LOCUS OF CONTROL, BODY ARTICULATION AND SEXUAL DIFFERENTIATION IN WOMEN AS MODIFIED BY SELF-HELP AND SEX EDUCATION PROGRAMS

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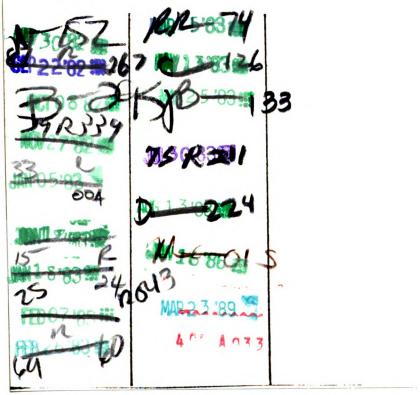

ABSTRACT

LOCUS OF CONTROL, BODY ARTICULATION,
AND SEXUAL DIFFERENTIATION IN WOMEN
AS MODIFIED BY
SELF-HELP AND SEX EDUCATION PROGRAMS

By

Patricia Eileen Thompson

This study is an exploratory investigation of a proposed model associating increased body articulation with decreased external locus of control and decreased sexual differentiation.

Two modes of sex education--a women's Self-help Health group and a human sexuality course--were used to study psychological changes in women relevant to the proposed model. Women enrolled in an Introductory Personality course which included brief coverage of similar content served as a comparison group.

The following measures of body articulation, locus of control and sexual differentiation were used in a pre- post-test design: Physical Self subtest of the Tennessee Self Concept Scale (Fitts, 1965); Draw-A-Person Test (Machover, 1949) scored via the Body Disturbance Scale (Carlson, Quinlan, Tucker and Harrow, 1973) and the Sophistication-of-body-concept Scale (Witkin, Dyk, Faterson and Goodenough, 1962); Internal-External Locus of Control Scale (Rotter, 1966); and the Sexual Differentiation Scale (Swenson, 1955) for figure drawings.

High body articulation on a self-report measure was significantly related to internal Personal subscale locus of control. No significant relationships were found between locus of control and

sexual differentiation. Contrary to prediction, high body articulation was associated with high sexual differentiation.

Evaluation of treatment effects showed that conscious attitudes towards one's body can be influenced by structured, informational programs. The Sex Education group increased in self-report of body acceptance whereas the Self-help and Personality groups did not show significant changes. No treatment effects were observed on the locus of control and sexual differentiation measures.

Analysis of the sex of first drawings suggested that the Self-help Group may have been influenced by processes emphasizing ways in which male-oriented values affect women while, to a lesser extent, the Sex Education and Personality Groups were exposed to experiences enhancing female self-concept.

Evaluation of overall treatment effects in the pooled group indicated that changes in body autonomy were related to changes in feelings of general autonomy. Increased body acceptance on the self-report Tennessee Scale was associated with decreased externality on the I-E Personal and Total measures. Increased body concept sophistication on the Witkin Scale was related to decreased externality on the I-E World Subscale. Differences were found, however, between conscious and unconscious body attitudes and between measures used to assess unconscious dynamics. Opposite to prediction, increases in body disturbance measured by the Carlson Scale were related to decreases in I-E Personal externality.

In general, the results indicated modest support for the model linking body articulation and internality and provided further evidence of the multidimensional nature of the locus of control construct.

Suggestions for future research include the refinement of scales commonly used in figure drawing studies, the investigation of differences resulting from tests tapping different levels of psychodynamics, the use of improved locus of control scales, and discrimination between psychological androgyny and sexual differentiation. More direct testing of the model is encouraged via intensive somatic programs to induce strong body awareness and kinesthetic feedback in males and females of all ages.

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By

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Finally, it is my pleasure to acknowledge the women who shared their personal worlds and provided the data for furthering the psychology of women.

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CHAPTER I

INTRODUCTION

Concepts such as competence, mastery, autonomy, effectance and ego strength have all been used to describe the degree to which individuals have the ability and confidence to control the important events in their life spheres. Basic to such factors is the development of a sense of personal causation. While many writers have focused on the theoretical aspects of the causation construct, it is primarily because of Rotter's (1954; 1966) social learning theory that the variable of locus of control has received much recent empirical investigation. Rotter's model and his assessment scale distribute people on a continuum according to their generalized expectancy of whether reinforcements are contingent upon their own behavior (internal control) or are the results of luck, fate, powerful others, or generally beyond their personal control (external control).

The development of perceived causality is influenced by the biological, social and psychological concomitants of growth and evolves as a unique, dynamic characteristic of every individual. Included in the process of differentiation are a growing sense of separate identity, a more articulated way of experiencing the world, and a more clearly defined body concept.

One of the most sensitive and vital aspects of this self-affirmation process is the awareness of oneself as a sexual being. For

females, development of such awareness frequently follows a confusing course. Sexual socialization is commonly characterized by taboo attitudes toward reproductive and sexual functioning, myths, misinformation, and double standards vis-à-vis males. The result is that many women experience some degree of shame, fear, ignorance, inhibition and/or depersonalization of the sexual aspects of their bodies. They often develop a passive, uninformed reliance upon their physicians to minister to their reproductive health needs and depend upon their sexual partners to take responsibility for teaching them about their sexual functioning. In general, many women have been taught to deny responsibility for their sexuality. In social learning theory terms, they may be viewed as demonstrating an external locus of control in this area of their lives.

The works of the Kinsey group (Kinsey, Pomeroy and Martin, 1948; Kinsey, Pomeroy, Martin and Gebhard, 1953) and Masters and Johnson (1966; 1970) laid the modern research foundation for developing the full human potential of sexual awareness and have been followed by a plethora of books on sexuality, sex education courses and sexual dysfunction treatment clinics. A contemporary phenomenon in which some women are attempting to shift to greater internality and body autonomy has developed which may be broadly termed the Women's Health Movement:

> Along with the spirited women's liberation movement which is shaking a lot of old traditions, women are taking a more active interest in knowing about their bodies and their unique physical problems as women. There are now over 150 self-help gynecology clinics flourishing in this country and undoubtedly the number will continue to rise. In addition, organized lectures, weekly meetings, and rap sessions to discuss various aspects of female health problems are becoming commonplace in many large cities (Lanson, 1975, p. 337).

With the opportunity for the assimilation of factual information comes the potential for a more differentiated body image and an integration of sexual components into the overall body image. Freud's statement, "The ego is first and foremost a body-ego" (1927, p. 31), as well as the views of others, suggest that heightened feelings of competence, autonomy and personal causation may accompany or follow from the development of increased body articulation. As feelings of autonomy increase, the freedom to deviate from traditional sex-role behavior and attitudes may develop with a consequent reduction in sex role differentiation. The present study investigated the relationships among body articulation, locus of control and sexual differentiation by measuring the psychological changes which occurred in the female participants of two modes of sex education--a self-help health group and a university human sexuality course--in comparison to female students in an introductory personality class.

Review of the Literature

Background material for the present study may be grouped into three broad areas--the development of personal causation and the associated sense of competence, the body-image concept, and sex education. In the following literature survey, the discussion of each of these topics is divided into theoretical and research sections.

Competence and Causation

Theory

Early concern with the concepts of competence and personal causation came from a variety of theorists, primarily of the "organismic"

attitude, who were interested in an individual's perceived sense of mastery and autonomy. Later, the focus shifted to the analysis of the origins of personal causality.

The theorist who has written most comprehensively about the development of mastery and the overcoming of helplessness is Alfred Adler (1930). His concept of "striving for superiority" of self is posited as an innate, universal, dynamic principle. An individual's style of life reflects a forward and upward movement toward perfection and competence. Feelings of inferiority arise from a sense of incompletion in any sphere of life. The concept of "courage" refers to having confidence in oneself and one's ability to control the personal world. Adler emphasized the interaction of body and mind as a unit and noted how psychological processes are expressed through physical development and organ specificities. He was a true organismic theorist.

Another holistic, fulfillment theorist who noted the importance of the body in the development of an integrated mature personality is Gordon Allport (1955; 1961). He viewed the mature individual as striving in a proactive fashion to express the unique, complex self or "proprium." The individual initiates action and is the focal source or, in De Charms' (1968) terms, the "Origin" of his own behavior. He does not merely respond as a "Pawn" to environmental forces. The earliest factor of Allport's seven developmental propriate functions of the personality is the sense of bodily self--"The bodily sense remains a lifelong anchor for our self-awareness (Allport, 1961, p. 114)." Allport's research into the relationship of expressive movements and personality led him to conclude that there are direct relationships between the

degree of autonomy and internal consistency in bodily functioning and the way the personality is patterned.

Building upon a psychoanalytic foundation, Erik Erikson (1950, revised 1963) stressed the importance of the ego as a unifying and directing concept in identity formation. He outlined a theory of infantile sexuality which highlights the psychological consequences of the individual's attempts to master the bodily zones. Ego development is contingent upon the resolution of each negotiation of bodily experience occurring within an interpersonal environmental context.

R. W. White (1960) has proposed that libidinal and interpersonal developmental models such as the Erikson view be supplemented by a competence model. He views effectance motivation as an intrinsic, general motive inherent in all organisms. Its immediate satisfaction is a feeling of efficacy; its adaptive significance is the growth of competence. The sense of competence is seen as the cumulative product of one's history of efficacies and inefficacies in dealing with the inanimate environment, the social environment and the intrapersonal sensory-motor-cognitive spheres.

From another tradition, Piaget's (see Flavell, 1963) systematic observations of infant development led him to hypothesize that the concept of physical causation derives originally from personal knowledge. The stages of thinking reflect the progressive impact of experience upon sensorimotor functioning. Flavell has provided a summary:

> Piaget's hypothesis is that the early stages of sensory-motor development are characterized by a causality best described as an undifferentiated mixture of efficacy and phenomenalism. As a knowledge of the evolution of space and objects would predict, this early causality knows nothing at all of objects as causal centers acting upon each other through spatial contact. With development,

> on the other hand, causality becomes both spatialized and objectified, and efficacy and phenomenalism, originally undifferentiated, break apart to undergo separate fates . . . Efficacy eventually becomes psychological causality, by which Piaget means the sense--now in a self aware of its thoughts and wishes--of causing one's own actions through volition, of willing to perform such and such action before performing it. And phenomenalism becomes physical causality, the causal action one object exercises on another through spatial contact (1963, p. 42).

Similarly, De Charms (1968) has emphasized the importance of differentiated subjective knowledge as the origin of a sense of personal causality. Knowledge derives from sense perception. Objects are differentiated as non-self because they produce no subjective feedback. First the individual learns by feeling and then, by doing. De Charms' basic postulate is that the individual is the locus of causality for personal behavior. The term "Origins" describes individuals who perceive their behavior and changes in their environment as determined by their own free choosing and are experientially intrinsically motivated. Extrinsically motivated "Pawns" are persons who perceive their behavior as determined by external forces.

Research

Though there have been several major investigations of the relationship between body and psychological autonomy since the early theoretical concern, there has been a tremendous upsurge in the amount of interest in the general concept of autonomy during the past decade. Rotter's (1966) contribution of the locus of control construct has been a significant generating factor and will receive separate attention later.

The work of Witkin and his associates (Witkin, Lewis, Hertzman, Machover, Meissner, and Wapner, 1954; Witkin, Dyk, Faterson, Goodenough

and Karp, 1962) has given evidence that perception of the body as a physical entity is a correlate of cognitive maturity. The organizing concept "psychological differentiation" relates the degree of analytical cognitive functioning to articulated body concepts, a sense of separate identity, specialized defenses for impulse control, and definiteness of body boundaries. Evidence from a variety of perceptual tasks intended to evaluate the ability to maintain spatial orientation when cues were distorted or removed demonstrated that people who relied more on their own kinesthetic cues, and were thus more field-independent, were more analytical than global in their cognitive styles. Kagan and Kogan (1970), summarizing the research generated by the Witkin et al. projects, suggest a general course of development of increasing field independence from childhood to a maximal level at age 17. At this stage there is a slight decrease with stabilization until a marked decline very late in life. In addition, sex differences have been consistently reported indicating greater field independence for males with differences being maximal during the upper elementary school to last year of high school period, a time when sex-role differentiation is most pronounced. Kagan and Kogan note that while the greater field independence of males generally achieves statistical significance, such differences are usually of relatively small magnitude. Other research has shown no significant sex differences in the years below age 8 (Goodenough and Eagle, 1963) or in geriatric populations (Schwartz and Karp, 1967).

In addition to the above developmental and sex difference patterns, Witkin et al. (1954; 1962) found that there was a greater degree of correlation between personality characteristics and attitudes toward

one's body in male subjects than in female subjects. Speculating about the origins of such sex differences, Witkin et al. suggested that differences in biological role and anatomic make-up may lead to differences in development of articulation of experience. They state, "The fact that the sex organs of women are 'hidden' may make it more difficult for them to develop a clear conception of the body (1962, p. 220)." In addition, they note that differential socialization practices in our culture may lead to more limited differentiation and development of a dependent, nurturant attitude for females as opposed to males, for whom self-reliance, achievement, independence and greater differentiation are encouraged. Witkin et al. concluded that men seem to have a greater identity between body and self, whereas women are more concerned with the relation of their bodies to the external world.

Fisher and Cleveland (1968), after summarizing studies focused on the body-image boundary dimension, also noted the association of a clear body concept and autonomous behavior. The individual with well-defined boundaries is achievement- and goal-oriented, resists unreasonable control but otherwise is cooperative and integrative in group contexts, effectively communicates with others, is independent, and is highly motivated toward mastery of problems. These characteristics clearly describe a high level of autonomous functioning.

Seligman (1975) studied the effects of controllable and uncontrollable aversive stimulus conditions on the behavior of animals and humans. He concluded that perceived lack of contingency between an organism's behavior and a reinforcer produces learned helplessness. Generalization of feelings of helplessness can lead to anxiety,

depression and, in extreme cases, death. Seligman interprets White's (1960) competence motive as a drive to avoid helplessness which has its roots in infant development. Those "objects" become self that exhibit near-perfect correlation between motor command and visual and kinesthetic feedback; those "objects" that do not show this synchrony become the world. Thus, "begins the lifelong struggle to raise the correlation of the world's changes with motor commands--the struggle for control (Seligman, 1975, p. 142)."

Locus of Control Research

One of the most significant approaches to the study of autonomy has been the locus of control construct derived from Rotter's social learning theory (Rotter, 1954; Rotter, Chance and Phares, 1972). For Rotter, rather than being a drive or motivational factor, locus of control is an expectancy variable which cuts across specific need areas. His (1966) original definition is as follows:

> When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual we have labeled this a belief in external control. If the person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this a belief in internal control (p. 1).

The extensive research following the publication of the I-E Scale has been summarized in several reviews and bibliographies (Joe, 1971; Lefcourt, 1966, 1972; Phares, 1973; Throop and MacDonald, 1971), has inspired the development of alternate assessment measures (Dies,

1968; Nowicki and Strickland, 1973), and spurred clarification of the construct by Rotter (1975).

Attempts to further refine the predictive power of the scale have brought increasing evidence of the multidimensionality of I-E (Collins, 1974; Gurin, Gurin, Lao, and Beattie, 1969; Klockars and Varnum, 1975; Levensen, 1973, 1974; Mirels, 1970; Viney, 1974). Two factors seem to emerge with the most consistency: 1. a personal factor indicating a belief concerning felt mastery over the course of one's life, and 2. a system or social factor revolving about the extent to which the individual feels capable of having an impact on political institutions or society. The occurrence of this 2-factor trend may have important implications for investigations such as the present study into the correlates of locus of control as well as the study of the nature of its development. For example, an individual may need to attain a certain level of felt mastery in the personal life sphere before feeling able to influence broader societal events.

As noted earlier, another feature which emerges with consistency in research reports is the greater externality of females. Recent large-scale cross-cultural surveys have shown this to be characteristic of college students in Eastern and Middle Eastern as well as Western countries (McGinnies, Nordholm, Ward and Bhanthumnavin, 1974; Parsons and Schneider, 1974). Although these differences attain high statistical significance, examination of the means in these studies shows very slight differences. Parsons and Schneider (1974) comment on this pattern and note that, in their study, females averaged on a point scale only .81 more external than males. They suggest that future studies should factor analyze these

scores since subscale differences between sexes were significant only on the Luck-Fate and Leadership-Success categories. Testing of children on the Intellectual Achievement Responsibility Scale resulted in straightforward associations between I-E and academic achievement for boys, but inconsistent results for girls (Crandall, Katkovsky, and Crandall, 1965). Further research is needed to clarify the developmental stages of sex differences on various I-E dimensions.

The results of the few studies in the important area of familial antecedents have generally suggested that externality is associated with parental dominance, control, rejection and inconsistency while internality is related to parental behavior which is protective, nurturing, approving, non-rejecting, and predictable (Davis, 1969; Johnson and Kilmann, 1975; Katkovsky, Crandall, and Good, 1967; MacDonald, 1971; Scheck, Emerick, and El-Assal, 1973; Tolor and Jalowiec, 1968). Comparison of these studies, however, is difficult because of the different assessment methods employed--retrospective reports of parental behavior, direct observation of parent-child interaction, parental attitude inventories, parental interview data. Since parent-child interaction in the early years revolves greatly around the basic functions of feeding, toilet training, locomotor activity, etc., such as the situations discussed by Erikson (1950), the development of locus of control may be related to the child's evaluation of the difference between personal control and parental control of body functioning. The investigation of sex differences in I-E requires research on such issues as genital exploration and parental socialization of the child's sexuality to determine the association between sexual body autonomy and more generalized feelings of freedom and autonomy.

Research focusing on situational conditions which lead to changes in I-E has shown that psychotherapy can be an effective vehicle. Dua (1970) compared the effects of action-oriented counseling in which an interpersonal problem was defined and specific behavioral sequences prescribed, and re-educative therapy which was aimed at influencing the client's attitudes toward significant persons through analysis of affects and cognitive processes. He found decreases in externality with both approaches in comparison to an untreated group, but the action-oriented program produced the most change. Diamond and Shapiro (1973) also found a significant increase in internality as a function of encounter group experiences. Abramowitz, Abramowitz, Roback and Jackson (1974) used a client-modality interactive model for studying group therapy experience. As hypothesized, the more internally oriented persons were more therapeutically responsive to a non-directive than to a directive approach, whereas the reverse tended to be the case among the externals. In a similar study of structure of marathon group therapy (directive versus non-directive) and locus of control, Kilmann and Howell (1974), however, did not find the predicted interaction of I-E and type of therapy. They speculated that this may have been a function of the complex variability inherent in marathon group therapy as well as difficulty in facilitating change in a drug addict population. Within the therapy groups, internals did consistently show greater gains on self-attitude measures. In a more recent study replicating this experimental design with college students, Kilmann, Albert and Sotile (1975) did find the predicted results that externals do better with a structured therapeutic format whereas internals improve more in an unstructured setting.

Several studies have shown that internals tend to seek and use information which they perceive as valuable in environmental control more actively than externals (Davis and Phares, 1967; Phares, 1968; Seeman, 1963; Seeman and Evans, 1962; Williams and Stack, 1972). Johnson and Meyer (1974) found that their female internals were better able to use biofeedback in controlling their EEG alpha rhythm than the externals. They urged that the scope of "personal control over the environment" be extended to include the internal bodily environment. Consistent with this broader definition, Straits and Sechrest (1963) found male and female non-smokers to be significantly more internal than smokers. James, Woodruff and Werner (1965) also noted this difference and found that following the report of the Surgeon-General on the harmful effects of smoking, males who quit smoking were more internal than males who believed the report but continued to smoke. The latter results were not significant for females.

Balch and Ross (1975) reported significant correlations between initial internal total I-E scores and both completion and success of a 9-week weight reduction program for females. No significant relationships were found between the two criterion variables and I-E Personal and World factors. Unfortunately, there was no post I-E testing to determine whether changes in locus of control accompanied the bodily changes in weight.

Rodin and Slochewer (1976) related eating changes of normal weight children during an 8-week camp experience to behavioral measures of externally-oriented environmental responsiveness. The more externally responsive the children were, the more weight they gained. Contributing

factors may have been the lack of parental regulation and the inability to rely on internal bodily cues of satiation.

Sonstroem and Walker (1973) found that internal I-E subjects with favorable attitudes toward physical activity obtained significantly better cardiovascular fitness scores and reported greater amounts of voluntary physical exercise than did internals with poorer attitudes and externals with poor or favorable attitudes.

Of special interest to the present study is MacDonald's (1970) finding that among unmarried women, internals reported utilization of birth control techniques significantly more than did externals. There was a similar trend for married women, but the results were not statistically significant.

The research of Gatchel (1975) relating locus of control to voluntary heart-rate change presents a less clear-cut picture than the above studies involving the body environment. During the initial session, internals were better able to increase and externals better able to decrease their heart rates. No feedback was given to the subjects and the group differences diminished to non-significance in the second testing session.

Past research also suggests that internals express the greatest amount of interest in social action and academic organization activities (Brown and Strickland, 1972; Gore and Rotter, 1963; Strickland, 1965). Of special importance to the present study, Ryckman, Martens, Rodda and Sherman (1972) found internal women expressing greater commitment to Women's Liberation activities than externals. When investigating women's opinions of important socio-political events, however, Hamsher, Geller

and Rotter (1968) and Hochreich (1972) found the I-E Scale's predictive power weak or not statistically significant. Among the reasons for the results was the speculation that since most social and political events tend to be exclusively male, women would be less likely to identify themselves closely with the situations. Zikmund and Miller (1974) studied the relationship of locus of control and female activism in a socio-economic event in which women would be more likely to feel involved--the April, 1973, national meat boycott. Contrary to expectations, internals reported less support for the boycott than did externals. One explanation for the results was that internals may discriminate between "controllable" and "uncontrollable" situations better than externals. The internals may have reacted constructively at home months prior to the boycott.

Similar personality and behavior correlates seem to characterize both field-independent (Witkin et al., 1954; 1962) and internal locus of control individuals, while other traits describe field-dependent and external individuals. Although the constructs are theoretically similar and overlap descriptively, the two dimensions are reported to be uncorrelated (Lefcourt and Telegdi, 1971; Rodin, Broughton, and Vaught, 1974; Tobacyk, Broughton, and Vaught, 1975). Tobacyk et al. (1975) explored the relationship of congruence-incongruence between I-E and field dependence-independence and other indices of personality functioning. They found that the two theoretically congruent groups demonstrated better personality adjustment on a real-self, ideal-self Q-sort than did the incongruent groups. These researchers suggested that a combination of these two particular constructs might create a higher order construct

such as "perceptual-expectancy style" and called for future research linking variables which are empirically unrelated but theoretically relevant to enhance predictive power.

There has been a noticeable paucity of studies dealing with the I-E Scale and projective techniques. Using James' (1957) 60-item I-E Scale and a modified version of the Rorschach, Mitroff (1973) studied the relationship of locus of control to selected Rorschach determinants. None of the hypotheses relating internality to those determinants which are assumed to reflect good reality testing, good impulse control, sensitivity and other indices of healthy adjustment was supported. Discussion of the findings included possible methodological flaws and the mediating role of intellectual level.

Body-image

The next section reviews the body image literature to lay the foundation for a proposed linkage of body articulation and locus of control.

Theory

Systematic concern with the concept of body-image began with the observations of neurologists in the early 1900s who documented the distortions in body attitudes and experiences accompanying such pathology as brain lesions and limb amputations (Bonnier, 1905; Pick, 1922). On the basis of such data, the British neurologist Henry Head (1926) concluded that every individual develops a "schema" or bodily model as a standard against which all body movements and postures are judged. The sensory cortex acts as a storeroom of past impressions, and, incoming sensory impulses are modified by the schema in such a way that "every

recognizable change enters into consciousness already charged with its relation to something that has happened before (p. 605) . . . ."

In his classic work The Image and Appearance of the Human Body (1950), Paul Schilder extended the body-image construct from Head's physiological focus to the interaction of psychological and sociological factors. The term "body-image" referred to the manner in which the individual has organized the subjective experiences resulting from these three factors. Schilder incorporated psychoanalytic and gestalt theory into his formulations and considered the body-image to be a fluid gestalt, continually being shaped by emotional influences which changed the relative value and clarity of the different parts according to libidinous tendencies. Body-images are always the sum of the body-images of the community, reflecting the attitudes of others toward their own and the individual's body as well as the projection of qualities from the individual's body-image onto others. Relationships to the body-images of others are determined by spatial distance and emotional closeness. Since sexuality carries the implications of both physical contact and emotional intimacy, the erogenous zones of body-images are felt as closer to each other than the other parts of the bodies and the psychological space around the sex organs carries more intense associations.

In addition to the psychoanalytic model to be discussed more thoroughly below, there have been many theories of perception and personality involving the body percept. There was early emphasis on the association between sensations and perceptual meaning in the development of spatial perception (Berkeley, 1709, Helmholtz, 1867; Lotze, 1852; see Boring, 1929, 1950). The use of the method of introspection by the

Structuralist school led to a focus on the importance of experience and active consciousness. Wundt's (1874; see Boring, 1929, 1950) "doctrine of apperception" assumes that a complex of ideas from past bodily experiences forms "apperceptive masses" which give meaning to present consciousness. Similarly, the essence of Titchner's (1910; see Boring, 1929, 1950) theory is that selectively attended kinesthetic sensations are the core of perceptions, but images accrue to the core to lend contextual meaning to the complex of sensations.

The Gestalt movement (Koffka, 1935; Kohler, 1929; Wertheimer, 1945; see Boring, 1929, 1950) was a major influence in the shift to a more phenomenological approach to the study of body-image. The principle of isomorphism states that there is no one-to-one relationship between stimuli and percepts; rather, the form of experience corresponds to the form or molar configuration of the stimulus pattern. The psychological field replaces the physical aggregate of sensations as the primary view of reality. Physiochemical processes are assumed to correlate with psychic processes and to be governed by the same gestalt principles. Under the leadership of F. S. Perls (1947, revised 1969; Perls, Hefferline and Goodman, 1951), gestalt concepts have been developed into a psychotherapeutic approach which emphasizes "here-and-now" reality, the "organism-as-a-whole," and the significance of spontaneous non-verbal expression. Sensory awakening through body concentration techniques is an essential aspect of this process.

Werner and Wapner (1949; Wapner and Werner, 1965) have proposed a sensory-tonic theory which implies that perception is the outcome of an equilibrium process involving both the effects of stimulation from

an object and the existing body tonus. In a variety of experimental situations requiring spatial judgments such as adjusting a rod to the vertical or to body tilt angle, they demonstrated that changes in an individual's perceptions can be produced by subjecting the individual to experiences which alter the pattern of proprioceptive sensations. The mature adult demonstrates clear differentiation of self from objects as reflected in more accurate task judgments. Similarly, the previously discussed research of Witkin et al. (1954, 1962) has indicated the importance of a clear sense of one's body as a necessary condition for being able to differentiate an object from the context in which it is embedded. The research in psychological differentiation highlights the need for developmental studies linking perceptual abilities and other aspects of personality.

In recent years, Fisher and Cleveland (1968) have been the primary proponents of body-image boundary research. They use specially devised Rorschach indices to assess individuals on a vagueness-definiteness continuum, according to the degree to which they have differentiated themselves from the environment. The body is seen as a "base of operations" which is the cumulative site of all past integrated experiences. The boundary properties vary according to the nature of internalized object systems which, in turn, depend on the quality of interactions with significant others in the environment. Thus, the body-image boundary generally does not reflect the state of immediate situations or mirror the actual structural characteristics of the body; rather, it is a fairly stable average of the past experiences from which internalized systems were originally derived. The body-image boundary may be considered an

ever-present "screen" which the individual interposes between self and external reality. It indicates the person's basic feelings about safety in the world.

Thus, a variety of approaches ranging from the neurological to the phenomenological have been used to study body-image. Of special significance is the psychoanalytic model which provided the foundation for elaborations on the concept of body-image by other theorists.

Psychoanalytic Theory and Related Positions

The body-image construct was a cornerstone in the psychoanalytic system of ego development. Freud clearly summarizes this dynamic in The Ego and the Id (1927): "The ego is first and foremost a body ego; it is not merely a surface entity but it is itself the projection of a surface (p. 31)." Freud viewed the infant as an initially undifferentiated organism who learns to integrate body surface sensations and use these sensations as a basis for discriminating between self and non-self. Fenichel (1945) has provided a brief summary of the process:

> In the development of reality the conception of one's own body plays a very special role. At first there is only the perception of tension, that is, of an "inside something." Later, with the awareness that an object exists to quiet this tension, we have an "outside something." One's own body becomes something apart from the rest of the world and thus discerning of self from nonself is made possible. The sum of the mental representations of the body and its organs, the so-called body image, constitutes the idea of I and is of basic importance for the further formation of the ego (pp. 35-36).

As the biological system matures, the infant progresses from an undifferentiated "polymorphous perverse" condition through the oral, anal and genital psychosexual stages. The vicissitudes of life experiences influence whether fixation, regression, or the successful mastery of

these libidinal stages occurs. Peculiar alterations of the body-image are determined by underlying mental dynamics and can be taken as starting points for the analysis of the unconscious conflicts. Considerable psychoanalytic work has been devoted to the study of body-image distortions in schizophrenia and other extreme forms of psychopathology.

Paul Federn's (1952) contributions to ego psychology offer further insight into the dynamics and implications of body-image. Federn describes the ego as a "continuous experience" rather than as a distinct entity in opposition to external reality. His basic assumption is summarized in the statement, "'Ego feeling' can be described as the feeling of bodily and mental relations in respect to time and content, the relation being regarded as an uninterrupted or a restored unity (p. 25)." He was the first to distinctly conceptualize two kinds of ego boundaries --an inner boundary between ego and nonego which serves as a barrier against disturbing drives and memories from the unconscious, and an external boundary separating inner mentality ego from external reality. The "expansion" and "contraction" of ego boundaries influenced the different states of consciousness such as in the stages of sleep and in fainting. Federn's innovative explanation for the depersonalization experiences reflecting weakened ego boundaries was that there had occurred a withdrawal of libido from the ego boundaries--"an impoverishment in narcissism"--rather than there having been a libido withdrawal from object representations as the earlier Freudian model had set forth.

Federn views the infant as experiencing all inner perceptions in an unbounded, totally egotized, narcissistic fashion. With maturation, the ego states of the various organs of bodily perception are organized

and incorporated into the ego. As the body ego becomes consolidated, the ego feeling becomes more complete. Federn's concept of the bodily ego is that of a unified feeling of libido cathexis of the motor and sensory apparatus whose boundary extends to include mental representation of objects located in the outside world. The body image is viewed as a changing presentation of the total configuration of the body while the bodily ego represents the continued awareness of the body. Depersonalization occurs when bodily ego feeling is denied access to, or withdrawn from, an area of the body. Then the bodily ego boundary is disturbed or incomplete and the body image is distorted.

Of central importance to the present study is the unique influence of female anatomical structure on body-image and the consequent personality ramifications. The psychoanalytic literature has dealt extensively with these issues, especially in regard to the Oedipal stage of psychosexual development. In sum, the castration complex prepares for the Oedipal attachment to the father in girls and destroys the comparable attachment to the mother in boys. Freud emphasized that the hypothesized superior superego development of males was due to the greater degree of resolution of the Oedipus complex in boys than in girls.

Greenacre (1952) has dwelt more specifically on anatomical sex differences and their relationship to body-image. Since the male organs are exposed and external, they may be seen and palpated, and receive stimulation through bathing, urinary functions and contact with clothing, bedding, etc. While leading to a greater fear of injury, the external nature of the male genital structure means that the boy has a fairly

clear, intact body image in which all his senses concur. In contrast, the female genital organs are almost completely invaginated, leading to a marked restriction in visual and kinesthetic awareness. They remain hidden and mysterious, creating confusion for a girl between the genital functions and the proximal anal eliminative functions, which are viewed as more strongly condemned than the urinary functions which co-exist in the male's genitality. The presence of a vaginal orifice is said to lead to fear of penetration while the poorly demarcated surface creates a body image of diffuse vagueness.

While Freud assumed that clitoral awareness preceded vaginal awareness, several psychoanalysts have mentioned the probability of early vaginal sensations in the female infant. Greenacre (1952) believes that such vaginal sensitivity arises not by external friction, but rather as the spontaneous outcome of a surcharge of central stimulation in states of extreme excitement, frustration or distress. She sees a parallel in the more readily observed erection in male infants to such conditions. The vaginal sensations are assumed to set up a "central registering of the vagina" which appears as "intuitive knowledge" of the existence of this organ in the body-image. Under the influence of hypothesized penis envy, confusion may develop resulting in such phenomena as the illusion of an "inner penis."

Horney (1933) has noted evidence for the existence of vaginal masturbation in the early years of childhood. She views the later repression or "denial of the vagina" as the result of anxiety stemming from fear of injury from penetration by the father's large genital, the vulnerability of the female body seen in menstruation, and the vulnerability to injury arising out of pain incurred through small ruptures

of the hymen during masturbation. Barnett (1966) also offers several hypotheses to account for the repression of vaginal awareness. She notes that the vaginal cavity has several characteristics which make it difficult to incorporate into the body image. She hypothesizes that, unlike the urinary and anal openings, there is no voluntary muscular control of the orifice, thus creating a threat to body integrity (evidence from sex therapists, however, indicates that a high degree of voluntary control can be achieved by exercises designed to strengthen the puboccygeal and perineal muscles, cited in Kaplan, 1974; Kegel, 1952). There is nothing contained in the cavity, the nature and activity of which would help the girl learn about this organ, such as the tongue in the mouth. Finally, there are no contents such as feces which can be viewed as actual parts of the self. As a result of the inability to maintain awareness of the vagina without anxiety, the organ is decathected.

Along similar lines, Keiser (1956; 1958) reports that in several patients who had outstanding problems in learning and abstracting, there was an unusual lack of knowledge about, and even denial of, body openings, particularly the vagina and anus. These denials seemed to be due to anxiety about being invaded, penetrated, and disrupted. Keiser feels that the acceptance of the existence of certain body orifices which are not readily visually apparent requires acceptance of certain presumptive data acquired by verbal or written description and deduction. Failure to integrate the concept of body orifices into the body scheme results in a disturbed and fragmented body image. Extending these hypotheses to an extreme position, Keiser further states, "This failure to accept bodily parts that can be known only by deduction was a prototype for

the disturbance in aspects of thinking that required the formulation of logical conclusions and the use of abstract thinking (1958, p. 630)."

Other psychoanalytically-based theorists who have focused concern on body concepts include Adler (1930) whose previously discussed notion of organ inferiority implies a libidinal fixation, and Reich (1949) who built a system of psychotherapy around the concept of loosening the "body armor" through which the individual physically expresses psychological conflicts. Lowen (1958; 1967) has expanded on the foundation laid by Freud, Ferenczi, Federn, Abraham and Reich. His bioenergetic psychotherapy combines a physical activity approach to the somatic level of the ego with an analytic procedure on the psychological level. As muscular tensions are reduced or heightened through specific exercises, memories are aroused which are associated with the feelings being expressed physically. Emotional abreaction may occur which can then be analyzed.

While placing his emphasis on the interpersonal aspects of psychosexual development, Sullivan (1953) has noted the importance of the body in the development of the self system. The beginning personification of "good-me," "bad-me," and "not-me" are created through differential reinforcement by the parent of bodily learning experiences such as in toilet training. Sullivan uses the term "uncanny emotion" to describe the abrupt supervention of severe anxiety which occurs as a reaction to the mother's response when the infant explores "taboo" body areas. The self-system is viewed as a "dynamism"--an organization of educative experience called into being by the necessity to avoid or minimize the dysjunctive tension of anxiety.

Body-image Research

A variety of research has been conducted to further clarify the characteristics of body-image initially observed by neurologists and clinicians.

Fisher and Cleveland (1968) noted that body-image distortions may be roughly classified into four categories:

1. Feelings of changes in body boundaries.
2. Sensations of depersonalization which revolve about the perception of one's body or specific body parts as strange, alien, or belonging to someone else.
3. The attribution of unrealistic qualities or extra parts to one's body.
4. Confusion regarding the distinction between right-left orientation.

A wide repertoire of experimental methods and assessment techniques has been employed to study such body-image changes. Tactile sensitivity measures, figure drawings, inverting lenses, hallucinatory drugs, body attitude questionnaires, word-association tests, distorting aniseikonic lenses and Rorschach indices are but a small sample of measurement techniques. Because of the extensive range of research, the present review will be restricted to studies having some bearing on issues related to the three areas of locus of control, sexual differentiation, and body articulation. In this paper, "sexual differentiation" refers to the degree to which an individual discriminates between male and female figure drawing characteristics rather than referring to "sexual identification" or "sex-role identity." The term "body articulation" follows Witkin's (1962) definition--"the extent to which the body is experienced as having definite limits or 'boundaries,' and the 'parts' within these

boundaries experienced as discrete, yet joined into a definite structure (p. 116)."

One of the most pertinent studies relevant to these three areas was conducted by Machover (1949, 1954), who worked with the figure drawings of the male and female college students who had participated in Witkin et al.'s (1954, 1962) field dependence-independence studies. She observed that the field-dependent subjects produced figure drawings reflecting "low body confidence"--a poorly differentiated body image, low body esteem, infantile defenses against anxiety, and an acceptance of defeat in coping with environmental pressures. In contrast, the field-independent subjects produced drawings reflecting "a high degree of narcissistic involvement in the body, effective body integration, and mature body sexual features." She also noted that the field-independent subjects freely included a range of both male and female features in their drawings whereas the field-dependent group emphasized like sex traits. For some purposes, it may be valuable to discriminate between a primary form of differentiation concerned with anatomical differences and a secondary type of sexual differentiation associated with details of appearance such as clothing, posture, hair styles, activity, etc. Machover appears to have been referring to secondary differentiation when she postulated that the field-independent person in a drive for narcissistic independence may "overlook or ignore the barrier between sexual differentiae and incorporate into his own self-image enhancing traits from both sexes (1954, p. 241)." This appears to be an early contribution to the construct of psychological androgyny (Bem, 1974, 1975; Spence, Helmrich, and Stapp, 1975).

Swensen (1955; Swensen and Newton, 1955) developed a 9-point global scale to measure sexual differentiation between pairs of male and female figure drawings. He found that hospitalized mental patients demonstrated significantly poorer differentiation than out-patients. Using the same scale, Murphy (1957) reported greater differentiation by female job applicants than males, though there were no differences in graphic maturity between the groups according to the Goodenough Draw-A-Person Test norms. Sherwood (1959), using male and female college students, found a low positive, but not statistically significant relationship between sexual differentiation and degree of masculinity and femininity, as measured by the Interest Scale (mf) of the MMPI. This might reflect the trend of Machover's findings that less sexual differentiation is associated with less stereotypic attitudes towards indices of sexual differentiation. Rabin and Limuaco (1959) hypothesized that since sex roles are more clearly differentiated among Filipinos than Americans, Filipino children would produce drawings with significantly greater sexual differentiation than American children. They found that among 10- and 11-year-old boys and girls, Filipino children differentiated significantly more than American children.

Fisher and Cleveland (1968) developed special Rorschach indices of Body Barrier and Body Penetration, which measure the qualities of boundary definiteness and psychological vulnerability to intrusion or breakdown of the boundary. They noted that boundary definiteness is linked with a cluster of characteristics which they label as "self-steering" behavior. In a series of studies exploring the effects of external stimuli on boundary definiteness in men and women, Fisher (1971)

found that the following stimuli did not affect the Barrier score in women: relaxing music, exciting music, body mutilation films, highly boring films, exciting content films, visual self-images altered by a distorting mirror, embarrassing interrogative sessions, intense white noise, hostile images, dependency messages, depressive messages, and optimistic-reassuring messages. Fisher has concluded from this data and that of other perceptual studies (1964) that, contrary to the widely held view stemming from psychoanalytic theory, women have a much clearer body-image and more resilient and delineated boundaries than men.

With the increased use of this construct by other researchers, however, criticism has emerged that some of the scoring procedures are unjustifiedly "arbitrary" and that distinction should be made between the "protective" elements and the "definiteness" factors which presently are combined in the Barrier score (Cassell, 1964; Eigenbrode and Shipman, 1960; Long, 1972, Mednick, 1959; Wylie, 1961). Of relevance to this issue is a study by Erikson (1951) who explored the play productions of children aged 10-12 years. He found that boys tended to produce upright, channelized constructions whereas the girls built low, simple enclosures. Based on his theory of infantile sexuality, Erikson suggested that the differential spatial modalities were symbolic statements of the two sexes' genital modes. Recent supportive evidence has been presented by Cramer and Hogan (1975) who replicated the Erikson design as part of a larger study of children's verbal and play fantasies. They obtained similar results and support Erikson's theoretical explanation as opposed to social learning theory. In view of the fact that the Rorschach Barrier score gives equal weight to such different elements as "containers"

and "defensive covering," there appears to be cause for serious concern regarding the use of the Fisher scoring procedure with female subjects who might show an initial generalized predisposition toward certain of the categories. Also, the Barrier concept may be grouping different and not entirely consistent dimensions which may cancel the relation when the subfactors are combined.

Tolor and Jalowiec (1968) hypothesized that high Barrier scores in their all-male subject population would be positively correlated with internal locus of control. In their discussion of the non-significant results, they noted severe problems with low inter-scorer reliabilities and the possibility that other measures might more successfully discriminate the relevant variable as well as the obvious possibility that body boundary is simply not a significant correlate of I-E expectancy.

The dramatic distortions in body-image which are often included in the symptomatology of schizophrenia have long been observed by clinicians. Of the large body of literature dealing with the boundary dimensions of schizophrenics, few studies of an experimental nature have dealt with the role of the body in the recovery process. Building upon the work of DesLauriers (1962), Darby (1970) induced somatic awareness to alter perceived boundary definiteness in hospitalized schizophrenics. Highly significant increases in Barrier scores on the Holtzman Inkblot Test were achieved in one 15-minute session by all groups which experienced actual physical stimulation. The Penetration score was only slightly affected. An imagination condition failed to produce significant changes in either boundary index. In a study designed to explore the effects of induced body awareness over a longer time period, Muzekari

and Kreiger (1975) engaged schizophrenics over a 5-day period in 25-minute daily sessions emphasizing external or internal body focus. No significant differences were found between the control and experimental groups on the Barrier or Penetration Holtzman scores. These researchers stated that their sample consisted of older, more chronic patients than the Darby (1970) population and may have been more resistant to change. They also speculated that the 5-day duration of sessions may have diluted the impact of an intense, initial experience. The subjects were also attending group sessions in a social interaction treatment program which may have lessened the influence of the experimental interventions.

Carlson, Tucker, Harrow and Quinlan (1971) investigated the relationship between body image and I-E in psychiatric in-patients. They reported a significant relationship between internal control and low Rorschach Barrier scores, a finding in contradiction to the general hypothesis by Fisher and Cleveland (1968). No significant results were found linking I-E to Rorschach Penetration scores, body disturbance or sophistication of body concept.

In another study, Carlson, Quinlan, Tucker and Harrow (1973) scored the figure drawings of hospitalized psychiatric patients for specific features and on global ratings of sophistication of body concept and artistic skill. These researchers were attempting to correct for various methodological difficulties described by Roback (1968) and Swensen (1968) in their reviews of the Draw-A-Person Test literature. Factor analysis suggested two scales - one of body disturbance factors (BD), and the other of sexual elaboration (SE). Scores on these scales were then correlated with measures theoretically related to body image

disturbance such as depersonalization, and to other measures of psychopathology such as thought process disorders. BD correlated highly with artistic skill and with sophistication of body concept, but did not correlate with the other measures. The SE scale correlated with Rorschach Penetration scores and measures of pathological thinking but not with the other body-image related variables. The authors interpreted the results as suggesting that sexual concerns may be emphasized in patients attempting to deal with vague and diffuse boundaries. Carlson et al. advised caution in the use of Draw-A-Person Test scoring procedures which may reflect artistic ability, though they point out the question of the psychological import of artistic skill has not been examined.

Certain aspects of a large-scale study of female sexual responsivity by Fisher (1973) offer further perspectives on the association between sexuality and body-image distortion. While investigating the characteristics of women who differed in their preferences for clitoral versus vaginal stimulation in attaining orgasm, Fisher found a significant tendency for the latter group to describe their bodies as depersonalized, alien, distant, as not belonging to themselves. Fisher notes that since the essential difference in the orientation lies in the degree of preference for, or reliance on, an interpersonal intrusive sexual mode, the underlying dynamic may be the extent to which the individual woman feels a sense of body autonomy, ownership and responsibility. Fisher speculates that these feelings may originate in the ways in which the woman has experienced her parents as being in control or as communicating to her that she may not have a significant body experience unless it is approved by, or shared with, some other significant figure. This

line of reasoning seems parallel to the locus of control framework in which an external orientation implies a belief that other people control reinforcements. Of interest also are the results of a wide variety of self-report and observer ratings which indicated that anxiety was greater in the vaginally-oriented women than in the clitorally-oriented women. The self-reports showed a similar significant difference in the amount of past psychological disturbance, especially as revealed in the women's autobiographies. These findings appear to contradict the psychoanalytic proposition that orgasm via vaginal stimulation is an indication of a higher level of personal maturity. It should be noted that Fisher found no differences, however, between the groups with respect to general body awareness, body-boundary differentiation and feelings about the body interior.

Sex Education

Theory

The importance of correct sexual knowledge in psychosexual development has been noted by many educators and counselors. Anthropologist Margaret Mead states in Male and Female:

> The more a society obscures these relationships, muffles the human body in clothes, surrounds elimination with prudery, shrouds copulation in shame and mystery, camouflages pregnancy, banishes men and children from childbirth, and hides breast feeding, the more individual and bizarre will be the child's attempts to understand, to piece together a very imperfect knowledge of the life-cycle of the two sexes and an understanding of the particular state of maturity of his or her own body (1949, revised 1967, p. 146).

Focusing specifically on late adolescence, when the issue of sexuality is most acute, Simon and Gagnon note:

> But, perhaps on a more fundamental level, it is possible that sociosexual activity is the one aspect of identity experimentation that we associate particularly with later adolescence, a period in which the psychosocial moratorium that Erikson (1959, revised 1963) describes as protecting the adolescent during this period of crises and experimentation fails to operate. This may be partly due to the fact that the society has some difficulty protecting the adolescent from the consequences of that part of his behavior it is not prepared to admit he is engaging in. More importantly, it may be due to the fact that we have, at all age levels, great problems in talking about sexual feelings and experiences in personal terms which, in turn, make it extremely difficult to get social support for our experiments with our sexual selves (the term "pluralistic ignorance" is perhaps nowhere more applicable than in the sexual area). It may be that these experiments with sexual capacities and identities rank among the first unprotected tests of competence and the quest for a basis for self-acceptance. We suspect that success or failure in the management of sexual identity may have consequences in many more areas of personality development than merely the sexual sphere (1971, pp. 82-83).

The term "sexual revolution" has now become commonplace; however, it has only been during the last decade that any intensive effort has been made to implement comprehensive sex education into school programs. Building upon the Kinsey et al. (1948, 1953) research, the work of Masters and Johnson (1966, 1970) was a significant factor in the promotion of sexual awareness and knowledge. Manifestations of this change in societal mores may be seen in the flood of popular books and magazine articles on this topic, relaxed restrictions in the film and stage industries, the increase in professional journal reports, and the development of sexual dysfunction clinics. Seruya, Losher, and Ellis (1972) and Haims (1973) have compiled extensive bibliographies documenting publications dealing with sex and sex education guidelines.

Many writers have claimed that there are differential modes of sexual learning in males and females. Simon and Gagnon (1971) feel that for males the development of heterosexual behavior in adolescence means a shift from a commitment to an intrapersonal sexuality towards a commitment to interpersonal sociosexuality. For females, the situation is reversed. Thus, Simon and Gagnon view the processes of dating and courtship as learning situations in which males share their sexual knowledge with females who are relatively untrained in sexuality, and, males, in turn, learn to form loving, intense, affect-laden relationships. These authors point out that males conform to Freudian expectations of progression through the stages of the libidinal developmental model, but, in this culture at this time, the model is inaccurate for females. Highlighting the societal double standard, Rheingold (1964) concluded that whereas men have only to fear sexual failure, women have to fear sexual failure and success simultaneously.

Brownmiller (1975) examined the role of sexual body autonomy from the perspective of power relationships between males and females. She concluded from an extensive study of the psychology of rape that the threat, use and cultural acceptance of sexual force is a pervasive process of psychological intimidation that affects all women. It has acted as a control mechanism against their freedom, mobility and aspirations and can be combated only by vigorous efforts on a multiplicity of levels --legal, societal values, active physical defense and sex education.

The research and treatment techniques of sex therapists have strongly implicated the disturbing effects of sexual ignorance and inhibition. Thus, Masters and Johnson state, "Multiple treatment sessions

are devoted to explanations of sexual functioning with concentration both on psychological and physiological ramifications of sexual responsivity (1970, p. 5)." These researchers particularly condemn societal norms which cause the female to dissemble much of her developing functional sexuality during her formative years. Involved in another large-scale treatment program, Barbach (1975) has described sensitivity exercises designed to acquaint women with their sexual functioning. The program is geared to orient women toward orgasm through masturbatory techniques with continuation of successful functioning in interpersonal sexual modes. Barbach's discussion contains many references to the increased self-confidence experienced by the participants which is generalized toward better control of other life spheres. Publications by The Boston Women's Health Collective (1971, 1973) and Rush (1973) similarly emphasize the attempts of women to "re-discover" their bodies, and the ramifications of comfort and pride resulting from this most basic process.

A discrepant conclusion was noted by Kaplan in her clinical text The New Sex Therapy (1974). She states that in most cases treated in her clinic, symptom removal did not result in a "ripple effect" of generalization of improvement in psychic functioning. The typical pattern was the development of an initial feeling of euphoria, which was of brief duration, followed by "a rather amazing take-it-for-granted attitude." She does not, however, describe possible differential reactions of males and females. Nor, does Kaplan describe (as the above studies do not) the measures used to assess possible psychological changes in self-concept or follow-up studies of these factors after treatment termination.

Kaplan does state that the cases where such changes did occur were those where the sexual dysfunction was central to the client's psychological problems and/or the course of treatment led to resolution of basic conflicts which were related to the sexual difficulties.

In addition to the establishment of professional clinical services, there has been a steady increase in the attempts of educators to institute comprehensive sex education in school programs. Most courses in sex education fall under the headings of "Family Life, "Human Sexuality," "Marriage and the Family," or similar titles. Though varying in content and emphasis, they generally include information on the physiological, psychological and sociological aspects of sexuality. Kirkendall (1965) has outlined a 9-point statement of sex education objectives, which, according to Haims (1973), has served as a prototype for many school districts. Most classes seem to follow a traditional, structured format frequently supplemented by discussion groups.

In recent years, another method of sex education for females has arisen as a result of women's efforts to play a more active role in their gynecological health care. Beginning with the Los Angeles Feminist Women's Health Center in the early 1970s, women's "Self-help Health Groups" have been developing across the nation. These groups vary from highly organized gynecology clinics having medical consultants to informal "rap" sessions. Typically, the informal discussion groups are composed of women meeting voluntarily on a weekly basis to share information and experiences and to hear professional guest speakers. Topics include contraceptive techniques, early sexual socialization experiences, abortion, rape, breast examination, self pelvic examination via use of a speculum and mirror, detection of vaginal infections,

sex-role identity and current sexual problems. Publications by Frankfort (1972), The Boston Women's Health Book Collective (1971, 1973) and Lanson (1975) provide further descriptions of this aspect of the women's health movement. Palmer (1974) has described a community-based women's clinic which had participant control. This ensured the responsivity of the clinic to the needs of the women in the community and led to the feeling by many of the clients that they had more control over their health.

Research in Sex Education

Evaluation of comprehensive sex education programs has been limited because they are a relatively recent innovation. In addition, Haims (1973) describes several factors which make research difficult--most family life and sex education classes are not open to outside observation; there is a diversity of course goals, time, quality of instruction, school atmosphere and students' ages; there is a lack of standardized assessment methods; and the subject matter is still a sensitive, emotion-laden issue for many individuals. It is also necessary to differentiate among testing for changes in factual knowledge, measuring shifts in socio-sexual attitudes, and measuring personality changes. Since the present study falls in the third category, the following review will be restricted to that area.

In one of the few studies of psychological changes, Crosby (1971) used a specially devised self-concept inventory and found increased self-acceptance and positive changes in self-image among adolescents who took a family life course. Shofer (1973), however, found that college students did not have more positive self-concept scores on the Tennessee

Self-Concept Scale as the result of course work in sex education. There was a sensitizing effect for the total positive self-scale, however, and Shofer considered the possibility of self-concept as a slowly changing, cumulative phenomenon. Steinmann and Jurich (1975) measured the pre-post effects of a sex education course specifically geared toward balancing career-self and family orientation. They found the course had a liberalizing influence on self-concept sex roles for male junior high school students who shifted from a slightly familial to a balanced view, but not for females who maintained a family orientation. These investigators reasoned that since females are socialized at an early age to derive their primary identity as wife/mother, they are more resistant to change. Further, in that pubertal age range, the females are more mature physically than the males, are more aware of their sexuality and seek the security of standard sex role behavior. Feinberg (1972) investigated sex guilt and psychosexual conflict in college students participating in a human sexuality course. He found no changes in Draw-A-Person Test measures of psychosexual conflict, but did find significant reductions in self-reported sex guilt for the initial high guilt groups--the females and the virgins. Schwartz (1973) found that high sex-guilt and sexually stimulated subjects retained less information from a birth control lecture than low guilt and non-stimulated subjects. Across all conditions, females retained more information than males. The implications of guilt-generated anxiety were discussed in regard to efficient teaching of sexual information. Studying the effects of sex composition in family life course discussion groups, Adams (1969) found no support for the assumption that mixed sex groups provide the optimal learning

arrangement for female students. No males were involved in the comparison, however, and the need for replication with an all-male control group was discussed.

In a large-scale study of changes in sexual attitudes and behavior associated with sex education, Zuckerman, Tushup and Finner (1976) tested undergraduates enrolled in human sexuality and personality courses. Males were more permissive in attitudes and had experience with a greater number of partners than females. Attitudes and experience were more highly related in females. Students taking the sexuality course were more permissive and experienced than students in the control group. The sexuality class increased permissiveness in sexual attitudes in both sexes, but behavior changed only in males, relative to changes in the control group. In males sexuality was related to self-expressive needs such as Exhibitionism, Play, Impulsivity and Sentience; in females sexuality was related to social needs such as Dominance, Affiliation and Social Recognition. Sexual permissiveness and expression correlated positively with the "self-actualization" scales of the Personal Orientation Inventory. These relationships were true for both sexes, but were particularly pronounced for females.

Indirectly related to the issue of sex education is a limited, descriptive study by Osofsky (1967) who investigated women's reactions to pelvic examinations in a standard medical setting. The women's descriptive comments indicated that the majority of the group experienced some degree of embarrassment and discomfort with a considerable range of feelings of anxiety, hostility, dirtiness, dread, vaginal distortion and sexual arousal. Of the 40 subjects, 21 rated their anxiety

as being about the same as the average woman with the remainder rating only slightly more or less. The rating of the attending male physician and female nurse, however, showed greater scatter, indicating that more subjects were slightly more or less anxious than the average patient. This suggests a defensive tendency of the women in evaluating their own anxiety levels. Osofsky's comments stressed the need for physician sensitivity and consideration of individual variation in psychological responses to gynecological concerns.

Fisher (1973) found no empirical support for a predicted relationship between source of early sex education and sexual responsivity. Also, a woman's sexual responsivity was not linked to the adequacy of the sex information provided by her parents, how openly they talked to her about sexual matters, their attitudes about nudity and the display of one's body, their degree of open display of affection toward each other, or their reaction to the onset of her menstruation. Fisher concluded that the nature of explicit sex education is relatively unimportant in an individual's "emotional" sexual development. He does state that such information could help to clarify "cognitively" the essential aspects of sexuality and thus "relieve the individual of the need to go through a lot of unnecessary anxiety-provoking trial-and-error learning (p. 435)." These comments seem contradictory since the relief of anxiety would appear to be a very crucial variable in psychosexual development. Further, Fisher's study seems to have explored differences in the reported source of sex education and the adequacy of parental information, but not the overall accumulation of sex knowledge which might have differentiated the groups. This hypothesis is supported

by Fisher's own statement that educational level and social class were the only consistent positive correlates of orgasm consistency found in his extensive literature survey. Though there may certainly be other variables influencing these associations, it seems likely that higher education would include better sexual knowledge.

Statement of the Problem

Based on the theoretical foundations of Freud (1927) and Schilder (1950), body-image may be defined as an individual's perception of self in relation to the external world, incorporating concepts of physical appearance and competence as they are perceived through experiences, attitudes and feelings. The body-image originates slowly through the development of complex multisensory, cognitive-affective, and interpersonal systems as focused through the body. While continuing as a fluid, dynamic gestalten for the adult, it becomes progressively more stable through life and comes to represent the cumulative average of past experience more than the contemporary experiences of the body. Though achieving a relatively stable level, the dynamic characteristic of body-image implies that even in adult life, body-image is subject to change with relevant experiences.

The present study focused on two groups of subjects who were exposed to experiences presumed to be conducive to body-image changes.

The specific aspect of body-image under consideration is body articulation--i.e., the degree to which an individual manifests mature awareness of boundary dimensions and the integration of differentiated parts within the body structure as a whole. Because sexual characteristics

have been shown to be important and unique aspects of body-image, especially in females whose anatomical structure heightens the likelihood for confusion, women's knowledge of the sexual aspects of their bodies was the central focus. The important contribution of body articulation to the development of autonomy has been discussed by many theorists. Though the locus of control construct has received increased attention as an effective empirical mode of studying autonomy, there has been a gap in the attempts to link this variable to other personality correlates and to variables connected with the development of I-E expectancies. The present study is an exploratory investigation of a proposed direct association between body articulation and internal locus of control.

Because autonomy implies the freedom and ability to implement situationally appropriate behavior beyond narrow cultural restrictions, the concept of sexual differentiation was hypothesized as a result of increases in body articulation and internality. Sexual differentiation is viewed as the degree to which an individual manifests the flexibility to transcend culturally-defined sexual concepts and choose self-enhancing features from either sex. Thus, the greater the autonomy, the less sexual differentiation.

The availability of two modes of sex education, via a women's self-help health group and a human sexuality course, offered a valuable opportunity to study the psychological changes occurring in the female participants in regard to the interrelated issues of locus of control, body articulation and sexual differentiation. The sex education groups were natural ones, consisting of participants who selected themselves

into the groups rather than being randomly assigned by the researcher. Self-selection does have disadvantages of potentially large nonrepresentativeness of the subjects; similarly, the use of naturally occurring sex education courses not controlled by the experimenter enables only a general statement of the events presumed relevant to any change that occurs from pre- to post-test. However, it was felt that evaluation of ongoing natural events, particularly those of timely sociological import, is important in its own right and that such evaluations may be more meaningful in the context of standard theoretical psychological constructs. A third group (from an introductory personality course) is assumed to be a reasonably representative selection of female subjects participating in psychological research.

The hypotheses are separated into three groups. The first set deals with the interrelationships of the three variables of body articulation, locus of control and sexual differentiation as they existed in a "static" sense within the individual prior to and after the experimental interventions. The second group offers more "dynamic" predictions of the changes in these variables as functions of the treatment modes. The third set predicts patterns of changes in the pooled groups.

Hypotheses about the "static" descriptions of interrelationships are:

Hypothesis 1:

> External locus of control will be negatively correlated with the degree of body articulation on both pre- and post-test measures.

This hypothesis is based on the theoretical perspectives relating feelings of autonomy and competence to the early development of body

autonomy and clear body differentiation such as discussed by Allport, Erikson, White, Freud, and Witkin.

Hypothesis 2:

External locus of control will be positively correlated with the degree of sexual differentiation.

The work of Machover (1954) with the Witkin et al. research (1954, 1962), as well as recent contributions to the construct of androgyny (Bem, 1974, 1975; Spence, Helmreich and Stapp, 1975) suggest that autonomous development is associated with an increase in the feelings of freedom and flexibility to integrate desirable characteristics from both sex roles, thus resulting in a decrease in psychological sexual differentiation.

Hypothesis 3:

The degree of body articulation will be negatively correlated with the degree of sexual differentiation.

This prediction also follows from the findings of Machover (1954) with the figure drawings of the Witkin et al. (1954, 1962) subjects of an increase in body sophistication associated with a decrease in sexual differentiation.

With respect to changes as a function of treatment modes, the following hypotheses are made:

Hypothesis 4:

Significant positive changes in body articulation will occur for all groups with the magnitude of shift occurring in the following descending order--Self-help Health group, human sexuality class, and introductory personality class.

Based on the theories of Freud, Erikson, White and others previously discussed, it would appear that the more knowledge available regarding physical functions combined with encouragement of active

exploration of one's body, the greater the body autonomy. The groups varied in their degree of such processes and predictions are made accordingly.

Hypothesis 5:

> Significant pre-post test decreases in externality will occur for all groups with the magnitude of shift occurring in the following descending order--Self-help Health group, human sexuality class, and introductory personality class.

The three groups may be placed on a continuum of active involvement in learning about sexual body autonomy. The more active involvement with body and environment is seen to present more stimulus input and more knowledge useful for controlling one's life. These predictions are based on the developmental foundations of Erikson, Piaget, and White.

Hypothesis 6:

> Significant decreases in sexual differentiation will occur for all groups with the magnitude of shift occurring in the following descending order--Self-help Health group, human sexuality class, and introductory personality class.

This hypothesis is based on Machover's (1954) finding of reduced sexual differentiation in individuals showing greater body articulation scores on figure drawings. Thus, subjects with varying degrees of opportunities to increase body articulation may manifest varying decreases in sexual differentiation.

Because the decreases in externality and decreases in sexual differentiation are predicted to be attributable to increases in body articulation, more precise hypotheses for the pooled groups are as follows:

Hypothesis 7:

> Subjects who show increased body articulation will show decreased externality.

Hypothesis 8:

Subjects who show decreased externality will show decreased sexual differentiation.

CHAPTER II

METHOD

Subjects

Three self-selected groups of female subjects were studied.

Group A. This group was comprised of women participating in an all-women's Self-help Health Group sponsored through a women's center in the university community of East Lansing, Michigan, during spring and summer, 1974. These women had been attracted to the group through an introductory workshop at a local women's conference on the Michigan State University campus and through regular advertising in the events section of the university newspaper. The group was non-structured, experiential, and typical of the women's health discussion groups described earlier. It was not a gynecological clinic. Participation in the research project was voluntary and without remuneration. Of the 23 subjects initially tested, completed protocols were obtained from 20 women, with the final group having a mean age of 22.90 years.

Group B. This group consisted of women enrolled in a 10-week undergraduate Human Sexuality course at Michigan State University during fall term, 1974. The co-educational class followed the structured format and content described in an earlier section. Primary material was presented by a male instructor via televised lectures, and was supplemented by discussion groups led by male or female student facilitators.

Permission was received from the instructor to distribute an explanatory letter during the first week of classes requesting voluntary participation. No class credit or financial remuneration was involved. Thirty-two subjects were initially tested with complete protocols obtained from a group of 23 women having a mean age of 19.95 years.

Group C. A comparison group consisted of women enrolled in a 10-week undergraduate Introductory Personality class at Michigan State University during fall term, 1974. This co-educational course used the text Personality, A Scientific Approach (Donelson, 1973) as a basic guideline to cover a broad range of psychological issues. This group of subjects is presumed to have had the least exposure to explicit information about sexual bodily anatomy. However, text and lecture did include coverage of the concepts of locus of control, body differentiation, and sexuality. Thus, it is not one which can be considered to have received "zero degrees" of the treatment presumed relevant to the predicted changes. However, it is assumed to have had the least amount of active, personalized involvement with these issues, and the least amount of time during the 10-week course of attention to them. While it does not seem reasonable to predict no change occurring in this group, prediction of less change than in the other groups is made. On the first day of class the female instructor announced the option of extra class credit through research participation and notice was given of the availability of the present study. Subjects were given the equivalent of six examination points for participation, with the restriction that points for completing the initial testing were contingent upon completion of the second testing. Of the 49 subjects initially tested, usable

protocols were obtained from 35 women, with a mean age for the final group of 20.08 years.

Procedure

All of the subjects were pre-tested during their first week of class or group participation and were then post-tested following their 10-week period of involvement. Testing was performed in an individual setting away from the specific class or group, using a battery of psychological tests administered in the order listed below. The "Who Am I?" was presented first to elicit spontaneous self-perceptions without the influence of cues from the personality inventories. The other tests were given in an order chosen primarily to minimize subject fatigue, boredom, and response set factors.

1. Who Am I? (Gordon, 1968) - 20 responses to the stem "I am ____" followed by ratings of each response on a 1-5 scale of importance.
2. Internal-External Locus of Control Scale (Rotter, 1966) - 29-item forced-choice scale consisting of 23 keyed items and six filler items.
3. Tennessee Self Concept Scale (Fitts, 1965) - 100 items rated on a 1-5 scale ranging from completely false to completely true.
4. Draw-A-Person Test (Machover, 1949) - figure drawings of a person, person of the opposite sex from drawing one, and self, done on three separate sheets of 8½"x11" unlined white paper.
5. Fand Inventory of Feminine Values (Fand, 1955) - 34 items rated on a 1-5 scale ranging from strongly agree to strongly disagree.
6. Thematic Apperception Test (Murray, 1943) - administration of

a split set of 20 cards with order of presentation of the two 10-card sets balanced. Due to time circumstances, only the Self-help Health group received this test.

7. Self-help Health Group Questionnaire - 8-item series of open-ended questions and 1-7 ratings regarding the value of the group experience, administered following post-tests.

The present study focused on the I-E Locus of Control Scale, Tennessee Self Concept Scale and Draw-A-Person Test which were scored as follows:

1. I-E Locus of Control Scale. Standard scoring in the direction of externality was employed to obtain a total score (maximum score of 23). In addition, two factors were scored based on items found by previous research (Mirels, 1970; Viney, 1974) to reflect feelings of control in Personal (maximum score of 5) and World (maximum score of 5) dimensions.

Rotter (1966) reported that item analysis and factor analysis showed high internal consistency for the total additive scale. Test-retest reliability was satisfactory (1 month r = .72; 2 months r = .55) and the test correlated significantly with other methods of assessing the same variable such as questionnaires, Likert scales, interviews and ratings from story-completion tests. Construct validity was satisfactory with the test predicting differences in behavior for individuals above and below the median and from correlations with behavioral criteria.

2. Tennessee Physical Self Scale. This test consists of 18 items (maximum score of 90) from the Tennessee Self Concept Scale. The items reflect views about the individual's own body, state of health, physical

appearance and sexuality. High scores indicate positive body attitudes.

Fitts (1965) reported high 2-week test-retest reliabilities for the Physical Self Scale ($r = .87$) and for the total Self Concept Scale ($r = .92$). The test scales correlated satisfactorily with relevant scales on other personality measures such as the MMPI and EPPS, and predicted differences such as psychological status and changes in personality under conditions such as psychotherapy.

3. Draw-A-Person Test. Several extensive reviews have highlighted the controversial status of the Draw-A-Person Test (Hammer, 1968; Molish, 1972; Roback, 1968; Swenson, 1968). Though this test is reported to rank with the Rorschach and TAT as one of the three most frequently used projective techniques (Molish, 1972), the data about reliability and validity are inconclusive. However, Swenson concluded his review stating that the "research has improved substantially in quality and sophistication and has produced increased empirical support for the use of human figure drawings as a clinical tool (1968, p. 20)."

The present study assessed figure drawings on three dimensions:

a. Body Disturbance Scale (Carlson, Tucker, Harrow and Quinlan, 1971). Each drawing was rated separately on 20 discrete items (maximum score of 33) and the three drawing scores were summed to obtain a total score (maximum score of 99). High scores indicate greater body disturbance. Carlson et al. (1971) reported an inter-scorer reliability of .77.

b. Sophistication-of-body-concept Scale (Witkin, Dyk, Faterson, Goodenough and Karp, 1962). Each drawing was rated separately on a 5-point global scale (maximum score of 5) and the three drawing scores

were summed to obtain a total score (maximum score of 15). High scores indicate low body concept sophistication. Inter-rater reliability reported by Witkin et al. (1962) was .84.

c. Sexual Differentiation Scale (Swenson, 1955). Pairs of drawings were rated for degree of sexual differentiation between the "person" and "person of the opposite sex from drawing 1." The original 9-point global scale was modified to five global categories (maximum score of 5). High scores indicate greater sexual differentiation between the two figures. Swenson (1955) reported an inter-scorer reliability coefficient of .84.

Samples of all tests (except TAT) presented in the original battery and the scoring procedures employed in the present study are shown in Appendix A.

Rater reliability on Draw-A-Person Test measures

To establish reliability, 30 drawings were independently scored on the Body Disturbance Scale and Sophistication-of-body-concept Scale by the author and another M. A. psychologist experienced in the clinical use of projective tests. For the Sexual Differentiation Scale, 30 pairs of drawings were independently scored by both raters. Inter-rater reliabilities were .70 for the Body Disturbance Scale, .87 for the Sophistication-of-body-concept Scale, and .90 for the Sexual Differentiation Scale. Following discussion of the differences on the Body Disturbance Scale ratings, the inter-judge reliability increased to .98. This placed all three test results within the reliability limits previously reported in the original studies. All drawings were then scored by the author on the three procedures.

Statistical Procedures

The data were analyzed as follows:

1. Summary of means and standard deviations on all measures for the three treatment groups and the pooled groups (Appendix B - Table 1).
2. Intercorrelations between all measures for each of the four groups to test hypotheses 1, 2 and 3 which deal with the "static" relationships between variables. The correlations within the pre- and post-test data separately were highly similar; thus, the pre- and post-test correlations were averaged to obtain clearer patterns. Hypotheses 7 and 8 were tested with the intercorrelations of pre-post change scores between the various measures for the pooled groups.
3. One-way analyses of variance to assess the "dynamic" hypotheses --4, 5 and 6.
4. Cluster analysis. Although analysis of variance determines which variables in a multi-variate structure have significant effects, it does not point out the strengths of those effects, which are determined by the underlying correlations. It is difficult to see trends in the data behind less than conventionally significant results. In an attempt to get closer to the data patterns, cluster analysis was used as a supplementary methodology. The aim of cluster analysis is to group variables which appear to represent a single factor or cluster variable. Once these clusters are formed, the internal structure of the clusters and individual variables can be examined.

To implement the cluster analysis, correlations were computed between all variables. These matrices were re-ordered using the ORDER and ARRANGE programs of the PACKAGE system of computer routines (Hunter and Cohen, 1969). The correlations were corrected for attenuation to provide an estimate of what the true correlation would be if the variables were perfectly reliable (Gillmore, 1970; Nunnally, 1967). Three corrections for attenuation are needed for a cluster analysis and were implemented through the PACKAGE program:

1. Intercorrelations among clusters need to be corrected for the different amounts of measurement error caused by having clusters of different sizes.
2. The correlations between an item and the cluster to which it belongs must be corrected downward to eliminate the spurious inflation caused by a common error of measurement.
3. The spuriously low correlation between an item and a cluster to which it does not belong, due to the error associated with each cluster, must be corrected. This procedure eliminates the distortion caused by having clusters with different amounts of error.

Based on the resulting correlation matrices, a primary set of clusters was formed. An oblique multiple groups cluster analysis was then performed on these clusters and revised until the following three criteria for unique homogeneous clusters were met:

1. Internal consistency, i.e., the items in a cluster must be relatively highly correlated with each other.
2. External parallelism, i.e., all items in a cluster must

have similar patterns and magnitudes of correlations with items outside the cluster.

3. Homogeneity of item content, i.e., items in a cluster must share a similar ideational content.

The multiple groups cluster analysis showed groupings of the correlations into generally clear-cut clusters for the three treatment groups and the pooled groups. This was expected because the tests were selected according to previously definable content. It was not the primary purpose of this procedure to factor analyze and identify dimensions, but rather to permit an averaging of the correlations within each cluster and apply these results to the intercluster correlations needed to test the hypotheses.

An Order variable determined the appropriate ordering of the groups and the extent to which a linear model could be applied to the subject sample as a whole.

Correlations of Order and the pre-test variables showed that the Self-help Group differed significantly from the other two groups in age ($p \ll .001$) and also differed from the Sex Education Group in years of education ($p < .01$). None of the other pre-test measures showed significant differences between the groups.

5. Specific statistical procedures such as t-tests were used to clarify results not immediately tested by the above analyses.

CHAPTER III

RESULTS

The results of the data analyses are summarized for the three categories of hypotheses--the "static" interrelationships between the variables (1, 2, 3), the effects of the treatment conditions (4, 5, 6), and the overall patterns of change (7, 8).

In examining the correlations, the following outline may be useful in evaluating the direction of the relationships:

Test	Low raw score	High raw score
I-E Locus of Control Scale	Internality	Externality
Tennessee Physical Self Scale	Low body acceptance	High body acceptance
Carlson Body Disturbance Scale	Low body disturbance	High body disturbance
Witkin Sophistication-of-body-concept Scale	High body sophistication	Low body sophistication
Swensen Sexual Differentiation Scale	Low sexual differentiation	High sexual differentiation

Evaluation of Hypotheses

Tables 1-4 summarize the correlations relevant to Hypotheses 1, 2, and 3.

Hypothesis 1:

External locus of control will be negatively correlated with the degree of body articulation on both pre-and post-test measures.

In all analyses, the locus of control measure is divided into a Total score (maximum 23) and the World (maximum 5) and Personal (maximum 5) Subtests scores. Using the first measure of body articulation, the Tennessee Physical Self Scale (maximum 90), the total sample indicated a significant relationship ($r = -.34$, $p < .01$) between I-E Personal and body acceptance (Table 1). For both the Sex Education ($r = -.41$, $p < .10$) and the Personality ($r = -.33$, $p < .10$) groups, the I-E Personal measures approach, but do not attain conventionally significant levels of relationship with the Tennessee Scale (Tables 3 and 4). The I-E total showed a similar trend ($r = -.38$, $p < .10$) in the Sex Education Group (Table 3). No significant relationships or trends were found in the Self-help Group.

Relating a second measure of body articulation, the Carlson Body Disturbance Scale (maximum 99) to the locus of control measures resulted in no significant correlations in the total sample or the Self-help and Personality groups separately. For the Sex Education Group, the relationships between the Body Disturbance Scale and the I-E Personal ($r = -.41$, $p < .10$) and I-E total ($r = -.41$, $p < .10$) Scales approach, but do not achieve conventional statistical significance levels. The direction of these correlations is <u>opposite</u> to that predicted, suggesting an association between high body disturbance and internality.

The third method of testing Hypothesis 1 explored the relationship of the Witkin Sophistication-of-body-concept Scale (maximum 15) to the I-E Scales. No significant relationships or suggestive trends were found in any of the groups for these variables.

TABLE 1

Averaged Pre-post Correlations Between Measures for Total Sample (N=77)

	World	Pers.	I-E Total	Tenn.	Carlson	Witkin	Swenson
I-E World	1.0	.23*	.59**	.20	-.05	.01	.09
I-E Pers.		.50	.63***	-.34**	0	-.02	.03
I-E Total			.74	-.18	0	.03	.04
Tenn. Phys. Self				1.0	.08	0	-.06
Carlson Body Dist.					1.0	.32**	-.30**
Witkin Soph.-of-body-conc.						1.0	-.38***
Swenson Sex. Diff.							.41
$p <$	.10	.05*	.02	.01**	.001***		
r =	.19	.23	.27	.30	.38		

Note: Tables 1-4 include items not clustered, hence correlation averaging was used. These clusters are not corrected for attenuation. Diagonals are estimates of the reliability of these "created" clusters. Actual cluster diagonals are 1.0.

TABLE 2

Averaged Pre-post Correlations Between Measures for Self-help Group (N=20)

	World	Pers.	I-E Total	Tenn.	Carlson	Witkin	Swenson
I-E World	1.0	0	.34	.33	.02	-.13	-.06
I-E Pers.		.53	.66**	-.30	.19	.02	-.02
I-E Total			.90	-.31	.25	.03	.02
Tenn. Phys. Self				1.0	.36	-.14	-.29
Carlson Body Dist.					1.0	.19	-.22
Witkin Soph.-of-body-conc.						1.0	-.08
Swenson Sex. Diff.							.05
	p <	.10	.05*	.02	.01**	.001***	
	r =	.38	.44	.52	.56	.68	

TABLE 3

Averaged Pre-post Correlations Between Measures for Sex Education Group (N=22)

	World	Pers.	I-E Total	Tenn.	Carlson	Witkin	Swenson
I-E World	.36	.21	.35	-.04	-.12	.03	-.05
I-E Pers.		.67	.78***	-.41	-.41	-.34	.14
I-E Total			.72	-.38	-.41	-.29	.21
Tenn. Phys. Self				.65	.29	.20	-.11
Carlson Body Dist.					1.0	.67***	-.49*
Witkin Soph.-of-body-conc.						1.0	-.53*
Swenson Sex. Diff.							.53
$p <$	.10	.05*	.02	.01**	.001***		
$r =$	.36	.42	.49	.54	.65		

TABLE 4

Averaged Pre-post Correlations Between Measures for Personality Group (N=35)

	World	Pers.	I-E Total	Tenn.	Carlson	Witkin	Swenson
I-E World	1.0	.35*	.77***	.14	-.02	.03	.20
I-E Pers.		.37	.53**	-.33	.14	.26	-.02
I-E Total			.68	-.04	.08	.26	-.05
Tenn. Phys. Self				1.0	-.17	-.04	.10
Carlson Body Dist.					.53	.09	-.16
Witkin Soph.-of-body-conc.						1.0	-.47**
Swenson Sex. Diff.							.52

$p <$	.10	.05*	.02	.01**	.001***
r =	.30	.35	.41	.45	.55

Although the correlation of the Tennessee Scale and the I-E Personal Subscale suggests a relationship between body autonomy and feelings of control in the personal life sphere, the overall results do not offer clear support for the hypothesis. It is also evident from the above data that the I-E World Subtest taps a different dimension than does the I-E Personal Subtest or the I-E Test as a whole. The World measures operated with different magnitude and direction in regard to the body articulation scales, phenomena which offer support to previous research suggesting the locus of control construct to be multi-dimensional.

Hypothesis 2:

External locus of control will be positively correlated with the degree of sexual differentiation.

No significant relationships or trends between the I-E World, Personal and Total measures and the Swenson Sexual Differentiation Scale (maximum score 5) were found in any of the samples. Thus, the data do not support Hypothesis 2.

Hypothesis 3:

The degree of body articulation will be negatively correlated with the degree of sexual differentiation.

There were no significant relationships between the Tennessee Physical Self Scale and the Swenson Sexual Differentiation Scale in any of the samples.

In both the total sample ($r = -.30$, $p < .01$) and the Sex Education Group ($r = -.49$, $p < .02$), the Carlson Body Disturbance Scale demonstrated a significant relationship with the Swenson Scale (Tables 1 and 3). These correlations are in a direction opposite to that predicted.

The Witkin Sophistication-of-body-concept Scale also showed results opposite to the hypothesis in the total sample ($r = -.38$, $p < .001$) and the Sex Education ($r = -.53$, $p < .02$) and Personality ($r = -.47$, $p < .01$) groups (Tables 1, 3 and 4).

The general results thus indicate that, contrary to the hypothesis, high sexual differentiation is associated with high body sophistication and low body disturbance.

Hypotheses 4, 5 and 6 are predictions of the "dynamic" relationships existing among the variables as functions of the treatment modes. In each summary, the analysis of variance results will be presented first, followed by supplementary analyses derived from the cluster analysis.

Hypothesis 4:

> Significant positive changes in body articulation will occur for all groups with the magnitude of shift occurring in the following descending order--Self-help Group, Sex Education Group and Personality Group.

No significant results were found on the Tennessee Physical Self Scale, the Carlson Body Disturbance Scale or the Witkin Sophistication-of-body-concept Scale using analyses of variance (Table 5; complete summaries--Appendix B, Tables 2-4).

Supplementary analysis of the Tennessee Scale showed that the Sex Education Group significantly increased ($t(21) = 1.93$, $p < .05$) in body acceptance (Table 6). Screening for differences between the groups by the correlation of the Order variable with the pre-post difference scores confirmed the above finding of no differences between groups (Table 7).

TABLE 5

Summary of Analyses of Variance
on Body Articulation Measures

TEST	df	F	P
Tennessee Physical Self Scale	2,74	1.031	.362
Carlson Body Disturbance Scale	2,74	.263	.769
Witkin Sophistication-of-body-concept Scale	2,74	2.886	.062

TABLE 6

Pre-post Changes on
Tennessee Physical Self Scale

Group	$\bar{X}_1$	$\bar{X}_2$	SD_1	SD_2	$r_{1,2}$	$\bar{X}_2-\bar{X}_1$	df	t	p
Self-help	65.35	66.50	8.55	8.35	.85	1.15	19	1.11	
Sex Education	66.59	68.46	5.30	5.51	.65	1.87	21	1.93	.05
Personality	66.51	66.29	7.88	8.61	.71	-.22	34	.21	

TABLE 7

Correlation of Order and
Tennessee Physical Self Scale
Pre-post Differences

Tennessee Scale Pre-post Difference	ORDER		
	1	2	3
	-.12	.16	-.05

p <	.10	.05*	.02	.01**	.001***
r =	.19	.23	.27	.30	.38

The t-tests on pre-post scores of the Carlson Scale showed no significant changes for any of the groups. The Self-help Group demonstrated a trend ($t(19) = 1.87$, $p < .10$) in a direction opposite to that predicted (Table 8).

The Witkin Scale showed no significant pre-post changes for any of the groups (Table 9).

Reviewing the above data, the only support for Hypothesis 4 is the positive shift of the Sex Education Group as measured by the Tennessee Physical Self Scale and this effect was determined to be not significantly different from the shifts of the other groups.

Hypothesis 5:

> Significant pre-post decreases in externality will occur for all groups with the magnitude of shift occurring in the following descending order--Self-help Group, Sex Education Group and Personality Group.

No significant results were found in the analyses of variance of the I-E World, Personal and Total measures (Table 10; complete summaries--Appendix B, Tables 5-7).

Supplementary tests of the locus of control measures also showed that, although the shifts are generally in the predicted direction, none of the differences attains significance (Tables 11, 12 and 13).

Hypothesis 6:

> Significant decreases in sexual differentiation will occur for all groups with the magnitude of shift occurring in the following descending order--Self-help Group, Sex Education Group and Personality Group.

The Swenson Sexual Differentiation Scale indicated no significant pre-post differences ($F(2,74) = .195$, $p = .824$; complete summary--Appendix B, Table 8).

TABLE 8

Pre-post Changes on
Carlson Body Disturbance Scale

Group	$\bar{X}_1$	$\bar{X}_2$	SD_1	SD_2	$r_{1,2}$	$\bar{X}_2-\bar{X}_1$	df	t	p
Self-help	32.90	34.55	9.03	9.03	.57	1.65	19	1.87	.10
Sex Education	32.96	34.00	8.16	8.79	.74	1.04	21	1.31	
Personality	32.20	34.77	7.68	8.49	.47	2.57	34	1.41	

TABLE 9

Pre-post Changes on
Witkin Sophistication-of-body-concept Scale

Group	$\bar{X}_1$	$\bar{X}_2$	SD_1	SD_2	$r_{1,2}$	$\bar{X}_2-\bar{X}_1$	df	t	p
Self-help	8.10	8.10	3.13	3.35	.88	0	19	-	
Sex Education	8.09	9.55	3.67	3.79	.84	1.46	21	.45	
Personality	7.71	8.97	3.13	3.76	.78	1.26	34	.40	

TABLE 10

Summary of Analyses of Variance
on Locus of Control Measures

TEST	df	F	p
I-E World Subtest	2,74	1.35	.265
I-E Personal Subtest	2,74	.07	.933
I-E Total Scale	2,74	.46	.636

TABLE 11

Pre-post Changes on
I-E World Subtest

Group	$\bar{X}_1$	$\bar{X}_2$	SD_1	SD_2	$r_{1,2}$	$\bar{X}_2-\bar{X}_1$	df	t	p
Self-help	2.55	2.05	1.43	1.50	.78	-.50	19	.22	
Sex Education	3.09	3.27	1.28	1.14	.36	.18	21	.29	
Personality	3.03	2.91	1.46	1.76	.61	-.12	34	.25	

TABLE 12

Pre-post Changes on
I-E Personal Subtest

Group	$\bar{X}_1$	$\bar{X}_2$	SD_1	SD_2	$r_{1,2}$	$\bar{X}_2-\bar{X}_1$	df	t	p
Self-help	2.05	1.90	1.72	1.61	.53	-.15	19	.36	
Sex Education	2.18	1.96	1.67	1.55	.67	-.22	21	.28	
Personality	2.09	1.77	1.38	1.57	.37	-.32	34	.28	

TABLE 13

Pre-post Changes on
I-E Total Scale

Group	$\bar{X}_1$	$\bar{X}_2$	SD_1	SD_2	$r_{1,2}$	$\bar{X}_2-\bar{X}_1$	df	t	p
Self-help	11.95	11.70	3.49	4.28	.90	-.25	19	.43	
Sex Education	12.14	12.32	3.63	3.78	.72	.18	21	.59	
Personality	11.89	11.26	3.88	5.02	.68	-.63	34	.63	

The t-tests on changes in the Swenson Scale showed the shifts to be in the predicted direction but below statistical significance (Table 14).

As a supplementary study of the sexual differentiation issue, the sex of the pre- and post-test first drawings was investigated. Item 14 of the Carlson Body Disturbance Scale includes this rating and was expanded to record male, female and indeterminate (ambiguous or no sexual defining characteristics) sex. According to traditional projective theory (Machover, 1949), an individual's response to the instruction "Draw a Person" reflects the degree of same-sex sexual identification. More recent research has shown, however, that normal females draw twice as many other-sex figures and twice as many undifferentiated drawings as males (Feinberg, 1972; Gravitz, 1966). A sex-role socialization frame of reference which considers the traditionally higher status of males may be a more valid approach to this issue.

The sex and distribution of pre-post change of the first drawings were examined in the three treatment groups (Table 15). Though a chi-square test was inappropriate due to the low cell frequencies, computation of the proportion of Ss who shifted in any way did permit analysis. The Sex Education (9/22, 41%) and Personality (13/35, 40%) groups do not differ from each other in incidence of change, but the Self-help Group (13/20, 65%) does differ significantly from the other two ($z = 2.27$, $p < .03$ versus the Sex Education Group; $z = 2.72$, $p < .01$ versus the Personality Group). This evidence of greater change in the Self-help Group is further supported by the pre-post test coefficients for the Swenson Sexual Differentiation Scale in the three groups: Self-help

TABLE 14

Pre-Post Changes on
Swenson Sexual Differentiation Scale

Group	$\bar{X}_1$	$\bar{X}_2$	SD_1	SD_2	$r_{1,2}$	$\bar{X}_2-\bar{X}_1$	df	t	p
Self-help	2.70	2.55	.95	1.28	.05	-.15	19	.35	
Sex Education	3.09	2.73	1.24	1.14	.53	-.36	21	.25	
Personality	2.89	2.71	1.21	1.03	.52	-.18	34	.19	

r = .05; Sex Education r = .53 ($p < .02$); Personality r = .52 ($p < .01$).

There are additional interesting patterns in the distribution of the change in drawings (Table 15). The Sex Education and Personality groups are fairly similar in their pre-test category percentages showing approximately equal proportions of male and female drawings. There is a tendency to shift to female drawings away from male figures. The Self-help Group, however, began with a high proportion of female drawings which decreased greatly and resulted in an increase in male figures. The post-proportions of the Sex Education Group strongly resemble the pre-percentages of the Self-help Group. Placing these results in the context of a sex-role socialization model, the Self-help Group appears to have been influenced by increased awareness of male-oriented societal values which then promoted "other-sex identification." The Sex Education Group and, to a lesser degree, the Personality Group perhaps participated in experiences which focused on intrapersonal processes enhancing the female self-concept and facilitating "same-sex identification."

Hypotheses 7 and 8 state predictions of pre-post changes based on the theoretical model of increases in body articulation leading to decreases in externality and resulting in decreases in sexual differentiation.

Hypothesis 7:

Subjects who show increased body articulation will show decreased externality.

There were significant relationships between pre-post changes on the Tennessee Physical Self Scale and those on the I-E Personal ($r = -.24$, $p < .05$) and I-E Total ($r = -.25$, $p < .05$) in the total sample (Table 16). However, supplementary chi-square analyses of these data

TABLE 15

Distribution of Pre-post Changes
in Sex of First Drawing

	Self-help Post					Sex Education Post					Personality Post				
Pre	M	I	F	N		M	I	F	N		M	I	F	N	
Male	0	1	1	2	10%	2	2	6	10	45%	6	5	6	17	49%
Indet.	1	0	2	3	15%	0	1	0	1	5%	0	0	1	1	2%
Female	5	3	7	15	75%	1	0	10	11	50%	2	0	15	17	49%
	6	4	10	20		3	3	16	22		8	5	22	35	
	30%	20%	50%			13.5%	13.5%	73%			23%	14%	63%		

TABLE 16

Correlations of Pre-Post Changes
on Tennessee Physical Self Scale
with Locus of Control Changes for All Samples

Group	Tenn./I-E World	Tenn./I-E Personal	Tenn./I-E Total
Total	-.19	-.24*	-.25*
Self-help	.21	-.30	-.15
Sex Education	-.20	-.21	-.25
Personality	-.32	-.25	-.31

*$p < .05$

were not significant. None of the correlations for the separate groups attains significance but the Personality Group shows some association of the Tennessee with the I-E World ($r = -.32$, $p < .10$) and the I-E Total ($r = -.31$, $p < .10$). The Tennessee and the I-E World also demonstrated a trend in the total sample ($r = -.19$, $p < .10$).

Contrary to prediction, the significant relationships of changes on the Carlson Body Disturbance Scale with the I-E Personal Subtest changes in the total sample ($r = -.25$, $p < .05$) and the Personality Group ($r = -.37$, $p < .05$) associate decreases in externality with increases in body disturbance (Table 17). Chi-square analyses were not significant.

The significant relationship of changes on the Witkin Sophistication-of-body-concept Scale and the I-E World changes for the total sample ($r = .26$, $p < .05$) is consistent with the hypothesis (Table 18). The chi-square analysis was not significant.

Hypothesis 8:

Subjects who show decreased externality will show decreased sexual differentiation.

No support was found for this hypothesis relating changes on the locus of control measures to changes on the Swenson Sexual Differentiation Scale (Table 19).

Self-help Health Group Questionnaire

To obtain more direct information about the experience of participating in a Self-help Health Group, a questionnaire was administered to each Self-help subject following the post-testing (Appendix A).

Questions 1 and 2 requested numerical and descriptive assessments of the value of Self-help. Based on a 7-point scale, the average

TABLE 17

Correlations of Pre-post Changes
on Carlson Body Disturbance Scale
with Locus of Control Changes for All Samples

Group	Carls./I-E World	Carls./I-E Personal	Carls./I-E Total
Total	.17	-.25*	-.11
Self-help	.33	-.22	-.05
Sex Education	.22	.04	-.06
Personality	.11	-.37*	-.13

*$p < .05$

TABLE 18

Correlations of Pre-post Changes
on Witkin Sophistication-of-body-concept Scale
with Locus of Control Changes for All Samples

Group	Witk./I-E World	Witk./I-E Personal	Witk./I-E Total
Total	.26*	-.01	.08
Self-help	.29	.02	.31
Sex Education	.22	-.01	.26
Personality	.22	-.01	-.03

*$p < .05$

TABLE 19

Correlations of Pre-post Changes
on Swenson Sexual Differentiation Scale
with Locus of Control Changes for All Samples

Group	Swens./I-E World	Swens./I-E Personal	Swens./I-E Total
Total	-.18	.12	-.08
Self-help	-.05	-.05	-.01
Sex Education	-.28	.25	-.32
Personality	-.19	.19	0

rating ($\bar{x}$=5.85, SD=.81) indicated a high degree of perceived usefulness. The descriptive assessments were generally extremely positive. They typically focused on the opportunity to meet unselfconsciously with other women in a feeling of "sisterhood" to learn about one's body and break down the "forbidden," "mysterious" "taboo" aura surrounding the sexual body. Several women stated that it made them aware of the medical problems which women face and the power they had to control their own bodies. Frequent comments noted increased self-confidence and increased acceptance of and respect for one's body, especially as a result of the pelvic self-examination procedure. Limitations which were noted included disappointment because most of the women were single, middle-class, and childless which tended to restrict the topic interest range to issues such as birth control, abortion and self-examination. Suggestions for improvement called for a wider spectrum of subjects, such as the politics of childbirth and health care for lower-class women, and for opening meetings to men for discussion of sex-roles.

Question 3 called for evaluation of plans to continue participation. Ten women answered affirmatively. Asked for reasons for future possible discontinuance, they stated time conflicts, geographical moves and other external events. One woman stated that self-help was really a life-long process. Of the seven women who answered negatively, several stated that the sessions had covered the topics in which they were interested and several stated time or moving conflicts. One woman described a felt lack of privacy and another expressed the idea of a limited life span to such a group unless it expanded to a clinic. Of the three indeterminate responses, one noted work schedule conflicts,

another was conditional on the nature of future topics, and the third was due to the fact that the group had been temporarily discontinued.

Question 4 dealt with the number of meetings attended. This data proved to be extremely unreliable for several reasons. It was based on the subject's own recall and most subjects indicated their doubts about their own estimates or stated a range. Others wrote comments such as being filled in by friends who had attended missed meetings. In general, the average appeared to be 6 to 7 meetings out of 10 possible.

Question 5 asked for a list of major interests or activities in order to obtain background descriptive information about this subject population. Over half of those responding indicated major interest in the women's movement, aspects of Self-help, and various social causes. In general, the responses indicated that most of the women had a wide variety of interests with frequent emphasis on sports, reading, the arts, and their careers. Responses showed a range from parachuting to poetry, motorcycles to modern dance.

Question 6 asked for comments on any changes which had occurred in the subject as a result of participating in the Self-help Group. The changes which were reported were generally extremely favorable. Frequent themes were increased self-confidence and body acceptance. One subject stated, "I feel more sure of myself, more in control of my body and consequently my life." Other responses were "fewer lurking fears of mysterious diseases," "more like they (sexual organs) are an integrated part, like any other part of my body," "more right to control and

knowledge of my body when dealing with doctors, dentists, etc.," and "much more relaxed and a lot freer during love-making (without fear of injury from penetration)." Some subjects commented on the friends they had made in the group and their increased awareness of the position of women in general.

Question 7 called for numerical ratings on a 7-point scale of the changes which had occurred on five factors over the 10-week group involvement. These results indicate shifts in a positive direction:

1. Self-confidence $\bar{x} = 4.95$ SD = .94
2. Acceptance of body $\bar{x} = 5.35$ SD = .88
3. Liking of body $\bar{x} = 5.30$ SD = .80
4. Knowledge of body functioning $\bar{x} = 5.35$ SD = .93
5. Identity defined by other people - not analyzed because the meaning proved to be unclear to practically all Ss.

Question 8, investigating life changes during the 10-week period which were not directly associated with Self-help, elicited a broad range of responses--engagements, the breaking off of "emotionally debilitating" relationships, new jobs, acceptance to graduate school, and travel. A frequent theme was the intensified exploration of current and new relationships. Overall, these responses suggested that this sample was composed of women who were particularly sensitive to issues such as individual growth, feelings, freedom, openness and goal-oriented planning.

CHAPTER IV

DISCUSSION

The data from this study highlight the complex nature of the relationships between locus of control, body articulation and sexual differentiation in women and suggest directions for further research. A brief summary of results of special interest is followed by discussion of issues meriting further clarification.

Summary of results

There was some evidence that changes in body autonomy were related to changes in feelings of general autonomy. Increased body articulation as measured by the Tennessee Physical Self Scale was associated with decreased externality on the I-E Personal and I-E Total Scales for the total sample. Also, increased body concept sophistication on the Witkin Scale was related to decreased externality on the I-E World for the total sample. However, increases in body disturbance scores on the Carlson Scale were related to decreases in externality on the I-E Personal Scale for the total sample and Personality Group.

Assessment of the "static" relationships among the variables indicated that high body articulation is associated with feelings of control in the personal sphere. For the total sample, there was a relationship between reports of positive body attitudes as measured by the Tennessee Physical Self Scale and internality on the I-E Personal Scale.

High body articulation as measured by projective techniques was also found to be associated with high sexual differentiation. Swenson Sexual Differentiation Scale scores were inversely related to scores on the Carlson Body Disturbance Scale in the total sample and Sex Education Group as well as to Witkin Sophistication-of-body-concept Scale scores in the total sample, Sex Education Group and Personality Group. Thus, individuals with relatively integrated body images and minimal body conflict emphasized anatomical and secondary physical appearance differences between the sexes.

Evaluation of treatment effects indicated that self-reports of body attitudes can be influenced by structured, informational programs. The Sex Education Group had increased body acceptance as measured by the Tennessee Physical Self Scale.

Analysis of the sex of first drawings suggested that the Self-help Group may have been influenced by processes emphasizing ways in which male-oriented values affect women while, to a lesser extent, the Sex Education and Personality groups were exposed to experiences which focused more on self-affirmation.

Locus of control issues

The above statistically significant results, as well as the non-significant trends described earlier, offer support that the I-E construct is multidimensional. Consistent with previous I-E factor analytic research, the Personal and World factors frequently operated with different magnitude and direction from each other and from the I-E Total. Thus, the inter-correlations of the Total Scale with other measures could result in spuriously high or low coefficients, depending on the

particular factor loadings. In general, the Personal factor seemed the most sensitive to the dynamics underlying assumptions about body articulation as measured by each of the three relevant tests. An individual may need to acquire conscious feelings of control in the personal sphere before generalizing to broader world spheres of influence. The most immediate personal environment involves the health and perceived control of one's body.

The evidence suggests that locus of control may be more sensitive to conscious body attitudes than to unconscious dynamics of body-image. The results of this study are consistent with those of Carlson et al. (1971) who used a psychiatric population and found no relationship between total I-E and body articulation as measured by the Carlson and Witkin figure drawing scoring methods. However, these investigators did not examine I-E subscales and did not use any self-report body attitude techniques such as the Tennessee. Certainly, future studies of this type should aim for finer discrimination of I-E dimensions such as through the use of newer test forms which differentiate several factors (Collins, 1974). I-E assessment via unstructured techniques such as TAT stories (Dies, 1968) might also clarify the relationship between locus of control and conscious and unconscious body articulation.

Levels of consciousness

Frequent discrepancies occurred between the results from the self-report Tennessee measure of body articulation and the projective Draw-A-Person procedures. This phenomenon was particularly evident with the Carlson Body Disturbance Scale for which results often were non-significant or opposite to the effects for the Tennessee Scale.

Feinberg (1972) reported a similar pattern of changes in overt attitudes toward sex guilt following a human sexuality course similar to the one used in the present study. The Draw-A-Person measures of psychosexual conflict, however, showed no change. Feinberg speculated that the course was able to affect the part of personality that is immediately accessible to conscious report but that it was difficult to change the stable and underlying personality patterns (presumably tapped by the projectives) using didactic methods over a period of only 10 weeks. Maloney and Payne (1969) questioned the validity of the Draw-A-Person Test as a measure of body-image when it failed to reflect changes which were observed on two physical tests of body articulation following sensory-motor training of mental retardates. These instances of contradictory results suggest that the various tests may be tapping different sources of method variance as well as different phenomena.

Viewed from a "levels of consciousness" approach, it appears that the subjects in the present study, as perhaps in Feinberg's study, may have been consciously reporting a positive change in body attitudes while unconsciously experiencing an increase in body conflict. Because sexuality is a sensitive subject for most individuals, increases in anxiety would be expected and might be reflected in elevated body conflict scores. Schwartz (1973) noted that anxiety generated by sex guilt decreased retention of contraception lecture material. In addition, self-report measures are vulnerable to response sets such as social desirability. The Sex Education subjects may have wished to portray themselves as more liberal, as having more positive body attitudes, or less sex guilt (as in Feinberg's study), yet conflict remained on deeper

levels. The continued use of a battery of tests tapping different layers of dynamics is recommended to clarify differences resulting between and within levels. One specific example in further studies of women involved in sexuality programs where body awareness is heightened through learning self pelvic and breast examination would be the comparison of Boundary and Penetration variables with the Holtzman Inkblot Technique versus such scores on human figure drawings.

Related to the above methodological issues, the Tennessee Scale used in the present study may involve another source of possible variance. This test requires the endorsement of statements about one's physical health, appearance and sexuality. It could be interpreted as a measure of body acceptance. Although body acceptance is assumed to imply body articulation, the situation could exist in which an individual accepts a relatively unarticulated body, either because of a strong self-image developed in other ways or from defensiveness, denial or distortion. It may be easier to change to accepting and liking the given body status than to work toward improving body articulation. At the other extreme, an individual may have a relatively high level of body articulation yet have a negative or distorted body-image. This issue is worthy of a separate study, perhaps relating measures of defensiveness to body attitude scores. Another area for research is the distinction between accepting and liking one's body. These investigations would be consistent with a levels of consciousness approach to body articulation.

Sexual differentiation and psychological androgyny

The unexpected relationship of high sexual differentiation with

high body concept sophistication and low body disturbance raises several issues. The original hypotheses concerning these associations were based on Machover's (1954) theoretical and empirical work as well as the construct of psychological androgyny (Bem, 1974; 1975). Mature individuals were assumed to incorporate adaptive "feminine" and "masculine" features in their figure drawings and personalities. Machover states that a "struggle for sexual identification" is an important quality for self-fulfilling growth. This process involves the narcissistic incorporation of self-image enhancing traits from both sexes as opposed to the passive acceptance of conventional definitions of sexual characteristics. These psychological qualities are assumed to be reflected by various indicators on human figure drawings. Machover found that the more autonomous women in the Witkin et al. (1954) study often included "masculine" features in their drawings and the more autonomous men displayed a large number of "feminine" items in their drawings. These features referred to body proportions, superficial aspects of clothing and accessories and items such as a sensuous mouth on the male self-sex figure.

Several sources of measurement error, however, raise doubts about the reliability of the correlations of the body articulation and sexual differentiation scales used in the present study. The Carlson and Witkin Scales each incorporate a sexual differentiation item in abbreviated form within their total score. Thus, the correlations with the Swenson Scale may be spuriously high because of the confounding of similar category definitions.

Another problem is the Swenson Scale's grouping of both primary

sexual differentiation features, such as anatomy, and secondary differentiation items, such as clothing or hair length, within the same global category. This created difficulty in determining which factor to emphasize when features in a pair of drawings "straddled" categories. It seems valuable to approach sexual differentiation as a multidimensional concept having at least three factors. The first factor would include measures of male-female differentiation based on primary anatomical features such as breast contours in the female. The second factor would measure male-female differentiation by the presence of items based on traditional norms of attire, hair style and other secondary appearance characteristics such as trousers on the male and a dress on the female. The third category would include Machover's "cross-sex" indicators--"masculine" features on the female drawing and "feminine" features on the male drawing. Examples might be pants or short hair on a female figure, sensuous mouth or detailed accessories on a male figure, body proportions or activities portrayed which do not conform to traditional concepts of "masculine" and "feminine" behavior. Hammer (1968) has recommended that evaluation of figure drawings be based on the pattern of signs with alertness to the under-, average-, and over-emphasis of indicators. Though a multidimensional approach to sexual differentiation seems essential, the interrelationships of the three factors must be considered to evaluate the overall pattern of the drawing.

Related to the above problems is a more basic conceptual issue, namely, the relationship between psychological androgyny and physical sexual differentiation. Caution must be observed in extrapolating

cross-sex personality factors from physical differentiation indicators, especially secondary sexual differentiation factors. This seems particularly important in contemporary student populations where both sexes have variable hair length, wear pants, etc. For example, a female figure portrayed as wearing slacks or having short hair may not necessarily reflect the rejection of "feminine" personality traits assumed in years past. Inclusion of Bem's (1974) Scale would be a valuable adjunct to evaluate changes in psychological sex-role adherence relative to sexual differentiation. The Bem Scale could be correlated with the three factors described earlier to determine, for example, if psychological androgyny can co-exist with, or implies a rejection of, traditional sexual differentiation (factor 2) or is correlated with "cross-sex" body-image indicators (factor 3).

Body articulation scoring procedures

Along with the earlier-described measurement problems in the Swenson Scale, another difficulty became apparent in the scoring procedures for the Draw-A-Person Test. Several of the subjects drew either stick figures or heads without bodies. The primary advantage of the projective nature of the instruction "Draw a person" is that the subject must determine the relevant features to include, omit, emphasize and minimize. From a clinical standpoint, the patterns of these characteristics can offer rich dynamic material; for example, the omission of the body with much head detailing may mean a cognitive "cerebralization" of experience, an obsessive-compulsive intellectualized quality with denial or rigid control of physical, sexual or aggressive impulses. For research purposes, however, uniform instructions to draw a non-stick,

complete figure may be advantageous to allow more useable data, more comprehensive scoring and less measurement error while still preserving some of the projective quality.

It should be noted that several studies have questioned the validity of the Carlson Scale as a measure of body disturbance with controversy surrounding the role of artistic quality, internal item consistency and the construct validity of sub-factors (Carlson et al., 1971; Carlson et al., 1973; Marais and Struempfer, 1965; Nichols and Struempfer, 1962; Struempfer and Nichols, 1962). Though widely used, further research is needed to clarify the above factors and, if necessary, revise this scale.

Swenson (1968) concluded from his review of the Draw-A-Person research that global ratings are the most reliable and most valid while individual signs are the least reliable and least valid. In the present study, the global Witkin Scale would thus be favored over the discrete item Carlson Scale. In view of the several sources of possible error in the figure drawing scoring procedures, however, the most reliable results would seem to be those derived from the more objective self-report tests--the Tennessee Physical Self Scale and the Rotter Locus of Control Scale. As discussed earlier, these measures have problems too.

Treatment effects

The results of the analyses evaluating treatment effects require examination of possible reasons for the increase in body articulation in the Sex Education Group and the non-significant change in the Self-help Group. Though the Personality class had some emphasis on body-image material, the non-significant results in this group are not unexpected.

The Human Sexuality class was a comprehensive, structured program of information for which the subjects were held responsible in the form of academic examinations. These didactic sessions as well as informal peer-facilitated discussion groups apparently had an impact on conscious attitudes as measured by the Tennessee Scale. The Self-help program was relatively unstructured and relied heavily on the individual's initiative in sharing problems, asking questions, and learning about one's body within and outside the session. Although there was active guidance and support from women who had participated in earlier groups and resources such as speakers, films and books, the focus was on self-initiated education--self-help. The individuals were not held accountable for the knowledge achieved and attendance was of a more voluntary nature than in the other two groups. There were also fewer sessions than in the other treatment groups; thus, the opportunity for assimilation of information was less than for the other samples. Since this was a fairly innovative program dealing with a sensitive subject, there may have been cognitive dissonance leading to resistance in accepting, retaining and expanding upon knowledge, yet overt approval and discussion. The data from the post-test questionnaire administered to this group indicated a high degree of perceived usefulness and positive changes in self-confidence, body acceptance, body liking and knowledge of body functioning. However, there may have been wide differences in the levels of stable body-image changes and in the levels of gain of factual knowledge among the individuals due to cognitive dissonance factors.

It may be helpful to distinguish between the actual factual knowledge gained and the emotional excitement generated by the concept

of Self-help, particularly associated with the pelvic self-examination. While the emotional reward was evident in the spontaneous comments and questionnaire responses, no objective test of acquired cognitive information was administered. Thus, the actual knowledge may have been less than initially presumed. Future research should incorporate an objective test of such changes. It is likely that the more information that was assimilated, the greater the body articulation and the more stable the changes in body-image over time.

A second aspect of the factor of increased emotionality in the Self-help Group is the fact that these women had been originally attracted to the group via an introductory workshop which included brief descriptions of discussion topics and a pelvic self-examination demonstration. Their initial scores may have reflected a temporary elevation in body attitude scores generated by anticipatory excitement, hope and general body awareness while the post scores reflected a stable increased score. The apparent net result would be no change. Presumably, this phenomenon would be much less likely or potent in the Sex Education and Personality Groups who were tested after introductory lectures of very different content and emotional tone.

Pre-post test intervals

The role of anxiety has been discussed as an important factor in sexual attitudes changes. Consistent with this view, Shofer (1973) suggested that the effect of a sex education course may be a slowly changing, cumulative phenomenon. Follow-up testing after an "incubation period" seems a valuable procedure for future research. This would allow for assimilation of information, personal testing of concepts and,

perhaps, diminution of anxiety. It might also result in a closer alignment of self-report and projective assessment measures.

A follow-up approach may be particularly relevant in clarifying theoretical issues for evaluating the "consciousness-raising" process characteristic of Women's Movement groups. Assertiveness-training classes, consciousness-raising "rap" groups and Self-help Health groups such as the one in the present study typify this process. The shift toward "other-sex identification" seen in the sex of the first drawings of the Self-help Group could have been the result of unconscious, or new conscious awareness of, "identification with the aggressor"--a defensive means of dealing with feelings of increased anxiety, helplessness and frustrated anger brought to the surface in the women's group. The probability of these feelings developing is heightened due to the one-sided focus of female health care. The dual awareness of male control and one's own previous or present lack of knowledge and low expectancy of internal control may be necessary steps toward freedom from male-oriented modes of viewing oneself and the rest of the world. As channels for change are learned and body autonomy is developed and tested, self-affirmation as a female might be expected to increase over time.

In contrast to the Self-help "consciousness-raising" process, the Sex Education and Personality Groups may have had other aims, emphasizing interpersonal and intrapersonal aspects of sexuality and body-image. These classes also probably used more direct, positive approaches. The female instructor for the Personality group and the female peer facilitators may have served as role models for self-affirmation in a context where both male and female sex-role concepts

were expanded and balanced. Follow-up testing might show more stable proportions of same-sex identification in the sex of first drawings in these two groups than in the Self-help Group.

Subject selection

The self-selection procedure of group formation poses methodological concerns. Though the three groups did not differ on the pre-test measures, the Self-help Group was significantly older than the other two groups (22.90 years versus 19.95 years, Sex Education; 20.08 years, Personality). This age difference may be related to such variables as sexual experience, history of gynecological health care, general suggestibility, and flexibility of attitude change. Other factors such as reasons for participating in the groups and in the present study also may have created a difference between the Self-help Group and the other groups. At the time this data was gathered, Self-help care was a fairly radical concept. At the present time, however, it is more commonly known, and structured Self-help classes are attracting large numbers of more typical student samples. Conditions may now be more conducive to better controlled research. For comparison in the present study, however, the Sex Education and Personality Groups may be a more homogeneous sample for evaluation of treatment effects.

Future research issues

Although the data showed that reports of conscious attitudes towards one's body were affected by cognitive experiences, the evidence is inconclusive regarding the role of increased body awareness on unconscious body dynamics, locus of control, and sexual differentiation. A

more fair test of these hypotheses would be a more active experiential treatment program involving body activity to induce strong somatic awareness. More direct sensory-motor experience would permit more kinesthetic and cognitive feedback of the immediate influence an individual's behavior has on the environment and the ways to manipulate reinforcement contingencies. In the area of sexuality, the active treatment strategies of some sexual dysfunction clinics seem consistent with this approach. On a more general level, exercise, dance or sports activities would promote this type of feedback and result in increased body autonomy. Dance therapy and bioenergetics analysis (Lowen, 1958; 1967) are based in part on this model. They use body movement and expression to explore the origins of constricted affect and other symptoms, and overcome inhibitions in general autonomy. Active physical behavior has long been discouraged for females and may play an important role in the inhibition of generalized feelings of autonomy. A valuable area for future research would be the testing of both males and females participating in active body-awareness experiences such as members of athletic teams. The results of the present study which link increases in body articulation to increases in internal locus of control encourage further work in this area.

Research with natural groups is important for the evaluation and improvement of ongoing change efforts in areas of personal and societal concern. This study has shown that a higher degree of measurement sophistication is essential to permit effective evaluation and extend the generality of theoretically relevant concepts. Suggestions for further such research in the areas of locus of control, body articulation and sexual differentiation have been outlined.

CHAPTER V

SUMMARY

The role of body articulation in the development of perceived causality, competence and autonomy has been discussed by many theorists. The present study was an exploratory investigation of a proposed model associating increased body articulation with decreased external locus of control and decreased sexual differentiation.

Two modes of sex education--a women's Self-help Health group and a human sexuality course--were used to study psychological changes in women relevant to the proposed model. These settings also provided the opportunity to assess the effectiveness of ongoing, naturally selected groups dealing with contemporary issues of important societal concern. Women enrolled in an Introductory Personality course which included brief coverage of similar content served as a comparison group.

A battery of projective and inventory tests was administered in a pre- post-test design. The present study focused on the following measures of body articulation, locus of control and sexual differentiation: Physical Self subtest of the Tennessee Self Concept Scale (Fitts, 1965); Draw-A-Person Test (Machover, 1949) scored via the Body Disturbance Scale (Carlson, Quinlan, Tucker and Harrow, 1973) and the Sophistication-of-body-concept Scale (Witkin, Dyk, Faterson and Goodenough, 1962); Internal-External Locus of Control Scale (Rotter, 1966); and the Sexual Differentiation Scale (Swenson, 1955) for figure drawings.

Results derived from hypotheses describing the "static" relationships between the variables showed that high body articulation on a self-report measure was significantly related to internal Personal subscale locus of control. No significant relationships were found between locus of control and sexual differentiation. Contrary to prediction, high body articulation was associated with high sexual differentiation.

Evaluation of "dynamic" hypotheses predicting treatment effects showed that conscious attitudes towards one's body can be influenced by structured, informational programs. The Sex Education group increased in self-report of body acceptance whereas the Self-help and Personality groups did not show significant changes. No treatment effects were observed on the locus of control and sexual differentiation measures.

Analysis of the sex of first drawings suggested that the Self-help Group may have been influenced by processes emphasizing ways in which male-oriented values affect women while, to a lesser extent, the Sex Education and Personality groups were exposed to experiences enhancing female self-concept.

Evaluation of overall treatment effects in the pooled group indicated that changes in body autonomy were related to changes in feelings of general autonomy. Increased body acceptance on the self-report Tennessee Scale was associated with decreased externality on the I-E Personal and Total measures. Increased body concept sophistication on the Witkin Scale was related to decreased externality on the I-E World Subscale. Differences were found, however, between conscious and unconscious body attitudes and between measures used to assess

unconscious dynamics. Opposite to prediction, increases in body disturbance measured by the Carlson Scale were related to decreases in I-E Personal externality.

In general, the results indicated modest support for the model linking body articulation and internality and provided further evidence of the multidimensional nature of the locus of control construct.

Suggestions for future research include the refinement of scales commonly used in figure drawing studies, the investigation of differences resulting from tests tapping different levels of psychodynamics, the use of improved locus of control scales, and discrimination between psychological androgyny and sexual differentiation. A 3-factor approach to sexual differentiation based on primary anatomical features, secondary physical appearance characteristics, and "cross-sex" indicators was recommended. More direct testing of the model is encouraged via intensive somatic programs to induce strong body awareness and kinesthetic feedback in males and females of all ages.

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APPENDICES

APPENDIX A

TESTS AND DRAW-A-PERSON TEST

SCORING PROCEDURES

1. Who Am I?
2. Internal-External Locus of Control Scale
3. Tennessee Self Concept Scale
4. Draw-A-Person Test Instructions
5. Fand Inventory of Feminine Values
6. Thematic Apperception Test Instructions
7. Self-help Health Group Questionnaire
8. Body Disturbance Scale
9. Sophistication-of-body-concept Scale
10. Sexual Differentiation Scale

Part A. Who Am I?

There are twenty numbered blanks below. Please write twenty different answers to the simple question, "Who am I?" in the blanks. Answer as if you were giving the answers to yourself, not to somebody else. Write the answers in the order that they occur to you. Don't worry about "logic" or "importance." Please do not take more than about 7 to 8 minutes for this part. Go along fairly fast.

I am:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

17.

18.

19

20.

Part B

Now, go back and rate each of the twenty things you listed about yourself for their importance to you in defining for yourself who you are. Sometimes people list the most important things first, sometimes last, sometimes they mix them in with things of lesser importance. Sometimes, people find that they have listed something that is not really so important after all. We are asking that you indicate their importance to you. Do not change any answers. Use the following scale, and write the appropriate number (from 1 to 5) to the left, in the left margin, of the attributes you listed.

1. Somewhat misleading, or not really characteristic of me, now that I think about it.

2. Not really particularly important, now that I think about it, though it is true of me.

3. Important in my view of myself.

4. Very important in my view of myself.

5. Extremely important in my view of myself.

This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you're concerned. Be sure to select the one you actually believe to be more true rather than the one you think you should choose or the one you would like to be true. This is a measure of personal belief: obviously there are no right or wrong answers.

Please answer these items carefully but do not spend too much time on any one item. Be sure to find an answer for every choice. Find the number of the item on the answer sheet and black-in the space under the number 1 or 2 which you choose as the statement more true.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned. Also try to respond to each item independently when making your choice: do not be influenced by your previous choices.

Record your answers on the IBM answer sheet. Please be sure your identification code is recorded.

_ = Externally scored item

P = Personal Subtest item

W = World Subtest item

1. a. Children get into trouble because their parents punish them too much.
   b. The trouble with most children nowadays is that their parents are too easy with them.

2. a. Many of the unhappy things in people's lives are partly due to bad luck.
   b. People's misfortunes result from the mistakes they make.

W 3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
   b. There will always be wars, no matter how hard people try to prevent them.

4. a. In the long run people get the respect they deserve in this world.
   b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

5. a. The idea that teachers are unfair to students is nonsense.
   b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. a. Without the right breaks one cannot be an effective leader.
   b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. a. No matter how hard you try some people just don't like you.
   b. People who can't get others to like them don't understand how to get along with others.

8. a. Heredity plays the major role in determining one's personality.
   b. It is one's experiences in life which determine what they're like.

P 9. a. I have often found that what is going to happen will happen.
   b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
   b. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
    b. Getting a good job depends mainly on being in the right place at the right time.

W 12. a. The average citizen can have an influence in government decisions.
    b. This world is run by the few people in power, and there is not much the little guy can do about it.

P 13. a. When I make plans, I am almost certain that I can make them work.
    b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

14. a. There are certain people who are just no good.
    b. There is some good in everybody.

P 15. a. In my case getting what I want has little or nothing to do with luck.
    b. Many times we might just as well decide what to do by flipping a coin.

16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
    b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.

W 17. a. As far as world affairs are concerned, most of us are victims of forces we can neither understand, nor control.
    b. By taking an active part in political and social affairs the people can control world events.

18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
    b. There really is no such thing as "luck."

19. a. One should always be willing to admit mistakes.
    b. It is usually best to cover up one's mistakes.

20. a. It is hard to know whether or not a person really likes you.
    b. How many friends you have depends upon how nice a person you are.

21. a. In the long run the bad things that happen to us are balanced by the good ones.
    b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

W 22. a. With enough effort we can wipe out political corruption.
    b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at the grades they give.
    b. There is a direct connection between how hard I study and the grades I get.

24. a. A good leader expects people to decide for themselves what they should do.
    b. A good leader makes it clear to everybody what their jobs are.

P 25. a. Many times I feel that I have little influence over the things that happen to me.
    b. It is impossible for me to believe that chance or luck plays an important role in my life.

26. a. People are lonely because they don't try to be friendly.
    b. There's not much use in trying too hard to please people, if they like you, they like you.

27. a. There is too much emphasis on athletics in high school.
    b. Team sports are an excellent way to build character.

P 28. a. What happens to me is my own doing.
    b. Sometimes I feel that I don't have enough control over the direction my life is taking.

W 29. a. Most of the time I can't understand why politicians behave the way they do.
    b. In the long run the people are responsible for bad government on a national as well as on a local level.

Instructions: Please respond to these items as if you were describing you to yourself. Read each item carefully, then select one of the five alternative responses. Do not omit any item. On your answer sheet put a black mark in the chosen response. If you want to change any answer after marking it, erase the old answer completely.

Responses *Physical Self Subscale

Completely false = 1 Mostly false = 2 Partly false and partly true = 3
Mostly true = 4 Completely true = 5

*1. I have a healthy body.
*2. I am an attractive person.
*3. I consider myself a sloppy person.
4. I am a decent sort of person.
5. I am an honest person.
6. I am a bad person.
7. I am a cheerful person.
8. I am a calm and easy-going person.
9. I am a nobody.
10. I have a family that would always help me in any kind of trouble.
11. I am a member of a happy family.
12. My friends have no confidence in me.
13. I am a friendly person.
14. I am popular with men.
15. I am not interested in what other people do.
16. I do not always tell the truth.
17. I get angry sometimes.
*18. I like to look nice and neat all the time.
*19. I am full of aches and pains.
*20. I am a sick person.
21. I am a religious person.
22. I am a moral failure.
23. I am a morally weak person.
24. I have a lot of self-control.
25. I am a hateful person.
26. I am losing my mind.
27. I am an important person to my friends and family.
28. I am not loved by my family.
29. I feel that my family doesn't trust me.
30. I am popular with women.
31. I am mad with the whole world.
32. I am hard to be friendly with.
33. Once in a while I think of things too bad to talk about.
34. Sometimes, when I am not feeling well, I am cross.
*35. I am neither too fat nor too thin.
*36. I like my looks just the way they are.
*37. I would like to change some parts of my body.
38. I am satisfied with my moral behavior.
39. I am satisfied with my relationship to God.
40. I ought to go to church more.
41. I am satisfied to be just what I am.
42. I am just as nice as I should be.
43. I despise myself.
44. I am satisfied with my family relationships.
45. I understand my family as well as I should.
46. I should trust my family more.
47. I am as sociable as I want to be.
48. I try to please others, but I don't overdo it.
49. I am no good at all from a social standpoint.
50. I do not like everyone I know.
51. Once in a while I laugh at a dirty joke.
*52. I am neither too tall nor too short.
*53. I don't feel as well as I should.

*54. I should have more sex appeal.
55. I am as religious as I want to be.
56. I wish I could be more trustworthy.
57. I shouldn't tell so many lies.
58. I am as smart as I want to be.
59. I am not the person I would like to be.
60. I wish I didn't give up as easily as I do.
61. I treat my parents as well as I should (use past tense if parents are deceased).
62. I am too sensitive to things my family say.
63. I should love my family more.
64. I am satisfied with the way I treat other people.
65. I should be more polite to others.
66. I ought to get along better with other people.
67. I gossip a little at times.
68. At times I feel like swearing.
*69. I take good care of myself physically.
*70. I try to be careful about my appearance.
*71. I often act like I am "all thumbs."
72. I am true to my religion in my everyday life.
73. I try to chage when I know I'm doing things that are wrong.
74. I sometimes do very bad things.
75. I can always take care of myself in any situation.
76. I take the blame for things without getting mad.
77. I do things without thinking about them first.
78. I try to play fair with my friends and family.
79. I take a real interest in my family.
80. I give in to my parents (use past tense for deceased parents).
81. I try to understand the other fellow's point of view.
82. I get along well with other people.
83. I do not forgive others easily.
84. I would rather win than lose in a game.
*85. I feel good most of the time.
*86. I do poorly in sports and games.
*87. I am a poor sleeper.
88. I do what is right most of the time.
89. I sometimes use unfair means to get ahead.
90. I have trouble doing the things that are right.
91. I solve my problems quite easily.
92. I change my mind a lot.
93. I try to run away from my problems.
94. I do my share of work at home.
95. I quarrel with my family.
96. I do not act like my family thinks I should.
97. I see good points in all the people I meet.
98. I do not feel at ease with other people.
99. I find it hard to talk with strangers.
100. Once in a while I put off until tomorrow what I ought to do today.

Drawings (3 pages attached)

Drawing 1: Draw a picture of a Person.

Drawing 2: Draw a picture of a Person of the opposite sex from the figure you drew in Picture 1.

Drawing 3: Draw a picture of Yourself.

Please number your drawings and write your student identification number on each one as well as on all answer sheets in this testing packet.

Please read the following instructions carefully. You are asked to indicate your opinion on each item below by selecting a number from one to five and then mark it on the answer sheet in the corresponding place. Use the following scale:

STRONGLY AGREE = 1 AGREE = 2 NO OPINION = 3 DISAGREE = 4 STRONGLY DISAGREE = 5

PLEASE RESPOND TO THESE STATEMENTS WITH YOUR TRUE OPINION. KEEP IN MIND THE WAY YOU REALLY ARE.

1. An ambitious and responsible husband does not like his wife to work.
2. I usually pay no attention to other people's feelings.
3. A woman who works cannot possibly be as good a mother as the one who stays home.
4. I would like to do something that everybody knows is important.
5. I try to do what I think people want me to do.
6. A woman has a conflict in what she has to do as a woman and what she wishes to do for herself.
7. A woman should get married even if the man does not measure up to all her hopes.
8. I sometimes feel that I must do everything myself, that I can accept nothing from others.
9. The needs of a family come before a woman's personal ambitions.
10. I am not sure that the joys of motherhood make up for the sacrifices.
11. I like listening to people better than talking.
12. I argue with people who try to give me orders.
13. Marriage and children should come first in a woman's life.
14. When I am with a group of people, I usually become the leader.
15. I worry about what people think of me.
16. I express my ideas strongly.
17. Single women need personal success, but all a married woman needs is her husband's success.
18. I would not get married if I had to give up what I really believe in order to get along with another person.
19. It is up to the woman to make a marriage work.
20. A working mother can get along as well with her children as can a mother who stays at home.
21. The greatest help a wife can give her husband is to encourage his progress.
22. It is unfair that women have to give up more than men in order to have a good marriage.
23. I can put myself in the background and work hard for a person I admire.
24. A wife's opinion should be as important as the husband's opinion.
25. My main interest is to raise normal, well-behaved children.
26. How I develop as a person is more important to me than what others think of me.
27. If we disagree, I would give in to my husband more often than I would expect him to give in to me.

28. The greatest satisfactions in life come from what you do yourself.
29. I would like to marry a man to whom I could really look up.
30. A woman should have interests outside the home.
31. I am sure that what a woman gains from marriage makes up for sacrifices.
32. Modern mothers should bring up their boys and girls to believe in absolute equal rights and freedoms for both sexes.
33. A woman's place is in the home.
34. I would rather be famous, admired and popular throughout the nation than have the constant affection of just one man.

Thematic Apperception Test Instructions

I am going to show you a series of cards, one card at a time. Each card has one picture on it and I would like you to make up a story about that picture. Keep in mind the following questions as you make up each story:

1. What is happening? Who are the people?

2. What has led up to this situation? That is, what has happened in the past?

3. What is being thought? What is wanted? By whom?

4. What will happen? What will be done?

Questionnaire

1. How valuable did you find the Self-Help Health Group to be?

   a. Please rate the value on the following scale

Waste of Time						Very Valuable
1	2	3	4	5	6	7

2. What are some of the reasons for your estimation of the value or lack of value of Self-Help?

3. Do you plan to continue participating Yes_____ No_____

   a. <u>If yes</u> - when you do discontinue, what do you think will be the reason?

   b. <u>If no</u> - why have you decided to discontinue?

4. How many meetings have you attended? _____

5. Please list your major interests or activities:

6. Please comment on any changes which have occurred to you as a result of participating in the Self-Help Health Group.

7. Please rate the type and amount of change, if any, which has occurred on the following factors in the past 10 weeks:

	Great Decrease 1	2	3	No Change 4	5	6	Great Increase 7
1. Self-Confidence							
2. Acceptance of body							
3. Liking of body							
4. Knowledge of body functioning							
5. Identity defined by other people							

8. Please comment briefly on any changes in your life which occurred during the past 10 weeks that might be relevant to personality change though not directly associated with the Self-Help Health Group:

Body Disturbance Scale

Scoring Items

Each item is scored for each drawing. The summary scores for the three scales are the sums of the items (unweighted).

Body Disturbance Items & Code

1. Erasures 0 = none 1 = erased (any erasure)

2. Transparency (such that figure defies laws of perspective as regards the masking of objects when they are behind others)
   a. Transparency is considered present only when there are overlapping parts--if parts are kept separate, even in "unrealistic" ways (e.g., hair does not really sit on top of head), transparency is considered not evident.
   b. Includes outline of head or shoulders showing through hair

   0 = none 1 = transparency

   Examples of + scoring: Drawings #1, 2, 5, 6, 7, 10, 14 (Drawings are in the back of this manual.)
   Examples of - scoring: 8, 9

3. Lack of major body part: head, trunk, limbs, one or both hands or feet, absence of all facial features (eyes, nose, mouth)
   a. If one or both arms are behind back and thus no hands are represented, do not score here since this is picked up in item #6.

   0 = none 1 = lack

3A. Lack of major body part:

1 = hands or feet 2 = facial features 3 = limbs 4 = trunk 5 = head

4. Nose indicated only by two nostril dots (include 1 dot)

   0 = no 1 = yes

5. Mouth indicated only by a single line

   0 = no 1 = yes

6. One or more arms behind back (if figure is in frontal view) or hand is in pocket

   0 = no 1 = yes

BD Scale

7. Very crude or peculiar clothing - no clothing
   a. Crude: no internal delineation (e.g., pocket, belt, creases, sashes, collar, etc.) or just belt or buttons alone
   b. Peculiar: depends on drive intrusions; semi-nude drawings (e.g., top half of figure has no indication of clothing while bottom half does--this is scored + even if the unclothed parts are not sexually defined)

   0 = appropriately clothed
   1 = crude
   2 = peculiar
   3 = no clothing
   3S = stick figure with no clothing

   Examples: crude: 8, 11; peculiar: 1, 12

8. Lack of breasts in the female figure

   0 = no 1 = yes

9. Shading of the body for perspective or filling in interior detail

   0 = no 1 = yes

   Examples of + scoring: Drawings #3, 6, 13

10. Lack of margins and delimiting lines in the figure (e.g., shirt or blouse cuffs, collar, hemline or pants cuffs)
    a. Nude figure scored on this item

    0 = no 1 = yes (2 of 3 missing)

    Examples of + scoring: Drawings #1, 4, 5, 10, 11, 12

11. Figure markedly off balance (whole figure deviates from vertical)
    a. When no feet are drawn (as in female figures with floor-length dresses), figure will be assumed to be balanced.
    b. Also figure will not be considered off-balance when an attempt at fore-shortening the feet has been made to indicate depth in the picture.

    Examples of + scoring: #11

    Examples of - scoring: #12, 13

BD Scale

12. Figure very small
    a. Not scored when figure is seated

    0 = no

    0 = less than ½ length of page

    0 = less than ¼ length of page (less than 3")

13. Markedly unusual shading or elaboration of crotch area
    a. Area darkly shaded compared to rest of figure or lines gone over several times or excessive erasure
    b. Mere indication of crotch is not scored here; must be emphasized

    0 = no 1 = yes

    Examples of + scoring: #5, 11, 13

    Examples of - scoring: #1, 7, 10

14. Opposite sex drawn first (score on 1st drawing only)

    0 = no 1 = yes

15. Overemphasis on any part of body (except sex parts)
    a. One part markedly out of proportion as compared to other body parts or one part considerably darker (more pencil pressure or repeated lines)

    0 = none 1 = head only 2 = other part

    Examples of "1" scoring: Drawings #1, 3, 4, 11, 12

    Examples of "2" scoring: Drawings #5, 6 (chest), 10 (ears)

16. Emphasis on sex parts
    a. Emphasis: darker lines, repetitious lines, excessive erasures and redoing, disproportionate size, greater detailing
    b. Very pointed breasts get score of "1"

    0 = no 1 = yes

    Examples of + scoring: #5, 10

    Examples of 0 scoring: #3

17. Geometrical forms (Circle, ellipse, rectangle, triangle, square) used to represent body

    0 = no 1 = yes

    Examples: #8

BD Scale

18. Incompletions and disconnections
    a. Incompletions - boundary lines (defining body or parts) not completed
    b. Disconnections - body parts not connected to body
    c. Score even minor incompletions and disconnections
    d. If both incomplete and disconnected parts are evident, score for highest category (i.e., more disturbance)

    Examples of incompletions: Drawings #6, 9, 10, 11

    Examples of disconnections: Drawings #2, 4, 7 (head), 8, 14

    0 = none 1 = incompletions 2 = disconnected parts

19. Distortions: minor, major, gross
    a. Minor - distortion or exaggerations of limbs or extremities or non-major parts of body
    b. Major - distortions of proportion (head; trunk; legs)
    c. Gross - misshapen, bizarre, unrecognizable

    0 = none 1 = minor 2 = major 3 = gross

    Examples of minor: Drawings #2, 7, 8, 13

    Examples of major: Drawings #1, 10, 12

    Examples of gross: Drawings #4, 5

20. Sexual differentiation
    a. Clearly differentiated (score: 0) - sexes differentiated by clothes, hair, and sexual features or at least two of these
    b. Poorly differentiated or some attempt made or questionable differentiation (score: 1) - sex recognizable but barely, one type of differentiation represented but only one (i.e., hair, clothes, sex features), or clothes of opposite sex (e.g., girl in pants) but otherwise differentiated; masculine or feminine features on opposite sex (e.g., broad muscular shoulders on otherwise differentiated female figures)
    c. No differentiation or clearly ambiguous (score: 2) - no attempt made at differentiation or characteristics of both sexes present without clear focus on one or other

BD Scale

0 = clearly differentiated

1 = poorly differentiated but some attempt made

2 = no differentiation or clearly ambiguous

Examples of "0" scores: Drawings #2, 6, 7, 9, 14

Examples of "1" scores: Drawings #1, 5, 10

Examples of "2" scores: Drawing #4

Sophistication-of-body-concept Scale

1. Most sophisticated drawings: These manifest high form level (e.g., waistline, hips, shoulders, chest or breasts, shaped or clothed limbs, etc.); appendages and details represented in proper relation to body outline, with some sophistication in mode of presentation; appropriate, even imaginative, detailing (e.g., successful profiling, as young girl in evening clothes, well-dressed man with cigarette, etc.).

2. Moderately sophisticated drawings: Drawings which show a definite attempt at role assignment (with regard to age, activity, occupation, etc.) through adequate detailing, shaping, clothing; with continuity of outline (i.e., integration of parts) attempted.

3. Drawings intermediate in level of sophistication: Drawings in which identification of sex is evident, attempts at shaping and a fair level of integration of parts are manifest and a minimum of detailing is present.

4. Moderately primitive drawings: Drawings which essentially still lack features of differentiation through form, identity, or detailing; however, these drawings show slightly more complexity in some respect (e.g., presence of one body part that is unusual in most primitive drawings, such as the neck).

5. Most primitive and infantile drawings: These manifest a very low level of form (ovals, rectangles, sticks stuck on to each other); no evidence of role or sex identity (same treatment of male and female with, at most, difference in hair treatment, no facial expression, little shaping or clothing).

Sexual Differentiation Scale

1. Little or no sexual differentiation. There is little or no difference between the two figures, and what difference exists between them does not particularly suggest sexual differentiation.

2. Poor sexual differentiation. Longer hair on the female than on the male. There may be a slight suggestion of difference in body contour and/or clothing.

3. Fair sexual differentiation. The female definitely has longer hair than the male. The female clearly has different body contour, with either rounded hips or breasts, or both present. There may be a suggestion of difference in the clothing of the pair.

4. Good sexual differentiation. The female has longer hair than the male. The female has body contour, the male has angular body contour. Breasts and/or hips present, with both usually present. There is a clear difference in clothing with the female wearing feminine apparel, although the apparel may be copied after that of the male, e.g., slacks. There may be the suggestion of differentiation in minor details, such as eyelashes or fuller lips on the female.

5. Excellent sexual differentiation. Female hair is longer than male hair, with definite feminine hair styling in the female. The male body has angular contour, the female body has rounded contour with both rounded hips and breasts present. The male wearing clothing that is definitely masculine, the female wearing clothing that is clearly feminine. Minor details, such as eyes, mouth, earrings, bracelets, etc., clearly appropriate for the sex of the figure on which they are drawn.

APPENDIX B

STATISTICAL RESULTS TABLES

TABLE 1

Means and Standard Deviations for All Groups on All Variables

Variable	Group							
	Self-help (N=20)		Sex Ed. (N=22)		Pers. (N=35)		Total (N=77)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Age	22.90	2.66	19.96	1.36	20.09	1.18	20.78	2.14
Years of education	15.50	1.25	14.59	.72	14.91	.94	14.97	1.03
I-E World Scale								
Pre test	2.55	1.43	3.89	1.28	3.03	1.46	2.92	1.42
Post test	2.05	1.50	3.27	1.14	2.91	1.76	2.79	1.61
Post-pre difference	-.50	.98	.18	1.37	-.11	1.45	-.13	1.34
I-E Personal Scale								
Pre test	2.05	1.72	2.18	1.67	2.09	1.38	2.10	1.56
Post test	1.90	1.51	1.96	1.55	1.77	1.57	1.86	1.58
Post-pre difference	-.15	1.62	-.23	1.31	-.31	1.67	-.25	1.56
I-E Total Scale								
Pre test	11.95	3.49	12.14	3.63	11.89	3.88	11.97	3.71
Post test	11.70	4.28	12.32	3.78	11.26	5.02	11.68	4.53
Post-pre difference	-.25	1.92	.18	2.77	-.63	3.72	-.30	3.09
Tennessee Physical Self Scale								
Pre test	65.35	8.55	66.59	5.30	66.51	7.88	66.23	7.45
Post test	66.50	8.35	68.46	5.51	66.29	8.61	66.96	7.84
Post-pre difference	1.15	4.70	1.86	4.55	-.23	6.32	.73	5.54
Body Disturbance Scale								
Drawing 1								
Pre test	11.70	3.23	11.14	3.05	10.91	2.81	11.18	3.01
Post test	11.65	3.72	11.50	2.99	12.06	3.28	11.79	3.33
Post-pre difference	-.05	3.56	.36	2.84	1.14	3.60	.61	3.43
Drawing 2								
Pre test	10.45	3.86	10.00	2.95	10.09	2.64	10.16	3.10
Post test	11.10	3.99	10.32	3.35	10.89	3.33	10.78	3.53
Post-pre difference	.65	3.88	.32	2.98	.80	3.13	.62	3.31

TABLE 1 (continued)

Means and Standard Deviations for All Groups on All Variables

Variable	Self-help		Sex Education		Personality		Total	
Drawing 3								
Pre test	10.75	3.53	11.82	3.38	11.49	3.29	11.39	3.40
Post test	11.80	3.22	12.18	3.11	11.83	3.16	11.92	3.17
Post-pre difference	1.05	4.48	.36	2.84	.34	3.19	.53	3.50
Total								
Pre test	32.90	9.03	32.96	8.16	32.20	7.68	32.60	8.19
Post test	34.55	9.03	34.00	8.79	34.77	8.49	34.49	8.72
Post-pre difference	1.65	8.34	1.05	6.12	2.57	8.34	1.90	7.80
Soph.-of-body-concept Scale								
Drawing 1								
Pre test	2.90	1.14	2.68	1.26	2.57	1.13	2.69	1.18
Post test	2.70	1.19	3.23	1.35	2.94	1.29	2.96	1.29
Post-pre difference	-.20	.75	.55	.84	.37	.90	.27	.89
Drawing 2								
Pre test	2.75	1.04	2.82	1.34	2.49	1.11	2.65	1.17
Post test	2.80	1.12	3.27	1.36	3.00	1.30	3.03	1.29
Post-pre difference	.05	.74	.46	.78	.51	.91	.38	.85
Drawing 3								
Pre test	2.45	1.20	2.59	1.23	2.66	1.07	2.58	1.16
Post test	2.60	1.24	3.05	1.22	3.03	1.32	2.92	1.29
Post-pre difference	.15	.91	.46	.78	.37	.83	.34	.85
Total								
Pre test	8.10	3.13	8.09	3.67	7.71	3.13	7.92	3.30
Post test	8.10	3.35	9.55	3.78	8.97	3.76	8.91	3.70
Post-pre difference	0	1.61	1.46	2.13	1.26	2.35	.99	2.20
Sexual Differentiation Scale								
Pre test	2.70	.95	3.09	1.24	2.89	1.21	2.90	1.17
Post test	2.55	1.28	2.73	1.14	2.71	1.03	2.68	1.13
Post-pre difference	-.15	1.56	-.36	1.15	.17	1.11	-.22	1.26

TABLE 2

Tennessee Physical Self Scale
Analysis of Variance Summary

Source	df	SS	MS	F	p
Between Groups	2	63.96	31.98	1.03	.362
Within Groups	74	2295.31	31.02		
Total	76	2359.27			

TABLE 3

Body Disturbance Scale
Analysis of Variance Summary

Source	df	SS	MS	F	p
Between Groups	2	33.09	16.55	.26	.769
Within Groups	74	4650.08	62.84		
Total	76	4683.17			

TABLE 4

Sophistication-of-body-concept Scale
Analysis of Variance Summary

Source	df	SS	MS	F	p
Between Groups	2	26.85	13.42	2.89	.062
Within Groups	74	344.14	4.65		
Total	76	370.99			

TABLE 5

I-E World Subtest
Analysis of Variance Summary

Source	df	SS	MS	F	p
Between Groups	2	4.89	2.44	1.35	.265
Within Groups	74	133.82	1.81		
Total	76	138.70			

TABLE 6

I-E Personal Subtest
Analysis of Variance Summary

Source	df	SS	MS	F	p
Between Groups	2	.36	.18	.07	.933
Within Groups	74	187.96	2.54		
Total	76	188.31			

TABLE 7

I-E Total Scale
Analysis of Variance Summary

Source	df	SS	MS	F	p
Between Groups	2	8.94	4.47	.46	.636
Within Groups	74	727.19	9.83		
Total	76	736.13			

TABLE 8

Sexual Differentiation Scale
Analysis of Variance Summary

Source	df	SS	MS	F	p
Between Groups	2	.63	.32	.20	.824
Within Groups	74	120.61	1.63		
Total	76	121.25			