600
		EFFECT	-0.322	0.322
		SD	4.915	2.601
		N	8.000	8.000

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	11.200	9.325
		EFFECT	-0.322	0.322
		SD	5.370	5.363
		N	8.000	8.000
FEMALE	2	MEAN	12.850	11.225
		EFFECT	0.322	-0.322
		SD	3.000	3.864
		N	8.000	8.000

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX OF EXPERIMENTER				
MALE	1	MEAN	12.500	9.813
		EFFECT	0.209	-0.209
FEMALE	2	MEAN	11.250	10.938
		EFFECT	-0.209	0.209

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX OF EXPERIMENTER				
MALE	1	MEAN	8.813	8.563
		EFFECT	-0.259	0.259
FEMALE	2	MEAN	11.438	11.688
		EFFECT	0.259	-0.259

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX OF EXPERIMENTER				
MALE	1	MEAN	9.375	8.875
		EFFECT	-0.134	0.134
FEMALE	2	MEAN	10.813	11.313
		EFFECT	0.134	-0.134

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX OF EXPERIMENTER				
MALE	1	MEAN	9.813	8.375
		EFFECT	-0.025	0.025
FEMALE	2	MEAN	11.375	11.375
		EFFECT	0.025	-0.025

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX OF EXPERIMENTER				
MALE	1	MEAN	10.063	9.063
		EFFECT	0.209	-0.209
FEMALE	2	MEAN	10.375	11.750
		EFFECT	-0.209	0.209

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	10.875	11.438
		EFFECT	0.278	-0.278
FEMALE	2	MEAN	10.188	12.000
		EFFECT	-0.278	0.278

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	8.313	9.063
		EFFECT	0.184	-0.184
FEMALE	2	MEAN	10.750	12.375
		EFFECT	-0.184	0.184

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	8.313	9.938
		EFFECT	-0.097	0.097
FEMALE	2	MEAN	10.375	11.750
		EFFECT	0.097	-0.097

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	7.750	10.438
		EFFECT	-0.300	0.300
FEMALE	2	MEAN	10.563	12.188
		EFFECT	0.300	-0.300

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	8.688	10.438
		EFFECT	-0.066	0.066
FEMALE	2	MEAN	10.250	11.875
		EFFECT	0.066	-0.066

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	10.500	13.250
		EFFECT	-0.109	0.109
CCOL	2	MEAN	10.563	10.188
		EFFECT	0.109	-0.109

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	9.188	11.063
		EFFECT	0.328	-0.328
CCOL	2	MEAN	9.875	10.375
		EFFECT	-0.328	0.328

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	9.000	11.188
		EFFECT	0.328	-0.328
CCOL	2	MEAN	9.688	10.500
		EFFECT	-0.328	0.328

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	8.625	12.563
		EFFECT	-0.219	0.219
CCOL	2	MEAN	9.688	10.063
		EFFECT	0.219	-0.219

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	8.375	12.063
		EFFECT	-0.328	0.328
CCOL	2	MEAN	10.563	10.250
		EFFECT	0.328	-0.328

FOUR-WAY STATISTICS

SUB-TABLE NO. 1 MALE FIRST MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	12.000	9.750
		EFFECT	0.241	-0.241
FEMALE	2	MEAN	9.000	11.375
		EFFECT	-0.241	0.241

SUB-TABLE NO. 2 MALE SECOND MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	8.375	8.250
		EFFECT	-0.041	0.041
FEMALE	2	MEAN	10.000	11.500
		EFFECT	0.041	-0.041

SUB-TABLE NO. 3 MALE THIRD MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	8.500	8.125
		EFFECT	-0.041	0.041
FEMALE	2	MEAN	9.500	11.250
		EFFECT	0.041	-0.041

SUB-TABLE NO. 4 MALE FOURTH MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	8.125	7.375
		EFFECT	0.225	-0.225
FEMALE	2	MEAN	9.125	12.000
		EFFECT	-0.225	0.225

SUB-TABLE NO. 5 MALE FIFTH MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	8.125	9.250
		EFFECT	-0.384	0.384
FEMALE	2	MEAN	8.625	11.875
		EFFECT	0.384	-0.384

FOUR-WAY STATISTICS

SUB-TABLE NO. 6 FEMALE FIRST MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	13.000	9.875
		EFFECT	-0.241	0.241
FEMALE	2	MEAN	13.500	10.500
		EFFECT	0.241	-0.241

SUB-TABLE NO. 7 FEMALE SECCND MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	9.250	8.875
		EFFECT	0.041	-0.041
FEMALE	2	MEAN	12.875	11.875
		EFFECT	-0.041	0.041

SUB-TABLE NO. 8 FEMALE THIRD MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	10.250	9.625
		EFFECT	0.041	-0.041
FEMALE	2	MEAN	12.125	11.375
		EFFECT	-0.041	0.041

SUB-TABLE NO. 9 FEMALE FCURTH MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	11.500	9.375
		EFFECT	-0.225	0.225
FEMALE	2	MEAN	13.625	10.750
		EFFECT	0.225	-0.225

SUB-TABLE NO. 10 FEMALE FIFTH MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	12.000	8.875
		EFFECT	0.384	-0.384
FEMALE	2	MEAN	12.125	11.625
		EFFECT	-0.384	0.384

Appendix H

Analysis of variance table and means for incorrect responses collapsed over minutes two, three, and four.

ANALYSIS OF VARIANCE TABLE FOR WRONG

CLASSIFYING FACTORS

SEXEXPTR	SEX OF EXPERIMENTER
WARMCOLD	AFFECTIVE MODE
SEXSUBJT	SEX OF SUBJECT
UNIT	SUBJECTS OR UNITS OF ANALYSIS

	SOURCE	SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
	SEXEXPTR	805.141	1	805.141	3.371	0.072	5.43
	WARMCOLD	8.266	1	8.266	0.035	OVER 0.500	0.06
	SEXSUBJT	375.391	1	375.391	1.572	0.216	2.53
	SEXEXPTR X WARMCOLD	34.516	1	34.516	0.145	OVER 0.500	0.23
	SEXEXPTR X SEXSUBJT	0.766	1	0.766	0.003	OVER 0.500	0.01
	WARMCOLD X SEXSUBJT	159.391	1	159.391	0.667	0.418	1.07
	SEXEXPTR X WARMCOLD X SEXSUBJT	78.766	1	78.766	0.330	OVER 0.500	0.53
*	UNIT	13375.625	56	238.850	NOT TESTED		90.15
	TOTAL	14837.859	63	235.522			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

64 UNITS WERE READ IN FOR THIS ANALYSIS.
64 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS FOR WRONG

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD AFFECTIVE MODE: WARM 1	COLD 2	ROW MARGINALS
MALE	1	MEAN	28.000	25.813	26.906
		EFFECT	0.734	-0.734	-3.547
FEMALE	2	MEAN	33.625	34.375	34.000
		EFFECT	-0.734	0.734	3.547
COLUMN MARGINALS		MEAN	30.813	30.094	30.453
		EFFECT	0.359	-0.359	

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT SEX OF SUBJECT: MALE 1	FEMALE 2	ROW MARGINALS
MALE	1	MEAN	24.375	29.438	26.906
		EFFECT	-0.109	0.109	-3.547
FEMALE	2	MEAN	31.688	36.313	34.000
		EFFECT	0.109	-0.109	3.547
COLUMN MARGINALS		MEAN	28.031	32.875	30.453
		EFFECT	-2.422	2.422	

WARMCOLD AFFECTIVE MODE			SEXSUBJT SEX OF SUBJECT: MALE 1	FEMALE 2	ROW MARGINALS
WARM	1	MEAN	26.813	34.813	30.813
		EFFECT	-1.578	1.578	0.359
COLD	2	MEAN	29.250	30.938	30.094
		EFFECT	1.578	-1.578	-0.359
COLUMN MARGINALS		MEAN	28.031	32.875	30.453
		EFFECT	-2.422	2.422	

TWO-WAY STATISTICS FOR WRONG

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD AFFECTIVE MODE: WARM 1	COLD 2	ROW MARGINALS
MALE	1	MEAN	28.000	25.813	26.906
		EFFECT	0.734	-0.734	-3.547
FEMALE	2	MEAN	33.625	34.375	34.000
		EFFECT	-0.734	0.734	3.547
COLUMN MARGINALS		MEAN	30.813	30.094	30.453
		EFFECT	0.359	-0.359	

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT SEX OF SUBJECT: MALE 1	FEMALE 2	ROW MARGINALS
MALE	1	MEAN	24.375	29.438	26.906
		EFFECT	-0.109	0.109	-3.547
FEMALE	2	MEAN	31.688	36.313	34.000
		EFFECT	0.109	-0.109	3.547
COLUMN MARGINALS		MEAN	28.031	32.875	30.453
		EFFECT	-2.422	2.422	

WARMCOLD AFFECTIVE MODE			SEXSUBJT SEX OF SUBJECT: MALE 1	FEMALE 2	ROW MARGINALS
WARM	1	MEAN	26.813	34.813	30.813
		EFFECT	-1.578	1.578	0.359
COLD	2	MEAN	29.250	30.938	30.094
		EFFECT	1.578	-1.578	-0.359
COLUMN MARGINALS		MEAN	28.031	32.875	30.453
		EFFECT	-2.422	2.422	

THREE-WAY STATISTICS FOR WRONG

SUB-TABLE NO. 1 MALE ON SEXSUBJT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD: WARM 1	AFFECTIVE MODE: COLD 2
MALE	1	MEAN	25.000	23.750
		EFFECT	1.109	-1.109
		SD	19.756	18.437
		N	8.000	8.000
FEMALE	2	MEAN	28.625	34.750
		EFFECT	-1.109	1.109
		SD	14.697	7.344
		N	8.000	8.000

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD: WARM 1	AFFECTIVE MODE: COLD 2
MALE	1	MEAN	31.000	27.875
		EFFECT	-1.109	1.109
		SD	17.920	18.027
		N	8.000	8.000
FEMALE	2	MEAN	38.625	34.000
		EFFECT	1.109	-1.109
		SD	10.127	12.739
		N	8.000	8.000

Appendix I

Analysis of variance table and means of incorrect responses for each experimenter over minutes one through five.

ANALYSIS OF VARIANCE TABLE

CLASSIFYING FACTORS

INDEXPTR	INDIVIDUAL EXPERIMENTER
WARMCOLD	AFFECTIVE MODE
SEXSUBJT	SEX OF SUBJECT
TIMEBLOC	TIME BLOCK
UNIT	SUBJECTS OR UNITS OF ANALYSIS

	SOURCE		SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
	INDEXPTR	(INDEXP)	1002.257	3	334.085	3.187*	0.032	11.14
	WARMCOLD	(WARMCO)	13.203	1	13.203	0.126	OVER 0.500	0.15
	SEXSUBJT	(SEXSUB)	190.654	1	190.654	1.819	0.184	2.12
	INDEXP X WARMCO		120.959	3	40.320	0.385	OVER 0.500	1.34
	INDEXP X SEXSUB		64.359	3	21.453	0.205	OVER 0.500	0.72
	WARMCO X SEXSUB		144.453	1	144.453	1.378	0.247	1.61
	INDEXP X WARMCO X SEXSUB		38.809	3	12.936	0.123	OVER 0.500	0.43
*	UNIT		5032.129	48	104.836	NOT TESTED		55.93
	TIMEBLOC	(TIMEBL)	46.575	4	11.644	1.378	0.243	0.52
	INDEXP X TIMEBL		280.474	12	23.373	2.767**	0.002	3.12
	WARMCO X TIMEBL		31.625	4	7.906	0.936	0.445	0.35
	SEXSUB X TIMEBL		10.425	4	2.606	0.308	OVER 0.500	0.12
	INDEXP X WARMCO X TIMEBL		216.024	12	18.002	2.131*	0.017	2.40
	INDEXP X SEXSUB X TIMEBL		34.875	12	2.906	0.344	OVER 0.500	0.39
	WARMCO X SEXSUB X TIMEBL		24.500	4	6.125	0.725	OVER 0.500	0.27
	INDEXP X WARMCO X SEXSUB X TIMEBL		123.799	12	10.317	1.221	0.271	1.38
*	TIMEBL X UNIT		1622.095	192	8.448	NOT TESTED		18.03
	TOTAL		8997.191	319	28.204			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

64 UNITS WERE READ IN FOR THIS ANALYSIS.
64 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS

			WARMCOLD: WARM 1	WARMCOLD: COOL 2	AFFECTIVE MODE: ROW MARGINALS
INCEXPTR INDIVIDUAL EXPERIMENTER					
SID	1	MEAN	7.575	7.275	7.425
		EFFECT	-0.053	0.053	-2.953
LEN	2	MEAN	12.650	10.600	11.625
		EFFECT	0.822	-0.822	1.247
PAT	3	MEAN	9.900	11.300	10.600
		EFFECT	-0.903	0.903	0.222
JAN	4	MEAN	12.200	11.525	11.862
		EFFECT	0.134	-0.134	1.484
COLUMN MARGINALS		MEAN	10.581	10.175	10.378
		EFFECT	0.203	-0.203	

			SEXSUBJT: MALE 1	SEXSUBJT: FEMALE 2	SEX OF SUBJECT: ROW MARGINALS
INCEXPTR INDIVIDUAL EXPERIMENTER					
SID	1	MEAN	6.650	8.200	7.425
		EFFECT	-0.003	0.003	-2.953
LEN	2	MEAN	10.925	12.325	11.625
		EFFECT	0.072	-0.072	1.247
PAT	3	MEAN	10.425	10.775	10.600
		EFFECT	0.597	-0.597	0.222
JAN	4	MEAN	10.425	13.300	11.862
		EFFECT	-0.666	0.666	1.484
COLUMN MARGINALS		MEAN	9.606	11.150	10.378
		EFFECT	-0.772	0.772	

			SEXSUBJT: MALE 1	SEXSUBJT: FEMALE 2	SEX OF SUBJECT: ROW MARGINALS
WARMCOLD AFFECTIVE MODE					
WARM	1	MEAN	9.137	12.025	10.581
		EFFECT	-0.672	0.672	0.203
COOL	2	MEAN	10.075	10.275	10.175
		EFFECT	0.672	-0.672	-0.203
COLUMN MARGINALS		MEAN	9.606	11.150	10.378
		EFFECT	-0.772	0.772	

TWO-WAY STATISTICS

TIMEBLOC TIME BLOCK

INDEXPTR INDIVIDUAL EXPERIMENTER			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	R MAR
SID	1	MEAN	10.875	7.313	6.500	5.875	6.563	
		EFFECT	2.703	0.141	-0.641	-1.406	-0.797	
LEN	2	MEAN	11.438	10.063	11.750	12.313	12.563	
		EFFECT	-0.934	-1.309	0.409	0.831	1.003	
PAT	3	MEAN	10.688	11.063	10.250	10.750	10.250	
		EFFECT	-0.659	0.716	-0.066	0.294	-0.284	
JAN	4	MEAN	11.500	12.063	11.875	12.000	11.875	
		EFFECT	-1.109	0.453	0.297	0.281	0.078	
COLUMN MARGINALS		MEAN	11.125	10.125	10.094	10.234	10.313	
		EFFECT	0.747	-0.253	-0.284	-0.144	-0.066	

TIMEBLOC TIME BLOCK

WARMCOLD AFFECTIVE MODE			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	R MAR
WARM	1	MEAN	11.875	10.125	10.094	10.594	10.219	
		EFFECT	0.547	-0.203	-0.203	0.156	-0.297	
COOL	2	MEAN	10.375	10.125	10.094	9.875	10.406	
		EFFECT	-0.547	0.203	0.203	-0.156	0.297	
COLUMN MARGINALS		MEAN	11.125	10.125	10.094	10.234	10.313	
		EFFECT	0.747	-0.253	-0.284	-0.144	-0.066	

TIMEBLOC TIME BLOCK

SEXSUBJT SEX OF SUBJECT			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	R MAR
MALE	1	MEAN	10.531	9.531	9.344	9.156	9.469	
		EFFECT	0.178	0.178	0.022	-0.306	-0.072	
FEMALE	2	MEAN	11.719	10.719	10.844	11.313	11.156	
		EFFECT	-0.178	-0.178	-0.022	0.306	0.072	
COLUMN MARGINALS		MEAN	11.125	10.125	10.094	10.234	10.313	
		EFFECT	0.747	-0.253	-0.284	-0.144	-0.066	

TWO-WAY STATISTICS

TIMEBLOC TIME BLOCK

PTR / IDUAL EXPERIMENTER			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
D	1	MEAN	10.875	7.313	6.500	5.875	6.563	7.425
		EFFECT	2.703	0.141	-0.641	-1.406	-0.797	-2.953
N	2	MEAN	11.438	10.063	11.750	12.313	12.563	11.625
		EFFECT	-0.934	-1.309	0.409	0.831	1.003	1.247
T	3	MEAN	10.688	11.063	10.250	10.750	10.250	10.600
		EFFECT	-0.659	0.716	-0.066	0.294	-0.294	0.222
N	4	MEAN	11.500	12.063	11.875	12.000	11.875	11.862
		EFFECT	-1.109	0.453	0.297	0.281	0.078	1.484
LUMN MARGINALS		MEAN	11.125	10.125	10.094	10.234	10.313	10.378
		EFFECT	0.747	-0.253	-0.284	-0.144	-0.066	

TIMEBLOC TIME BLOCK

OLD / TIVE MODE			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
RM	1	MEAN	11.875	10.125	10.094	10.594	10.219	10.581
		EFFECT	0.547	-0.203	-0.203	0.156	-0.297	0.203
CL	2	MEAN	10.375	10.125	10.094	9.875	10.406	10.175
		EFFECT	-0.547	0.203	0.203	-0.156	0.297	-0.203
LUMN MARGINALS		MEAN	11.125	10.125	10.094	10.234	10.313	10.378
		EFFECT	0.747	-0.253	-0.284	-0.144	-0.066	

TIMEBLOC TIME BLOCK

BJT / F SUBJECT			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
LE	1	MEAN	10.531	9.531	9.344	9.156	9.469	9.606
		EFFECT	0.178	0.178	0.022	-0.306	-0.072	-0.772
MALE	2	MEAN	11.719	10.719	10.844	11.313	11.156	11.150
		EFFECT	-0.178	-0.178	-0.022	0.306	0.072	0.772
LUMN MARGINALS		MEAN	11.125	10.125	10.094	10.234	10.313	10.378
		EFFECT	0.747	-0.253	-0.284	-0.144	-0.066	

THREE-WAY STATISTICS

SUB-TABLE NO. 1 MALE ON SEXSUBJT

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	6.400	6.900
		EFFECT	0.272	-0.272
		SD	4.208	4.553
		N	4.000	4.000
LEN	2	MEAN	11.650	10.200
		EFFECT	0.372	-0.372
		SD	5.567	6.233
		N	4.000	4.000
PAT	3	MEAN	8.550	12.300
		EFFECT	-0.503	0.503
		SD	3.C30	1.949
		N	4.000	4.000
JAN	4	MEAN	9.950	10.900
		EFFECT	-0.141	0.141
		SD	6.773	3.268
		N	4.000	4.000

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	8.750	7.650
		EFFECT	-0.272	0.272
		SD	6.325	7.588
		N	4.000	4.000
LEN	2	MEAN	13.650	11.000
		EFFECT	-0.372	0.372
		SD	3.356	1.433
		N	4.000	4.000
PAT	3	MEAN	11.250	10.300
		EFFECT	0.503	-0.503
		SD	3.022	1.428
		N	4.000	4.000
JAN	4	MEAN	14.450	12.150
		EFFECT	0.141	-0.141
		SD	2.247	5.524
		N	4.000	4.000

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	10.500	11.250
		EFFECT	0.222	-0.222
LEN	2	MEAN	11.250	11.625
		EFFECT	0.334	-0.334
PAT	3	MEAN	10.250	11.125
		EFFECT	-0.441	0.441
JAN	4	MEAN	10.125	12.875
		EFFECT	-0.116	0.116

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	6.500	8.125
		EFFECT	-0.216	0.216
LEN	2	MEAN	10.125	10.000
		EFFECT	0.584	-0.584
PAT	3	MEAN	11.125	11.000
		EFFECT	0.059	-0.059
JAN	4	MEAN	10.375	13.750
		EFFECT	-0.428	0.428

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	5.875	7.125
		EFFECT	0.128	-0.128
LEN	2	MEAN	10.750	12.750
		EFFECT	-0.322	0.322
PAT	3	MEAN	10.000	10.500
		EFFECT	-0.097	0.097
JAN	4	MEAN	10.750	13.000
		EFFECT	0.291	-0.291

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	4.250	7.500
		EFFECT	-0.544	0.544
LEN	2	MEAN	11.250	13.375
		EFFECT	-0.056	0.056
PAT	3	MEAN	10.750	10.750
		EFFECT	0.481	-0.481
JAN	4	MEAN	10.375	13.625
		EFFECT	0.119	-0.119

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	6.125	7.000
		EFFECT	0.409	-0.409
LEN	2	MEAN	11.250	13.875
		EFFECT	-0.541	0.541
PAT	3	MEAN	10.000	10.500
		EFFECT	-0.003	0.003
JAN	4	MEAN	10.500	13.250
		EFFECT	0.134	-0.134

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	12.000	9.750
		EFFECT	0.428	-0.428
LEN	2	MEAN	13.000	9.875
		EFFECT	-0.009	0.009
PAT	3	MEAN	11.875	9.500
		EFFECT	1.341	-1.341
JAN	4	MEAN	10.625	12.375
		EFFECT	-1.759	1.759

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	7.375	7.250
		EFFECT	0.116	-0.116
LEN	2	MEAN	10.250	9.875
		EFFECT	-0.634	0.634
PAT	3	MEAN	11.375	10.750
		EFFECT	1.216	-1.216
JAN	4	MEAN	11.500	12.625
		EFFECT	-0.697	0.697

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	6.375	6.625
		EFFECT	-0.072	0.072
LEN	2	MEAN	12.375	11.125
		EFFECT	-0.197	0.197
PAT	3	MEAN	9.125	11.375
		EFFECT	-0.222	0.222
JAN	4	MEAN	12.500	11.250
		EFFECT	0.491	-0.491

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	5.875	5.875
		EFFECT	-0.306	0.306
LEN	2	MEAN	13.750	10.875
		EFFECT	0.256	-0.256
PAT	3	MEAN	9.500	12.000
		EFFECT	-0.706	0.706
JAN	4	MEAN	13.250	10.750
		EFFECT	0.756	-0.756

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	6.250	6.875
		EFFECT	-0.166	0.166
LEN	2	MEAN	13.875	11.250
		EFFECT	0.584	-0.584
PAT	3	MEAN	7.625	12.875
		EFFECT	-1.628	1.628
JAN	4	MEAN	13.125	10.625
		EFFECT	1.209	-1.209

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
WARMCOLD AFFECTIVE MODE			MALE 1	FEMALE 2
WARM	1	MEAN	10.500	13.250
		EFFECT	-0.109	0.109
COOL	2	MEAN	10.563	10.188
		EFFECT	0.109	-0.109

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
WARMCOLD AFFECTIVE MODE			MALE 1	FEMALE 2
WARM	1	MEAN	9.188	11.063
		EFFECT	0.328	-0.328
COOL	2	MEAN	9.875	10.375
		EFFECT	-0.328	0.328

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
WARMCOLD AFFECTIVE MODE			MALE 1	FEMALE 2
WARM	1	MEAN	9.000	11.188
		EFFECT	0.328	-0.328
COOL	2	MEAN	9.688	10.500
		EFFECT	-0.328	0.328

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
WARMCOLD AFFECTIVE MODE			MALE 1	FEMALE 2
WARM	1	MEAN	8.625	12.563
		EFFECT	-0.219	0.219
COOL	2	MEAN	9.688	10.063
		EFFECT	0.219	-0.219

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
WARMCOLD AFFECTIVE MODE			MALE 1	FEMALE 2
WARM	1	MEAN	8.375	12.063
		EFFECT	-0.328	0.328
COOL	2	MEAN	10.563	10.250
		EFFECT	0.328	-0.328

FOUR-WAY STATISTICS

SUB-TABLE NO. 1 MALE FIRST MIN ON SEXSUBJT ON TIMEBLOC

INDEXPTR INDIVIDUAL EXPERIMENTER			WARMCOLD AFFECTIVE MODE WARM 1	COOL 2
SID	1	MEAN	11.250	9.750
		EFFECT	0.134	-0.134
LEN	2	MEAN	12.750	9.750
		EFFECT	0.347	-0.347
PAT	3	MEAN	8.750	11.750
		EFFECT	-1.403	1.403
JAN	4	MEAN	9.250	11.000
		EFFECT	0.922	-0.922

SUB-TABLE NO. 2 MALE SECOND MIN ON SEXSUBJT ON TIMEBLOC

INDEXPTR INDIVIDUAL EXPERIMENTER			WARMCOLD AFFECTIVE MODE WARM 1	COOL 2
SID	1	MEAN	5.750	7.250
		EFFECT	-0.741	0.741
LEN	2	MEAN	11.000	9.250
		EFFECT	0.659	-0.659
PAT	3	MEAN	11.000	11.250
		EFFECT	0.409	-0.409
JAN	4	MEAN	9.000	11.750
		EFFECT	-0.328	0.328

SUB-TABLE NO. 3 MALE THIRD MIN ON SEXSUBJT ON TIMEBLOC

INDEXPTR INDIVIDUAL EXPERIMENTER			WARMCOLD AFFECTIVE MODE WARM 1	COOL 2
SID	1	MEAN	5.500	6.250
		EFFECT	-0.178	0.178
LEN	2	MEAN	11.500	10.000
		EFFECT	0.097	-0.097
PAT	3	MEAN	9.000	11.000
		EFFECT	0.972	-0.972
JAN	4	MEAN	10.000	11.500
		EFFECT	-0.891	0.891

SUB-TABLE NO. 4 MALE ON SEXSUBJT
FOURTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	4.250	4.250
		EFFECT	0.619	-0.619
LEN	2	MEAN	12.000	10.500
		EFFECT	-0.169	0.169
PAT	3	MEAN	7.750	13.750
		EFFECT	-0.356	0.356
JAN	4	MEAN	10.500	10.250
		EFFECT	-0.094	0.094

SUB-TABLE NO. 5 MALE ON SEXSUBJT
FIFTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	5.250	7.000
		EFFECT	0.166	-0.166
LEN	2	MEAN	11.000	11.500
		EFFECT	-0.934	0.934
PAT	3	MEAN	6.250	13.750
		EFFECT	0.378	-0.378
JAN	4	MEAN	11.000	10.000
		EFFECT	0.391	-0.391

SUB-TABLE NO. 6 FEMALE ON SEXSUBJT
FIRST MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	12.750	9.750
		EFFECT	-0.134	0.134
LEN	2	MEAN	13.250	10.000
		EFFECT	-0.347	0.347
PAT	3	MEAN	15.000	7.250
		EFFECT	1.403	-1.403
JAN	4	MEAN	12.000	13.750
		EFFECT	-0.922	0.922

SUB-TABLE NO. 7 FEMALE ON SEXSUBJT
SECOND MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	9.000	7.250
		EFFECT	0.741	-0.741
LEN	2	MEAN	9.500	10.500
		EFFECT	-0.659	0.659
PAT	3	MEAN	11.750	10.250
		EFFECT	-0.409	0.409
JAN	4	MEAN	14.000	13.500
		EFFECT	0.328	-0.328

SUB-TABLE NO. 8 FEMALE ON SEXSUBJT
THIRD MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	7.250	7.000
		EFFECT	0.178	-0.178
LEN	2	MEAN	13.250	12.250
		EFFECT	-0.097	0.097
PAT	3	MEAN	9.250	11.750
		EFFECT	-0.972	0.972
JAN	4	MEAN	15.000	11.000
		EFFECT	0.891	-0.891

SUB-TABLE NO. 9 FEMALE ON SEXSUBJT
FOURTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	7.500	7.500
		EFFECT	-0.619	0.619
LEN	2	MEAN	15.500	11.250
		EFFECT	0.169	-0.169
PAT	3	MEAN	11.250	10.250
		EFFECT	0.356	-0.356
JAN	4	MEAN	16.000	11.250
		EFFECT	0.094	-0.094

SUB-TABLE NO. 10 FEMALE ON SEXSUBJT
FIFTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	7.250	6.750
		EFFECT	-0.166	0.166
LEN	2	MEAN	16.750	11.000
		EFFECT	0.934	-0.934
PAT	3	MEAN	9.000	12.000
		EFFECT	-0.378	0.378
JAN	4	MEAN	15.250	11.250
		EFFECT	-0.391	0.391

Appendix J

Analysis of variance table and means of incorrect responses for each experimenter collapsed over minutes two, three, and four.

ANALYSIS OF VARIANCE TABLE FOR WRONG

CLASSIFYING FACTORS

INDEXPTR	INDIVIDUAL EXPERIMENTER
WARMCOLD	AFFECTIVE MODE
SEXSUBJT	SEX OF SUBJECT
UNIT	SUBJECTS OR UNITS OF ANALYSIS

	SOURCE	SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
	INDEXPTR	2592.797	3	864.266	3.679*	0.019	17.47
	WARMCOLD	8.266	1	8.266	0.035	OVER 0.500	0.06
	SEXSUBJT	375.391	1	375.391	1.598	0.213	2.53
	INDEXPTR X WARMCOLD	168.422	3	56.141	0.239	OVER 0.500	1.14
	INDEXPTR X SEXSUBJT	154.297	3	51.432	0.219	OVER 0.500	1.04
	WARMCOLD X SEXSUBJT	159.391	1	159.391	0.678	0.415	1.07
	INDEXPTR X WARMCOLD X SEXSUBJT	102.547	3	34.182	0.145	OVER 0.500	0.69
*	UNIT	11276.750	48	234.932	NOT TESTED		76.00
	TOTAL	14837.859	63	235.522			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

64 UNITS WERE READ IN FOR THIS ANALYSIS.
64 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS FOR WRONG

WARMCOLD AFFECTIVE MODE

INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COLD 2	ROW MARGINALS
SID	1	MEAN	19.625	19.750	19.688
		EFFECT	-0.422	0.422	-10.766
LEN	2	MEAN	36.375	31.875	34.125
		EFFECT	1.891	-1.891	3.672
PAT	3	MEAN	30.000	34.125	32.063
		EFFECT	-2.422	2.422	1.609
JAN	4	MEAN	37.250	34.625	35.938
		EFFECT	0.953	-0.953	5.484
COLUMN MARGINALS		MEAN	30.813	30.094	30.453
		EFFECT	0.359	-0.359	

SEXSUBJT SEX OF SUBJECT

INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2	ROW MARGINALS
SID	1	MEAN	16.625	22.750	19.688
		EFFECT	-0.641	0.641	-10.766
LEN	2	MEAN	32.125	36.125	34.125
		EFFECT	0.422	-0.422	3.672
PAT	3	MEAN	31.875	32.250	32.063
		EFFECT	2.234	-2.234	1.609
JAN	4	MEAN	31.500	40.375	35.938
		EFFECT	-2.016	2.016	5.484
COLUMN MARGINALS		MEAN	28.031	32.875	30.453
		EFFECT	-2.422	2.422	

SEXSUBJT SEX OF SUBJECT

WARMCOLD AFFECTIVE MODE			MALE 1	FEMALE 2	ROW MARGINALS
WARM	1	MEAN	26.813	34.813	30.813
		EFFECT	-1.578	1.578	0.359
COLD	2	MEAN	29.250	30.938	30.094
		EFFECT	1.578	-1.578	-0.359
COLUMN MARGINALS		MEAN	28.031	32.875	30.453
		EFFECT	-2.422	2.422	

THREE-WAY STATISTICS FOR WRONG

SUB-TABLE NO. 1 MALE ON SEXSUBJT

			WARMCOLD WARM 1	AFFECTIVE MODE COLD 2
INDEXPTR INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	15.500	17.750
		EFFECT	0.516	-0.516
		SD	17.445	16.112
		N	4.000	4.000
LEN	2	MEAN	34.500	29.750
		EFFECT	1.703	-1.703
		SD	19.122	20.918
		N	4.000	4.000
PAT	3	MEAN	27.750	36.000
		EFFECT	-0.484	0.484
		SD	9.032	5.888
		N	4.000	4.000
JAN	4	MEAN	29.500	33.500
		EFFECT	-1.734	1.734
		SD	20.486	9.327
		N	4.000	4.000

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

			WARMCOLD WARM 1	AFFECTIVE MODE COLD 2
INDEXPTR INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	23.750	21.750
		EFFECT	-0.516	0.516
		SD	23.472	25.184
		N	4.000	4.000
LEN	2	MEAN	38.250	34.000
		EFFECT	-1.703	1.703
		SD	7.632	4.899
		N	4.000	4.000
PAT	3	MEAN	32.250	32.250
		EFFECT	0.484	-0.484
		SD	8.958	3.775
		N	4.000	4.000
JAN	4	MEAN	45.000	35.750
		EFFECT	1.734	-1.734
		SD	7.118	18.875
		N	4.000	4.000

Appendix K

Analysis of variance table and means for rate of response over minutes one through five.

ANALYSIS OF VARIANCE TABLE

CLASSIFYING FACTORS

SEXEXPTR	SEX OF EXPERIMENTER
WARMCOLD	AFFECTIVE MODE
SEXSUBJT	SEX OF SUBJECT
TIMEBLOC	TIME BLOCK
UNIT	SUBJECTS OR UNITS OF ANALYSIS

SOURCE	SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
SEXEXPTR	26.450	1	26.450	0.249	OVER 0.500	0.27
WARMCOLD	819.198	1	819.198	7.700**	0.008	8.35
SEXSUBJT	4.050	1	4.050	0.038	OVER 0.500	0.04
SEXEXP X WARMCO	35.112	1	35.112	0.330	OVER 0.500	0.36
SEXEXP X SEXSUB	46.512	1	46.512	0.437	OVER 0.500	0.47
WARMCO X SEXSUB	12.012	1	12.012	0.113	OVER 0.500	0.12
SEXEXP X WARMCO X SEXSUB	0.050	1	0.050	VERY SMALL		0.00
UNIT	5959.184	56	106.396	NOT TESTED		60.76
TIMEBLOC	1229.605	4	307.401	48.829***	UNDER 0.001	12.54
SEXEXP X TIMEBL	19.269	4	4.817	0.765	OVER 0.500	0.20
WARMCO X TIMEBL	60.394	4	15.098	2.398	0.052	0.62
SEXSUB X TIMEBL	11.231	4	2.808	0.446	OVER 0.500	0.11
SEXEXP X WARMCO X TIMEBL	26.356	4	6.589	1.047	0.384	0.27
SEXEXP X SEXSUB X TIMEBL	30.519	4	7.630	1.212	0.307	0.31
WARMCO X SEXSUB X TIMEBL	40.644	4	10.161	1.614	0.172	0.41
SEXEXP X WARMCO X SEXSUB X TIMEBL	76.981	4	19.245	3.057*	0.018	0.78
* TIMEBL X UNIT	1410.188	224	6.295	NOT TESTED		14.38
TOTAL	9806.727	319	30.742			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

64 UNITS WERE READ IN FOR THIS ANALYSIS.
64 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2	ROW MARGINALS
WARM	1	MEAN	26.462	27.075	26.769
		EFFECT	-0.194	0.194	1.600
COOL	2	MEAN	23.650	23.487	23.569
		EFFECT	0.194	-0.194	-1.600
COLUMN MARGINALS		MEAN	25.056	25.281	25.169
		EFFECT	-0.112	0.113	

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2	ROW MARGINALS
MALE	1	MEAN	25.150	24.612	24.881
		EFFECT	0.381	-0.381	-0.287
FEMALE	2	MEAN	24.962	25.950	25.456
		EFFECT	-0.381	0.381	0.288
COLUMN MARGINALS		MEAN	25.056	25.281	25.169
		EFFECT	-0.112	0.113	

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2	ROW MARGINALS
MALE	1	MEAN	26.812	22.950	24.881
		EFFECT	0.331	-0.331	-0.287
FEMALE	2	MEAN	26.725	24.187	25.456
		EFFECT	-0.331	0.331	0.288
COLUMN MARGINALS		MEAN	26.769	23.569	25.169
		EFFECT	1.600	-1.600	

TWO-WAY STATISTICS

			TIMEBLOC FIRST MIN	TIME BLOCK SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
SEXSUBJT SEX OF SUBJECT								
MALE	1	MEAN	21.625	23.813	25.750	26.750	27.344	25.056
		EFFECT	-0.153	-0.122	-0.075	-0.013	0.362	-0.112
FEMALE	2	MEAN	22.156	24.281	26.125	27.000	26.844	25.281
		EFFECT	0.153	0.122	0.075	0.012	-0.363	0.113
COLUMN MARGINALS		MEAN	21.891	24.047	25.938	26.875	27.094	25.169
		EFFECT	-3.278	-1.122	0.769	1.706	1.925	

			TIMEBLOC FIRST MIN	TIME BLOCK SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
WARMCOLD AFFECTIVE MODE								
WARM	1	MEAN	22.875	25.406	27.875	29.094	28.594	26.769
		EFFECT	-0.616	-0.241	0.337	0.619	-0.100	1.600
COOL	2	MEAN	20.906	22.688	24.000	24.656	25.594	23.569
		EFFECT	0.616	0.241	-0.338	-0.619	0.100	-1.600
COLUMN MARGINALS		MEAN	21.891	24.047	25.938	26.875	27.094	25.169
		EFFECT	-3.278	-1.122	0.769	1.706	1.925	

			TIMEBLOC FIRST MIN	TIME BLOCK SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
SEXEXPTR SEX OF EXPERIMENTER								
MALE	1	MEAN	21.906	23.500	25.938	26.469	26.594	24.881
		EFFECT	0.303	-0.259	0.287	-0.119	-0.213	-0.287
FEMALE	2	MEAN	21.875	24.594	25.938	27.281	27.594	25.456
		EFFECT	-0.303	0.259	-0.288	0.119	0.212	0.288
COLUMN MARGINALS		MEAN	21.891	24.047	25.938	26.875	27.094	25.169
		EFFECT	-3.278	-1.122	0.769	1.706	1.925	

THREE-WAY STATISTICS

SUB-TABLE NO. 1 MALE ON SEXSUBJT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD AFFECTIVE MODE: WARM 1	COOL 2
MALE	1	MEAN	26.900	23.400
		EFFECT	0.013	-0.012
		SD	4.016	3.808
		N	8.000	8.000
FEMALE	2	MEAN	26.025	23.900
		EFFECT	-0.012	0.013
		SD	4.468	4.244
		N	8.000	8.000

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD AFFECTIVE MODE: WARM 1	COOL 2
MALE	1	MEAN	26.725	22.500
		EFFECT	-0.012	0.013
		SD	5.415	4.975
		N	8.000	8.000
FEMALE	2	MEAN	27.425	24.475
		EFFECT	0.013	-0.012
		SD	4.215	5.458
		N	8.000	8.000

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD AFFECTIVE MODE WARM 1	COOL 2
MALE	1	MEAN	23.625	20.188
		EFFECT	0.403	-0.403
FEMALE	2	MEAN	22.125	21.625
		EFFECT	-0.403	0.403

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD AFFECTIVE MODE WARM 1	COOL 2
MALE	1	MEAN	24.938	22.063
		EFFECT	-0.253	0.253
FEMALE	2	MEAN	25.875	23.313
		EFFECT	0.253	-0.253

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD AFFECTIVE MODE WARM 1	COOL 2
MALE	1	MEAN	28.125	23.750
		EFFECT	-0.081	0.081
FEMALE	2	MEAN	27.625	24.250
		EFFECT	0.081	-0.081

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD AFFECTIVE MODE WARM 1	COOL 2
MALE	1	MEAN	28.688	24.250
		EFFECT	-0.331	0.331
FEMALE	2	MEAN	29.500	25.063
		EFFECT	0.331	-0.331

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD AFFECTIVE MODE WARM 1	COOL 2
MALE	1	MEAN	28.688	24.500
		EFFECT	0.263	-0.262
FEMALE	2	MEAN	28.500	26.688
		EFFECT	-0.262	0.263

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	22.500	21.313
		EFFECT	0.478	-0.478
FEMALE	2	MEAN	20.750	23.000
		EFFECT	-0.478	0.478

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	23.813	23.188
		EFFECT	0.166	-0.166
FEMALE	2	MEAN	23.813	25.375
		EFFECT	-0.166	0.166

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	26.125	25.750
		EFFECT	-0.006	0.006
FEMALE	2	MEAN	25.375	26.500
		EFFECT	0.006	-0.006

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	26.313	26.625
		EFFECT	-0.412	0.413
FEMALE	2	MEAN	27.188	27.375
		EFFECT	0.413	-0.412

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
MALE	1	MEAN	27.000	26.188
		EFFECT	-0.225	0.225
FEMALE	2	MEAN	27.688	27.500
		EFFECT	0.225	-0.225

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	21.750	24.000
		EFFECT	-0.666	0.666
CCOL	2	MEAN	21.500	20.313
		EFFECT	0.666	-0.666

SUB-TABLE NO. 2 SECCND MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	25.063	25.750
		EFFECT	0.084	-0.084
CCOL	2	MEAN	22.563	22.813
		EFFECT	-0.084	0.084

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	27.813	27.938
		EFFECT	0.319	-0.319
CCOL	2	MEAN	23.688	24.313
		EFFECT	-0.319	0.319

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	28.750	29.438
		EFFECT	-0.025	0.025
CCOL	2	MEAN	24.750	24.563
		EFFECT	0.025	-0.025

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARM	1	MEAN	28.938	28.250
		EFFECT	0.288	-0.287
CCOL	2	MEAN	25.750	25.438
		EFFECT	-0.287	0.288

FOUR-WAY STATISTICS

SUB-TABLE NO. 1 MALE FIRST MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	24.125	20.875
		EFFECT	0.753	-0.753
FEMALE	2	MEAN	19.375	22.125
		EFFECT	-0.753	0.753

SUB-TABLE NO. 2 MALE SECOND MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	25.250	22.375
		EFFECT	0.097	-0.097
FEMALE	2	MEAN	24.875	22.750
		EFFECT	-0.097	0.097

SUB-TABLE NO. 3 MALE THIRD MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	28.125	24.125
		EFFECT	-0.325	0.325
FEMALE	2	MEAN	27.500	23.250
		EFFECT	0.325	-0.325

SUB-TABLE NO. 4 MALE FOURTH MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	28.500	24.125
		EFFECT	0.175	-0.175
FEMALE	2	MEAN	29.000	25.375
		EFFECT	-0.175	0.175

SUB-TABLE NO. 5 MALE FIFTH MIN ON SEXSUBJT ON TIMEBLOC

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2
MALE	1	MEAN	28.500	25.500
		EFFECT	-0.700	0.700
FEMALE	2	MEAN	29.375	26.000
		EFFECT	0.700	-0.700

FOUR-WAY STATISTICS

SUB-TABLE NO. 6 FEMALE FIRST MIN ON SEXSUBJT ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX OF EXPERIMENTER				
MALE	1	MEAN	23.125	19.500
		EFFECT	-0.753	0.753
FEMALE	2	MEAN	24.875	21.125
		EFFECT	0.753	-0.753

SUB-TABLE NO. 7 FEMALE SECCND MIN ON SEXSUBJT ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX OF EXPERIMENTER				
MALE	1	MEAN	24.625	21.750
		EFFECT	-0.097	0.097
FEMALE	2	MEAN	26.875	23.875
		EFFECT	0.097	-0.097

SUB-TABLE NO. 8 FEMALE THIRD MIN ON SEXSUBJT ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX CF EXPERIMENTER				
MALE	1	MEAN	28.125	23.375
		EFFECT	0.325	-0.325
FEMALE	2	MEAN	27.750	25.250
		EFFECT	-0.325	0.325

SUB-TABLE NO. 9 FEMALE FOURTH MIN ON SEXSUBJT ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX CF EXPERIMENTER				
MALE	1	MEAN	28.875	24.375
		EFFECT	-0.175	0.175
FEMALE	2	MEAN	30.000	24.750
		EFFECT	0.175	-0.175

SUB-TABLE NO. 10 FEMALE FIFTH MIN ON SEXSUBJT ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM 1	COOL 2
SEXEXPTR SEX CF EXPERIMENTER				
MALE	1	MEAN	28.875	23.500
		EFFECT	0.700	-0.700
FEMALE	2	MEAN	27.625	27.375
		EFFECT	-0.700	0.700

Appendix L

Analysis of variance table and means for rate of response collapsed over minutes two, three, and four.

ANALYSIS OF VARIANCE TABLE FOR RATE

CLASSIFYING FACTORS

SEXEXPTR	SEX OF EXPERIMENTER
WARMCOLD	AFFECTIVE MODE
SEXSUBJT	SEX OF SUBJECT
UNIT	SUBJECTS OR UNITS OF ANALYSIS

	SOURCE	SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
	SEXEXPTR	43.891	1	43.891	0.227	OVER 0.500	0.34
	WARMCOLD	2036.266	1	2036.266	10.514**	0.002	15.61
	SEXSUBJT	34.516	1	34.516	0.178	OVER 0.500	0.26
	SEXEXPTR X WARMCOLD	2.641	1	2.641	0.014	OVER 0.500	0.02
	SEXEXPTR X SEXSUBJT	74.391	1	74.391	0.384	OVER 0.500	0.57
	WARMCOLD X SEXSUBJT	0.016	1	0.016	VERY SMALL		0.00
	SEXEXPTR X WARMCOLD X SEXSUBJT	2.641	1	2.641	0.014	OVER 0.500	0.02
*	UNIT	10846.125	56	193.681	NOT TESTED		83.17
	TOTAL	13040.484	63	206.992			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

64 UNITS WERE READ IN FOR THIS ANALYSIS.
64 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS FOR RATE

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD AFFECTIVE MODE: WARM 1	COLD 2	ROW MARGINALS
MALE	1	MEAN	81.750	70.063	75.906
		EFFECT	0.203	-0.203	-0.828
FEMALE	2	MEAN	83.000	72.125	77.563
		EFFECT	-0.203	0.203	0.828
COLUMN MARGINALS		MEAN	82.375	71.094	76.734
		EFFECT	5.641	-5.641	

SEXEXPTR SEX OF EXPERIMENTER			SEXSUBJT SEX OF SUBJECT: MALE 1	FEMALE 2	ROW MARGINALS
MALE	1	MEAN	76.250	75.563	75.906
		EFFECT	1.078	-1.078	-0.828
FEMALE	2	MEAN	75.750	79.375	77.563
		EFFECT	-1.078	1.078	0.828
COLUMN MARGINALS		MEAN	76.000	77.469	76.734
		EFFECT	-0.734	0.734	

WARMCOLD AFFECTIVE MODE			SEXSUBJT SEX OF SUBJECT: MALE 1	FEMALE 2	ROW MARGINALS
WARM	1	MEAN	81.625	83.125	82.375
		EFFECT	-0.016	0.016	5.641
COLD	2	MEAN	70.375	71.813	71.094
		EFFECT	0.016	-0.016	-5.641
COLUMN MARGINALS		MEAN	76.000	77.469	76.734
		EFFECT	-0.734	0.734	

THREE-WAY STATISTICS FOR RATE

SUB-TABLE NO. 1 MALE ON SEXSUBJT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COLD 2
MALE	1	MEAN	81.875	70.625
		EFFECT	-0.203	0.203
		SD	12.135	13.298
		N	8.000	8.000
FEMALE	2	MEAN	81.375	70.125
		EFFECT	0.203	-0.203
		SD	11.940	11.507
		N	8.000	8.000

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

SEXEXPTR SEX OF EXPERIMENTER			WARMCOLD WARM 1	AFFECTIVE MODE COLD 2
MALE	1	MEAN	81.625	69.500
		EFFECT	0.203	-0.203
		SD	16.379	15.334
		N	8.000	8.000
FEMALE	2	MEAN	84.625	74.125
		EFFECT	-0.203	0.203
		SD	14.030	15.815
		N	8.000	8.000

Appendix M

Analysis of variance table and means for rate of response for each experimenter over minutes one through five.

ANALYSIS OF VARIANCE TABLE

CLASSIFYING FACTORS

INDEXPTR	INDIVIDUAL EXPERIMENTER
WARMCOLD	AFFECTIVE MODE
SEXSUBJT	SEX OF SUBJECT
TIMEBLOC	TIME BLOCK
UNIT	SUBJECTS OR UNITS OF ANALYSIS

	SOURCE		SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
	INDEXPTR	(INDEXP)	1117.009	3	372.336	4.134*	0.011	11.39
	WARMCOLD	(WARMCO)	819.198	1	819.198	9.095**	0.005	8.35
	SEXSUBJT	(SEXSUB)	4.050	1	4.050	0.045	OVER 0.500	0.04
	INDEXP X WARMCO		49.176	3	16.392	0.182	OVER 0.500	0.50
	INDEXP X SEXSUB		443.774	3	147.925	1.642	0.193	4.53
	WARMCO X SEXSUB		12.012	1	12.012	0.133	OVER 0.500	0.12
	INDEXP X WARMCO X SEXSUB		132.863	3	44.288	0.492	OVER 0.500	1.35
*	UNIT		4323.613	48	90.075	NOT TESTED		44.09
	TIMEBLOC	(TIMEBL)	1229.605	4	307.401	54.228***	UNDER 0.001	12.54
	INDEXP X TIMEBL		49.894	12	4.158	0.733	OVER 0.500	0.51
	WARMCO X TIMEBL		60.394	4	15.098	2.663*	0.034	0.62
	SEXSUB X TIMEBL		11.231	4	2.808	0.495	OVER 0.500	0.11
	INDEXP X WARMCO X TIMEBL		183.106	12	15.259	2.692**	0.003	1.87
	INDEXP X SEXSUB X TIMEBL		56.069	12	4.672	0.824	OVER 0.500	0.57
	WARMCO X SEXSUB X TIMEBL		40.644	4	10.161	1.792	0.132	0.41
	INDEXP X WARMCO X SEXSUB X TIMEBL		185.855	12	15.488	2.732**	0.002	1.90
*	TIMEBL X UNIT		1088.396	192	5.669	NOT TESTED		11.10
	TOTAL		9806.855	319	30.742			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

64 UNITS WERE READ IN FOR THIS ANALYSIS.
64 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS

			WARMCOLD WARM 1	AFFECTIVE MODE COOL 2	ROW MARGINALS
INCEXPTR INDIVIDUAL EXPERIMENTER					
SID	1	MEAN	25.650	22.275	23.962
		EFFECT	0.687	-0.688	-1.206
LEN	2	MEAN	27.975	23.625	25.800
		EFFECT	0.575	-0.575	0.631
PAT	3	MEAN	24.450	21.575	23.012
		EFFECT	-0.163	0.163	-2.156
JAN	4	MEAN	29.000	26.800	27.900
		EFFECT	-0.500	0.500	2.731
COLUMN MARGINALS		MEAN	26.769	23.569	25.169
		EFFECT	1.600	-1.600	

			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2	ROW MARGINALS
INCEXPTR INDIVIDUAL EXPERIMENTER					
SID	1	MEAN	22.925	25.000	23.962
		EFFECT	-0.925	0.925	-1.206
LEN	2	MEAN	27.375	24.225	25.800
		EFFECT	1.688	-1.688	0.631
PAT	3	MEAN	23.400	22.625	23.012
		EFFECT	0.500	-0.500	-2.156
JAN	4	MEAN	26.525	29.275	27.900
		EFFECT	-1.262	1.263	2.731
COLUMN MARGINALS		MEAN	25.056	25.281	25.169
		EFFECT	-0.113	0.113	

			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2	ROW MARGINALS
WARMCOLD AFFECTIVE MODE					
WARM	1	MEAN	26.462	27.075	26.769
		EFFECT	-0.194	0.194	1.600
COOL	2	MEAN	23.650	23.487	23.569
		EFFECT	0.194	-0.194	-1.600
COLUMN MARGINALS		MEAN	25.056	25.281	25.169
		EFFECT	-0.113	0.113	

TWO-WAY STATISTICS ,

TIMEBLOC TIME BLOCK

SEXSUBJT SEX OF SUBJECT			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
MALE	1	MEAN	21.625	23.813	25.750	26.750	27.344	25.056
		EFFECT	-0.153	-0.122	-0.075	-0.012	0.363	-0.113
FEMALE	2	MEAN	22.156	24.281	26.125	27.000	26.944	25.291
		EFFECT	0.153	0.122	0.075	0.012	-0.363	0.113
COLUMN MARGINALS		MEAN	21.891	24.047	25.938	26.875	27.094	25.169
		EFFECT	-3.278	-1.122	0.769	1.706	1.925	

TIMEBLOC TIME BLOCK

WARMCOLD AFFECTIVE MODE			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
WARM	1	MEAN	22.875	25.406	27.375	29.094	28.594	26.769
		EFFECT	-0.616	-0.241	0.337	0.619	-0.100	1.600
COOL	2	MEAN	20.906	22.688	24.500	24.656	25.594	23.569
		EFFECT	0.616	0.241	-0.338	-0.619	0.100	-1.600
COLUMN MARGINALS		MEAN	21.891	24.047	25.938	26.875	27.094	25.169
		EFFECT	-3.278	-1.122	0.769	1.706	1.925	

TIMEBLOC TIME BLOCK

INDEXPTR INDIVIDUAL EXPERIMENTER			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
SID	1	MEAN	21.313	23.063	24.813	25.313	25.313	23.962
		EFFECT	0.628	0.222	0.081	-0.356	-0.575	-1.206
LEN	2	MEAN	22.500	23.938	27.063	27.625	27.875	25.800
		EFFECT	-0.022	-0.741	0.494	0.119	0.150	0.631
PAT	3	MEAN	19.813	21.938	23.188	24.688	25.438	23.012
		EFFECT	0.078	0.047	-0.594	-0.031	0.500	-2.156
JAN	4	MEAN	23.938	27.250	28.688	29.875	29.750	27.900
		EFFECT	-0.684	0.472	0.019	0.269	-0.075	2.731
COLUMN MARGINALS		MEAN	21.891	24.047	25.938	26.875	27.094	25.169
		EFFECT	-3.278	-1.122	0.769	1.706	1.925	

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	22.000	20.625
		EFFECT	-0.384	0.384
LEN	2	MEAN	25.250	19.750
		EFFECT	1.191	-1.191
PAT	3	MEAN	21.500	18.125
		EFFECT	0.866	-0.866
JAN	4	MEAN	22.750	25.125
		EFFECT	-1.672	1.672

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	24.750	21.375
		EFFECT	0.241	-0.241
LEN	2	MEAN	25.125	22.750
		EFFECT	-0.747	0.747
PAT	3	MEAN	24.000	19.875
		EFFECT	0.866	-0.866
JAN	4	MEAN	27.750	26.750
		EFFECT	-0.359	0.359

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	27.125	22.500
		EFFECT	0.288	-0.287
LEN	2	MEAN	29.125	25.000
		EFFECT	-0.450	0.450
PAT	3	MEAN	24.750	21.625
		EFFECT	-0.212	0.212
JAN	4	MEAN	30.500	26.875
		EFFECT	0.375	-0.375

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDIVIDUAL EXPERIMENTER	INCEXPTR		WARM 1	COOL 2
SID	1	MEAN	27.500	23.125
		EFFECT	-0.119	0.119
LEN	2	MEAN	29.875	25.375
		EFFECT	-0.544	0.544
PAT	3	MEAN	26.750	22.625
		EFFECT	0.006	-0.006
JAN	4	MEAN	32.250	27.500
		EFFECT	0.656	-0.656

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDIVIDUAL EXPERIMENTER	INCEXPTR		WARM 1	COOL 2
SID	1	MEAN	26.875	23.750
		EFFECT	-0.025	0.025
LEN	2	MEAN	30.500	25.250
		EFFECT	0.550	-0.550
PAT	3	MEAN	25.250	25.625
		EFFECT	-1.525	1.525
JAN	4	MEAN	31.750	27.750
		EFFECT	1.000	-1.000

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

INDEXPTR INDIVIDUAL EXPERIMENTER			SEXSUBJT SEX OF SUBJECT MALE 1	FEMALE 2
SID	1	MEAN	20.750	21.875
		EFFECT	0.628	-0.628
LEN	2	MEAN	24.250	20.750
		EFFECT	0.328	-0.328
PAT	3	MEAN	19.500	20.125
		EFFECT	-0.547	0.547
JAN	4	MEAN	22.000	25.875
		EFFECT	-0.409	0.409

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

INDEXPTR INDIVIDUAL EXPERIMENTER			SEXSUBJT SEX OF SUBJECT MALE 1	FEMALE 2
SID	1	MEAN	22.375	23.750
		EFFECT	0.472	-0.472
LEN	2	MEAN	25.250	22.625
		EFFECT	-0.141	0.141
PAT	3	MEAN	22.125	21.750
		EFFECT	-0.078	0.078
JAN	4	MEAN	25.500	29.000
		EFFECT	-0.253	0.253

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

INDEXPTR INDIVIDUAL EXPERIMENTER			SEXSUBJT SEX OF SUBJECT MALE 1	FEMALE 2
SID	1	MEAN	23.375	26.250
		EFFECT	-0.325	0.325
LEN	2	MEAN	28.875	25.250
		EFFECT	0.313	-0.313
PAT	3	MEAN	23.125	23.250
		EFFECT	-0.375	0.375
JAN	4	MEAN	27.625	29.750
		EFFECT	0.387	-0.388

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	23.375	27.250
		EFFECT	-0.887	0.888
LEN	2	MEAN	29.250	26.000
		EFFECT	0.063	-0.063
PAT	3	MEAN	25.750	23.625
		EFFECT	0.687	-0.688
JAN	4	MEAN	28.625	31.125
		EFFECT	0.137	-0.138

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	24.750	25.875
		EFFECT	0.113	-0.112
LEN	2	MEAN	29.250	26.500
		EFFECT	-0.563	0.563
PAT	3	MEAN	26.500	24.375
		EFFECT	0.312	-0.313
JAN	4	MEAN	28.875	30.625
		EFFECT	0.137	-0.138

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT SEX OF SUBJECT MALE 1	FEMALE 2
WARM	1	MEAN	21.750	24.000
		EFFECT	-0.666	0.666
COOL	2	MEAN	21.500	20.313
		EFFECT	0.666	-0.666

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT SEX OF SUBJECT MALE 1	FEMALE 2
WARM	1	MEAN	25.063	25.750
		EFFECT	0.084	-0.084
COOL	2	MEAN	22.563	22.813
		EFFECT	-0.084	0.084

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT SEX OF SUBJECT MALE 1	FEMALE 2
WARM	1	MEAN	27.813	27.938
		EFFECT	0.319	-0.319
COOL	2	MEAN	23.688	24.313
		EFFECT	-0.319	0.319

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT SEX OF SUBJECT MALE 1	FEMALE 2
WARM	1	MEAN	28.750	29.438
		EFFECT	-0.025	0.025
COOL	2	MEAN	24.750	24.563
		EFFECT	0.025	-0.025

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE			SEXSUBJT SEX OF SUBJECT MALE 1	FEMALE 2
WARM	1	MEAN	28.938	28.250
		EFFECT	0.287	-0.287
COOL	2	MEAN	25.750	25.438
		EFFECT	-0.288	0.288

THREE-WAY STATISTICS

SUB-TABLE NO. 1 MALE ON SEXSUBJT

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	24.900	20.950
		EFFECT	0.481	-0.481
		SD	3.040	1.075
		N	4.000	4.000
LEN	2	MEAN	28.900	25.850
		EFFECT	-0.456	0.456
		SD	4.209	4.084
		N	4.000	4.000
PAT	3	MEAN	23.850	22.950
		EFFECT	-0.794	0.794
		SD	2.675	5.277
		N	4.000	4.000
JAN	4	MEAN	28.200	24.950
		EFFECT	0.769	-0.769
		SD	5.177	3.431
		N	4.000	4.000

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	26.400	23.600
		EFFECT	-0.481	0.481
		SD	6.095	7.174
		N	4.000	4.000
LEN	2	MEAN	27.050	21.400
		EFFECT	0.456	-0.456
		SD	5.568	1.751
		N	4.000	4.000
PAT	3	MEAN	25.050	20.200
		EFFECT	0.794	-0.794
		SD	2.306	3.059
		N	4.000	4.000
JAN	4	MEAN	29.800	28.750
		EFFECT	-0.769	0.769
		SD	4.593	3.380
		N	4.000	4.000

FOUR-WAY STATISTICS

SUB-TABLE NO. 1 MALE ON SEXSUBJT
FIRST MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	21.500	20.000
		EFFECT	0.441	-0.441
LEN	2	MEAN	26.750	21.750
		EFFECT	1.066	-1.066
PAT	3	MEAN	17.250	21.750
		EFFECT	-2.284	2.284
JAN	4	MEAN	21.500	22.500
		EFFECT	0.778	-0.778

SUB-TABLE NO. 2 MALE ON SEXSUBJT
SECOND MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	24.750	20.000
		EFFECT	0.316	-0.316
LEN	2	MEAN	25.750	24.750
		EFFECT	-0.122	0.122
PAT	3	MEAN	23.750	20.500
		EFFECT	0.466	-0.466
JAN	4	MEAN	26.000	25.000
		EFFECT	-0.659	0.659

SUB-TABLE NO. 3 MALE ON SEXSUBJT
THIRD MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	25.750	21.000
		EFFECT	-0.544	0.544
LEN	2	MEAN	30.500	27.250
		EFFECT	-0.106	0.106
PAT	3	MEAN	25.000	21.250
		EFFECT	0.981	-0.981
JAN	4	MEAN	30.000	25.250
		EFFECT	-0.331	0.331

SUB-TABLE NO. 4 MALE ON SEXSUBJT
FOURTH MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE

INCEXPTR INCIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	26.250	20.500
		EFFECT	0.425	-0.425
LEN	2	MEAN	30.750	27.750
		EFFECT	-0.075	0.075
PAT	3	MEAN	26.750	24.750
		EFFECT	-0.050	0.050
JAN	4	MEAN	31.250	26.000
		EFFECT	-0.300	0.300

SUB-TABLE NO. 5 MALE ON SEXSUBJT
FIFTH MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE

INCEXPTR INCIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	26.250	23.250
		EFFECT	-0.637	0.637
LEN	2	MEAN	30.750	27.750
		EFFECT	-0.762	0.762
PAT	3	MEAN	26.500	26.500
		EFFECT	0.888	-0.887
JAN	4	MEAN	32.250	25.500
		EFFECT	0.513	-0.512

SUB-TABLE NO. 6 FEMALE ON SEXSUBJT
FIRST MIN ON TIMEBLOC

WARMCOLD AFFECTIVE MODE

INCEXPTR INCIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	22.500	21.250
		EFFECT	-0.441	0.441
LEN	2	MEAN	23.750	17.750
		EFFECT	-1.066	1.066
PAT	3	MEAN	25.750	14.500
		EFFECT	2.284	-2.284
JAN	4	MEAN	24.000	27.750
		EFFECT	-0.778	0.778

SUB-TABLE NO. 7 FEMALE ON SEXSUBJT
SECOND MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM	COOL
INDEXPTR			1	2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	24.750	22.750
		EFFECT	-0.316	0.316
LEN	2	MEAN	24.500	20.750
		EFFECT	0.122	-0.122
PAT	3	MEAN	24.250	19.250
		EFFECT	-0.466	0.466
JAN	4	MEAN	29.500	28.500
		EFFECT	0.659	-0.659

SUB-TABLE NO. 8 FEMALE ON SEXSUBJT
THIRD MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM	COOL
INDEXPTR			1	2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	28.500	24.000
		EFFECT	0.544	-0.544
LEN	2	MEAN	27.750	22.750
		EFFECT	0.106	-0.106
PAT	3	MEAN	24.500	22.000
		EFFECT	-0.981	0.981
JAN	4	MEAN	31.000	28.500
		EFFECT	0.331	-0.331

SUB-TABLE NO. 9 FEMALE ON SEXSUBJT
FOURTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	28.750	25.750
		EFFECT	-0.425	0.425
LEN	2	MEAN	29.000	23.000
		EFFECT	0.075	-0.075
PAT	3	MEAN	26.750	20.500
		EFFECT	0.050	-0.050
JAN	4	MEAN	33.250	29.000
		EFFECT	0.300	-0.300

SUB-TABLE NO. 10 FEMALE ON SEXSUBJT
FIFTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR			WARM	COOL
INDIVIDUAL EXPERIMENTER			1	2
SID	1	MEAN	27.500	24.250
		EFFECT	0.637	-0.638
LEN	2	MEAN	30.250	22.750
		EFFECT	0.762	-0.763
PAT	3	MEAN	24.000	24.750
		EFFECT	-0.888	0.887
JAN	4	MEAN	31.250	30.000
		EFFECT	-0.512	0.512

Appendix N

Analysis of variance table and means for rate of response collapsed over minutes two, three, and four for individual experimenters.

ANALYSIS OF VARIANCE TABLE FOR RATE

CLASSIFYING FACTORS

INDEXPTR	INDIVIDUAL EXPERIMENTER
WARMCOLD	AFFECTIVE MODE
SEXSUBJT	SEX OF SUBJECT
UNIT	SUBJECTS OR UNITS OF ANALYSIS

	SOURCE	SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
	INDEXPTR	2236.172	3	745.391	4.734**	0.006	17.15
	WARMCOLD	2036.266	1	2036.266	12.932***	0.001	15.61
	SEXSUBJT	34.516	1	34.516	0.219	OVER 0.500	0.26
	INDEXPTR X WARMCOLD	5.422	3	1.807	0.011	OVER 0.500	0.04
	INDEXPTR X SEXSUBJT	1037.672	3	345.891	2.197	0.101	7.96
	WARMCOLD X SEXSUBJT	0.016	1	0.016	VERY SMALL		0.00
	INDEXPTR X WARMCOLD X SEXSUBJT	132.172	3	44.057	0.280	OVER 0.500	1.01
*	UNIT	7558.250	48	157.464	NOT TESTED		57.96
	TOTAL	13040.484	63	206.992			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

64 UNITS WERE READ IN FOR THIS ANALYSIS.
64 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS FOR RATE

AFFECTIVE MODE

INDIVIDUAL EXPERIMENTER			WARM 1	COLD 2	ROW MARGINALS
SID	1	MEAN	79.000	67.000	73.000
		EFFECT	0.359	-0.359	-3.734
LEN	2	MEAN	84.500	73.125	78.813
		EFFECT	0.047	-0.047	2.078
PAT	3	MEAN	75.500	64.125	69.813
		EFFECT	0.047	-0.047	-6.922
JAN	4	MEAN	90.500	80.125	85.313
		EFFECT	-0.453	0.453	8.578
COLUMN MARGINALS		MEAN	82.375	71.094	76.734
		EFFECT	5.641	-5.641	

SEX OF SUBJECT

INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2	ROW MARGINALS
SID	1	MEAN	68.750	77.250	73.000
		EFFECT	-3.516	3.516	-3.734
LEN	2	MEAN	83.750	73.875	78.813
		EFFECT	5.672	-5.672	2.078
PAT	3	MEAN	71.000	68.625	69.813
		EFFECT	1.922	-1.922	-6.922
JAN	4	MEAN	80.500	90.125	85.313
		EFFECT	-4.078	4.078	8.578
COLUMN MARGINALS		MEAN	76.000	77.469	76.734
		EFFECT	-0.734	0.734	

SEX OF SUBJECT

AFFECTIVE MODE			MALE 1	FEMALE 2	ROW MARGINALS
WARM	1	MEAN	81.625	83.125	82.375
		EFFECT	-0.016	0.016	5.641
COLD	2	MEAN	70.375	71.813	71.094
		EFFECT	0.016	-0.016	-5.641
COLUMN MARGINALS		MEAN	76.000	77.469	76.734
		EFFECT	-0.734	0.734	

THREE-WAY STATISTICS FOR RATE

SUB-TABLE NO. 1 MALE ON SEXSUBJT

			AFFECTIVE MODE	
			WARM 1	COLD 2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	76.000	61.500
		EFFECT	1.266	-1.266
		SD	10.708	3.317
		N	4.000	4.000
LEN	2	MEAN	87.750	79.750
		EFFECT	-1.672	1.672
		SD	11.701	13.401
		N	4.000	4.000
PAT	3	MEAN	75.500	66.500
		EFFECT	-1.172	1.172
		SD	6.137	15.177
		N	4.000	4.000
JAN	4	MEAN	87.250	73.750
		EFFECT	1.578	-1.578
		SD	14.245	6.602
		N	4.000	4.000

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

			AFFECTIVE MODE	
			WARM 1	COLD 2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	82.000	72.500
		EFFECT	-1.266	1.266
		SD	17.569	21.992
		N	4.000	4.000
LEN	2	MEAN	81.250	66.500
		EFFECT	1.672	-1.672
		SD	17.802	6.403
		N	4.000	4.000
PAT	3	MEAN	75.500	61.750
		EFFECT	1.172	-1.172
		SD	6.245	8.500
		N	4.000	4.000
JAN	4	MEAN	93.750	86.500
		EFFECT	-1.578	1.578
		SD	14.080	10.149
		N	4.000	4.000

Appendix O

Analysis of variance table and means for percentage of correct responses over minutes one through five for each experimenter.

ANALYSIS OF VARIANCE TABLE .

CLASSIFYING FACTORS

INDEXPTR	INDIVIDUAL EXPERIMENTER
WARMCCLD	AFFECTIVE MODE
SEXSUBJT	SEX OF SUBJECT
TIMEBLOC	TIME BLOCK
UNIT	SUBJECTS OR UNITS OF ANALYSIS

	SOURCE	SUM OF SQUARES	DF	MEAN SQUARE	F-TEST	SIGNIFICANCE	PERCENT OF TOTAL SUM OF SQUARES
	INDEXPTR (INDEXP)	1.333	3	0.444	4.112*	0.012	11.94
	WARMCCLD (WARMCO)	0.107	1	0.107	0.989	0.326	0.96
	SEXSUBJT (SEXSUB)	0.173	1	0.173	1.605	0.212	1.55
	INDEXP X WARMCO	0.210	3	0.070	0.646	OVER 0.500	1.89
	INDEXP X SEXSUB	0.129	3	0.043	0.399	OVER 0.500	1.16
	WARMCC X SEXSUB	0.156	1	0.156	1.443	0.236	1.40
	INDEXP X WARMCC X SEXSUB	0.074	3	0.025	0.229	OVER 0.500	0.67
*	UNIT	5.188	48	0.108	NOT TESTED		46.46
	TIMEBLOC (TIMEBL)	0.838	4	0.209	18.205***	UNDER 0.001	7.50
	INDEXP X TIMEBL	0.411	12	0.034	2.974***	0.001	3.68
	WARMCC X TIMEBL	0.061	4	0.015	1.334	0.259	0.55
	SEXSUB X TIMEBL	0.020	4	0.005	0.439	OVER 0.500	0.18
	INDEXP X WARMCO X TIMEBL	0.134	12	0.011	0.969	0.481	1.20
	INDEXP X SEXSUB X TIMEBL	0.026	12	0.002	0.190	OVER 0.500	0.24
	WARMCC X SEXSUB X TIMEBL	0.026	4	0.006	0.559	OVER 0.500	0.23
	INDEXP X WARMCO X SEXSUB X TIMEBL	0.071	12	0.006	0.518	OVER 0.500	0.64
*	TIMEBL X UNIT	2.209	192	0.012	NOT TESTED		19.79
	TOTAL	11.166	319	0.035			100.00

AN ASTERISK (*) MARKS THE EFFECT USED IN TESTING THE PRECEDING EFFECTS

64 UNITS WERE READ IN FOR THIS ANALYSIS.
64 UNITS WERE USED IN THIS ANALYSIS.

TWO-WAY STATISTICS

WARMCOLD AFFECTIVE MODE

INCEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2	ROW MARGINALS
SID	1	MEAN	0.696	0.694	0.695
		EFFECT	-0.017	0.017	0.107
LEN	2	MEAN	0.553	0.539	0.546
		EFFECT	-0.012	0.012	-0.042
PAT	3	MEAN	0.593	0.468	0.530
		EFFECT	0.044	-0.044	-0.058
JAN	4	MEAN	0.583	0.578	0.580
		EFFECT	-0.015	0.015	-0.007
COLUMN MARGINALS		MEAN	0.606	0.570	0.588
		EFFECT	0.018	-0.018	

SEXSUBJT SEX OF SUBJECT

INCEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2	ROW MARGINALS
SID	1	MEAN	0.697	0.693	0.695
		EFFECT	-0.021	0.021	0.107
LEN	2	MEAN	0.601	0.491	0.546
		EFFECT	0.031	-0.031	-0.042
PAT	3	MEAN	0.540	0.520	0.530
		EFFECT	-0.013	0.013	-0.058
JAN	4	MEAN	0.607	0.554	0.580
		EFFECT	0.003	-0.003	-0.007
COLUMN MARGINALS		MEAN	0.611	0.565	0.588
		EFFECT	0.023	-0.023	

SEXSUBJT SEX OF SUBJECT

WARMCOLD AFFECTIVE MODE			MALE 1	FEMALE 2	ROW MARGINALS
WARM	1	MEAN	0.652	0.561	0.606
		EFFECT	0.022	-0.022	0.018
COOL	2	MEAN	0.571	0.568	0.570
		EFFECT	-0.022	0.022	-0.018
COLUMN MARGINALS		MEAN	0.611	0.565	0.588
		EFFECT	0.023	-0.023	

TWO-WAY STATISTICS

TIMEBLOC TIME BLOCK

INDEXPTR INDIVIDUAL EXPERIMENTER			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
SID	1	MEAN	0.491	0.701	0.753	0.777	0.754	0.695
		EFFECT	-0.107	0.012	0.031	0.044	0.020	0.107
LEN	2	MEAN	0.490	0.575	0.561	0.558	0.546	0.546
		EFFECT	0.041	0.036	-0.012	-0.025	-0.039	-0.042
PAT	3	MEAN	0.455	0.493	0.553	0.559	0.600	0.530
		EFFECT	0.022	-0.041	-0.004	-0.008	0.030	-0.058
JAN	4	MEAN	0.527	0.567	0.592	0.607	0.609	0.580
		EFFECT	0.044	-0.007	-0.015	-0.011	-0.011	-0.007
COLUMN MARGINALS		MEAN	0.491	0.582	0.615	0.625	0.627	0.588
		EFFECT	-0.097	-0.006	0.027	0.037	0.039	

TIMEBLOC TIME BLOCK

WARMCOLD AFFECTIVE MODE			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
WARM	1	MEAN	0.482	0.608	0.642	0.645	0.653	0.606
		EFFECT	-0.027	0.008	0.009	0.002	0.008	0.018
COOL	2	MEAN	0.500	0.555	0.587	0.605	0.601	0.570
		EFFECT	0.027	-0.008	-0.009	-0.002	-0.008	-0.018
COLUMN MARGINALS		MEAN	0.491	0.582	0.615	0.625	0.627	0.588
		EFFECT	-0.097	-0.006	0.027	0.037	0.039	

TIMEBLOC TIME BLOCK

SEXSUBJT SEX OF SUBJECT			FIRST MIN	SECOND MIN	THIRD MIN	FOURTH MIN	FIFTH MIN	ROW MARGINALS
MALE	1	MEAN	0.505	0.597	0.636	0.659	0.658	0.611
		EFFECT	-0.009	-0.007	-0.002	0.011	0.008	0.023
FEMALE	2	MEAN	0.477	0.566	0.593	0.591	0.596	0.565
		EFFECT	0.009	0.007	0.002	-0.011	-0.008	-0.023
COLUMN MARGINALS		MEAN	0.491	0.582	0.615	0.625	0.627	0.588
		EFFECT	-0.097	-0.006	0.027	0.037	0.039	

THREE-WAY STATISTICS

SUB-TABLE NO. 1 MALE ON SEXSUBJT

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	0.716	0.678
		EFFECT	-0.004	0.004
		SD	0.187	0.198
		N	4.000	4.000
LEN	2	MEAN	0.608	0.593
		EFFECT	-0.021	0.021
		SD	0.157	0.230
		N	4.000	4.000
PAT	3	MEAN	0.630	0.451
		EFFECT	0.005	-0.005
		SD	0.099	0.067
		N	4.000	4.000
JAN	4	MEAN	0.652	0.561
		EFFECT	0.021	-0.021
		SD	0.205	0.079
		N	4.000	4.000

THREE-WAY STATISTICS

SUB-TABLE NO. 2 FEMALE ON SEXSUBJT

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	0.677	0.710
		EFFECT	0.004	-0.004
		SD	0.193	0.235
		N	4.000	4.000
LEN	2	MEAN	0.497	0.485
		EFFECT	0.021	-0.021
		SD	0.052	0.028
		N	4.000	4.000
PAT	3	MEAN	0.555	0.485
		EFFECT	-0.005	0.005
		SD	0.097	0.021
		N	4.000	4.000
JAN	4	MEAN	0.514	0.594
		EFFECT	-0.021	0.021
		SD	0.096	0.160
		N	4.000	4.000

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	0.483	0.500
		EFFECT	-0.001	0.001
LEN	2	MEAN	0.537	0.443
		EFFECT	0.002	-0.002
PAT	3	MEAN	0.460	0.450
		EFFECT	0.004	-0.004
JAN	4	MEAN	0.540	0.515
		EFFECT	-0.005	0.005

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	0.704	0.697
		EFFECT	0.009	-0.009
LEN	2	MEAN	0.602	0.548
		EFFECT	-0.020	0.020
PAT	3	MEAN	0.478	0.488
		EFFECT	-0.008	0.008
JAN	4	MEAN	0.605	0.529
		EFFECT	0.019	-0.019

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	0.747	0.759
		EFFECT	-0.006	0.006
LEN	2	MEAN	0.628	0.495
		EFFECT	0.014	-0.014
PAT	3	MEAN	0.562	0.544
		EFFECT	0.000	-0.000
JAN	4	MEAN	0.609	0.576
		EFFECT	-0.008	0.008

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	0.800	0.754
		EFFECT	0.010	-0.010
LEN	2	MEAN	0.625	0.491
		EFFECT	0.002	-0.002
PAT	3	MEAN	0.574	0.544
		EFFECT	-0.006	0.006
JAN	4	MEAN	0.638	0.576
		EFFECT	-0.006	0.006

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
INDEXPTR INDIVIDUAL EXPERIMENTER			MALE 1	FEMALE 2
SID	1	MEAN	0.751	0.757
		EFFECT	-0.012	0.012
LEN	2	MEAN	0.611	0.481
		EFFECT	0.003	-0.003
PAT	3	MEAN	0.627	0.572
		EFFECT	0.009	-0.009
JAN	4	MEAN	0.643	0.575
		EFFECT	0.000	-0.000

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARMCOLD AFFECTIVE MODE				
WARM	1	MEAN	0.513	0.451
		EFFECT	-0.006	0.006
CCCL	2	MEAN	0.498	0.502
		EFFECT	0.006	-0.006

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARMCOLD AFFECTIVE MODE				
WARM	1	MEAN	0.639	0.578
		EFFECT	-0.007	0.007
CCCL	2	MEAN	0.556	0.554
		EFFECT	0.007	-0.007

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

			SEXSUBJT MALE 1	SEX OF SUBJECT FEMALE 2
WARMCOLD AFFECTIVE MODE				
WARM	1	MEAN	0.678	0.607
		EFFECT	-0.008	0.008
CCCL	2	MEAN	0.594	0.580
		EFFECT	0.008	-0.008

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
WARMCOLD AFFECTIVE MODE			MALE 1	FEMALE 2
WARM	1	MEAN	0.707	0.584
		EFFECT	0.005	-0.005
COOL	2	MEAN	0.611	0.599
		EFFECT	-0.005	0.005

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

			SEXSUBJT	SEX OF SUBJECT
WARMCOLD AFFECTIVE MODE			MALE 1	FEMALE 2
WARM	1	MEAN	0.721	0.585
		EFFECT	0.015	-0.015
COOL	2	MEAN	0.595	0.608
		EFFECT	-0.015	0.015

THREE-WAY STATISTICS

SUB-TABLE NO. 1 FIRST MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INCEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	0.446	0.537
		EFFECT	-0.019	0.019
LEN	2	MEAN	0.485	0.494
		EFFECT	0.016	-0.016
PAT	3	MEAN	0.454	0.457
		EFFECT	-0.037	0.037
JAN	4	MEAN	0.542	0.512
		EFFECT	0.039	-0.039

SUB-TABLE NO. 2 SECOND MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INCEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	0.713	0.688
		EFFECT	0.003	-0.003
LEN	2	MEAN	0.594	0.557
		EFFECT	0.003	-0.003
PAT	3	MEAN	0.526	0.441
		EFFECT	-0.029	0.029
JAN	4	MEAN	0.601	0.533
		EFFECT	0.023	-0.023

SUB-TABLE NO. 3 THIRD MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INCEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	0.765	0.740
		EFFECT	0.002	-0.002
LEN	2	MEAN	0.579	0.543
		EFFECT	0.002	-0.002
PAT	3	MEAN	0.634	0.472
		EFFECT	0.009	-0.009
JAN	4	MEAN	0.591	0.593
		EFFECT	-0.013	0.013

SUB-TABLE NO. 4 FOURTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	0.787	0.767
		EFFECT	0.C07	-0.007
LEN	2	MEAN	0.555	0.561
		EFFECT	-0.C12	0.012
PAT	3	MEAN	0.647	0.472
		EFFECT	0.C23	-0.023
JAN	4	MEAN	0.593	0.620
		EFFECT	-0.C18	0.018

SUB-TABLE NO. 5 FIFTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
INDEXPTR INDIVIDUAL EXPERIMENTER			WARM 1	COOL 2
SID	1	MEAN	0.769	0.739
		EFFECT	0.C07	-0.007
LEN	2	MEAN	0.551	0.541
		EFFECT	-0.C09	0.009
PAT	3	MEAN	0.703	0.496
		EFFECT	0.C33	-0.033
JAN	4	MEAN	0.589	0.629
		EFFECT	-0.C30	0.030

FOUR-WAY STATISTICS

SUB-TABLE NO. 1 MALE ON SEXSUBJT
FIRST MIN ON TIMEBLOC

			WARMCOLD: AFFECTIVE MODE	
			WARM	COOL
INDEXPTR			1	2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	0.453	0.514
		EFFECT	0.003	-0.003
LEN	2	MEAN	0.523	0.551
		EFFECT	-0.005	0.005
PAT	3	MEAN	0.490	0.431
		EFFECT	0.009	-0.009
JAN	4	MEAN	0.585	0.495
		EFFECT	-0.007	0.007

SUB-TABLE NO. 2 MALE ON SEXSUBJT
SECOND MIN ON TIMEBLOC

			WARMCOLD: AFFECTIVE MODE	
			WARM	COOL
INDEXPTR			1	2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	0.757	0.651
		EFFECT	0.030	-0.030
LEN	2	MEAN	0.585	0.619
		EFFECT	-0.029	0.029
PAT	3	MEAN	0.537	0.420
		EFFECT	-0.004	0.004
JAN	4	MEAN	0.678	0.532
		EFFECT	0.003	-0.003

SUB-TABLE NO. 3 MALE ON SEXSUBJT
THIRD MIN ON TIMEBLOC

			WARMCOLD: AFFECTIVE MODE	
			WARM	COOL
INDEXPTR			1	2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	0.768	0.725
		EFFECT	-0.001	0.001
LEN	2	MEAN	0.636	0.620
		EFFECT	-0.003	0.003
PAT	3	MEAN	0.644	0.480
		EFFECT	-0.019	0.019
JAN	4	MEAN	0.665	0.553
		EFFECT	0.022	-0.022

SUB-TABLE NO. 4 MALE ON SEXSUBJT
FOURTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM	COOL
INDEXPTR			1	2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	0.816	0.784
		EFFECT	-0.017	0.017
LEN	2	MEAN	0.638	0.611
		EFFECT	0.011	-0.011
PAT	3	MEAN	0.705	0.444
		EFFECT	0.010	-0.010
JAN	4	MEAN	0.668	0.607
		EFFECT	-0.004	0.004

SUB-TABLE NO. 5 MALE ON SEXSUBJT
FIFTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM	COOL
INDEXPTR			1	2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	0.784	0.718
		EFFECT	-0.015	0.015
LEN	2	MEAN	0.658	0.564
		EFFECT	0.026	-0.026
PAT	3	MEAN	0.776	0.477
		EFFECT	0.004	-0.004
JAN	4	MEAN	0.666	0.620
		EFFECT	-0.015	0.015

SUB-TABLE NO. 6 FEMALE ON SEXSUBJT
FIRST MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM	COOL
INDEXPTR			1	2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	0.440	0.559
		EFFECT	-0.003	0.003
LEN	2	MEAN	0.448	0.437
		EFFECT	0.005	-0.005
PAT	3	MEAN	0.418	0.483
		EFFECT	-0.009	0.009
JAN	4	MEAN	0.500	0.530
		EFFECT	0.007	-0.007

SUB-TABLE NO. 7 FEMALE ON SEXSUBJT
SECOND MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM	COOL
INCEXPTR			1	2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	0.669	0.726
		EFFECT	-0.030	0.030
LEN	2	MEAN	0.602	0.494
		EFFECT	0.029	-0.029
PAT	3	MEAN	0.515	0.462
		EFFECT	0.004	-0.004
JAN	4	MEAN	0.524	0.534
		EFFECT	-0.003	0.003

SUB-TABLE NO. 8 FEMALE ON SEXSUBJT
THIRD MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM	COOL
INCEXPTR			1	2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	0.762	0.755
		EFFECT	0.001	-0.001
LEN	2	MEAN	0.522	0.467
		EFFECT	0.003	-0.003
PAT	3	MEAN	0.624	0.464
		EFFECT	0.019	-0.019
JAN	4	MEAN	0.517	0.634
		EFFECT	-0.022	0.022

SUB-TABLE NO. 9 FEMALE ON SEXSUBJT
FOURTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM	COOL
INCEXPTR			1	2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	0.758	0.750
		EFFECT	0.C17	-0.017
LEN	2	MEAN	0.471	0.511
		EFFECT	-0.C11	0.011
PAT	3	MEAN	0.589	0.500
		EFFECT	-0.C10	0.01C
JAN	4	MEAN	0.518	0.633
		EFFECT	0.C04	-0.004

SUB-TABLE NO. 10 FEMALE ON SEXSUBJT
FIFTH MIN ON TIMEBLOC

			WARMCOLD	AFFECTIVE MODE
			WARM	COOL
INCEXPTR			1	2
INDIVIDUAL EXPERIMENTER				
SID	1	MEAN	0.754	0.759
		EFFECT	0.C15	-0.015
LEN	2	MEAN	0.444	0.518
		EFFECT	-0.C26	0.026
PAT	3	MEAN	0.629	0.515
		EFFECT	-0.C04	0.004
JAN	4	MEAN	0.512	0.638
		EFFECT	0.C15	-0.015

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