THE RELATIONSHIP BETWEEN SELF-PERCEIVED SEX-ROLE IDENTIFICATION, RELEVANT CONCEPT MEANINGS, FEELINGS ABOUT BEING PREGNANT AND THE CHILDBIRTH PROCESS

by

JUDITH GREEN

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date

Gilbert Voyat PhD
Chairman of Examining Committee

5/17/79
date

Martin C. Hoffman
Executive Officer

Dr. Herbert Nechin

Dr. Louis Gerstman

Dr. Gilbert Voyat
Supervisory Committee

The City University of New York

Abstract

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Adviser: Professor Gilbert Voyat

The purpose of this study was to establish a relationship between various psychological factors assessed during pregnancy and physiological outcome of labor and delivery. Fifty-one Ss of varying age, ethnicity, income and employment status were obtained from four sources and administered a questionnaire consisting of questions regarding demographic information, health, and attitudinal factors, the BSRI, and semantic differential ratings of four relevant concepts: mother, pregnancy, childbirth, and baby. Following delivery, specified labor and delivery parameters were obtained and, on the basis of this data, Ss were assigned an outcome rating of I (no complications) or II (moderate and severe complications). Correlations of the psychological and obstetrical data were obtained and a predictive index was developed through regression analysis. Three of the four major hypotheses were confirmed. Self-perceived sex-role identification as measured by the BSRI was not related to obstetrical outcome. Ss reports of feeling

other than "happy" about their pregnancies during the last trimester and reports of health problems during pregnancy were positively correlated with poor outcome and contributed to the predictive index. Three semantic differential items, "pregnancy" - hard, "childbirth" - cruel, and "baby" - strong, were also positively correlated with poor outcome and contributed to the predictive index. It was concluded that certain psychological factors assessed during pregnancy are significantly related to the physiological course of labor and delivery.

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Chapter I

Introduction

The childbirth experience for each woman is a maturational crisis elaborated by a complex network of psychobiological factors. The purely biological factors such as estimated period of gestation, pelvic parameters, parity, maternal age and physical health, are readily known prior to the birth experience. The psychological meaning of the experience for each woman is not so readily known or attended to. It is itself comprised of an interweave of early memories and fantasies, now dormant, of her mother's and significant others' birth experiences, early conceptualizing through play, and her current, more active, memories, fantasies and notions about the birth process.

Its meaning also extends far beyond the birth process itself, since the end result of that process is a baby. For some women, the baby may be an emblem of femininity, proof that she is, indeed, a woman. For others, it may represent potency, an ability to produce. For others still, it may be someone to love or a means of finally being loved. For women giving birth for the first time, it is, in a sense, the birth of the mother in themselves and portends a change in the way they think, feel and live their lives. The birth experience will be infused with all that becoming a mother means to them. Since a mother isn't born in a social vacuum, her current situational factors will affect the meaning of the experience. If she is happily married, expecting a "planned" baby in financial security, the meaning of the experience will differ significantly from that of a

woman whose marriage is deteriorating and whose well-being is threatened by financial insecurity. For the woman who already has a child it may represent a joyful renewal of the mothering experience or, conversely, further entrapment.

Motherhood and womanhood, while certainly no longer inextricably intertwined as concepts, are still relatively close in meaning. Thus, it seems reasonable to assume that the way in which a woman experiences herself as a woman will have considerable implications for her impending motherhood and her role in the birth process.

All of these biological and psychological factors weave a fabric of experience for each woman. These experiences are similar in many respects, but with important differences. The psychological factors that may influence variations in the childbirth process are what interest us here.

This paper is based on the assumption that childbirth is a psychosomatic process that depends on the interplay of biological and psychological factors briefly stated above. How a pregnant woman sees herself as a woman and what being a mother means to her may be as crucial an influence on the birth process as parity or pelvic size. It is the intention of this study to look closely at how such psychological factors as self-perceived sex-role identification and the psychological meaning of concepts highly relevant to the process of childbirth are associated with its course. Situational and demographic variables, while controlled for, will not be included in the focus of this study.

Chapter II

History

The following review of the literature will focus on two major areas: 1) theories and studies that explore the psychology of childbirth, from a predominantly psychoanalytic point of view; and 2) empirical studies that explore childbirth as a psychosomatic process by inquiring into the association of psychological variables with quantifiable and specifiable dimensions of the childbirth process.

Psychology of Childbirth

In Freud's view (1965), a woman's goals, aspirations and strivings will be essentially masculine in character unless she has successfully negotiated two critical transitions: 1) the transfer of her preoedipal affection for her mother to her father, hallmarking the oedipal period; and 2) the attendant transfer of sensation from the clitoris to the vagina. If these crucial transitions do not take place, then even a woman's yearning for a child is seen as "masculine" since what she really yearns for, according to Freud, is a penis. If she has made these crucial transitions, then the "feminine" pregnant woman, rid of her desire for a penis, will be content with the unconscious fantasy of carrying and giving birth to her father's child. Thus, for Freud, a woman's primary motivation to have a child is an historically determined urge for a penis or to bear her father's child, depending on the direction of the oedipal resolution, towards "masculinity" or "femininity."

Horney (1967) took issue with Freud stating: "...the wish for a child may indeed draw considerable secondary reinforcement from the wish for a penis, but...the desire is primary and instinctually anchored deeply in the biological sphere." (p. 106) Horney's view negates the Freudian one of a child representing a compensatory substitute to the woman, for obtaining neither a penis nor her father as husband. For Horney, the basic wish for a child becomes an adult desire to bear and nurture life rather than a childish wish for retribution. She further notes that the "wish for a child fulfills all the conditions Freud himself has postulated for 'drives.'" (p.106)

Thompson (1961), in a more spirited criticism, states that Freud

> ...at no point in his work showed any recognition of the possibility of there being a female biologic function in its own right. He saw the woman primarily as the negative of the male. The most extreme example of this appears in his theory that woman accepts her ability to produce a child as a compensation for her lack of a penis. Childbearing is a sufficiently important biologic function to have value for its own sake. Surely, only a man could have thought of it in terms of compensation or consolation. (p. 232)

Erickson (1964) suggests that woman can and naturally does experience herself as a complete person of physiological integrity. Commenting on the Freudian notion of penis envy as a motivating force in women, Erickson said: "...it made of womanhood an ubiquitous compensation neurosis marked by a repetitious insistence on being 'restored.'" (p. 596) Rather than harboring a grudge over the missing penis, Erickson suggests women harbor an awareness of a "productive inner bodily space," and that the urge to realize its potential is

basic, adult and feminine. He further suggests:

> ...a shift of theoretical emphasis from the loss of an external organ to a sense of vital inner potential; from a hateful contempt of the mother to a solidarity with her and other women; from a 'passive' renunciation of male activity to the purposeful and competent activity of one endowed with ovaries and a uterus; and from a masochistic pleasure in pain to an ability to stand (and to understand) pain as a meaningful aspect of human experience in general, and of the feminine role in particular. (p. 594)

Erickson considered his view as stated here to be markedly similar to Helene Deutsch's "fully feminine" woman, recognizing that her descriptive language adhered to the more orthodox Freudian language of pathology.

Deutsch, undoubtedly, has had more to say, in depth, about women and childbirth than any other psychoanalytically oriented author to this day. Her position is generally and hostilely regarded as typifying an anachronistic Viennese orientation towards what is intrinsically female. While adhering to the traditional Freudian line in restating the inherently problematic psychosexual development of women, Deutsch goes on to explore areas of feminine functioning that Freud, one suspects in recognition of his own limitations, thought better left to the poets.

In a paper (1925) predating her volume on "Motherhood" by 20 years, Deutsch sets forth her early notion of the pregnancy-childbirth process. According to Deutsch this process begins at coitus and ends with the expulsion of the child: "...parturition constitutes for women the termination of the sexual act, which was only inaugurated by coitus..." (p. 173) This process is characterized throughout by the

woman's identification with her unborn child. Deutsch continues: "...the woman plays in coitus the part of mother and child simultaneously -- a relation which is continued in pregnancy, when one actually is both mother and child." The source of this intense identification is the unconscious where "carrying and being carried, giving birth and being born, are as identical as giving suck and sucking." (p. 171)

Deutsch also viewed the pregnancy-childbirth process as recapitulating psychosexual developmental phases in general and stamped by each woman's individual developmental traumata and fixations in particular. According to Deutsch, it begins with the incorporation of the penis in the vagina, analogous to and reminiscent of the infant's incorporation of the breast in the mouth. A woman's early oral development will influence the retention (incorporation) of the semen or its expulsion (spitting out). This oral influence is continued during the early months of pregnancy and intensified by early childhood fantasies of oral impregnation. "Morning sickness" is common during this period and its nausea, accompanied by occasional vomiting, is viewed by Deutsch and many subsequent investigators as being derived from the early oral ambivalent position and the unconscious wish to reject the fetus. Anal influences are activated by the increasing feelings of fullness and pressure as the fetus grows and pushes against the uterine cavity during the second trimester. The fetus is here equated with feces "owing to the child's position in the body as something belonging to that body and yet destined to be severed from it." (p.173)

According to Deutsch, the first fetal movements stimulate fantasies of phallic movement within the pregnant woman, thus activating derivatives of the phallic stage that then find expression in the unconscious identification of the fetus with a penis. Subsequent to these first movements, Deutsch suggests that the child begins to emerge in the psyche of the woman as a child, and is likened by her to the maternal or paternal ego-ideal. Commenting on the ambivalence necessitated by this recapitulation and its eventual resolution, Deutsch says:

> The original harmony of the primal state, inaugurated in the process of introjection during the sexual act, is soon disturbed by manifestations of ambivalence towards the child in the uterus. From this point of view parturition appears as the final result of a struggle which has long been raging....Every hostile impulse which has already been mobilized during pregnancy reaches its greatest intensity in this decisive battle. Finally the incorporated object is successfully expelled into the outside world. (p. 174)

Deutsch characterizes the birth process itself as "an orgy of masochistic pleasure" and views the woman's fear of death in childbirth as an adult cognitively mediated version of the anxiety attending her own birth trauma. She terms the birth process "a process of 'autonomy' analogous to ejaculation," in a seeming repetition of the Freudian compulsion of child=penis and autonomous=phallic.

In her later volume, "Motherhood," (1945) Deutsch states a somewhat less orthodox point of view:

> I do not think, however, that all girls consider the child a compensation for the anatomic inferiority, because during childhood and puberty something nonexistent cannot be a compensation, and during the reproductive phase the child acquires a new significance that springs from other sources. (p. 61)

Deutsch updates her view in thie volume to accommodate the childbirth process as a progressive as well as regressive experience. Moving toward the child and toward becoming a mother, while perhaps not as poignantly urgent to Deutsch as the woman's pull back through her own psychosexual developmental course, is nevertheless explored as a legitimate topic of analytic interest in its own right.

Deutsch postulates two responses to the progressive and regressive pulls of motherhood: ego-expansion or ego-impoverishment. She sees the shift of balance from one to the other as owing to the quality of the woman's identification with her unborn child and with her mother. She states:

> The ego of the pregnant woman must find a harmonious compromise between her deeply unconscious identification with the child, which is directed toward the future, and her identification with her own mother, which is directed toward the past. Wherever one of these identifications is rejected, difficulties arise. In the first case the fetus becomes a hostile parasite, in the second the pregnant woman's capacity for motherhood is weakened by her unwillingness to accept her identification with her own mother. (p. 145)

She suggests that this identification with the mother influences the course of birth itself by citing anthropological data indicating that extreme variations in tribal births repeat those of the laboring woman's own mother. She also notes that this identification process can also be augmented by support from the intimacy with female peers, calling to mind modern-day natural childbirth classes.

Deutsch views childbirth as a demanding process in which the psychically healthy woman <u>actively</u> participates. She comments on the value of the woman's active participation as a negation of fear: "The favorable influence of delivery as such can be clearly described.

Above all, a cathartic effect inheres in the active mastering of a fear experience, provided that the woman's active participation is sufficiently great." (p. 244) She does, however, differentiate "feminine activity" from masculinity:

> In some cases one can observe a sudden cessation of the woman's participation as she protects herself from the rising fear and the pains by letting herself slip into passivity. Other women want to preserve their active control to such an extent that they free themselves from the normal rhythm of the process and cause a kind of confusion of the contracting activity. The conflict between the active and passive tendencies may also resort to physical phenomena in order to express itself. (p. 229)

Deutsch is clearly saying that in the course of an intrinsically female function, childbirth, behavior clustered exclusively around either pole of the active-passive continuum is maladaptive.

Deutsch reproves medical science for eclipsing the natural process of childbirth: "Modern obstetrics, a masterpiece of masculine efficiency, deprives woman of her active participation in delivery, and thus in a certain sense deprives her of her monopoly in this field." (p. 258)

She concludes her discussion of the childbirth process, as it was at the time of her writing, by suggesting two improvements: "1) to find a technic of delivery in which the psychic value of the mother's active participation in the process is taken into account, and 2) to reunite mother and child as soon as possible after birth." (p. 257) One wonders if Deutsch feels at all gratified that her two suggested improvements are now available to most women in the form of widespread acceptance of natural childbirth methods and rooming-in procedures.

Theoretical interest in childbirth, after a period of dormancy, resumed with the publication of a study by Bibring, et al. (1961). Bibring's central thesis underlying the study is that pregnancy in first-time mothers produces a "maturational crisis" comparable in intensity and developmental implications to the psychobiological crises of puberty and menopause. The critical nature of pregnancy in the psyche of a primipara owes to the fact that it represents, according to Bibring, "a point of no return... once a mother you cannot be a single unit again." (p. 13) This longitudinal study of 15 primiparas was conducted within a psychoanalytic framework utilizing interviews and projective techniques transposed to be especially sensitive to the intrapsychic experience of pregnancy. The content of the interviews and projectives, spanning for each subject a period from the first trimester until one year postpartum was found to be characterized by "magical thinking, premonitions, depressive reactions, primitive anxieties, introjective and paranoid mechanisms, frequently associated with the patient's relation to her own mother..." (p. 15) The authors concluded that these symptoms owed more to the pregnant condition, with its regressive pull and integrative demands, than to ongoing individual pathology. It was also concluded that this maturational crisis is not resolved until the postpartum period:

> The findings that crisis continues more or less so, beyond parturition offer strong support in favor of the proposition that the frequent problems in the early mother-child relationship are partly due to an as yet incomplete reorganization of the mother's psychic equilibrium at the time of delivery. (p. 20)

The implications of this psyche in flux for the course of labor and delivery were not discussed.

Benedek (1970) joins with Bibring in terming pregnancy a "critical phase." She describes it as "a biologically motivated step in the maturation of the individual which requires physiologic adjustments and psychologic adaptations to lead to a new level of integration that, normally, represents development." (p. 137) She emphasizes the oral-dependent phase of the pregnant woman's own development as the most salient psychosexual determinant of this process. She also cites the importance of the pregnant woman's identification with her mother in this new adaptive process. The fetus is viewed by her as representational of a plurality of psychosexual and object relational imagery including the good and/or bad self, the begetter, feces, and the penis. She acknowledges the importance of the interpersonal environment to pregnant women, noting, "If love is available and is enough to relieve their anxiety, pregnancy will continue without a renewed flare-up of unconscious conflicts." (p. 148) Regarding the active-passive controversy, Benedek states:

> In our culture women in the course of their psychophysiologic development toward motherhood incorporate also an active, extraverted, 'masculine' ego ideal. This may conflict with the passive tendencies inherent in the propagative function. (p. 161)

Just how an "active" ego ideal would conflict with the childbirth process is not elaborated. Again, we are presented with the dangers of female functioning oscillating between polarities viewed as necessarily antagonistic.

Chertok (1969), in a detailed report of his study of women in childbirth, notes that the "opposition between activity and passivity is today the main point at issue in theoretical discussions." Conceptualizing within the psychoanalytic framework, Chertok concurs with Bibring that childbirth constitutes a "maturational crisis" generally evidenced by pathological manifestations. But, unlike Bibring, he emphasizes the role of the pregnant woman's personal history in the nature of these manifestations. He agrees with Deutsch that the move towards motherhood blends regressive and progressive pulls in the pregnant woman's psyche. Pregnancy is viewed as an "integrative stage...the favorable outcome of which is expressed by integration, at the highest possible level, of instinctual drives and ego potential." (p. 23)

In the Freudian tradition, Chertok views the intrapsychic experience of first pregnancy as hinging on several crucial psychosexual developments: 1) the quality of the oedipal situation, negative or positive, and its attendant spectre of penis envy; 2) the narcissistic progression from the desire "to be loved" to object love for the child; and 3) the primitive relation with the mother and the way in which it influences identification with her. Chertok adheres to the patrilinear Freudian dictum of baby=penis. However, his singular view postulates "penis envy" as a reaction formation against primitive, deeply repressed desires regarding the mother. These desires are reactivited during pregnancy, childbirth and the early postpartum period through the pregnant woman's identification with her unborn child.

Although the complex methodology of Chertok's study rivals that of Bibring, the focus here is circumscribed by the childbirth process itself, labor and delivery: "If maternity as a whole is a crisis, confinement may be regarded as its peak." (p. 33) He sees childbirth as an "occasion for fruitful regression" involving two trends: 1) a regressive one of "paradise lost," owing to maternal identification with the child; and 2) a progressive trend towards establishing relatedness to the child. He notes that, according to the psychoanalytic view of these opposing forces, "childbirth at every level and at every stage proceeds on a groundwork of anxiety." (p. 34)

Chertok views childbirth research as productive on two levels: 1) diagnostic, in that it may reveal complex psychosomatic interactions based on the mother's early psychosexual development; and 2) prognostic, in that the course of childbirth has implications for the ensuing mother-child relationship and the mother's own ongoing psychic development. The two most problematic features in childbirth research are seen as 1) defining relevant labor and delivery variables, and 2) objectifying past personal factors. He concludes that delivery data is best objectified in the elementary form in which it appears in obstetrical unit records, and personal data is best evaluated objectively, without interpretation, although he notes such methods don't readily assess highly relevant unconscious material.

The stated goal of his research was to develop "a simple and usable instrument that will not only provide a basis for classification, but also enable correlations to be established and predictions

made." (p. 69) His actual study, conducted in a Paris clinic, was based on a sample of 90 women who underwent the psycho-prophylactic method of childbirth and 26 who did not. The interdisciplinary research team culled two types of data: 1) psychological assessment via semi-directive interviews at three intervals during pregnancy, past and present history, and interview behavior ratings; 2) confinement assessment which included observation during delivery and immediate postpartum period and objective obstetrical data. The psychological data was assessed by means of a "negativity grid" which yielded a matrix of fifty "negativity" variables, and was viewed as a device to assist in organizing historically derived multiple variables.

The results indicated that the "prepared" women experienced significantly less pain, more control, had better confinements and less negativity in the areas of family background and pregnancy than the unprepared. He summarizes his views on the limitations of this research:

> It is clear that in a field in which causal relationships are so complex and so closely dependent upon individual dynamic factors, a statistical study can do no more than contribute a few suggestions whose true significance must wait upon further confirmation and individual clinical studies. (p. 157)

Chertok notes that Heiman (1965), in the psychoanalytic tradition, proscribes the active participation of women in the childbirth process. Heiman rejects childbirth preparation on the grounds that it thwarts the beneficial regressive aspects of the process and may stimulate pathological aspects of the woman's personality. This is contrary to Chertok's conclusion that women with better confinements

participated more actively in the childbirth process, echoing Deutsch's prescription.

Bardwick (1971) states that passive and dependent women have more psychosomatic problems in general and more gynecological and obstetric difficulties than women who are able to express their conflicts and concerns directly in an externalized verbal form. This supports another important finding of Chertok's study that women who chose childbirth "preparation" were more likely to express their concerns directly than the "unprepared" who tended to employ primitive defenses against awareness of those concerns, such as denial and concealment.

Most of the theorists thus far reviewed have a strong intrapsychic focus that excludes the broader social or interpersonal meaning giving birth has for a woman. Deutscher (1969) views pregnancy as a transitional period from couple to parental status in his clinical atudy of ten middle-class, married, young adult couples. His concern was the various role shifts and phases involved in incipient family formation. Clinical, in-depth interviews were conducted with each couple at intervals during the pregnant and immediate postpartum periods and one individual interview with each husband and wife during the second trimester. On the basis of these interviews, Deutscher distinguished couples who were "going concerns," engaged in adaptive role differentiation during the transition towards family formation from those who were impeded in this process by historical and situational factors. He distinguished the labor and delivery

experiences of the two types of couples as follows:

> All three women in the maladjusted group and one woman of the 'going concerns' had complications in delivery, two with labor periods of unusual length and requiring active intervention by their obstetrician and one who had extensive hemorrhaging due to abruption of the placenta. (p. 249)

Flapan and Schoenfeld (1972) maintain a similar focus on family formation in their longitudinal study of child-bearing motivations and conflicts in women and how they interfere with optimal family development. They utilize several unique clinical procedures to inquire into these motivations and conflicts and extend their intervention beyond the goals of research to facilitating "maternal role development." Their research and clinical intervention was based on the following stated hypothesis: "The diversity of meanings that a woman associates with conception, pregnancy, labor and childbirth, childrearing, and motherhood may generate various conflicts related to childbearing and parenthood." (p. 389)

Most theories and theory-building studies like those cited focus on the intrapsychic experience of pregnancy and its referents in the woman's own personal development. The visual field of such studies is seriously narrowed, pushing the interpersonal realm to the periphery. But it may also be, within this context, that the interpersonal field is optimally viewed as created by the woman due to her choice of husband, doctor, or friends, just as her childbirth experience is created, in part, by relevant choices reflective of her own personal history and development as a woman.

A few general principles can be abstracted from these various theoretical points of view. Childbirth is a meaningful process, the

course of which may be influenced by its particular meanings for each woman. It is both a regressive and progressive process in that its primal qualities induce a pull toward the woman's own early developmental experience. It is progressive in that it pulls the woman inexorably toward her child as a separate being and toward her own future development. It invokes intense identification with the woman's mother and with her child and will, therefore, be responsive to resistances to those identifications. It is a process that optimally blends passive and active trends present in the woman's personality. Pregnancy requires patience. A woman cannot will her baby to be born healthy before its time. The birth process requires passivity in the sense that she must submit to contractions that make a natural birth possible. It requires activity in aligning her conscious will with biological necessity to give birth. This active participation, most essential towards the end of the process, heralds the highly active process of mothering.

Childbirth as a Psychosomatic Process:

Most major theorists who have studied the phenomenon of childbirth, either informally or systematically, concur that it is a psychosomatic process responsive to the meanings it has for each individual woman. Horney (1967) spoke of women "for whom motherhood obviously held a place of crucial importance in their lives, but in whom the associated unconscious conflicts expressed themselves in one form or another, such as in morning sickness, weakness of labor contractions, or overprotectiveness toward their children." (p. 105)

Deutsch (1945) states:

> According to our modern knowledge, the process of birth is not purely somatic, but psychosomatic.... Everything suggests that the previously existing inner conflicts become acute in a situation so charged, and that the intensified expectations and fears of pregnancy are further intensified with the beginning of labor....Every single physiologic gesture, every labor pain, as it were, testifies not only to the mutual dependence of the somatic and psychic factors, but also to the fact that in all the biologic functions of reproduction, the woman's whole psychic development and her emotional past play a decisive part. (p. 209)

She notes that the conflicts of which she and other theorists speak "normally find psychic expression" rather than a somatic acting out.

Grinker (1953), in his critical review of psychosomatic research, attributes somatically expressed conflict to a "failure in communication," producing a tendency to employ the body as the essential instrument of communication. This hypothesis is supported by many of the empirical studies, about to be reviewed, that suggest introverted, passive women who show little overt anxiety or conflict related to impending motherhood are more likely to experience difficulty in labor and delivery. Bardwick (1971) speaks of women who tend to display psychosomatic symptomatology:

> When asked what being a woman means to them, women with psychosomatic symptoms talk about self-sacrifice, responsibility, suffering, the ability to master a situation, and the need to cater to their husbands -- all of which they resent and fear. Because their need to be dependent enforces nonaggressive, passive behavior, the resentment and fear is never expressed directly. (p. 74)

One investigator (Newton, 1967) was so impressed with his finding that women who experienced prolonged labor also were inhibited in the expression of their feelings that he suggested their demeanor

of passive "goodness" should be discouraged.

In his commentary on Benedek's work, Grinker notes that she "...discusses affects as indicators of feeling or change in psychophysiological equilibrium." Grinker continues: "The affects or emotions originate in energies of the physiological processes, and it is in the unconscious that communication takes place between physiological energy and mental representations through a primary process." (p. 43) Grimm (1967), in her comprehensive review of studies that explore childbirth as a psychosomatic process, notes the speculative nature of inquiry into the actual psychophysiological mechanisms that translate emotions into physiological change in pregnancy.

Commenting on the regressive nature of psychosomatic disturbances, Grinker states:

> Psychosomatic syndromes are indications not only of failure to attain, but also of a disolution of, adult psychological organization -- in other words, a regression to less mature psychological adaptations or less mature phases of growth or development. (p. 65)

Given the already attested to regressive tendencies inherent in the childbirth process and the intensity of both the psychological and somatic experiences, it would seem almost an open invitation for the expression of unconscious conflict related to it. Benedek, however, cautions that "only if the psychosexual organization of the woman is loaded with conflicts toward motherhood do actual conditions stir up deeper conflicts and disturb the psychophysiologic balance of pregnancy." (1970, p. 142)

The following empirical studies relate psychological variables to physiological variables in labor and delivery. They vary as to the specificity of physiological variables and utilize a wide variety of techniques for assessing psychological variables, from clinical impression to quantifiable tests. Some are prospective, given prior to childbirth, and some retrospective. They also vary in terms of the intent to measure conscious attitudes or to tap more unconscious processes. They are presented, for the most part, in chronological order.

Zemlick and Watson (1953) rated 15 white, married, primiparous women according to measures of acceptance and rejection of pregnancy. Acceptance-rejection and anxiety during pregnancy were measured by selected TAT cards, a test of attitudes toward pregnancy and motherhood devised for this study, a Psycho-Somatic Inventory, and assessment of specific somatic symptomatology for each woman. Anxiety, rejection of pregnancy and motherhood, and psychosomatic symptomatology were found to correlate negatively with "Delivery Adjustment" as rated by the obstetrician and a psychologist. Time in labor was not significantly correlated with the "emotional" variables.

Cramond (1954) contrasted 50 women who had experienced difficult births accompanied by prolonged labor with 50 controls who had experienced normal deliveries. Psychological assessment was based on an interview, a short form of the Wechsler-Bellevue intelligence scale and the MMPI. On the basis of the psychological data, Crammond suggested the existence of a "dysfunction temperament" characterized by an absence of overt expression of anxiety, a tendency toward

"rigidly conventional and socially desirable behavior," and accompanied by chronic gastro-intestinal symptomatology. He found no differences between groups in the following areas, assessed by clinical impression: mother's obstetric history, rejection of feminine role, psychosexual adjustment and development, psychopathology, or previous psychoneurotic history. The only significant difference yielded by comparisons of MMPI data was a significantly greater "lie" score in the "dysfunction" group. The "dysfunction temperament" was found in 54% of the dysfunction cases compared with 12% of the controls. Cramond concluded that such a temperament, characterized by suppression or repression of feelings of tension and rigid conventionality, would not be assisted by psychotherapeutic intervention.

Toxemia, a common disturbance of pregnancy associated with hypertension was found to be significantly associated with poor psychosexual development and adjustment, disturbed attitude toward pregnancy and the feminine role, and abnormal physiological androgyny that deviated towards the masculine, by Coppen (1958). These areas were assessed by psychiatric interview, physiological measures and the Maudsley Personality Inventory in 50 primiparous toxemic patients matched to 50 controls. Coppen concluded that if the assessment of relevant psychosomatic factors is valid, "toxaemia would appear to be an ideal testing ground for the value of psychotherapy in psychosomatic illness." (p. 261)

Hetzel, Bruer and Poidevin (1961) compared the "incidence of stressful life situations" in 30 women who had experienced prolonged

vomiting during pregnancy, 40 patients who had been hospitalized during pregnancy for toxemia, 44 women who had prolonged labor, and 54 normal controls. Stressful life situations were defined as interpersonal, economic, or occupational problems and the pregnancy itself. The women's evaluations of these areas were gathered in an interview five to nine days postpartum. The investigators found a significantly higher incidence of interpersonal, economic and occupational problems in the toxemic and prolonged vomiting patients. Pregnancy itself was viewed as a stressful life situation by significantly more prolonged labor patients than those in the other three groups.

Davids et al. (1961) interviewed, rated and administered psychological test batteries to 48 clinic patients of varying parity in the third trimester of pregnancy. The tests, including selected TAT cards and a sentence completion test, were scored for "alienation." Self and other ratings were used to assess a patient's evaluation of her alienation and that attributed to her by others. In addition, the Manifest Anxiety Scale, and subtests of the WAIS were administered and each woman received a maternal personality rating by the interviewer. The entire procedure was repeated postpartum for 20 women who returned for a checkup.

The test, interview and rating data were correlated with delivery room data, classified as "normal" or "abnormal," obtained from hospital records. The women in the "abnormal" delivery group were found to score significantly higher on the "alienation syndrome" than those in the normal delivery group. Interesting additional findings were that the IQ scores of the women who experienced abnormal

deliveries decreased following that experience, whereas those in the normal group increased. Also of interest was a greater tendency for women in the normal delivery group (77%) to perceive a pregnant woman on a TAT card than for the abnormal group (28%).

Davids et al. reported significantly higher manifest anxiety scores for abnormal delivery patients, in a separate publication (1961). In a later publication (1962), Davids and DeVault, using the same population, scored the same test battery described above to derive a more comprehensive anxiety assessment. Self and other ratings by the patient and a maternal anxiety rating by the interviewer contributed to this evaluation. Women who later experienced more abnormalities and complications of childbirth were found to be markedly more anxious during pregnancy than women whose deliveries were normal. Age, IQ, and parity were not found to be significant factors in these studies. In no way did the authors attempt to differentiate manifest from latent anxiety as Cramond (1953) had.

Rosengren (1962), in a study of 62 clinic and 32 private patients of varying parity, found that women who perceive themselves as "ill" during pregnancy have significantly longer labors than women who do not. Longer labors were also found to be significantly correlated to lower socioeconomic status. A particularly interesting finding was that congruence of women's perceptions of pregnancy with their obstetricians' perceptions was a factor in length of labor. Women who regarded pregnancy as an illness, in contrast to their obstetricians' views and women who did not view pregnancy as an illness, in contrast

to their obstetricians who did, both had significantly longer labors than women whose views were congruent with their doctors' views.

Pilowsky and Sharp (1970) were able to evaluate psychological factors for pregnant women who developed toxemia and their husbands, compared to non-toxemic women and their husbands. Attitudes toward pregnancy and labor were assessed in an interview and personality assessment with "attitudinal aspects" were objectively evaluated. The results indicate that women who develop toxemia differ psychologically from those who don't, prior to its development. The toxemic women were found to be less verbally intelligent, had less desire for pregnancy, and were more introspective, depressed and less likely to verbally communicate their conflicts and concerns. Their husbands tended to be more dependent, immature, and less actively constructive in problem-solving. The authors conclude that the findings indicate the usefulness of assessing intra-familial dynamics in the study of psychogenic factors in toxemia.

Pilowsky (1972) saw 82 married primiparas and their husbands in the second trimester for a semi-structured interview, and psychological tests evaluating personality factors, psychosomatic tendencies, intelligence and attitudes towards pregnancy, motherhood and doctors. These findings were correlated with childbirth complications, length of second stage of labor and Apgar rating. Pilowsky found that the women with complications demonstrated more somatic symptoms, showed a more negative attitude towards their doctors, and were significantly more tense and anxious. The husbands in the complication group were significantly "more outgoing and socially effective" than the husbands of wives with

no complications. He also reported that women with the most severe complications were less intelligent, more tense, with more paranoid trends than women with moderate or no complications.

Pajntar (1972) tested patients just prior to delivery who were admitted to the hospital because they lived far away. He then divided these women into two groups on the basis of well-specified delivery room complications, including length of first and second stages of labor, low Apgar score, or no complications. He found that all complication variables correlated positively with high neuroticism as assessed by Eysenck's questionnaire for neurotic tendencies. Fear and other negative emotional reactions were significantly related to delivery complications only in those women with a tendency towards psychosomatic reactions. He concluded that women with "strongly expressed neurotic personality traits" could be expected to have a higher incidence of childbirth complications and recommended psychotherapeutic intervention.

Palmer and Evans (1972) concluded that denial is "a characteristic defence mechanism of the first trimester of pregnancy." They administered a checklist of psychoneurotic symptoms to 46 primiparas and found that those who later developed complications in childbirth scored low on neurotic symptoms early in pregnancy, but showed a marked increase when tested during the last trimester. They also concluded that denial, reflected in the early absence of symptoms may foster a more somaticized expression of conflict later in pregnancy and during the delivery. These investigators controlled for numerous demographic variables such as age, social class, marital status, education, and planning of pregnancy, and found no significant differences with respect

to the psychological and complication variables.

The importance of the unconscious motivation for pregnancy and the symbolic meaning of the pregnancy to each woman was affirmed by Ritter et al. (1972) in a study of 40 primiparas and 27 multiparas. In conversational, informal interviews during the last trimester, the investigators found a scarcity of manifest psychological disturbance and expressed difficulties in women who later developed complications. They did report, however, that for many of these women, the pregnancy seemed to represent "something else." The authors concluded that psychological conflict relevant to pregnancy and childbirth may not be experienced at the conscious level and recommended psychotherapy as a research tool in assessing the unconscious meaning of pregnancy for each patient.

Erickson (1976) studied the role of psychological variables in predicting later complications of pregnancy, labor and delivery after health factors prior to the psychological assessment were controlled for. She administered the Pregnancy Research Questionnaire to 730 private obstetrical patients in varying stages of pregnancy and obtained self-report health data for the periods during and before pregnancy. She found that psychological variables do discriminate women who develop complications from those who do not. However, when the relationship between health and psychological factors was eliminated, psychological variables did not discriminate primigravidas who developed complications from those who did not. This was not true for the multigravidas studied, for whom the psychological variables remained significantly linked to later complications after health factors were considered. These results

indicate that the impact of health factors on psychological variables is greater for women facing childbirth for the first time. The psychological assessment employed is, however, based on conscious attitudes towards the pregnancy and is, therefore, subject to the criticism made by the previously cited author, that it does not assess the unconscious meaning of pregnancy to these women. Another criticism of this study is that health factors extant prior to the psychological assessment could be influenced by pre-existing emotional conflict as well as contributing to it.

In a later study (1976), the same author examined the relationship between psychological variables and specific complications of labor, utilizing the same procedure as previously reported. Erickson found seven of the 15 complications examined, including prolonged first and second labor stages, uterine inertia, and low (5-7) Apgar scores, to be significantly associated with psychological variables after variance due to age and health factors was eliminated. The psychological variables found most relevant to these complications were fears for self, fears for baby, and dependency. It will be recalled that fear in childbirth has been viewed by at least one previous author (Chertok, 1969) as expressive of deeper concerns relating to motherhood.

Labor and delivery variables have been found to be significantly linked to psychological variables in each of the studies reported here. These findings support the major premise of this paper, that childbirth is a psychosomatic process. This agreement does not persist in deciding what variables are most relevant, and how and when they are optimally assessed. In assessing the methodological variance within this litera-

ture as a whole, the most easily dispensed with factor is when assessment whould optimally take place. Clearly, prospective studies, in which psychological variables are assessed prior to childbirth variables, are most valid in terms of predicting an association between the two. A traumatic delivery may affect psychological variables measured after the fact. This was demonstrated by Davids et al. (1961) through their readministering of the pre-delivery test battery during the postpartum visit. Ideally, psychological assessment should take place prior to, during, and after pregnancy to control for the effects of the pregnancy state in each woman. But, of course, it is extremely difficult for researchers to locate pregnant women before they become pregnant.

A more difficult issue is the relevance of particular variables. Some authors of quantitative studies apologetically conclude that clinical evaluation of unconscious processes during pregnancy is the most productive method. Intensive clinical evaluation of large numbers of pregnant women is unrealistically proposed as the only effective methodology. Intensive clinical study of selected samples of the pregnant population is best used to illuminate and interpret quantitative research and to indicate fruitful areas for more finite study. It must be noted, since attitudinal measures are prevalent in this research, that attitude formation involves a blend of unconscious and conscious processes. There is great uncontrolled for variance in women's awareness of more unconscious processes, and this can distort the results of such studies.

Additional methodological variance is apparent in the specificity of psychological variables. Some investigators utilize a variety of specific measures to yield a single global variable such as "alienation," "anxiety," or "dysfunction temperament." The results are ambiguous and often, contradictory, necessitating a statement pertaining to each individual measure and rendering such global conceptualizations superfluous at best.

Several factors that may strongly influence the variables measured have, in many instances, been uncontrolled for. Prior knowledge of possible complications is an important issue. A woman's awareness of a possible ceasarian section may affect her early labor. Childbirth preparation, controlled for in only one study, increases the woman's educated participation during the delivery and may, therefore, affect its duration. Another variable relevant to the length of labor and delivery is medication. Local anesthesia will influence the delivery process less than general anesthesia. Factors such as these must be accounted for in any valid study measuring labor and delivery variables.

It is apparent from the theories and studies reviewed that childbirth, a psychosomatic process and major life event, subsidiary only to one's own birth and death, presents serious researchers with a plethora of relevant variables. Some researchers make a massive effort to assess all relevant variables. The more circumscribed studies, employing a methodology that yields quantifiable results, focus on a few variables with varying degrees of control for "extraneous" ones.

The present study will inquire into the relationship between women's psychological experience of the childbirth process and outcome

of labor and delivery. More specifically, it is expected that the course of labor and delivery will vary as a function of women's self-perceived sex-role identification. Several theorists reviewed emphasize the active participation of women in the childbirth process as more facilitative of an optimal labor and delivery than a more passive involvement. It is, therefore, expected that women whose self-perceived sex-role identification is more androgenously defined will have more optimal labors and deliveries than women who identify themselves in a more polarized way as masculine or feminine. It is also anticipated that the meanings of four concepts highly relevant to the childbirth process, i.e. "mother," "pregnancy," "childbirth," and "baby" will systematically vary for women with more or less optimal labors and deliveries. Women who report being "happy" about their pregnancies and who report no health problems during pregnancy are also expected to enjoy more optimal labors and deliveries.

Chapter III

Methods

Subjects:

Ss were 56 female volunteers in the last trimester of pregnancy. They ranged in age from 17 to 40 years and also varied in education, marital status, ethnic background and parity. All demographic and health variables were controlled for in the analysis of the data. Because of the voluntary nature of their participation, and the relatively small number of women in the third trimester attending any one clinic or seeing any one private obstetrician at one time, Ss were obtained from four sources. All clinic Ss (29) were attending the obstetrical "pavillion" at the Roosevelt Hospital. Of the remaining 27 private Ss, seven were participating in the midwifery program at Roosevelt Hospital; nine obtained from a natural childbirth class in Brooklyn; and 11 from a private obstetrician in Manhattan. (See Table 1)

Instruments:

A questionnaire was devised containing questions related to demographic variables, attitudes relevant to childbirth, the Bem Sex-Role Inventory, and a Semantic Differential scale for four items. The first page of the questionnaire requested information such as the subject's name, age, current date and expected delivery date. Since subjects were obtained from four different sources and differences related to this and to other demographic variables could be anticipated, they were also asked to specify ethnic origin, parity, marital status,

Table 1

Demographic Data by Source of S

Variable	Clinic	Midwife	Natural Childbirth	Private Obstetrician	Total
Age	N = 23	N = 8	N = 9	N = 11	N = 51
20-25	16	1	3	4	25(49)*
26-31	4	5	6	6	20(39)
32-40	3	2	0	1	6(12)
Parity					
Primipara	11	7	6	6	30(59)
Multipara	12	1	3	5	21(41)
Ethnicity					
Black-American	4	1	0	2	7(14)
White-American	1	6	8	7	22(43)
Spanish-American	15	0	0	2	17(33)
Other	3	1	1	0	5(10)
Education					
Grade-school	1	0	0	0	1(2)
High-school	13	1	0	1	15(29)
College	9	7	9	10	35(69)

* numbers in parentheses represent sample percentages

level of education, employment status during pregnancy, and health problems during pregnancy.

Additional questions related more directly to feelings about pregnancy were also asked, such as whether or not this pregnancy was planned. It was assumed that an unplanned pregnancy might engender more conscious conflict than a planned one and that there may be differences related to the central hypotheses. Ss were asked to state their sex preference for this baby as it was thought that such information may relate interestingly to the BSRI data. Ss were also asked to indicate whether they felt "happy," "sad," "afraid," or had "mixed feelings" on learning they were pregnant and how they feel now. It was thought this would be a good indicator of conscious conflict. Ss were then asked how they thought their mothers felt when they were pregnant with them. This question was designed to indicate projective and/or identificatory mechanisms related to the Ss mother since this is an area identified by previous research and most major theorists as a critical one. Finally, Ss were asked whether or not they thought a woman could work at a job outside her home and be a good mother. It was thought that this might relate interestingly to the BSRI data and also to the dimensions of meaning in the concept "mother" as measured by the Semantic Differential.

The Bem Sex-Role Inventory:

Femininity has been recognized as an important, but elusive, variable related to conflict regarding specifically female functions such as childbirth. In the literature reviewed, femininity, when

assessment was attempted, was evaluated either clinically through interview methods or as part of a more general personality assessment yielded by such instruments as the MMPI.

Bem (1974) developed the BSRI to measure "masculinity" and "femininity" as separate dimensions and employed the difference between the two to yield a measure of "androgyny." Since "femininity" is, at best, a culturally derived concept of questionable stability, it was thought that Ss self-perceived sex-role identification, as measured by the BSRI, would provide a working definition of "femininity."

Bem (1975), continuing her research with the BSRI, found that highly sex-typed females tended to be more constricted and less adaptive in their behavior. Women who scored as highly feminine were both less independent and less nurturant when interacting with a kitten. Both masculine and androgynous women showed more nurturance and independence. In other words, their behavior was more situationally appropriate.

Bem, Martyna, and Watson (1976) again tested the relationship between nurturance and sex-typing using human subjects, an infant, and a peer. Feminine and androgynous female subjects were equally nurturant, whereas masculine female subjects were significantly less nurturant. Bem concluded from these two studies that only androgynous women were consistently independent and nurturant and, therefore, function adaptively.

Orlofsky (1977), using the BSRI, found psychological androgyny and cross sex-typing in women to be significantly associated with successful identity resolution and high self-esteem. High feminine

sex-typing in women was associated with low self-esteem and identity foreclosure. He also found low levels of both masculinity and femininity, termed "undifferentiation," to be associated with low self-esteem and identity diffusion, affirming the results obtained by previous investigators (Spence et al., 1975; Bem, 1975). Bem also found subjects who scored low in both masculinity and femininity to be significantly less nurturant than highly feminine or androgynous subjects who scored high in both masculinity and femininity and concluded that they should not be considered as part of the group defined as androgynous.

Since childbirth is a process that, as suggested by some theorists, incorporates both active and passive attributes traditionally associated with both masculinity and femininity, it was thought that the BSRI could best be used to test this theoretical assumption by ascertaining the relationship between sex-typing in either direction and labor and delivery variables. Secondarily, it was thought that this assessment might correlate with the SD data to generate interesting hypotheses for future study. Masculinity and femininity incorporate subsidiary concepts, such as activity and potency, both central dimensions on the SD.

For this study, Ss were defined as masculine, feminine, androgynous, or undifferentiated through the use of sample medians derived from individual Ss means. Ss who scored above both the masculine and feminine medians were defined as androgynous. Those who scored above only the masculine median were defined as masculine and those who scored above only the feminine median were defined as feminine. Those Ss who scored below both medians were defined as undifferentiated.

The Semantic Differential Technique:

A woman's attitude or set regarding childbirth is largely composed of layers of meaning that range from unconscious to fully conscious. The deeper layers of meaning, perhaps the most salient in the study of a psychosomatic process, are usually ascertained clinically, through an interview or administration of projective tests. The Semantic Differential Technique (SD) (Osgood, 1967) is a widely accepted method of quantifiably assessing deeper levels of meaning and provides a structure in which what is presented to the S can be varied according to the needs of the investigator. According to Osgood, "Psychodynamic mechanisms like repression, projection, and identification can be analyzed as involving representational processes or meanings as critical components and hence may be amenable to semantic measurement." (p. 217)

The SD technique was selected for this study as an indicator of meaning for the above reasons, and will be applied to four highly related concepts. The first concept, "mother," was selected because of its pertinence to the pregnant woman who is either about to become a mother for the first time, or again. It is left unmodified as a concept to draw on all levels of meaning from the archetypal to the highly personal. It is placed first in the series of concepts to elicit meaning related to the woman's own mother without confining the concept to "my mother."

The second concept in the series, "pregnancy," follows the woman's chronological experience. It is included to facilitate a conceptual continuity and because of its importance as the experience that precedes childbirth.

The third concept is "childbirth" itself. This provides an indicator of semantic meaning to the pregnant woman for the event assessed later in terms of physiological variables.

"Baby," the fourth and last concept evaluated, is last in the conceptual continuum and highly salient in meaning to the pregnant woman. Like "mother," it is left deliberately vague to elicit the same multi-levels of meaning.

The same 12 bipolar adjectives are used here to evaluate the four concepts described above. The adjectives are those most standardly used and selected from a list suggested by Osgood (1967). The adjectives represent the three factors or dimensions of meaning most prevalent in the SD technique: sad-happy, clean-dirty, cruel-kind, and pleasant-unpleasant reflect the evaluative dimension; fast-slow, tense-relaxed, high-low, and sharp-dull, the activity dimension; and, large-small, weak-strong, heavy-light, and hard-soft, the potency dimension. Mean scores were derived from adjective pairs and dimensions.

Labor and Delivery Variables:

The parameters used to assess childbirth were selected to be gross indicators of disturbance in the labor and delivery process: deviance from expected delivery date; sex of baby; birthweight; Apgar score; length of first stage of labor; length of second stage of labor; specified complications; childbirth preparation; and specified anesthesia. Birthweight is recorded in ounces. The Apgar score variable is an average of the one and five minute scores where both were recorded. First labor stage, from the time of the first contraction to full

dilitation of the cervix, is recorded in hours rounded up. Second labor state, from the entry of the baby into the birth canal to the completion of birth, is recorded in minutes since it is usually under one hour in length. All specific complications encountered were coded. Since childbirth preparation is a variable that can affect the ease of the process, it was included. Anesthesia used was specified and coded since different kinds of anesthetic may affect the process differently.

The above parameters are those traditionally recorded in delivery room and/or patients' medical records. This data was obtained from medical records except in the case of the nine Ss from the natural childbirth class. Their physicians varied and each S was asked to obtain the specified data from her own obstetrician.

These parameters were combined to define two outcome groups. Those Ss whose labors and deliveries were problem-free and within the normal range according to parity were assigned the status of Outcome I. Those Ss whose labors and deliveries were more problematic were assigned the status of Outcome Group II on the basis of the following parameters: prematurity; birthweight below five pounds; Apgar score below eight; first stage of labor (Labor I) in excess of 15 hours for a multipara; second stage of labor (Labor II) in excess of 60 minutes for a multipara and 120 minutes for a primipara; Caesarean section; and Toxemia. The labor time parameters were defined as problematic by a general obstetrical text (Hellman and Pritchard, 1971) and the Midwife Service at Roosevelt Hospital.

Procedure:

Each S in the clinic, midwife, and private obstetrician group was approached by E while waiting for a routine visit with the doctor during her last trimester of pregnancy. E explained that she was conducting a study on pregnancy and childbirth and that participation involved spending approximately 20-30 minutes filling out a questionnaire. If the S agreed to participate, E then requested each S to sign a release form granting permission to E for access to their medical records, and Ss then completed the questionnaires and returned them to E when they were finished. When Ss had given birth, E obtained labor and delivery data from the delivery room record book at Roosevelt Hospital for the clinic and midwife Ss, and from their individual medical records at the obstetrician's office, for the private obstetrical Ss.

The natural childbirth class Ss were obtained by contacting the obstetrical nurse who taught the class at a Brooklyn hospital. E instructed her to tell the members of her class that E was conducting a study on pregnancy and childbirth, and that participation involved spending approximately 20-30 minutes filling out a questionnaire, which they could do at home, and return directly to E in the stamped, addressed envelope provided. The release form was attached to the front of the questionnaire and each S was informed that E would contact her later by mail for additional data related to childbirth. E provided her phone number at the top of each questionnaire distributed in case an S had a question about its completion. After the Ss had given birth,

E contacted each by mail requesting them to obtain the specified labor and delivery data from their obstetricians. Again, a stamped, self-addressed envelope was provided for the return of this information.

Hypotheses:

It is expected that outcome of labor and delivery will vary as a function of Ss self-perceived sex-role identification, the meaning of concepts related to the childbirth process, self-report of affective state during pregnancy, and self-report of health problems during pregnancy. Specific hypotheses are as follows:

I. Ss in Outcome Group I will be more androgynous as defined by the BSRI than those in Outcome Group II.

II. Ss in Outcome Group I will differ from Ss in Outcome Group II as a function of how they rate the four concepts "mother," "pregnancy," "childbirth," and "baby" along Osgood's three dimensions of meaning: evaluative, activity, and potency.

III. Ss in Outcome Group I will report feeling happier about their pregnancies than Ss in Outcome Group II.

IV. Ss in Outcome Group I will report fewer health problems during pregnancy than Ss in Outcome Group II.

Chapter IV

Results

The results will be presented in the following sequence. First, demographic intercorrelations providing multidimensional definition of the sample used are given, then correlations of demographic data with variables directly related to childbirth and attitudinal variables. Second, correlations of data yielded by the Semantic Differential Technique (SD) with demographic, childbirth related, and attitudinal data are given. Third, correlations of Bem Sex-Role Inventory (BSRI) data with demographic, childbirth related, attitudinal and SD data are given. Fourth, outcome of labor and delivery is reported according to sample source and significant correlations of outcome with other variables are given. Finally, a prediction index of significant variables was compiled and the results of a multiple regression analysis are reported. (See legend on following page for coding of variables to accompany tables.)

It is important to note here, before proceeding, that five of the original 56 Ss were disqualified during the preliminary stages of data analysis. Item analyses of SD and BSRI data revealed multiple aberrant and internally inconsistent responses from these five Ss. Additional disqualification criteria were seemingly redundant and random use of rating numerals and marking of questionnaires grossly at odds with the instructions. All five disqualified Ss were clinic patients, all had Spanish surnames, three reported education at the high

Table 2

Legend of Coded Variables

Clinic: 1 = clinic status
2 = non-clinic status

Childbirth Planning: 1 = planned pregnancy
2 = unplanned pregnancy

Childbirth Preparation: 1 = childbirth preparation classes
2 = no childbirth preparation classes

Sex Preference: 1 = preference expressed
2 = no preference expressed

Feeling I: 1 = happy when first learned of pregnancy
2 = other than happy when first learned of pregnancy

Feeling II: 1 = happy during last trimester
2 = other than happy during last trimester

Mother's Feelings: 1 = happy when pregnant with S
2 = other than happy when pregnant with S

Working Mothers: 1 = woman can work outside home and be a good mother
2 = woman cannot work outside home and be a good mother

school level, and two at only the grade school level. It was deemed likely that these Ss familiarity with the vocabulary used in the questionnaire was not sufficient to allow valid or reliable responses and would distort further analysis.

Correlations of Demographic, Attitudinal and Childbirth Related Variables

Table 3 presents demographic intercorrelations for the entire sample. Clinic patients were significantly younger ($r = .33$, $p < .05$), had less formal education ($r = .57$, $p < .001$), and were much less likely to be employed during pregnancy ($r = .47$, $p < .001$). Multiparous Ss reported less formal education ($r = -.31$, $p < .05$) and were also less likely to be employed during pregnancy ($r = -.41$, $p < .005$). Employment during pregnancy was positively correlated with more formal education ($r = .41$, $p < .005$). There was a non-significant trend for parity to be positively correlated with age ($r = .26$, $p < .07$). Finally, there was no relationship between age and level of formal education or employment during pregnancy.

Table 4 presents the correlations for three variables directly related to the childbirth process and demographic variables. Childbirth preparation was negatively correlated with the clinic category ($r = -.70$, $p < .001$). Ss who did not attend childbirth preparation classes were less likely to be college educated ($r = -.42$, $p < .005$) and less likely to be employed during pregnancy ($r = -.31$, $p < .05$). Having no sex preference was negatively correlated with parity ($r = -.40$, $p < .01$) and positively correlated with more formal education ($r = .36$, $p < .01$). Planning for this pregnancy was not significantly related to any of the

Table 3

Intercorrelations of Five Demographic Categories

	Clinic	Age	Parity	Education
Age	.33*	-	-	-
Parity	-.20	.26	-	-
Education	.57***	.05	-.31*	-
Employment during pregnancy	.47***	.07	-.41**	.41**

* p .05 ** p .005 *** p .001

other variables reported here. Age was not significantly associated with either planning or sex preference. There was a trend for childbirth preparation Ss to be older, but this was not significant ($r = -.26$, $p < .07$).

In Table 5, intercorrelations for the four attitudinal variables and correlations with demographic variables and three childbirth related variables are given. Ss report of feeling "happy" when first learning they were pregnant is positively correlated with having planned this pregnancy ($r = .50$, $p < .001$). Ss report of feeling "happy" about being pregnant during the last trimester is positively correlated with being younger ($r = .33$, $p < .05$). Ss report of her mother as "happy" during her pregnancy with S is positively correlated with Ss report of being happy when first learning of her pregnancy ($r = .41$, $p < .005$). Ss report of whether a woman could "work outside her home and still be a good mother" was not significantly correlated with any of the other variables. There were, however, two nonsignificant trends. Ss who reported a woman could not "work outside her home and be a good mother" tended to have less formal education ($r = -.24$, $p < .08$).

Correlations of Semantic Differential, Demographic, Attitudinal and Childbirth Related Variables

Correlation coefficients for dimensions of meaning on four concepts and demographic data is presented in Table 6. Positive evaluation of "mother" was positively correlated with formal education ($r = .29$, $p < .05$) and tended to be positively correlated with non-clinic status, although this trend was non-significant ($r = .25$, $p < .08$). "Baby"

Table 4

Correlation Coefficients for Childbirth Planning, Childbirth Preparation, Sex Preference and Five Demographic Variables

	Childbirth Planning	Childbirth Preparation	Sex Preference
Clinic	-.16	-.70****	.17
Age	-.02	-.26	-.24
Parity	.06	.23	-.40**
Education	-.18	-.42***	.36*
Employment during pregnancy	-.05	-.31*	.12
Childbirth Planning	-	.20	.11
Childbirth Preparation	-	-	-.18

* p .05 ** p .01 *** p .005 **** p .001

Table 5

Correlation Coefficients for Four Attitudinal Variables, Five Demographic Variables, Childbirth Planning, Childbirth Preparation and Sex Preference

	Feeling I	Feeling II	Mother's Feeling	Working Mothers
Clinic	-.15	-.10	.03	-.16
Age	-.15	.33*	.08	.01
Parity	.20	.13	.20	.07
Education	-.20	.09	-.03	-.24
Employment during pregnancy	-.09	.11	-.09	-.07
Childbirth Planning	.50***	.01	.23	.21
Childbirth Preparation	.20	.18	.02	.16
Sex Preference	-.09	.11	.09	-.17
Feeling I	-	.09	.41**	.05
Feeling II	-	-	.09	.08
Mother's Feelings	-	-	-	.19

* p .05 ** p .005 *** p .001

potency was negatively correlated with being a non-clinic S ($r = -.43$, $p < .005$), being employed during pregnancy ($r = -.30$, $p < .05$), and more formal education, although the latter is a non-significant trend ($r = -.27$, $p < .06$). There were no other significant correlations for dimensions of meaning with demographic variables. There was a non-significant trend for evaluation of "pregnancy" to be negatively correlated with age ($r = -.25$, $p < .08$) and parity ($r = -.27$, $p < .06$).

Correlation coefficients for dimensions of meaning on the four concepts and three childbirth related variables are presented in Table 7. Evaluation of "mother" was negatively correlated with no childbirth preparation ($r = -.29$, $p < .05$), and positively correlated with no sex preference ($r = .40$, $p < .01$). "Mother" potency was positively correlated with no childbirth preparation ($r = .30$, $p < .05$). Evaluation of "pregnancy" was positively correlated with no sex preference ($r = .31$, $p < .05$), and "childbirth" activity was positively correlated with no planning for this pregnancy ($r = .28$, $p < .05$). Evaluation of "baby" was positively correlated with no sex preference ($r = .30$, $p < .05$) and "baby" potency was positively correlated with no childbirth preparation ($r = .32$, $p < .05$). There was a non-significant trend for evaluation of "childbirth" to be negatively correlated with no planning for this pregnancy ($r = -.25$, $p < .08$).

Table 8 presents correlation coefficients for dimensions of meaning on the four concepts and for four attitudinal variables. "Pregnancy" evaluation was negatively correlated with feeling other than happy about being pregnant during the last trimester ($r = -.30$, $p < .05$), and "pregnancy" potency was positively correlated with Ss report of her

Table 6

Correlation Coefficients for Dimensions of Meaning on Four Concepts and Five Demographic Categories

	Clinic	Age	Parity	Education	Employment during pregnancy
Mother					
evaluative	.25	-.15	-.09	.29*	.02
activity	-.03	.12	.05	-.13	.09
potency	.02	.01	.01	-.23	.21
Pregnancy					
evaluative	.09	-.25	-.27	.09	.05
activity	.02	-.08	-.16	-.03	.07
potency	.18	.07	.03	.07	.14
Childbirth					
evaluative	.04	-.04	.04	.03	-.01
activity	.16	.02	-.18	.01	-.04
potency	.22	.15	-.06	.15	-.04
Baby					
evaluative	.17	-.11	-.13	.09	.11
activity	-.05	-.05	.02	-.07	-.08
potency	-.43**	-.04	.21	-.27	-.30*

* p .05 ** p .005

Table 7

Correlation Coefficients for Dimensions of Meaning on Four Concepts, Childbirth Planning, Childbirth Preparation, and Sex Preference

	Childbirth Planning	Childbirth Preparation	Sex Preference
Mother			
evaluative	-.20	-.29*	.40**
activity	.13	.09	.08
potency	.09	.30*	-.23
Pregnancy			
evaluative	-.10	-.22	.31*
activity	.19	.00	.13
potency	.09	-.06	-.15
Childbirth			
evaluative	-.25	.06	.13
activity	.28*	-.22	.14
potency	.12	-.22	-.03
Baby			
evaluative	.05	-.14	.30*
activity	.23	-.16	-.03
potency	.13	.32*	-.19

* p .05 ** p .01

mother feeling other than happy when pregnant with her ($r = .34$, $p < .05$). "Childbirth" evaluation was negatively correlated with Ss feeling other than happy when she first learned of her pregnancy ($r = -.37$, $p < .01$). Evaluation of "baby" was negatively correlated with Ss feeling other than happy about pregnancy during the last trimester. "Baby" activity was positively correlated with Ss feeling other than happy when she first learned of pregnancy ($r = .30$, $p < .05$) and "baby" potency was potency was positively correlated with Ss belief that a woman "cannot work outside her home and be a good mother" ($r = .31$, $p < .05$). There was a non-significant trend for "childbirth" activity to be negatively correlated with Ss feeling other than happy about her pregnancy during the last trimester ($r = -.24$, $p < .09$).

Table 9 reports correlation coefficients for individual item adjective pairs on the concept "mother" and the five demographic variables. Non-clinic status was positively correlated with rating "mother" stronger ($r = .31$, $p < .05$) and kinder ($r = .39$, $p < .01$). More formal education was positively correlated with rating "mother" more relaxed ($r = .31$, $p < .05$), stronger ($r = .29$, $p < .05$), kinder ($r = .46$, p .001), and lighter ($r = .39$, $p < .01$). There was a non-significant trend for education to be positively correlated with rating "mother" happier ($r = .27$, $p < .06$). There were also non-significant trends for age to be negatively correlated with rating "mother" happier ($r = -.25$, $p < .08$), for parity to be negatively correlated with rating "mother" duller ($r = -.25$, $p < .08$), and for employment during pregnancy to be positively correlated with rating "mother" stronger ($r = .24$, $p < .09$).

Table 8

Correlation Coefficients for Dimensions of Meaning for Four Concepts and for Four Attitudinal Variables

	Feeling I	Feeling II	Mother's Feeling	Working Mothers
Mother				
evaluative	-.10	-.18	.11	.14
activity	.03	-.14	-.02	.01
potency	.12	.06	.07	-.01
Pregnancy				
evaluative	-.15	-.30*	-.05	-.21
activity	.23	-.07	.07	-.13
potency	.22	.10	.34*	.02
Childbirth				
evaluative	-.37**	-.21	-.19	-.18
activity	.20	-.24	.19	-.09
potency	.13	-.12	.21	-.15
Baby				
evaluative	-.22	-.31*	.13	-.09
activity	.30*	-.07	.15	.08
potency	.20	.04	.11	.31*

* p .05 ** .01

Table 9

Correlation Coefficients for Adjective Pair Ratings of the Concept "Mother" and for Five Demographic Categories

	Clinic	Age	Parity	Education	Employment during pregnancy
Mother					
fast-slow	.13	.14	.07	.17	-.02
sad-happy	.09	-.25	.15	.27	-.04
large-small	-.06	-.09	-.05	.14	-.13
tense-relaxed	.17	-.02	-.16	.31*	-.05
clean-dirty	-.01	.19	.17	.03	.06
weak-strong	.31*	.11	-.23	.29*	.24
high-low	.13	.05	-.04	-.10	-.06
cruel-kind	.39**	.07	-.18	.46***	.08
heavy-light	.20	.15	-.07	.39**	-.04
sharp-dull	-.15	.10	-.25	-.15	-.07
pleasant-unpleasant	-.18	.07	-.01	-.09	-.07
hard-soft	.03	.10	.12	.23	-.19

* p .05 ** p .01 *** p .001

Correlation coefficients for adjective pair ratings of the concept "pregnancy" and the five demographic variables are reported in Table 10. Non-clinic status was negatively correlated with rating "pregnancy" smaller ($r = -.40$, $p < .01$) and lower ($r = -.32$, $p < .05$). Non-clinic status was positively correlated with rating "pregnancy" dirtier ($r = .29$, $p < .05$) and duller ($r = .29$, $p < .05$). Age was positively correlated with rating "pregnancy" dirtier ($r = .32$, $p < .05$) and parity with rating it more unpleasant ($r = .30$, $p < .05$). Employment during pregnancy was positively correlated with rating it dirtier ($r = .28$, $p < .05$). There were non-significant trends for non-clinic status to be negatively correlated with rating "pregnancy" more unpleasant ($r = -.27$, $p < .06$) and positively correlated with rating it softer ($r = .25$, $p < .08$). There were also non-significant trends for age to be positively correlated with rating "pregnancy" duller ($r = .27$, $p < .06$), for parity to be negatively correlated with rating it kinder ($r = -.27$, $p < .06$), and for education to be positively correlated with rating it dirtier ($r = .24$, $p < .09$).

Table 11 presents correlation coefficients for adjective pair ratings of the concept "childbirth"and the five demographic variables. Non-clinic status was positively correlated with rating "childbirth" happier ($r = .30$, $p < .05$), stronger ($r = .48$, $p < .001$), and negatively correlated with rating it lower ($r = -.34$, $p < .05$). Education was positively correlated with rating "childbirth" stronger ($r = .41$, $p < .005$). There were non-significant trends for age to be positively correlated with rating "childbirth" stronger ($r = .26$, $p < .07$) and for

Table 10

Correlation Coefficients for Adjective Pair Ratings of the Concept "Pregnancy" and for Five Demographic Categories

	Clinic	Age	Parity	Education	Employment During Pregnancy
Pregnancy					
fast-slow	.08	-.05	.20	-.08	.02
sad-happy	.23	-.20	-.21	.17	.10
large-small	-.40**	-.03	.04	-.17	-.20
tense-relaxed	.10	.04	-.04	.22	-.14
clean-dirty	.29*	.32*	-.02	.24	.28*
weak-strong	.19	.15	.02	.19	.11
high-low	-.32*	-.04	.07	-.17	-.20
cruel-kind	-.07	-.11	-.27	.10	-.10
heavy-light	.03	.07	-.07	.13	-.01
sharp-dull	.29*	.27	.09	.10	.20
pleasant-unpleasant	-.27	.11	.30*	-.19	-.07
hard-soft	.25	-.01	.14	.12	.07

* p .05 ** p .01

employment during pregnancy to be positively correlated with rating it stronger ($r = .27$, $p < .06$).

In Table 12, the correlation coefficients for adjective pair ratings of the concept "baby" and the demographic variables are given. Non-clinic status was positively correlated with rating "baby" happier ($r = .28$, $p < .05$), more relaxed ($r = .33$, $p < .05$), lighter ($r = .43$, $p < .005$), and softer ($r = .34$, $p < .05$). Parity was negatively correlated with rating "baby" lighter ($r = -.29$, $p < .05$). Education was positively correlated with rating "baby" lighter ($r = .35$, $p < .05$) and being employed during pregnancy was positively correlated with rating "baby" smaller ($r = .38$, $p < .01$). There was a non-significant trend for non-clinic status to be positively correlated with rating "baby" smaller ($r = .25$, $p < .08$) and a negative correlation with rating "baby" lower ($r = -.27$, $p < .06$). There were also non-significant trends for parity to be negatively correlated with rating "baby" more relaxed ($r = -.25$, $p < .08$), for education to be positively correlated with rating "baby" happier ($r = .26$, $p < .08$) and smaller ($r = .24$, $p < .09$), and for employment during pregnancy to be positively correlated with rating "baby" lighter ($r = .24$, $p < .08$).

Tables 13 - 16 present correlation coefficients for adjective pair ratings of the four key concepts with Childbirth Planning, Childbirth Preparation and Sex Preference. Not planning this pregnancy was negatively correlated with rating "mother" more relaxed ($r = -.37$, $p < .01$), stronger ($r = -.28$, $p < .05$), kinder ($r = -.32$, $p < .05$), and softer ($r = -.39$, $p < .01$). No preparation for childbirth was negatively correlated with rating "mother" kinder ($r = -.40$, $p < .01$) and lighter

Table 11

Correlation Coefficients for Adjective Pair Ratings of the Concept "Childbirth" and for Five Demographic Categories

	Clinic	Age	Parity	Education	Employment during pregnancy
Childbirth					
fast-slow	.10	-.18	.04	.14	.07
sad-happy	.30*	-.03	-.13	.22	.06
large-small	.06	.13	-.01	.12	.20
tense-relaxed	.04	.01	-.02	-.01	.14
clean-dirty	.01	-.09	-.20	-.01	.12
weak-strong	.48***	.26	-.12	.41**	.27
high-low	-.34*	.02	.17	-.12	-.04
cruel-kind	-.07	-.04	-.11	.00	.12
heavy-light	-.06	-.05	.02	-.04	.18
sharp-dull	-.17	.18	.21	-.06	.22
pleasant-unpleasant	.11	.13	-.14	.15	.21
hard-soft	.01	.12	.00	.02	.10

* p .05 ** p .005 *** p .001

Table 12

Correlation Coefficients for Adjective Pair Ratings of the Concept "Baby" and for Five Demographic Categories

	Clinic	Age	Parity	Education	Employment during pregnancy
Baby					
fast-slow	.05	-.02	.12	-.07	.02
sad-happy	.28*	.02	-.09	.26	.07
large-small	.25	.18	-.13	.24	.38**
tense-relaxed	.33*	-.03	-.25	.18	.06
clean-dirty	-.10	.00	-.03	-.01	.18
weak-strong	-.10	.14	-.04	.11	-.11
high-low	-.27	-.02	-.05	.04	-.12
cruel-kind	.13	-.11	-.09	.07	.07
heavy-light	.43***	.05	-.29*	.35*	.24
sharp-dull	.11	.20	.13	.02	.22
pleasant-unpleasant	.02	.19	.22	.02	.20
hard-soft	.34*	.03	-.17	.23	.01

* p .05 ** p .01 *** p .005

($r = -.41$, $p < .005$). Expressing no sex preference was positively correlated with rating "mother" happier ($r = .32$, $p < .05$) and negatively correlated with rating it dirtier ($r = -.31$, $p < .05$). Non-significant trends were a negative relationship between no preparation for childbirth and rating "mother" stronger ($r = -.25$, $p < .08$) and softer ($r = -.27$, $p < .06$). There was also a positive relationship between expressing no sex preference and rating "mother" kinder ($r = .25$, $p < .08$).

Ss report of not planning this pregnancy was negatively correlated with rating "pregnancy" more relaxed ($r = -.40$, $p < .01$) and stronger ($r = -.36$, $p < .01$). No childbirth preparation was positively correlated with rating "pregnancy" smaller ($r = .30$, $p < .05$), lower ($r = .34$, $p < .05$), more unpleasant ($r = .29$, $p < .05$), and negatively correlated with rating "pregnancy" more relaxed ($r = -.28$, $p < .05$) and softer ($r = -.29$, $p < .05$). Expressing no sex preference was negatively correlated with rating "pregnancy" more unpleasant ($r = -.28$, $p < .05$). There was a non-significant trend for not planning this pregnancy to be negatively correlated with rating "pregnancy" softer ($r = -.27$, $p < .06$).

Ss report of not planning this pregnancy was negatively correlated with rating "childbirth" happier ($r = -.35$, $p < .05$) and softer $r = -.40$, $p < .01$). There were non-significant trends for lack of planning to be negatively correlated with rating "childbirth" more relaxed ($r = -.25$, $p < .08$) and kinder ($r = -.24$, $p < .09$). There was also a positive relationship between no childbirth preparation and rating "childbirth" lower ($r = .27$, $p < .06$).

Table 13

Correlation Coefficients for Adjective Pair Ratings of the Concept "Mother and for Three Childbirth Related Variables

	Childbirth Planning	Childbirth Preparation	Sex Preference
Mother			
fast-slow	.12	-.03	.05
sad-happy	-.14	-.17	.32*
large-small	-.14	-.13	.16
tense-relaxed	-.37**	-.17	.14
clean-dirty	.04	.06	-.31*
weak-strong	-.28*	-.25	.09
high-low	.02	.23	-.19
cruel-kind	-.32*	-.40**	.25
heavy-light	-.04	-.41***	.10
sharp-dull	.22	.22	-.22
pleasant-unpleasant	.02	.17	-.21
hard-soft	-.39**	-.27	.22

* p .05 ** p .01 *** p .005

Table 14

Correlation Coefficients for Adjective Pair Ratings of the Concept "Pregnancy" and for Three Childbirth Related Variables

	Childbirth Planning	Childbirth Preparation	Sex Preference
Pregnancy			
fast-slow	.07	.09	-.21
sad-happy	.03	-.15	.19
large-small	-.13	.30*	.11
tense-relaxed	-.40**	-.28*	.07
clean-dirty	.08	.01	-.22
weak-strong	-.36**	-.11	-.03
high-low	.04	.34*	-.12
cruel-kind	-.20	-.17	.17
heavy-light	-.15	-.03	.04
sharp-dull	-.12	-.15	.02
pleasant-unpleasant	.08	.29*	-.28*
hard-soft	-.27	-.29*	.12

* p .05 ** p .01

Table 15

Correlation Coefficients for Adjective Pair Ratings of the Concept "Childbirth" and for Three Childbirth Related Variables

	Childbirth Planning	Childbirth Preparation	Sex Preference
Childbirth			
fast-slow	-.08	.00	.02
sad-happy	-.35*	-.12	.14
large-small	.00	-.01	-.08
tense-relaxed	-.25	-.02	-.10
clean-dirty	-.12	-.04	-.14
weak-strong	-.03	-.36**	-.02
high-low	-.04	.27	-.19
cruel-kind	-.24	.03	.03
heavy-light	.12	.04	.10
sharp-dull	-.15	.23	.00
pleasant-unpleasant	.17	-.22	-.03
hard-soft	-.40**	.10	.00

* p .05 ** p .01

Ss report of no childbirth preparation was negatively correlated with rating "baby" lighter ($r = -.44$, $p < .005$) and expressing no sex preference was negatively correlated with rating "baby" dirtier ($r = -.30$, $p < .05$). There were non-significant trends for not planning this pregnancy to be negatively correlated with rating "baby" slower ($r = -.27$, $p < .06$), for no childbirth preparation to be positively correlated with rating "baby" slower ($r = .24$, $p < .09$), and for expressing no sex preference to be positively correlated with rating "baby" lighter ($r = .25$, $p < .08$).

Tables 17 - 20 present correlation coefficients for adjective pair ratings of the four key concepts and for four attitudinal categories. Ss report of feeling other than "happy" when first learning of her pregnancy was negatively correlated with rating "mother" more relaxed ($r = -.31$, $p < .05$) and softer ($r = -.33$, $p < .05$). Feeling other than "happy" about pregnancy during the last trimester was positively correlated with rating "mother" lower ($r = .34$, $p < .05$) and more pleasant ($r = .29$, $p < .05$). Ss reporting her mother was other than "happy" when pregnant with her was negatively correlated with rating "mother" lower ($r = -.28$, $p < .05$). There were non-significant trends for feeling other than "happy" when first learning of pregnancy to be positively correlated with rating "mother" duller ($r = .27$, $p < .06$) and for Ss reporting of her mother having been other than "happy" when pregnant with S to be positively correlated with rating "mother" duller ($r = .24$, $p < .09$). There was also a non-significant trend for thinking a woman cannot "work outside her home and be a good mother" to be negatively correlated with rating "mother" slower ($r = -.26$, $p < .07$).

Table 16

Correlation Coefficients for Adjective Pair Ratings of the Concept "Baby" for for Three Childbirth Related Variables

	Childbirth Planning	Childbirth Preparation	Sex Preference
Baby			
fast-slow	-.27	.24	-.22
sad-happy	.09	-.14	.18
large-small	-.12	-.14	.13
tense-relaxed	-.13	-.19	.23
clean-dirty	.00	.08	-.30*
weak-strong	-.03	-.02	.08
high-low	-.10	.21	.03
cruel-kind	-.10	-.20	.11
heavy-light	-.13	-.44**	.25
sharp-dull	.03	.07	.05
pleasant-unpleasant	-.16	-.02	-.16
hard-soft	-.13	-.29*	.22

* p .05 ** p .005

Table 17

Correlation Coefficients for Adjective Pair Ratings of the Concept "Mother" and for Four Attitudinal Variables

	Feeling I	Feeling II	Mother's Feelings	Working Mothers
Mother				
fast-slow	.03	.04	.18	-.26
sad-happy	.05	-.11	.09	.15
large-small	-.08	.11	-.11	-.10
tense-relaxed	-.31*	-.18	-.12	.08
clean-dirty	.18	.06	.12	-.18
weak-strong	-.16	.05	.17	-.16
high-low	-.04	.34*	-.28*	.13
cruel-kind	-.19	-.05	.17	.01
heavy-light	-.06	-.02	-.03	-.07
sharp-dull	.27	.17	.24	.04
pleasant-unpleasant	-.07	.29*	-.16	-.04
hard-soft	-.33*	-.06	-.09	.10

* p .05

Feeling other than "happy" when first learning of pregnancy was negatively correlated with rating "pregnancy" more relaxed ($r = -.47$, $p < .001$) and softer ($r = -.35$, $p < .05$). Feeling other than "happy" about pregnancy during the last trimester was negatively correlated with rating "pregnancy" kinder ($r = -.33$, $p < .05$) and positively correlated with rating it more unpleasant ($r = .28$, $p < .05$). Ss reporting her mother was other than "happy" when pregnant with S was negatively correlated with rating "pregnancy" smaller ($r = -.32$, $p < .05$). There were non-significant trends for feeling other than "happy" about pregnancy during the last trimester to be negatively correlated with rating "pregnancy" more relaxed ($r = -.27$, $p < .06$) and positively correlated with rating it dirtier ($r = .24$, $p < .09$). There were also non-significant trends for Ss reporting her mother was other than "happy" when pregnant with S to be negatively correlated with rating "pregnancy" lower ($r = -.24$, $p < .09$) and for thinking a woman cannot "work outside her home and be a good mother" to be positively correlated with rating "pregnancy" more unpleasant ($r = .24$, $p < .09$).

Feeling other than "happy" when first learning abour pregnancy was negatively correlated with rating "childbirth" happier ($r = -.29$, $p < .05$), more relaxed ($r = -.40$, $p < .01$), and kinder ($r = -.45$, $p < .001$). Feeling other than "happy" about pregnancy during the last trimester was positively correlated with rating "childbirth" duller ($r = .31$, $p < .05$). Ss reporting her mother was other than "happy" when pregnant with S was positively correlated with rating "childbirth"

Table 18

Correlation Coefficients for Adjective Pair Ratings of the Concept "Pregnancy" and for Four Attitudinal Variables

	Feeling I	Feeling II	Mother's Feelings	Working Mothers
Pregnancy				
fast-slow	.11	.11	.22	.13
sad-happy	-.03	-.04	.02	-.10
large-small	-.13	-.01	-.32*	-.13
tense-relaxed	-.47**	-.27	-.23	-.11
clean-dirty	.08	.24	.01	.11
weak-strong	-.20	.17	-.08	-.07
high-low	-.02	.20	-.24	.22
cruel-kind	-.15	-.33*	.00	-.15
heavy-light	-.14	.16	-.21	.11
sharp-dull	-.14	.13	.04	.05
pleasant-unpleasant	.17	.28*	.14	.24
hard-soft	-.35*	-.16	-.21	-.08

* p .05 ** p .001

more unpleasant ($r = .30$, $p < .05$). There were non-significant trends for feeling other than "happy" when first learning of pregnancy to be negatively correlated with rating "childbirth" softer ($r = -.26$, $p < .07$) and for feeling other than "happy" during the last trimester to be positively correlated with rating "childbirth" lower ($r = .25$, $p < .08$). There were also non-significant trends for Ss reporting her mother was other than "happy" when pregnant with S to be negatively correlated with rating "childbirth" more relaxed ($r = -.26$, p .07) and for thinking a woman cannot "work outside her home and be a good mother" to be negatively correlated with rating "childbirth" happier ($r = -.25$, $p < .08$).

Ss report of feeling other than "happy" when first learning of pregnancy was negatively correlated with rating "baby" slower ($r = -.32$, $p < .05$) and softer ($r = -.36$, $p < .01$). Feeling other than "happy" about pregnancy during the last trimester was positively correlated with rating "baby" dirtier ($r = .28$, $p < .05$). Thinking a woman cannot "work outside her home and be a good mother" was negatively correlated with rating "baby" lighter ($r = -.44$, $p < .005$). There were non-significant trends for feeling other than "happy" when first learning of pregnancy to be positively correlated with rating "baby" dirtier ($r = .27$, $p < .06$), and feeling other than "happy" about pregnancy during the last trimester to be negatively correlated with rating "baby" kinder ($r = -.27$, $p < .06$).

Table 19

Correlation Coefficients for Adjective Pair Ratings of the Concept "Childbirth" and for Four Attitudinal Variables

	Feeling I	Feeling II	Mother's Feelings	Working Mothers
Childbirth				
fast-slow	.20	.13	.16	.16
sad-happy	-.29*	-.21	-.13	-.25
large-small	-.21	.13	-.21	-.04
tense-relaxed	-.40**	-.15	-.26	-.08
clean-dirty	.09	.00	-.05	.05
weak-strong	-.10	-.09	-.02	-.21
high-low	.02	.25	-.06	.07
cruel-kind	-.45***	-.10	-.12	-.02
heavy-light	.06	.05	-.17	-.06
sharp-dull	.21	.31*	-.21	.02
pleasant-unpleasant	.19	.23	.30*	.14
hard-soft	-.26	.02	-.15	.21

* p .05 ** p .01 *** p .001

Table 20

Correlation Coefficients for Adjective Pair Ratings of the Concept "Baby" and for Four Attitudinal Variables

	Feeling I	Feeling II	Mother's Feelings	Working Mothers
Baby				
fast-slow	-.32*	.04	-.08	-.11
sad-happy	-.18	.00	.01	-.01
large-small	-.23	.16	-.08	-.17
tense-relaxed	-.19	-.12	-.10	-.09
clean-dirty	.27	.28*	-.10	-.02
weak-strong	-.18	.20	-.14	-.08
high-low	-.20	.15	-.20	-.01
cruel-kind	-.18	-.27	.06	-.14
heavy-light	-.14	-.05	-.22	-.44***
sharp-dull	.09	.10	.06	.06
pleasant-unpleasant	-.08	.21	-.15	.10
hard-soft	-.36**	-.01	-.14	-.12

* p .05 ** p .01 *** p .005

BSRI Data: Sample Means and Correlations

The mean BSRI Masculinity score for the total sample of 51 Ss was 4.49. The mean Femininity score was 5.12. A previous study (Tuccillo, 1977), using a sample of 66 female metropolitan area college students of varied ages and ethnic backgrounds obtained a mean Masculinity score of 4.92 and a mean Femininity score of 5.01. A t-test was performed using the mean scores of both samples. There was a significant difference between the two samples, with the non-pregnant, college sample scoring significantly higher on Masculinity ($t = 2.914$, $p \ll .01$, 2-t). There was no significant difference between the Femininity scores for the two samples.

Table 21 presents correlation coefficients for Masculinity and Femininity BSRI scores and for childbirth related and demographic variables. Masculinity was positively correlated with education ($r = .32$, $p < .05$) and expressing no sex preference ($r = .30$, $p < .05$). Femininity was not significantly correlated with any of the other variables but there was a non-significant trend for Femininity to be positively correlated with feeling "happy" when first learning of pregnancy ($r = -.27$, $p \leq .06$).

Correlation coefficients for Masculinity and Femininity scores and for dimensions of meaning of the four key concepts are given in Table 22. Masculinity is positively correlated with evaluation of "mother" ($r = .42$, $p < .005$) and evaluation of "pregnancy" ($r = .33$, $p < .05$). Femininity is positively correlated with evaluation of "mother" ($r = .38$, $p < .01$) and of "baby" ($r = .30$, $p < .05$). There

Table 21

Correlation Coefficients for Masculinity, Femininity, Five Demographic, Three Childbirth Related and Four Attitudinal Variables

	Masculinity	Femininity
Age	-.09	-.05
Parity	-.20	-.23
Education	.32*	.21
Employment during pregnancy	.19	.08
Clinic	.10	.18
Childbirth Planning	-.13	-.07
Childbirth Preparation	-.01	-.14
Sex Preference	.30*	.16
Feeling I	-.11	-.27
Feeling II	.15	-.06
Mother's Feelings	-.05	-.07
Working Mothers	-.04	.07

* p .05

was a non-significant trend for Femininity to be negatively correlated with the potency rating of "baby" ($r = -.26$, $p < .07$).

Outcome of Labor and Delivery

Table 23 presents three classifications of complications and their frequencies according to source of S. The clinic and midwife Ss were distributed similarly with 52% and 50%, respectively, having no complications of labor and delivery. The similarity is sustained in the moderate and severe categories with 35% of the clinic Ss and 38% of the midwife Ss experiencing moderate complications and 13% and 12%, respectively, experiencing severe complications. The natural childbirth group had the most complications with 56% in the severe category, 11% in the moderate, and 33% in the no complications category. Ss in the private obstetrician group had the least severe complications with 9% in the severe category, 18% in the moderate, and 73% having no complications.

Correlation coefficients for two categories of outcome, (Good = 1, Poor = 2), demographic, attitudinal, and childbirth related variables, including self-report of health were obtained. Poor outcome was negatively correlated with self-report of no health problems during pregnancy ($r = -.31$, $p < .05$). Poor outcome was positively correlated with feeling other than "happy" about pregnancy during the last trimester ($r = .35$, $p < .05$).

Correlation coefficients were also obtained for outcome, dimensions of meaning and adjective pair ratings of the four key concepts. Poor outcome was positively correlated with potency ratings of "baby" ($r = .28$, $p < .05$). There were non-significant trends for poor outcome

Table 22

Correlation Coefficients for Masculinity, Femininity and Dimensions of Meaning for Four Concepts

	Masculinity	Femininity
Mother		
evaluative	.42***	.38**
activity	.18	.12
potency	-.20	-.06
Pregnancy		
evaluative	.33*	.20
activity	.19	.22
potency	-.06	.08
Childbirth		
evaluative	.07	.12
activity	-.04	.13
potency	-.01	-.06
Baby		
evaluative	.08	.30*
activity	.04	.13
potency	-.08	-.26

* p .05 ** p .01 *** p .005

Table 23

Frequency Distribution of Three Categories of Outcome According to Source of S

	Clinic	Midwife	Natural Childbirth	Private Obstetrician
Outcome I	12 (52%)	4 (50%)	3 (33%)	8 (73%)
Outcome II	8 (35%)	3 (38%)	1 (11%)	2 (18%)
Outcome III	3 (13%)	1 (12%)	5 (56%)	1 (9%)

note - frequencies are based on Outcome values:

I = no complications
II = moderate complications
III = severe complications

to be negatively correlated with evaluation of "childbirth" ($r = -.25$, $p < .08$), and rating "mother" more active than "baby" ($r = -.27$, $p < .06$). Poor outcome was negatively correlated with rating "pregnancy" softer ($r = -.28$, $p < .05$), "childbirth" kinder ($r = -.34$, $p < .05$), and positively correlated with rating "baby" stronger ($r = .40$, $p < .01$).

Preliminary analysis of BSRI data and outcome yielded no significant results and it was not included in any additional analysis of outcome data.

Regression Analysis of Outcome Data

As reported previously, significant relationships were found between outcome and three semantic differential items: "pregnancy," hard-soft; "childbirth," cruel-kind; and "baby," weak-strong. These three items were combined to form a discriminating index which will be referred to as Disc-SD. This new composite variable was entered into a regression analysis with two other variables significantly related to outcome: self-report of health during pregnancy, referred to as Health, and how Ss feel about their pregnancies during the last trimester, referred to as Feeling II. The regression analysis program takes in the first highest correlation, then the next highest, continuing in stepwise regression until all significant variables are included. The results of this analysis are presented in Table 24.

These three variables account for 36.4% of the outcome variance encountered in this sample ($R = .604$). Taken separately, Disc-SD was the most powerful predictor ($R = .430$, $R^2 = 27.1$). Second in predictive power was Feeling II ($R = .221$, $R^2 = 5.4$), and third, Health ($R = .204$,

R^2 = 3.9). Disc-SD accounts for 74.5% of the explained variance, Feeling II, for 14.8%, and Health, for 10.7%.

Table 24

Multiple Prediction of Two Categories of Outcome

Variables	Beta	Percentage of Variance r^2	Percentage of Explained Variance
Disc-SD	.430	27.1	74.5
Feeling II	.221	5.4	14.8
Health	.204	3.9	10.7
Total	R = .604	36.4	100.0

Chapter V

Discussion

Discussion of the findings will be organized and presented in the following way: first, a brief statement of how the results relate to the four stated hypotheses; second, a discussion of the relationships between ancillary variables and data yielded by the psychological measures; third, a more thorough consideration of the major findings relating outcome of labor and delivery to the psychological variables, using clinical data obtained from some of the Ss; and fourth, considerations for further investigation, based on these findings.

The results support the major premise of this paper that the psychological meaning of the childbirth experience is implicated in its physiological course. More specific to the hypotheses as stated, women's self-perceived sex-role identification was not related, in this study, to the labor and delivery process. The semantic differential technique yielded three individual items and one concept dimension of meaning that were predictive of difficulty in labor and delivery. The three individual items were "pregnancy" - hard, "childbirth" - cruel, and "baby" - strong. The relevant concept dimension was "baby" potency. Also predictive of complications in labor and delivery were Ss report of feeling other than "happy" during the last trimester and Ss report of health problems during pregnancy. Three of the four stated hypotheses were confirmed. Before proceeding to a discussion of these findings, we will now consider those that define the sample and distinguish the subsamples prior to a consideration of outcome.

The entire sample of 51 Ss was composed of four subsamples. The largest of the subsamples (23) was obtained from the obstetrics clinic at Roosevelt Hospital and was predominantly Spanish-American in ethnicity. The other three subsamples, the Roosevelt Hospital Midwife Program (8), a natural childbirth group (9), and a private obstetrician group (11), mixed in ethnicity, but predominantly white, middle-class, were combined for the purposes of data analysis to yield a non-clinic subsample. These two subsamples, clinic (23) and non-clinic (28), differed in ways other than ethnicity and income (see Table 3). The non-clinic group was older, had more formal education, and its members were more likely to be employed during pregnancy. As might be expected, women expecting their second or more child had less formal education and were less likely to be employed during pregnancy, and women who were employed during pregnancy had more formal education. Clinic women were also much less likely to attend natural childbirth classes. This can be attributed to the fact that these classes had been discontinued as part of the clinic program. A clinic patient would have to be highly motivated to seek such an experience since she would have to make private arrangements, including payment of a fee, to obtain it.

Clinic status was not related significantly to planning this birth, expressing a sex preference, or the attitudinal variables. Clinic Ss did rate "baby" higher in potency. This can probably be attributed to the fact that the clinic women, as a group, are lower income, more poorly educated, and have fewer life options more meaningful than becoming a mother. Relative to what else is available, having a baby is, indeed, a potent experience. "Baby" potency probably

reflects a different set of meanings for women with less options than for those with more, and may be more indicative of cultural than individual pathology. The notion of "fewer options" acquires support from the clinic group's rating of "mother" as weaker and crueler. Certainly, a figure perceived as having few options might also be readily experienced as both weak and cruel in response to her own lack of mobility.

Similarly, pregnancy, not experienced as one of many available choices was perceived by clinic Ss as smaller, lower, duller, and, to a less extent, more unpleasant and harder. The concept "childbirth" was rated sadder, weaker, and lower, again, one suspects, reflective of its being one more hard, inevitable reality. "Baby" was perceived as sadder, more tense, heavier and harder. These various concept meanings seem reflective of an experience not freely chosen as one of several possibilities but, rather, imposed and burdensome.

The only features illuminated by the age variable were a slight tendency for the older Ss to be involved in childbirth preparation classes, a stronger tendency to report feeling other than happy about their pregnancies during the last trimester, and to rate "pregnancy" dirtier than the younger Ss. The older Ss are probably both more concerned about the childbirth process as they advance in age and less likely to glorify and idealize pregnancy since they are also more likely to be multiparas.

Parity was similar to age in that multiparas seemed more disillusioned than primiparas. They rated "pregnancy" more unpleasant and "baby" heavier.

College educated Ss higher evaluation of "mother" and lower rating of "baby" potency seems to reflect positive feeling about the motherhood option. They may experience themselves as having more power over their own lives and, therefore, better able to accept the demands of motherhood. This interpretation gains support when we consider specific item ratings of the four concepts. College-educated Ss rated "mother" more relaxed, stronger, kinder, lighter and, to a less degree, happier. This can, of course, be interpreted as a romanticized notion of what motherhood should be. I prefer to consider it an accurate reflection of what their experience has led this group of women to expect from motherhood. Again, it is a matter of options. These women have grown into adulthood during an era in which women's life choices have expanded. There may still be a cultural and familial expectation that young women will choose to become mothers. The injunctions against first developing oneself as a professional, or combining mothering with other satisfying work, or even choosing not to become a mother at all, are no longer so strongly stated. A woman who has chosen motherhood will certainly experience it in a more humanized way than one who sees no other way to define herself as an adult woman.

"Pregnancy" ratings were not related to the education factor. It may be that, compared to the concept "mother," "pregnancy" is experienced as more encapsulated in time, without the lifelong implications of "mother." "Childbirth," an even more timebound concept was rated much stronger by college-educated Ss. This may be accounted for by the fact that college-educated Ss were also more likely to be involved in childbirth preparation classes. These classes provide a forum for

group rehearsal and anticipation of the childbirth experience. This, surely, would increase its "strength" as a concept.

Education was also an important factor in the rating of "baby," although to a less degree than for the concept "mother." College-educated Ss rated "baby" lighter and happier. This seems to be a very graphic representation of how much less burdensome the mothering process may be as anticipated by college-educated women.

Apparently, education is most salient when women are considering the concept "mother," in terms of their own anticipated experience. It is important to emphasize the anticipation because, as we recall, college-educated women are also more likely to be primiparas.

The last demographic feature to be considered is employment during pregnancy. There were no differences in how the employed and unemployed groups felt about their pregnancies. Interestingly, there were also no differences in their attitudes regarding whether or not a woman could work outside her home and still be a good mother. There were also no remarkable differences in the rating of the concept "mother" except for a very minor trend for the employed Ss to rate "mother" stronger. "Pregnancy" was rated dirtier and "childbirth" stronger. The process of pregnancy may have been viewed by the employed Ss as an interference with their work, not intrinsically worthwhile, but necessary to yield the desired baby. The "strength" of the "childbirth" concept may, again, be owed to the fact that employment during pregnancy, like education, was positively correlated with childbirth preparation. The employed Ss rating of "baby" as smaller may indicate that in the lifespace of a working woman, a baby claims proportionately less

territory than for women who are not employed. It may also be that a baby is regarded as less overwhelming and realistically seen as small compared to the mother.

In sum, of the five demographic variables considered, age and parity yielded the least information in terms of differentiating women's attitudes toward the pregnancy-childbirth process, and the meaning of related concepts. On the basis of this data, clinic status, education and employment during pregnancy seem to differentiate two groups of women with distinct attitudinal sets. The lower income (clinic), less educated, unemployed Ss appear to view motherhood as less of a choice and more of an imposition. These Ss may perceive themselves as having fewer options within this culture, and may have reluctantly accepted the dictum that to be an acceptable adult woman, you must bear children. Motherhood, not experienced as freely chosen becomes demeaning. "Mother" becomes tense, weak, cruel, and heavy. "Baby" becomes sad, large, tense, heavy and hard. These adjectives reflect motherhood as burdensome. By contrast, those Ss who are better educated, employed, and who can afford the kind of obstetrical care they wish, appear to regard motherhood as a choice, rather than an imposed burden. These Ss view "mother" as relaxed, strong, kind and light, "baby" as happy, small, relaxed, light and soft, adjectives that reflect a more positive alternative.

We will next consider what differentiates women who report being happy at two different stages of pregnancy from those who do not, in terms of the childbirth related variables and concept meanings. Women who reported they were "happy" when first learning they were pregnant

were far more likely to have planned on getting pregnant. The planning variable had no relationship to feeling "happy" about being pregnant during the last trimester. It seems logical that women who hadn't planned this pregnancy would feel less than happy on learning they were pregnant. But, apparently, these feelings become resolved during the first six months of pregnancy as planning had no relation to how they felt during the last trimester. An equally interesting finding was that Ss first feelings about their pregnancies were highly correlated with how they thought their own mothers felt when pregnant with them. This result cannot be adequately interpreted on the basis of this data alone. It could be speculated that these Ss were highly identified with their own mothers who may have reported difficult pregnancies, but there is no additional data to support this. It does seem clear that these are not the same Ss that reported feeling other than "happy" during the last trimester since reported feelings at these two stages of pregnancy were not at all correlated. Feeling "happy" about being pregnant at these two stages was highly correlated with positive ratings of the four concepts.

The other two attitudinal variables assessed Ss thoughts about how their mothers felt when pregnant with them and their attitudes towards working mothers. Ss who reported their mothers were "happy" when pregnant with them rated "pregnancy" less potent and smaller, "mother" lower, and "childbirth" more pleasant. It is difficult to interpret these findings with confidence, other than to speculate that these Ss may have heard positive reports of their mothers' childbirth experiences.

Ss who reported that a woman could not work outside her home and

be a good mother rated "baby" more potent and heavier, and, to a less extent, "mother" slower, "pregnancy" more unpleasant, and "childbirth" sadder. It appears that, for these women, an intrinsically female function such as childbirth may be felt as burdensome in the same sense as it was for those women who were unemployed during pregnancy and had less education.

Before proceeding to a consideration of how the psychological data relate to outcome of labor and delivery, we will briefly consider the BSRI and its use in this study.

As stated in the results section, this sample of pregnant women scored significantly lower on masculinity than did a sample of non-pregnant college women of varying ages and ethnicity. This difference could readily be attributed to two major differences between these two samples, pregnancy and education. Perhaps pregnant women rate themselves as less masculine than non-pregnant women. The validity of this possibility could only be assessed by administering the BSRI to the same sample prior to, during, and after pregnancy or through the use of two matched samples differing only in regard to pregnancy. It is more likely that the difference noted here is due to the education factor. In this study masculinity, as measured by the BSRI, correlated positively with education and expressing no sex preference. Apparently, college-educated women perceive themselves as more masculinely identified than pregnant women without a college education. This is not surprising as we have already ascertained that college-educated pregnant women seem to view their pregnancies as positive choices made within a context of having enough power and control over their lives to freely make such a choice. "Masculine" items on the BSRI such as "self-reliant,"

"independent," "assertive," and "individualistic" are descriptive of such a life context.

The connection between masculinity and expressing no sex preference is somewhat more elusive, but becomes more illuminated when we note that education was also positively correlated with expressing no sex preference. Apparently, this group of college-educated, more masculinely identified pregnant women are not very concerned about whether their babies will be born male or female.

Masculinity was not at all related to women's reports of how they felt about their pregnancies at either stage. There was, however, a trend noted for femininity to be positively correlated with feeling "happy" when first learning about being pregnant. This could be attributed to a sense of oneself as traditionally feminine that would very easily accommodate to the idea of pregnancy. It is important to note that, initially, pregnancy is experienced as more of an idea than a reality. By the last trimester, when pregnancy must be apprehended as a distinct reality, the relation between femininity and being happy about the pregnancy had disappeared.

The only other BSRI correlations of note were with semantic differential data. Both masculinity and femininity were correlated with a high evaluation of "mother." It may be recalled that high scores on both masculine and feminine BSRI items were reported to indicate a more differentiated personality than low scores on both (Orlofsky, 1977). It is conceivable that a pregnant woman with a more differentiated and developed psyche would also value motherhood, a state she is about to

experience or reaffirm, more highly. Perhaps these more differentiated women also had more positive experiences with their own mothers.

Masculinity was also correlated with a high evaluation of "pregnancy" whereas femininity was correlated with high evaluation of "baby." This intriguing difference is difficult to comment on with confidence, on the basis of this data alone. It could be speculated that the high evaluation of pregnancy may reflect a high evaluation of oneself, since these Ss were, at that time, actually pregnant. It may also simply be a high evaluation of the pregnant state. Evaluation of "baby" reflects one's valuing of something outside oneself (although this is not yet literally so). Previous BSRI studies reported that highly feminine women were more nurturant in their responses to an infant (Bem, Martyna and Watson, 1976). These findings may reflect the same phenomenon in that the pregnant woman is valuing the idea of the baby in preparation for a nurturant response. It may also be that women who score high on masculinity are more likely to value something currently descriptive of themselves (pregnancy) and that women who score high on femininity are more likely to value something outside themselves (baby), but this remains highly speculative.

We will begin out consideration of the outcome data by briefly noting the differences in distribution of outcome for the four sources of S. Both the clinic and midwife subsamples were obtained from Roosevelt Hospital. Childbirth procedures for the two groups who gave birth at the same physical location, were radically different. Ss in the midwife program were attended by female nurse-midwives with whom they had

variously become acquainted throughout their pregnancies. Their husbands were encouraged to be present during the delivery which took place in a "birthing" room where the women remained throughout the course of active labor and delivery. These two groups also differed greatly in terms of the demographic variables considered. It is important to note that in spite of the vast differences in childbirth techniques and demographic characteristics for these two subsamples, there was only a difference of two percentage points in distribution of outcome.

The natural childbirth group experienced an alarming proportion of poor outcome: 56% of this subsample had emergency Caesarian sections. It is important to note that these Ss who attended the same childbirth preparatory class employing the widely used Lamaze technique, may have all had different obstetricians attending their deliveries. The importance of "congruence" between the pregnant woman and her obstetrician was noted by Rosengren (1962). Some of these Ss may have been attended by obstetricians unsupportive of the Lamaze technique. In the interest of understanding more fully this alarming degree of childbirth pathology, this subsample was examined more closely in terms of responses found in the regression analysis to be predictive of complications. This subsample proved to be comparable to the entire sample in terms of its predictability according to Disc-SD criteria. On the basis of this, it seems likely that the high incidence of major complications in this group can be attributed to disproportionate psychological conflict regarding childbirth. Ironically, every S in this subsample reported feeling happy about being pregnant when she first found out and during the

last trimester. One might say these Ss were united in their silent denial of conflict. As we recall, Palmer and Evans (1972) suggested that denial of negative feelings fosters somaticized expression of conflict, a conclusion concurred with by other investigators (Bardwick, 1971; Grinker, 1953; Pilowsky and Sharp, 1970).

The subsample obtained from a private obstetrician had a disproportionately low incidence of complications. This was the only subsample with consistency of attending physician. Ss in this subsample did vary with respect to most of the demographic and attitudinal variables. The optimal results may be attributable to the supportiveness and consistency of the attending physician.

Outcome of labor and delivery had no relation to age, parity, education, income or being employed during pregnancy. Poor outcome was positively correlated with self-report of health problems during pregnancy, a result with two possible interpretations. First, it seems likely that women who were in poorer health during pregnancy would be expected to have more difficulty in labor and delivery. Second, since it was the Ss themselves who reported health problems during pregnancy, this item could be viewed as an indicator of general dissatisfaction with being pregnant.

Poor outcome was significantly correlated with being "sad," "afraid," or having "mixed feelings" about being pregnant during the last trimester, but not significantly related to Ss feelings when they first learned they were pregnant. Within the analytic orientation, early pregnancy has been viewed as characterized by oral ambivalence. Of the 14 Ss who reported not being happy about their pregnancies when they

first learned they were pregnant, 13 of the 14 had reported "mixed feelings." As stated before, pregnancy is initially encountered as an idea, an abstraction. Women's bodies don't usually "show" as pregnant until the fourth or fifth month, when they also begin to feel the first fetal movements. A woman who discovers her pregnant state at six to eight weeks, has at least another six weeks to accommodate to the "idea" of being pregnant before she is confronted with its concrete reality. It may be that how a woman feels about her pregnancy when first aware of it relates to a more global and abstract anticipation formed by her knowledge of her own or others' past experiences and fantasies. Apparently these anticipations do not effect the physiological process of childbirth. The pregnant woman's feelings during the last trimester, after feeling fetal movements for two or three months, watching her belly swell, perhaps making purchases of infant's clothing, would seem more connected to the baby itself as an impending reality. A woman's response to how she feels about her pregnancy during the last trimester, may be an effective barometer of conflict about mothering her soon to be born child. According to this data, such a conflict can interfere with the physiological course of labor and delivery.

Before proceeding to a consideration of the three semantic differential items that yield the Disc-SD predictor variable, there are two semantic differential results worthy of comment. There was a trend for Ss who had poor outcome of labor and delivery to rate "baby" more active than "mother," and a more substantial trend for poor outcome to be positively related to rating "baby" high in potency. These results may indicate the specific nature of some of the conflict regarding mothering.

It is possible that these women are concerned about being able to "keep up with" a baby viewed as faster, more mobile and powerful than themselves. In a broad sense, they may be apprehensive about being "left behind," overwhelmed, and perhaps, ultimately devestated by the mothering experience.

We will now consider the three semantic differential items that were combined to form the index predictive of complications in the labor and delivery process. The predictive items were "pregnancy" - hard, "childbirth" - cruel, and "baby" - strong. Taken separately, these items vary in terms of how readily interpretable they are. The first, "pregnancy" - hard, is at best, nebulous. Was the S responding to the questionnaire thinking of "hard" as similar in meaning to "difficult" or "hard" as a more sensual feature. "Childbirth" - cruel seems, superficially, to require little interpretation. Women who responded in such a way may, indeed, have been thinking of the pain associated with childbirth. It is also possible that the childbirth process may be, in part, apprehended as metaphorical for the sometimes painful process of being a mother. The third item, "baby" - strong, was the most highly significant in correlational value and, I believe, the key to lucid interpretation of this predictive index. To facilitate our consideration of this factor, we will recall some of the theoretical discussion from the literature review and include clinical data gathered from some of the Ss in this study.

Deutsch (1945) noted the pregnant woman's identification with her unborn child. It is speculated here that during an optimal pregnancy, this identification loses its initial primacy as the healthy,

relatively unconflicted pregnant woman progresses through the nine months toward the birth of her child. During this period, the woman's identification with her own mother gains importance, facilitating her own growing sense of herself as "mother." To the extent that a pregnant woman can make this transition during her nine month incubation as a mother, she may experience childbirth as an ego-expanding rather than ego-impoverishing experience. Various factors may interfere with or impede this process. Identification with the child may activate memories of a lack of nurturance.

One interviewed S, a 20 year old Spanish-American primipara, recalled herself as a willful and greedy child. Her earliest memory was of rummaging through her mother's purse, throwing out the cosmetics as she looked for candies. She also recalled an incident during which her mother cut her head by hitting her with a hairbrush. She had worried that her mother would be taken away to jail, but commented to the interviewer, "I deserved it." On a sentence completion test she wrote: Most mothers are "too gentle with kids and teens." The transition from identification with her unborn child to identification with her mother was impeded for this young woman by her own lack of nurturance as a child. Her overstriving for this identifcation was reflected in the childbirth process which was impeded by hypertonic labor resulting in emergency Ceasarian section. On the semantic differential portion of the questionnaire, she had rated "pregnancy" - hard and "childbirth" - cruel. A woman who suffered an early lack of nurturance may, through projective identificatory mechanisms anticipate, on some level, giving birth to a greedy monster rather than an infant in need of care.

This transitional identification process may also be interfered with by more immediate factors. A pregnant woman is herself in need of nurturance and stability, and is more dependent than in her non-pregnant state. A 21 year old white primipara, who could be described as fiercely independent had not yet married by her third trimester. The father of her child, a young migrant worker she had met while organizing farm workers, had expressed reluctance to marry. The young woman confidently found them an apartment and was proceeding heroically, and alone, with her plans. Some sentence completions from her protocol were: I always wanted to "be in the position to help others; Most girls "are kept in ignorance and I know are easily oppressed;" and, My greatest mistake was "I'd need more time to pinpoint my biggest." On a TAT card she noted a woman was "very dependent on the man." When asked how she thought this baby would change her life, she replied: "I think I'll mature a lot more with the responsibility of being tied down to one spot." She had rated "baby" strong and completed the sentence, When my baby is born "I hope that I can keep my strength up to fulfill all its needs."

As we recall, Deutscher (1969) found fewer complications of labor and delivery in his "going concern" couples who were characterized by a mutual supportiveness. The young woman just described experienced various complications in the childbirth process such as abnormal position of the umbilical cord, mecomium in the womb and low infant Apgar score. It appears that this S, so accustomed to independence and mobility may have been denying her own need for a mutually supportive partner and a growing sense that more than her own confidence in the future may be

required to create a "going concern" family. In this situation, it seems likely that her half acknowledged fears and doubts may have been focused on the baby itself. She may have begun to feel alone and weak before the challenge of the anticipated changes in her life, symbolized by a "strong" baby about to take her over.

As stated previously, the physiological growth of the fetus during the nine months of pregnancy is accompanied by a less obvious psychological growth of the mother. This growth may be characterized by a transition from identification with the child to identification with a mothering figure. The process may be impeded by deficiencies in the early or current interpersonal environments. In either case, the pregnant woman may feel weak and overwhelmed in anticipation of a "strong" and greedy infant, and the fetus experienced as a "hostile parasite" (Deutsch, 1945). Such a pregnancy would, indeed, be "hard" and childbirth, imbued with anxieties about mothering a "strong" and powerful infant, would readily be anticipated as "cruel."

Finally, I would like to consider some possibilities for further research on the basis of what we have learned from this study.

The strong correlations between demographic and attitudinal data invite additional exploration of a woman's motivation for bearing children. It seemed that Ss who may have experienced more control over their own lives due to the advantages of more education and jobs, felt more positively about the mothering experience than women without these advantages. This had no relation to the central hypotheses regarding obstetrical outcome, but may relate to the subsequent actual mothering

process. A longitudinal study focused on a designated period of early mother-infant interaction for two samples, distinguished by the demographic and attitudinal data obtained, as in this study, during pregnancy, would assist in ascertaining how these attitudes become manifest in the mothering process.

According to the results of this study, self-perceived sex-role identification, as measured by the BSRI, does not relate to obstetrical outcome. Two factors may have interfered with optimal use of the BSRI. First, a significant portion of this sample had acquired English as a second language. The BSRI, developed using a sample of college students, assumes a more sophisticated command of English than the semantic differential technique. Second, the N in this study may have been too small to yield significant differences using the BSRI. The usefulness of the BSRI in predicting obstetrical outcome could be determined by using a larger, uniformly college-educated sample.

The only concept rated via the semantic differential technique that did not relate significantly to outcome of labor and delivery was "mother." This concept had been deliberately left vague to tap a reservoir of meaning that would include actual experience with one's own mother and archetypal notions of "mother." Apparently, it was so vague that Ss may have responded to it idiosyncratically, rendering it devoid of predictive power. It would seem from our discussion of the results that "mother" is a crucial concept in relation to childbirth. In future research, attempting to assess the meaning of "mother" using this technique, its domain should be specified. "My mother" may serve as an adequate indicator of actual experience and "motherhood" may relate

more to the archetypal experience.

Finally, a thorough consideration of the three semantic differential items that formed the predictive index would necessitate more clinical data. Two samples could be obtained, one where at least two of the three ratings would conform to this index and another with none of the predictive ratings. Several Ss from each of these samples could be randomly selected to form subsamples that would be given thorough clinical consideration using a series of interviews and psychological tests.

Appendix

Questionnaire

1. Name_____ 2. Today's date_____

3. Age_____ 4. Expected delivery date_____

5. Ethnic origin:
   - black-american_____
   - white-american_____
   - spanish-american_____
   - other (specify)_____

6. This is my
   - 1st child_____
   - 2nd child_____
   - 3rd child_____
   - 4th child_____

7. I am
   - single_____
   - married_____
   - separated_____
   - divorced_____
   - widowed_____

8. Education:
   - grade school_____
   - high school_____
   - college_____

9. I have been employed
   - during pregnancy_____
   - after 3rd month_____
   - now_____

10. Health problems during pregnancy:
    - yes_____
    - no_____

11. If the answer to question 10 is yes, please specify:_____

---

12. This pregnancy was planned: yes_____ no_____.

13. I hope my baby will be a girl_____ a boy_____ no preference_____.

14. The word that best describes how I felt when I learned I was pregnant is happy_____ sad_____ afraid_____ mixed feelings_____.

15. The word that best describes how I feel now about this pregnancy is happy_____ sad_____ afraid_____ mixed feelings_____.

16. I think my mother felt happy_____ sad_____ afraid_____ mixed feelings_____ when she was pregnant with me.

17. I think a woman can work at a job outside her home and be a good mother yes_____ no_____.

On the next page you will be shown a large number of personality characteristics. We would like you to use these characteristics in order to describe yourself. That is, we would like you to indicate, on a scale from 1 to 7, how true of you these various characteristics are. Please do not leave any characteristic unmarked.

Example: sly

Mark a 1 if it is NEVER OR ALMOST NEVER TRUE that you are sly.

Mark a 2 if it is USUALLY NOT TRUE that you are sly.

Mark a 3 if it is SOMETIMES BUT INFREQUENTLY TRUE that you are sly.

Mark a 4 if it is OCCASIONALLY TRUE that you are sly.

Mark a 5 if it is OFTEN TRUE that you are sly.

Mark a 6 if it is USUALLY TRUE that you are sly.

Mark a 7 if it is ALWAYS OR ALMOST ALWAYS TRUE that you are sly.

Thus, if you feel it is sometimes but infrequently true that you are "sly," never or almost never true that you are "malicious," always or almost always true that you are "irresponsible," and often true that you are "carefree," then you would rate these characteristics as follows:

Sly	3	Irresponsible	7
Malicious	1	Carefree	5

DESCRIBE YOURSELF

1	2	3	4	5	6	7
NEVER OR ALMOST NEVER TRUE	USUALLY NOT TRUE	SOMETIMES BUT INFREQUENTLY TRUE	OCCASIONALLY TRUE	OFTEN TRUE	USUALLY TRUE	ALWAYS OR ALMOST ALWAYS TRU

Self reliant	
Yielding	
Helpful	
Defends own beliefs	
Cheerful	
Moody	
Independent	
Shy	
Conscientious	
Athletic	
Affectionate	
Theatrical	
Assertive	
Flatterable	
Happy	
Strong personality	
Loyal	
Unpredictable	
Forceful	
Feminine	

Reliable	
Analytical	
Sympathetic	
Jealous	
Has leadership abilities	
Sensitive to the needs of others	
Truthful	
Willing to take risks	
Understanding	
Secretive	
Makes decisions easily	
Compassionate	
Sincere	
Self-sufficient	
Eager to soothe hurt feelings	
Conceited	
Dominant	
Soft-spoken	
Likable	
Masculine	

Warm	
Solemn	
Willing to take a stand	
Tender	
Friendly	
Aggressive	
Gullible	
Inefficient	
Acts as a leader	
Childlike	
Adaptable	
Individualistic	
Does not use harsh language	
Unsystematic	
Competitive	
Loves children	
Tactful	
Ambitious	
Gentle	
Conventional	

Below are twelve pairs of words. Please use these word pairs to describe what the word above them means to you by circling the point on the scale that best relates to it. The scale points indicate the following:

1 = extremely
2 = quite
3 = slightly
4 = neutral or unrelated
5 = slightly
6 = quite
7 = extremely

For example,

WORK is:

empty 1 2 3 4 5 6 7 full

If you feel that the word "work" is best described as "quite" full, you would circle 6 on the scale.

MOTHER is:

fast	1	2	3	4	5	6	7	slow
sad	1	2	3	4	5	6	7	happy
large	1	2	3	4	5	6	7	small
tense	1	2	3	4	5	6	7	relaxed
clean	1	2	3	4	5	6	7	dirty
weak	1	2	3	4	5	6	7	strong
high	1	2	3	4	5	6	7	low
cruel	1	2	3	4	5	6	7	kind
heavy	1	2	3	4	5	6	7	light
sharp	1	2	3	4	5	6	7	dull
pleasant	1	2	3	4	5	6	7	unpleasant
hard	1	2	3	4	5	6	7	soft

Scale points:
1 = extremely
2 = quite
3 = slightly
4 = neutral or unrelated
5 = slightly
6 = quite
7 = extremely

Please do the same for "pregnancy."

PREGNANCY is:

fast	1	2	3	4	5	6	7	slow
sad	1	2	3	4	5	6	7	happy
large	1	2	3	4	5	6	7	small
tense	1	2	3	4	5	6	7	relaxed
clean	1	2	3	4	5	6	7	dirty
weak	1	2	3	4	5	6	7	strong
high	1	2	3	4	5	6	7	low
cruel	1	2	3	4	5	6	7	kind
heavy	1	2	3	4	5	6	7	light
sharp	1	2	3	4	5	6	7	dull
pleasant	1	2	3	4	5	6	7	unpleasant
hard	1	2	3	4	5	6	7	soft

Please do the same for "childbirth."

CHILDBIRTH is:

fast	1	2	3	4	5	6	7	slow
sad	1	2	3	4	5	6	7	happy
large	1	2	3	4	5	6	7	small
tense	1	2	3	4	5	6	7	relaxed
clean	1	2	3	4	5	6	7	dirty
weak	1	2	3	4	5	6	7	strong
high	1	2	3	4	5	6	7	low
cruel	1	2	3	4	5	6	7	kind
heavy	1	2	3	4	5	6	7	light
sharp	1	2	3	4	5	6	7	dull
pleasant	1	2	3	4	5	6	7	unpleasant
hard	1	2	3	4	5	6	7	soft

Scale points:
1 = extremely
2 = quite
3 = slightly
4 = neutral or unrelated
5 = slightly
6 = quite
7 = extremely

Please do the same for "baby."

BABY is:

fast	1	2	3	4	5	6	7	slow
sad	1	2	3	4	5	6	7	happy
large	1	2	3	4	5	6	7	small
tense	1	2	3	4	5	6	7	relaxed
clean	1	2	3	4	5	6	7	dirty
weak	1	2	3	4	5	6	7	strong
high	1	2	3	4	5	6	7	low
cruel	1	2	3	4	5	6	7	kind
heavy	1	2	3	4	5	6	7	light
sharp	1	2	3	4	5	6	7	dull
pleasant	1	2	3	4	5	6	7	unpleasant
hard	1	2	3	4	5	6	7	soft

* * * *

THANK YOU VERY MUCH.

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