PEER-GROUP ORIENTATION, SEXUAL BEHAVIOR, AND ATTITUDES OF COLLEGE STUDENTS TOWARD ABORTION

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ABSTRACT

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Although the Supreme Court of the U.S. legalized abortion in 1973, the abortion issue is still controversial and marked by honest and deeply felt differences of opinion. Therefore, the major thrust of this study was to investigate some of the demographic and social-psychological factors which promote the formation of attitudes toward abortion among never-married college students. The general theoretical approach assumed that college attendance provides a socialization process toward permissive abortion attitudes. The prime socializer was proposed to be the peer group, which was thought to be more liberal as well as to become more powerful than the family of orientation in shaping one's attitudes toward abortion. The peer group was proposed to encourage the development of a nontraditional sex-role ideology, a greater clinical knowledge of sex, and more permissive attitudes toward premarital sex, which three consequences were thought to encourage the initiation of sexual intercourse. Among sexually active respondents, a succession of intercourse partners and frequent sexual intercourse were hypothesized to conduce to a subjective perception of one's fecundity. Although no direct measures of one's biological capacity to produce children were available, three indirect measures were employed. Specifically, it was thought that those who practiced contraception,

who used the more efficacious contraceptive methods, and who discussed the possibility of pregnancy with the intercourse partner would be more likely to believe they could produce children. A subjective perception of oneself as fecund was argued to induce more tolerant attitudes toward abortion among the never-married.

The data on abortion attitudes presented in this investigation were drawn from a survey of never-married, undergraduate, male and female students enrolled at Michigan State University during the Fall term, 1976. The sample was drawn at random from current registration records. The present study was further limited to respondents who were white, who initiated sexual intercourse since coming to college, who had not been raped at first sexual intercourse, and who did not experience a pregnancy in the current or the most recent intercourse relationship. As such, the effective sample size became 534. The primary statistical method used was hierarchical multiple regression, which allowed the evaluation of the contribution to the total variance explained by a test variable after adjusting for the effects of control variables.

The analyses indicated that one's orientation to peers increased with college tenure and contributed to a greater clinical knowledge about sex and a greater sexual permissiveness. The latter two factors increased the probability of nonvirginity. Among those who became sexually active in college, contraceptive use and efficacy were not related to abortion attitudes, while a discussion of the probability of pregnancy with the intercourse partner was associated with more favorable attitudes toward abortion. Some possible directions for future research were offered.

DEDICATED

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER ONE

INTRODUCTION

More than seven years have passed since the U.S. Supreme Court made induced abortion legal under any circumstance in the first trimester of pregnancy as long as the woman and her physician approve it. But the Supreme Court ruling did not settle the abortion controversy once and for all. That the abortion issue is still marked by honest and deeply felt differences of opinion suggests that public policy with respect to abortion may still be subject to change.

The public's attitudes, the norms, the values, and the conditions by which abortion could be justified have been changing rapidly toward more liberalization since the beginning of the 1960's. Before the 1960's, abortion was not publicly discussed or legally permitted under any circumstance: abortion was a criminal offense against the unborn (McCary, 1973: 470 - 471; McCormick, 1975: 46). In 1962, the American Law Institute recommended that induced abortion should be legalized under the following special circumstances: if the life of the mother was endangered by birth, if there was medical evidence that the child would be born with physical or mental deformities, or if the pregnancy was the outcome of incest or rape. This recommendation was subsequently developed into a law which was passed by seventeen states and the District of Columbia between 1967 and 1970 (Westoff and Westoff, 1971: 138).

In conformity with the recommendation of the American Law Institute, the American Medical Association amended its official position on abortion in 1967, for the first time since 1870. Between 1967 and 1973, anti-abortion laws were challenged and were modified in some states. Finally, in January, 1973, the Supreme Court of the United States ruled (7 to 2) that abortion was legal under any circumstance during the first trimester of pregnancy (McCary, 1973: 470). During the remaining period of pregnancy, however, the state would regulate the performance of abortion and might deny it to a pregnant woman if her health or life was not in danger (Knowles, 1973: 113; Sarvis and Rodman, 1973: 68 - 69). Since "health" could be interpreted broadly as both physical and mental, the Court's ruling, practically speaking, allowed induced abortion throughout the entire period of pregnancy. In July, 1976, the Supreme Court further ruled that no related parties, such as the parents or the husband of a pregnant woman, could veto her decision to abort (Blake, 1977b: 45).

The general public's attitudes toward induced abortion are still ambivalent. Blake (1977a) argued that the legalization of abortion in 1973 reflected the attitudes of the U.S. Supreme Court rather than of the public. A 1976 national Gallup poll indicated that the sample was almost split in its response to the following question: "A constitutional amendment has been proposed which would prohibit abortions except where the pregnant woman's life is in danger. Would you favor this amendment which would prohibit abortion or would you oppose it?" Forty-five percent were in favor, and 49 percent were against such an amendment. The remaining six percent had no opinion

(Blake, 1977b: 60). Blake (1977a) and Zimmerman (1977) contended that the majority of the American people still disapprove or seriously question the legal right of a woman to a voluntary abortion.

The current American debate on abortion may reflect a worldwide trend toward its legalization. While abortion has been used in the United States as a complementary method to contraception, it has been used as a primary means of reducing fertility in the socialist countries of Central and Eastern Europe and in Japan. In these latter countries, induced abortion has been a response to population pressures (Davis, 1963). From a global view, more than one-third (36 percent) of the world population is currently living in countries which provide abortion services without any restrictions. For another one-third (35 percent), abortion is legally available only in cases of rape, incest, unweddedness of the pregnant woman, and high probability of fetal deformity. For 15 percent of the world population, abortion is legal only if the life of the mother is in danger due to pregnancy; and for the remaining 15 percent, abortion is absolutely prohibited (Nortman, 1977: 25).

The change in the legal status of abortion in the U.S., wrought by the 1973 Supreme Court decision, may be functionally related to changes in other social institutions. Of primary importance is the changing status of women which can be inferred from the following developments: the reemergence of women's rights organizations which have promoted pro-abortion ideologies (Westoff and Westoff, 1971: 145 - 146), increase in labor force participation of women, in general, and maternal employment, in particular (Hoffman, 1977), postponement of first marriage by one year between 1970 and 1978 (Current Population Reports, 1978), increase in the

proportion of women pursuing advanced education (Hoffman, 1974), delay in having children, having fewer children, and an increase in the proportion of women engaging in premarital sex (Hoffman, 1977). These developments may indicate that the time spent by women in familial and mothering activities, and their dependence on family support systems have decreased. As time spent by women in familial settings decreases, the peer group may be gaining a greater influence on one's attitudes and behavior; such as, on one's abortion attitudes and contraceptive practices.

This study will investigate the influence of the peer group on the development of attitudes toward abortion. Some sources show that a larger proportion of aborters are unmarried than are married (Abortion and the Changing Law, 1970; Spencer, 1970; Tietze and Lewit, 1973; Bauman et al., 1977; Tietze and Lewit, 1977). However, the relatively few studies of abortion attitudes have focused largely upon the currently married. Therefore, studies of the development of abortion attitudes among the unmarried can better inform public policy and health care delivery systems. Furthermore, analyses including data gathered from both males and females can show whether the social context producing given social-psychological dispositions toward abortion might differ between them. Therefore, this dissertation will analyze social and demographic correlates of abortion attitudes among never-married men and women students at Michigan State University.

In Chapter Two, the pertinent literature is reviewed and the theoretical framework is developed, followed by a statement of six major research hypotheses. In Chapter Three, the sample respondents, the operational measures and variables, and statistical procedures for the tests

of the hypotheses are defined and discussed. In Chapter Four, the analyses and findings of the study are presented. Finally, in Chapter Five, the findings of the study are summarized; and their implications are explored.

CHAPTER TWO

LITERATURE REVIEW, THEORY, AND HYPOTHESES

The general theoretical approach employed in this study utilizes reference group theory. It assumes that sexual behavior of never-married students is influenced by the sexual behavior of their peers as well as by the presence or absence of discussion of sexual matters with them. The theoretical approach also assumes that attitudes toward abortion are closely related to sexual and contraceptive behavior. Coitally active students who use contraception consciously perceive and seek to minimize the risk of conception. Within this context, abortion may be perceived as needed in case of contraceptive failure, and, therefore, more favorable attitudes toward abortion may be expressed. In short, the theoretical approach assumes that peer groups affect the development of one's sexual attitudes and behavior and, by extension, of attitudes toward abortion.

The term "reference group" was first introduced by Hyman (1942), who elaborated and explored some of its properties in his study of "The Psychology of Status." In this study, Hyman was interested in exploring the processes through which individuals subjectively evaluated themselves in terms of a variety of statuses; such as, economic and intellectual statuses. For each status evaluated, respondents were requested to identify the social milieu within which they evaluated themselves in the respective status. The social milieu was reported in terms of people and individuals the respondent knew and

used as points of reference by which he compared and evaluated himself. Thus, a reference group means a group of people or some individuals to which one compares his or her attitudes and behavior (Hyman, 1942) or from which one acquires values for the guidance of his or her behavior (Shibutani, 1962: 128).

Kelley (1952) distinguished between normative and comparative reference groups. A normative reference group assumes the function of "norm setting and norm enforcement." Normative reference groups are relatively few in number. Some examples are one's family of orientation, workmates, and immediate close friends such as in fraternity or sorority living arrangements. A normative reference group develops its own peculiar sets of values, norms, and expectations. Expression of attitudes and development of behavior within this group must be compatible with the group's norms. If, however, an individual does not adhere to the group's norms, he or she experiences a feeling of guilt and rejection which may eventually result in his or her separation or receiving disfavor from the group. In this respect, the group is in a position to award recognition or punishment for conformity or nonconformity, respectively. Therefore, in this kind of social arrangement, the individual feels continuously motivated as well as pressured to conform to what the group defines as normative for the purpose of gaining or maintaining acceptance by its members (Kelley, 1952: 413).

While a normative reference group is both a source and an enforcer of norms, a comparative reference group is in itself the norm (Kelley, 1952). Compared to the relatively few and well defined

normative reference groups, comparative reference groups are numerous and loosely defined. Comparative reference groups can be of a wide variety in terms of size and scope. They vary, for example, from the general population in one's race, gender, ethnic group, age category, religious, and professional groups to more specific groups such as one's casual acquaintances and college peers in the same locality. A comparative reference group serves as a standard or a yardstick against which an individual makes judgements and decisions. In this respect, an individual begins to resocialize himself or herself with standards of the comparative reference group even without being exposed to direct interaction with all of its members (Kelley, 1952).

Kelley (1952) also contended that a complete reference group theory must take into consideration both the normative and comparative functions of groups. He stated that the normative and comparative reference groups either exert separate influences or joint influences on the formation of one's attitudes, opinions, beliefs, and behavior.

While Kelley (1952) developed a distinction between two types of reference groups, Newcomb (1958) developed a distinction between two processes through which reference groups operate on the individual. Based on his study of "Attitude Development as a Function of Reference Groups: The Bennington Study", Newcomb concluded that the formation of attitudes is a "function of relating oneself to some group or groups, positively or negatively" (p. 275). In other words, Newcomb suggested that two types of reference group influences, positive and negative,

operate whenever an individual judges social phenomena. In this respect, an individual may oppose norms of one group while simultaneously adopting norms of another group. This implies that an individual is continuously and simultaneously confronted with duplicative or contradictory norms of more than one group (normative and/or comparative).

Given the multiplicity of reference groups, each group may exercise an influence over some specialized sphere on one's attitudes and/or behavior. However, in most of the instances, more than one group (normative or comparative, or a combination of both) simultaneously exerts influences over the same sphere. Norms and values of these groups may reinforce each other, if they are compatible across groups, or may bring about an inner conflict within the individual if they are not compatible. In the latter situation, an individual is, therefore, left with contradictory alternatives which he or she has to privately debate before he or she can make a selection (Riley and Riley, 1968).

How an individual resolves contradictory demands placed upon him or her by incompatible reference groups is an important problem of reference group theory. A variety of social psychologists have dealt with this issue. The general consensus appears to be that individuals establish a hierarchical order of their reference groups in terms of importance and legitimate exercise of power over their attitudes and actions (Merton and Rossi, 1968; Sherif, 1968; Charters and Newcomb, 1958; Hartley, 1960; Kelley, 1952; Rosen, 1955; Riley and Riley, 1968). Accordingly, the pressures toward conformity exerted by these reference groups are weighted differently by the individual. That is, an

individual may simultaneously yield, to a varying degree, to all or to a subset of the referent messages proposed to him or her by the diverse sources of pressure. Subsequently, the resultant attitude or behavior may be viewed as the weighted average of these referent messages which were carefully studied by the individual (Saltiel and Woelfel, 1975).

In the present study, one's peers are thought to provide important reference groups which exert positive or negative influences upon one's general attitudes or behavior. Some peers may serve as normative groups; such as those in friendship cliques, fraternities, or sororities. Other peers may serve as comparative groups; such as, those in one's field of study, in one's race, or even in the whole college student body. In this respect, college years provide a unique experience to the student not only in the attainment of higher education (which is taken for granted as the primary function of college), but also in the exposure to new normative and comparative reference groups which may question the existing social order and may lead to rejection or modification of one's former attitudes and behaviors.

Douvan (1975) argued that peers become more powerful than the family of orientation in shaping one's attitudes and behaviors after matriculation. This phenomenon need not imply that the two reference groups are incompatible; one can select reference groups which reinforce values supported by the family of orientation. There is empirical evidence, however, that the peer group is less traditional than the family of orientation on a variety of attitudinal dimensions (Rosen, 1955; Brittain, 1963; Lewis, 1973; Walsh et al., 1976). Furthermore, it is reasonable to argue that peers should be more liberal than

the family of orientation with regard to sex-role ideology, premarital sex, and attitudes toward abortion.

Sex-role ideology refers to two interrelated and complementary dimensions (see Holter, 1970). The normative dimension, which is of primary concern in this study, consists of institutionalized agreements or expectations regarding the assignment of tasks, resources, privileges, and burdens to men and women in a society. The belief dimension, on the other hand, consists of three types of assumptions, any one type of which is sufficient to support traditional sex-role norms. These three types of beliefs are: 1) beliefs in in-born differences between males and females regarding psychological traits and/or mental and physical capabilities; 2) beliefs in sex-role differentiation as laid out by a supernatural or divine power; and 3) beliefs that sex-role differentiation should increase efficiency in carrying out certain tasks (Holter, 1970: 21). As such, a one-to-one correspondence between a type of sex-role belief and a sex-role norm is posited. If women, for example, are believed inferior to men intellectually, a norm may develop that males should be given preference over females in admission to college.

The peer group should be more likely than one's family of orientation to support "equality between the sexes and freedom to choose social roles according to personal need rather than social (gender) stereotypes" (Seward, 1970: 123). This position seems plausible for several reasons. First, college entrance should be selective of persons with less traditional sex-role ideologies. Low socioeconomic status (Astin, 1975) and plans for marriage (Bayer, 1969) have been

found to prevent college entrance. Since persons of lower socioeconomic status and those who value marriage and maternity are generally found to hold traditional sex-role ideologies (Rainwater, 1965; Stolka and Barnett, 1969; Tobin, 1976), college entrance should be more selective of persons with nontraditional sex-role orientations. This effect is posited to be stronger for females than for males, since low socioeconomic status is less inhibitive of male than of female entrance into college (Astin, 1975) and since marital plans are more inhibitive of female than of male entrance into college (Bayer, 1969). Furthermore, after college entry, attrition should selectively remove the more sex-role traditional women (Astin, 1975). Consequently, college attendance probably exposes one to nontraditional sex-role models, the effect being more pronounced for females than for males.

Peer-group orientation should also promote sexual permissiveness and sex knowledge. It was mentioned earlier that, during the college years, the normative function of one's family of orientation may decrease while the normative and comparative functions of peers probably increase. Since college students escape the direct and close supervision of their families of orientation, college peers develop their own norms and values. In this respect, one's peers serve both as norm setters (normative function) and role models (comparative function). Schulz et al., (1977) suggested that students enter college with certain sets of attitudes and values which may encourage or discourage premarital sexual behavior. These attitudes and values may, in turn, influence the selection of friends. That is, a freshman student who, upon entrance into college, has nontraditional attitudes and values may be more likely than a student with traditional attitudes

and values to choose peers or living arrangements (e.g., fraternity or sorority) which may be supportive or inducible of premarital sex.

Peers were found to be liberal in their attitudes and behavior regarding sexual matters (Teevan, 1972; Walsh, Ferrell, and Tolone, 1976). Reiss (1967: 129 - 139) and Teevan (1972) reported that both one's immediate family and peers are primary sources of sexual attitudes and values. Furthermore, respondents tended to identify more closely with their peers than with their parents regarding sexual permissiveness. Based on a sexual permissiveness scale, Reiss (1967) found a strong relationship between the self-reported permissiveness of respondents and the perceived permissiveness of their peers and close friends. In this respect, seventy-seven percent of the total sample perceived their sexual permissiveness as similar to that of their peers. Reiss, therefore, concluded that "there is a general tendency for the individual to perceive his parents' permissiveness as a low point on a permissiveness continuum and his peers' permissiveness as a high point, and to place himself somewhat closer to his peers, particularly to those he regards as his close friends" (Reiss, 1967: 139).

In a longitudinal study, Walsh et al., (1976) reported that an increase in the sexual permissiveness of never-married undergraduate students as they progressed through college was a function of the increasing orientation of students toward peers. Similarly, Mirande (1968) and Teevan (1972) found that one's peers were a primary source of sexual attitudes. In these studies, the influence of peers on one's sexual attitudes (whether toward greater or lesser permissiveness)

was direct via the explicitly stated expectations (normative function) and indirect via the respondent's perception of his or her peers' actual behavior (comparative function). That pressures toward conformity to peers' norms and expectations were greater among upper- than lower-classmen was thought to be a function of the greater integration of upper-classmen into the peer subculture (Mirande, 1968).

Research findings have also indicated that greater sexual permissiveness among college peers was accompanied by greater sexual intimacy. Teevan's (1972) analysis of data drawn from a national sample of never-married college students has indicated a significant positive relationship between one's sexual permissive standards and his or her sexual intimacy. In the same study, Teevan also reported that peers' sexual permissiveness was the most important variable in predicting the respondent's sexual behavior. Similarly, Schulz et al., (1977) and Mirande (1968) reported that the perceived sexual attitudes and behavior of peers have the largest effect on the respondent's sexual behavior. In these two studies, students having had coitus associated themselves with peers who were more permissive in their attitudes toward premarital sex whereas virgins associated themselves with peers who discouraged premarital intercourse. Furthermore, Schulz et al., and Mirande have also indicated greater consistency between the respondent's sexual permissiveness and behavior, and sexual permissiveness of peers in a well defined group (such as fraternity or sorority) than of peer groups loosely defined (such as students of the same gender).

While previous research has shown that sexual permissiveness

is positively related to sexual intimacy (Mirande, 1968; Teevan, 1972), it has also shown a definite and strong relationship between sexual permissiveness and attitudes toward abortion. In a study of 454 never-married undergraduate female students, Mirande and Hammer (1974) reported a strong positive relationship between attitudes toward premarital sexual behavior and abortion attitudes, net of the effects of age and religious affiliation. A positive relationship between sexual permissiveness and abortion attitudes was also reported by Maxwell's (1970) study of 323 undergraduate male and female students. Maxwell suggested that abortion attitudes might be an extension of attitudes toward premarital sex. He contended that since permissive sexual attitudes might lead to premarital intercourse, which would involve a probability of conception, abortion might appear as a reasonable solution to a potential problem if a conception were not desired. Then favorable attitudes toward abortion would develop.

It follows, therefore, that from the reference group perspective, one's peers provide both the normative (norm setters and enforcers) and comparative (role models) functions with respect to sexual attitudes and behavior. With respect to the normative function of the peer reference group, Komarovsky (1976) has shown that nonconformity to peers' sexual standards and expectations led to painful experiences for the respondent. Interviewing a randomly selected sample of senior students of an Ivy League male college, Komarovsky elaborated on the painful experiences virgin males had to undergo for not joining their "buddies in sexual adventures" (p. 67). According to Komarovsky, virginity status was in itself a "disturbing personal

problem" (p. 107) for the majority of virgin males. Furthermore, peer pressure to participate in premarital sexual behavior led to feelings of guilt, indecision, and inadequacy among sexually inexperienced males. As one senior male put it:

> "The question of sex is really a very serious problem for a sensitive person. It's bad because when a guy gets to college he is going to feel inadequate as a man if he doesn't have a certain amount of experience. He is going to be different from other guys and they all make such to-do about it" (Komarovsky, 1976: 108).

In another study, Kanin (1967) has demonstrated that respondents whose peers were engaged in coital activity were more likely to have also experienced coitus than respondents whose peers were not so engaged. Furthermore, respondents who were virginal and whose peers were coitally active were reluctant to admit virginity. In this study, seventy percent of the males who stated that they were under a "great deal" or "considerable" pressure from peers reported that they could not admit to virginity without loss of status in the peer group.

With respect to the comparative function of the peer group, Mirande (1968) and Teevan (1972) contended that a respondent's perception of peers' attitudes and behavior regarding sexual matters provides a framework within which one justifies his or her position on such issues. In this respect, college students justify their premarital sexual behavior by saying or rationalizing to themselves that they are so sanctioned by their peers.

One's peers also function as sources of sexual, reproductive, and contraceptive information. It can be argued that one's involvement with peers who are permissive or are engaged in premarital sexual

activities, provides a suitable socializing milieu to discuss and reciprocate information about sexual skills, contraceptive practices, and other sexual concerns (Spanier, 1977). Thompson and Spanier (1977) and Gebhard (1977) reported that peers provided a primary source of sex knowledge. According to Finkel and Finkel (1975) and Thornburg (1972), peers were the most frequent source of such information as usage of condoms, length of time the sperm remains alive, and homosexuality and prostitution. Thornburg's (1972) study examined the contribution of eight sources of sex information such as peers, parents, schools, literature, and physicians among college students in two universities. Peers were found to have assumed a greater influence than any other source. In this study, college peers contributed 38 percent of the respondent's total score of sex knowledge.

The peers' influence toward greater sex knowledge is hypothesized to contribute to greater sexual intimacy. One may argue, however, that greater sexual intimacy may also contribute to greater sex knowledge. In this respect, Spanier (1976a) argued that the directionality of the relationship between sex knowledge and premarital sexual behavior is not clearly understood. The available data on sex knowledge and sexual behavior are cross-sectional, and a study with a longitudinal design is needed in order to assess the relationship between these two variables. However, based on data from a national probability sample of 1,177 American college male and female students, Spanier (1976a) reported a significant relationship between sex knowledge and premarital sexual involvement after controlling for the effects of "religiosity, social class, age, year in school, familial sexual conservatism, rural-urban differences, and several socialization

variables" (p. 252). In this study, Spanier concluded that a greater sex knowledge was a significant contributing factor to greater sexual involvement. He argued that before engaging in premarital sexual behavior, an individual must acquire a minimal amount of sex information. This sex information may, in turn, lead to sexual experimentation.

It must be emphasized, however, that sex knowledge in itself is not a sufficient condition for motivating an individual to engage in sexual experimentation but could become a potential contributing factor for this behavior if such circumstances as the source and range of sex education, sex topics discussed, and the way in which the transmission of sex information is handled are facilitating. For example, the various sources of sex knowledge can be dichotomized into (1) formal sources, such as school classrooms; and (2) informal sources, such as one's family of orientation and the peer group. Spanier (1976b) reported that among male and female respondents, formal sex-educating experiences were not significantly related, while informal sex-educating experiences were significantly related to the respondent's premarital sexual involvement. Furthermore, Spanier (1977) found that female respondents who reported their mothers as the major source of sex information were less likely than female respondents who reported their peers as the major source of sex information to have engaged in premarital sexual behavior. Similarly, male respondents who reported clergymen as the major source of sex information were less likely than male respondents who reported their peers as the major source of sex information to have had coitus. In this respect, Spanier argued that along with the transmission of substantive sex information, mothers

and clergymen were also likely to have communicated attitudes, norms, and values which discouraged premarital sexual involvement while peers were likely to have communicated an orientation which encouraged sexual intercourse. Spanier further reasoned that a value orientation toward premarital sexual intercourse is less likely to be presented with clinical information about human reproduction when such clinical information comes from formal than from informal sources.

It follows from the above, that it is not sex knowledge per se but the source as well as the context within which this information is transmitted which has an impact on premarital sexual involvement (Lewis, 1973; Spanier, 1977). Since most sex information comes from peers (Finkel and Finkel, 1975; Thornburg, 1972) who tend to be sexually permissive (Teevan, 1972; Walsh, Ferrell, and Tolone, 1976), respondents who have the most sex information are hypothesized to have had sexual intercourse. It is important to remember, however, that the above reported studies were based on cross-sectional data and the relationship between sex knowledge and sexual behavior may not be fully understood without longitudinal research.

Sex-role egalitarianism should also increase the sexual permissiveness and intimacy of college students. Since "the law of marriage is still geared to a time when it was important to use sex as a means of enticing people into marriage and childbearing" (Blake, 1972: 94), persons having a liberal orientation toward sex roles may be unwilling to view intercourse as the monopoly of the married. Furthermore, the development of nontraditional career commitments, particularly for female students, may lead college students into

premarital liaisons by postponing the age at which marriage might feasibly occur. These relationships may explain the findings of Fox and Fox (1977), who reported that college students who assumed nontraditional sex-role orientations were more likely than traditional students to engage in premarital coital activity. Other evidence among married women (Abernethy, 1978) indicated that women who assumed nontraditional sex-role orientations were more likely to initiate coitus than traditionally oriented women.

Sex-role orientation should be related to the use or nonuse of contraception, the contraceptive technique(s) employed, and the point in the sexually intimate relationship at which contraception is initiated. For example, one traditional sex-role belief distinguishes between good and bad women on the basis of interest in and desire for sexual intercourse:

> "Good women are basically mothers; they run households, take care of children and of husbands. While they are receptive to their husbands sexually, they do not independently seek sexual gratification ... Bad women, of course, are mainly interested in sex, and are to be found mostly in bars and hotel rooms" (Rainwater, 1960: 79-80).

A rejection of her sexuality may prevent a sex-role traditional female from using contraception at all. This fact may partly account for Stokes and Dudley's (1972) finding that married couples having a sharp, traditional segregation of sex roles were more likely to employ male contraceptive methods (e.g., condom or withdrawal). Since sex-role traditional women are thought to avoid female contraceptive techniques requiring genital contact, they may avoid such methods as diaphragms, jellies, and foam (Rainwater, 1960: 155 - 156). They may also be reluctant to use pills and intrauterine devices, since the advanced

planning required by these physician-administered methods betrays a concern for sexual intercourse which traditional women may wish to deny. Since a traditional sex-role ideology rejects contraception requiring female initiative, traditional couples may employ no contraception at all or only the male methods.

Regardless of the contraceptive technique employed by a couple, sex-role traditionalism may inhibit contraceptive efficacy. Traditional women tend to view bearing and mothering of children as central to the feminine role while nontraditional women regard occupational achievement as a viable alternative to or supplement of motherhood (Scanzoni and McMurry, 1972; Hoffman and Wyatt, 1960). Since women with traditional sex-role orientations view employment and occupational achievement as potential threats to their femininity (Hoffman and Wyatt, 1960), they may not view accidental conceptions as disfavorably as do sex-role egalitarian women. Consequently, traditional women may tend to have a larger number of children by being less motivated than nontraditional women to use contraception regularly and/or efficaciously (Stolka and Barnett, 1969; Clarkson et al., 1970) and less willing to resort to abortion as means of terminating a pregnancy.

Couples with traditional sex-role orientations begin to contracept at a later time after marriage than egalitarian couples (Rainwater, 1960). A partial explanation for this phenomenon may be that couples in highly segregated (traditional) sex-role relationships are less likely than couples in jointly organized sex-role relationships to communicate regarding many family affairs, including contraception and childbearing. A greater communication between husband and wife gives a couple an opportunity to decide on the number of children desired and, once that

goal is defined, to practice contraception regularly and efficaciously (Hill et al., 1955; Rainwater, 1965). The poorer communication between sex-role segregated couples may mean that a discussion of contraception and reproductive goals does not occur until births have begun to impinge on familial resources (Rainwater, 1960). These relationships may account for Stokes and Dudley's (1972: 158) finding that the percentage of couples practicing contraception before their first birth declined as the degree of conjugal role segregation increased.

From the foregoing considerations, it appears logical that nontraditional sex-role orientations should lead to more liberal orientations toward abortion among never-married college students. By promoting nontraditional views about gender roles, college peers are likely to encourage a greater and more efficacious use of contraception, initiation of contraception at an early point in the sexual relationship, employment of female contraceptive methods, nontolerance of accidental conceptions, and acceptance of abortion as a means of terminating a pregnancy. Sex-role orientations are, therefore, hypothesized to be one social-psychological bridge through which peers would influence the abortion attitudes of college students.

The discussion thus far suggested that a greater sexual permissiveness, a greater sex knowledge, and a greater nontraditional sex-role ideology should lead to a greater probability of nonvirginity. However, not everyone involved in intercourse relationships is hypothesized to perceive the risk of pregnancy and to seek to minimize it through the employment of contraception (Callahan, 1970: 293) and (as a backup method) abortion. Several studies of unwed mothers have found that contraception was irregularly practiced prior to conception.

Bowerman et al., (1966) reported that only 10 percent of the white and 7 percent of the nonwhite mothers bearing children out of wedlock had used contraception in every sexual encounter. Zelnik and Kantner's (1972) study of unwed females showed the single most important reason for their nonuse of contraception was the belief that they would not become pregnant. In addition, Sklar and Berkov's (1973) analysis of data for California in 1972 indicated that despite the accessibility of legal abortions in that state, the illegitimate birth rate had appeared to level off. They concluded, therefore, that although legal abortion had had a greater impact in reducing illegitimate than legitimate parenthood in California, there were significantly large proportions of unwed females who abjured abortion.

It would seem fair to assume that many individuals who are motivated to avoid conception would use contraceptive techniques and, in case of experiencing a contraceptive failure, they would be receptive to abortion. In the 1965 National Fertility Study of 5,600 currently married women under the age of 55, Ryder and Westoff (1971: 286) reported a positive relationship between attitudes toward contraceptive use and abortion attitudes. The most favorable attitudes toward abortion were expressed by women who were currently using the pill, who had used the pill but interrupted its use temporarily, or who indicated that they might use the birth control pill in the future. Less favorable attitudes toward abortion were shared by women who used the pill for a short period of time but rejected its use later on, while women who indicated no knowledge of the pill expressed the least favorable attitudes toward abortion. Similarly, McCormick (1975), in her study of abortion attitudes among women who were undergoing induced abortion, reported that women who practiced contraception before they

became pregnant and women who intended to use contraception in the future were more favorable towards a future abortion than women who did not practice and/or did not intend to practice contraception.

The probability of employing contraception is hypothesized to be significantly related to the type of relationship with intercourse partners. In intercourse relationships, a greater degree of personal commitment to the other should result in frequent sexual intercourse. The motivation to contracept should be greater in such cases for several reasons. The male partner should be more likely to carry condoms in a stable, romantic intercourse relationship because he knows intercourse is more likely to occur frequently, because the bargaining position of women is greater in this kind of relationship, or because he perceives he should assume responsibility should pregnancy occur (Furstenberg, 1976: 51). Furthermore, regardless of the use or efficacy of contraception, one's attitude toward abortion may be affected by the nature of the commitment to the intercourse partner. If a pregnancy takes place in a relationship characterized by a strong commitment between partners, such as between engaged or semi-engaged couples, a rushed marriage may seem a more reasonable alternative than an abortion (Lee, 1969: 150; Miller, 1973). Thus, use and efficacy of contraception may interact with the level of emotional commitment to the intercourse partner to influence attitudes toward abortion.

In their study of contraceptive practices and attitudes among unmarried college students, Vincent and Stelling (1973) found that as the rate of sexual activity decreased, there was an increase in the use of unreliable forms of contraception such as the rhythm

method and/or no use of contraception whatsoever. Zelnik and Kantner (1978: 141) have speculated about reasons for this fact:

> "Misinformation about the real risk of unprotected intercourse when the partners are young and sex occurs seldom and episodically; the inappropriateness of long-term methods in the face of episodic sexual encounters, and embarrassment over obtaining coitus-dependent methods like condoms from unsympathetic druggists; differential availability of methods and services ... or a need to dare the fates ..."

Miller (1973) also contended that infrequent sexual encounters may result in infrequent contraceptive use because some women wish to deny to themselves the fact that they are sexually active or might engage in premarital sex. However, these findings suggest that never-married women who are not in a stable, one-partner relationship but who have had intercourse frequently with several partners during the lifetime should be more likely to employ contraceptive techniques regularly and efficaciously. In such a context, intercourse would more likely be an expected event; and since responsibility for parenthood would be less easily assumed or assigned, the women might be strongly motivated to contracept.

In summary, one's peers represent significant reference points against which an individual continuously evaluates his or her perspectives and behavior. It was suggested that the influence of the peer group intensifies as an individual progresses from freshman to senior years. The peer group was hypothesized to influence abortion attitudes indirectly through a series of intervening factors. Specifically, one's peers are thought to increase nontraditional sex-role orientations, sexual permissiveness, and sex knowledge, which three factors

would lead to greater sexual intimacy. It also appears reasonable that frequency of intercourse and number of lifetime intercourse partners should promote use and efficacy of contraception. Use and efficacy of contraception should be associated with an awareness of pregnancy risk, with a wish to avoid conception, and with an awareness of abortion as an efficient method of avoiding parenthood if pregnancy does occur. Through these intermediate factors, peer-group influences should promote the development of attitudes favorable to abortion.

These relationships, however, are expected to vary according to certain important sociological factors. One such factor is gender. Many studies (Reiss, 1967; Mirande, 1968; Maxwell, 1970; Kaats and Davis, 1970; Lewis and Burr, 1975; Delcampo et al., 1976) reported that males are more sexually permissive, more sexually active, more knowledgeable about sexual information (Spanier, 1976a), and more apt to experience coitus at a younger age than are females (Lewis, 1973). While some studies (Mileti and Barnett, 1972; Singh and Leahy, 1978) reported a lack of significant differences between males and females in their attitudes toward abortion, other studies (Blake, 1971, 1977b; Rossi, 1966; Maxwell, 1970) reported that males were more liberal. Given these significant differences between males and females regarding sexual permissiveness, knowledge, behavior, and abortion attitudes, separate analyses will be carried out for males and females throughout the study.

Religious affiliation and religiosity are two other control variables which were found to affect one's attitudes and behavior regarding sex, contraception, and abortion. In the 1965 National

Fertility Study, Ryder and Westoff (1971) found that religious affiliation and religiosity were significantly related to contraceptive use and efficacy, and attitudes toward abortion. Contraceptive use and efficacy were greater, and abortion attitudes were more favorable among non-Catholic than among Catholic respondents. Furthermore, across all religious groups, a greater degree of religiosity was negatively related to favorable attitudes toward abortion. Similar findings were also reported by Blake (1971), Mileti and Barnett (1972), and Westoff and Ryder (1977).

Size of place of residence is a fourth control variable which will be employed throughout the analyses. Callahan (1970: 297) reported that urban-rural differences regarding attitudes toward abortion are almost a universal phenomenon. Urban residents are more likely to have abortions and to have them more frequently than are rural residents. Callahan contended that urban life brings about pressures on a married couple to favor smaller families and, subsequently, to employ measures, including abortion, to attain this goal. Some sources of such urban pressures toward smaller families could be: the larger proportion of married women participating in the labor force, many of whom work out of financial necessity; the higher costs of rearing a large family; and the greater absence of the extended family which, frequently in rural areas, provides emotional and financial support for rearing a large number of children.

Finally, the effect of degree of commitment to intercourse partner will be controlled in examining the interrelationships among frequency of intercourse, number of lifetime intercourse relationships,

contraceptive use and efficacy, and attitudes toward abortion. It was suggested above that use and efficacy of contraception as well as attitudes toward abortion may be affected by level of emotional commitment to the intercourse partner (Lee, 1969; Miller, 1973; Furstenberg, 1976).

Following the above theoretical discussion and literature review, six hypotheses will be tested separately for male and female respondents. These hypotheses are stated below.

Hypothesis I. The greater the year in school, then the greater the peer-group orientation, after the effects of religious affiliation, religiosity, and residence have been controlled.

Hypothesis II. The greater the peer-group orientation, then the more nontraditional the sex-role ideology and the greater the sex knowledge and permissiveness, after the effects of religious affiliation, religiosity, and residence have been controlled.

Hypothesis III. The more nontraditional the sex-role ideology and the greater the sex knowledge and permissiveness, then the greater the probability of nonvirginity, after the effects of religious affiliation, religiosity, and residence have been controlled.

Hypothesis IV. The greater the probability of nonvirginity, then the more favorable the attitudes toward abortion, after the effects of religious affiliation, religiosity, and residence have been controlled.

Hypothesis V. Among those ever having been in intercourse relationships, the greater the frequency of intercourse and number of lifetime intercourse relationships, then the greater the use and efficacy of contraception, after the effects of religious affiliation, religiosity,

residence, and degree of commitment to intercourse partner have been controlled.

Hypothesis VI. The greater the use and efficacy of contraception, then the more favorable the attitudes toward abortion, after the effects of religious affiliation, religiosity, residence, and degree of commitment to intercourse partner have been controlled.

It must be noted that "peer-group orientation" here means peers in general, not college classmates in particular. The reader is also reminded that the data presented in this study were collected at one point in time. That is, causal directions linking variables into the six associations hypothesized above cannot be strictly inferred. Therefore, it is necessary to view the findings and conclusions generated by this study with caution. A discussion of this limitation and an alternative research design are presented in Chapter Five.

CHAPTER THREE

DESIGN OF THE STUDY

The data on abortion attitudes presented in this dissertation are drawn from a more extensive study of factors which influence sexual behavior, contraceptive use and choice among never-married college students. The study was sponsored by The National Institute of Child Health and Human Development and carried out by Dr. David Kallen of the Department of Human Development, Michigan State University. The data were secured over a two-month period in the Fall term, 1976, by middle-aged professional interviewers (all women). Every interviewer first administered an interview schedule and then handed a self-administered questionnaire to the respondent to be completed and returned immediately. The purpose of a self-administered questionnaire was to minimize sample attrition and to maximize self-disclosure since several of the questions were sensitive. Interviewing time varied between $1\frac{1}{2}$ and $5\frac{1}{2}$ hours depending on the respondent's dating and sexual experiences.

The original random sample consisted of 1094 never-married undergraduate male and female students who were currently enrolled at Michigan State University during the Fall term, 1976. The sample was drawn from current Fall registration records. Single marital status and age of less than 26 were the two criteria for selection. Every respondent was sent a letter introducing the nature and purpose of the study, indicating that he or she had been randomly selected as an

informant, and kindly requesting cooperation once he or she was contacted by an interviewer. Subsequently, an attempt was made to contact each student by telephone to set a place and a time for the interview. If a respondent was not located by telephone the first time, an interviewer kept attempting to make a contact until one was made. The maximum number of telephone calls made to locate a respondent was 9 while the average number of telephone calls per respondent was 2.7. The response rate was 80 percent (875 completed interviews). The remaining 20 percent of the original sample could not be interviewed for such reasons as: the respondent was very busy, could not be located, or declined to be interviewed. Only two respondents refused to complete the interview once it started.

Previous research on sexual behavior, contraceptive use, and abortion attitudes has demonstrated significant white/black differences. Blacks were reported to be more permissive, more sexually active (Reiss, 1967), less knowledgeable about sexual and contraceptive information (Delcampo et al., 1976), less efficacious contraceptors (Westoff and Ryder, 1977), and less favorable in their attitudes toward abortion (Ryder and Westoff, 1971; McCormick, 1975; Westoff and Ryder, 1977) than were whites. In the present study, race of respondent was determined by interviewer observation. Since the number of black respondents yielded by the random sample was small (N = 45), the current analysis was limited to whites. Since the influence of one's peers upon abortion attitudes was thought to operate partially through their influence upon the initiation of coitus, those respondents who had been previously married (N = 4), who had been raped at first

intercourse (N = 2), or who had initiated sexual intercourse prior to college entry (N = 286) were excluded from the present study. The exclusion of respondents who initiated coitus prior to coming to college was also thought to reduce the effect of student attrition upon the conclusions of the study. These respondents were thought to be likely to drop out of college before finishing the senior year for such reasons as: lack of commitment to college education and a high probability of premarital pregnancy or marriage early in their college years. Finally, since the experience of pregnancy might change one's attitudes toward abortion, those respondents who experienced a pregnancy in the current or the most recent intercourse relationship (N = 3) were omitted. One additional female respondent was also excluded because she indicated informally that she had had a tubal ligation. No information on homosexuality among the sample respondents was elicited. (For information on how timing and social context of first intercourse and how pregnancy history were determined, see Appendix A). As a result, the effective sample size for the current inquiry became 534. Means and standard deviations of the study variables are presented by year in school in Table 3.1 .

MEASURES

The variables in the present investigation were measured in the following way.

(1) Year in School:

All respondents were undergraduates. This variable has four levels.

Table 3.1 Means and Standard Deviations of the Study Variables by Year in School.

Variable	Males $\bar{X}$	Males S.D.	Males N	Females $\bar{X}$	Females S.D.	Females N	Total $\bar{X}$	Total S.D.	Total N
Age	19.95	1.73	246	19.65	1.48	288	19.79	1.61	534
Freshman	18.14	.92	56	17.84	.45	58	17.99	.73	114
Sophomore	19.10	.95	58	18.92	.65	75	19.00	.79	133
Junior	20.48	1.24	66	20.22	1.04	80	20.34	1.14	146
Senior	21.68	1.20	66	21.16	.99	75	21.40	1.12	141
Self-Disclosure to Peers	11.27	4.43	244	12.73	4.54	283	12.05	4.54	527
Freshman	9.28	3.84	54	10.62	4.01	56	9.96	3.97	110
Sophomore	11.66	4.78	58	12.53	4.61	74	12.14	4.69	132
Junior	10.92	3.97	66	12.78	4.42	78	11.93	4.31	144
Senior	12.91	4.41	66	14.44	4.33	75	13.72	4.42	141
Perception of Peers' Sexual Intimacy	8.89	3.32	244	8.93	3.34	283	8.91	3.34	527
Freshman	7.68	3.61	56	6.86	2.81	56	7.27	3.25	112
Sophomore	7.68	2.84	57	8.52	3.00	73	8.15	2.95	130
Junior	8.83	2.97	65	9.38	3.38	79	9.13	3.20	144
Senior	10.98	2.72	66	10.41	3.24	75	10.68	3.01	141
Sexual Permissiveness	2.42	2.31	241	2.65	1.99	281	2.54	2.15	524
Freshman	1.71	2.22	55	2.02	1.72	57	1.87	1.98	112
Sophomore	1.84	1.90	56	2.52	2.04	73	2.22	2.00	129
Junior	2.58	2.23	64	2.81	1.97	79	2.71	2.11	143
Senior	3.35	2.44	66	3.08	2.08	74	3.21	2.25	140

Table 3.1 Continued.

Variable	Males $\bar{X}$	Males S.D.	Males N	Females $\bar{X}$	Females S.D.	Females N	Total $\bar{X}$	Total S.D.	Total N
Sex-Role Ideology	1.61	.79	231	1.89	.86	282	1.76	.84	513
Freshman	1.50	.73	51	1.53	.76	57	1.51	.74	108
Sophomore	1.43	.72	53	2.00	.82	72	1.76	.83	125
Junior	1.75	.80	63	1.84	.85	80	1.79	.83	143
Senior	1.72	.84	64	2.11	.89	73	1.93	.89	137
Sex Knowledge	3.68	1.80	245	4.63	1.99	286	4.19	1.97	531
Freshman	2.52	1.62	56	3.67	1.76	57	3.10	1.78	113
Sophomore	3.29	1.78	58	4.39	1.92	74	3.91	1.93	132
Junior	4.00	1.73	65	4.85	2.12	80	4.47	1.99	145
Senior	4.68	1.35	66	5.36	1.78	75	5.04	1.62	141
Nonvirginity	.41	.49	246	.41	.49	288	.41	.49	534
Freshman	.11	.31	56	.09	.28	58	.10	.30	114
Sophomore	.29	.46	58	.25	.44	75	.27	.45	133
Junior	.48	.50	66	.52	.50	80	.51	.50	146
Senior	.71	.46	66	.68	.45	75	.70	.46	141
Abortion Attitudes	3.64	3.03	243	3.76	3.07	283	3.71	3.05	526
Freshman	3.02	2.93	55	3.59	3.16	56	3.31	3.05	111
Sophomore	3.25	2.91	57	3.55	2.90	75	3.42	2.90	132
Junior	3.74	2.93	65	3.83	3.12	78	3.79	3.03	143
Senior	4.41	3.21	66	4.03	3.14	74	4.21	3.17	140

Table 3.1 Continued.

Variable	Males $\bar{X}$	Males S.D.	Males N	Females $\bar{X}$	Females S.D.	Females N	Total $\bar{X}$	Total S.D.	Total N
Number of Intercourse Partners	2.62	2.59	102	1.85	1.63	117	2.21	2.16	219
Freshman	1.83	2.04	6	1.40	.89	5	1.64	1.57	11
Sophomore	1.65	1.46	17	1.32	.67	19	1.47	1.11	36
Junior	2.00	2.34	32	1.69	1.26	42	1.82	1.80	74
Senior	3.49	2.90	47	2.22	2.09	51	2.83	2.58	98
Frequency of Intercourse	4.52	2.39	102	5.14	2.04	117	4.85	2.22	219
Freshman	4.83	2.79	6	4.00	2.74	5	4.45	2.66	11
Sophomore	3.41	2.45	17	4.68	2.14	19	4.08	2.35	36
Junior	4.84	2.31	32	5.02	2.11	42	4.94	2.19	74
Senior	4.66	2.32	47	5.53	1.84	51	5.11	2.12	98
Contraceptive Use	1.79	.51	102	1.80	.48	117	1.80	.49	219
Freshman	2.00	.00	6	2.00	.00	5	2.00	.00	11
Sophomore	1.41	.87	17	1.68	.58	19	1.56	.73	36
Junior	1.88	.34	32	1.79	.52	42	1.82	.45	74
Senior	1.85	.42	47	1.84	.42	51	1.85	.42	98
Contraceptive Efficacy	54.03	22.04	102	57.06	20.12	117	55.65	21.04	219
Freshman	59.50	20.80	6	60.00	22.36	5	59.73	20.40	11
Sophomore	39.18	28.86	17	53.58	20.55	19	46.78	25.52	36
Junior	53.34	20.15	32	56.31	22.41	42	55.03	21.37	74
Senior	59.17	18.52	47	58.69	18.07	51	58.92	18.19	98

Table 3.1 Continued.

Variable	Males $\bar{X}$	Males S.D.	Males N	Females $\bar{X}$	Females S.D.	Females N	Total $\bar{X}$	Total S.D.	Total N
Discussion of Conceptive Risk	2.23	1.14	53	2.26	.94	42	2.24	1.05	95
Freshman	2.00	.00	1	3.00	.00	1	2.50	.71	2
Sophomore	2.83	1.72	6	2.25	.96	4	2.60	1.43	10
Junior	2.11	.93	9	2.36	.74	14	2.26	.81	23
Senior	2.16	1.09	37	2.17	1.07	13	2.17	1.08	60
Residence	4.08	2.69	246	4.58	2.61	288	4.35	2.66	534
Freshman	4.14	2.75	56	4.67	2.58	58	4.41	2.67	114
Sophomore	3.59	2.68	58	4.15	2.71	75	3.90	2.70	133
Junior	4.45	2.65	66	4.75	2.66	80	4.62	2.65	146
Senior	4.10	2.67	66	4.77	2.48	75	4.46	2.58	141
Religiosity	2.96	1.28	245	3.07	1.22	288	3.02	1.25	533
Freshman	2.96	1.29	56	2.98	1.16	58	2.97	1.22	114
Sophomore	3.00	1.27	58	3.20	1.12	75	3.11	1.18	133
Junior	3.15	1.27	65	2.96	1.31	80	3.05	1.29	145
Senior	2.73	1.28	66	3.11	1.29	75	2.93	1.30	141
Commitment to Intercourse Partner	.47	.50	101	.67	.47	116	.58	.50	217
Freshman	.20	.45	5	.60	.55	5	.40	.52	10
Sophomore	.35	.49	17	.68	.48	19	.53	.51	36
Junior	.69	.47	32	.73	.45	41	.71	.46	73
Senior	.38	.49	47	.62	.49	51	.51	.50	98

Table 3.1 Continued.

Variable	Males N	Males %	Females N	Females %	Total N	Total %
Freshman						
No Religion	15	27	12	21	27	24
Non-Catholic Religion	28	50	35	60	63	55
Catholic Religion	13	23	11	19	24	21
Sophomore						
No Religion	18	31	13	17	31	23
Non-Catholic Religion	20	34	30	40	50	38
Catholic Religion	20	34	32	43	52	39
Junior						
No Religion	23	35	26	32	49	34
Non-Catholic Religion	23	35	28	35	51	35
Catholic Religion	20	30	26	32	46	32
Senior						
No Religion	30	46	27	36	57	40
Non-Catholic Religion	21	32	26	35	47	33
Catholic Religion	15	23	22	29	37	26

1. Freshman
2. Sophomore
3. Junior
4. Senior

(2) Peer-Group Orientation:

Ten indicators were used to measure several aspects of peer-group influences. These indicators and the close-ended responses associated with each are presented below.

How many friends would you say you have?

1. A few
2. Several
3. An average number
4. Many
5. A great many

Consider your college friends. How many of them do you think of as close friends with whom you can discuss a personal problem?

0. None of them
1. One
2. Two
3. Three
4. Four
5. Five
6. Six
7. Seven or more

About what proportion of your friends are friends with each other? Would you say ...

1. None of them
2. Less than half of them
3. About half of them
4. More than half of them
5. All of them

How many of your friends know what you are doing sexually?

0. None of them
1. One
2. Two
3. Three
4. Four
5. Five
6. Six
7. Seven or more

How often do you talk with your friends about what you are doing sexually? Would you say ...

1. Never
2. Seldom
3. Sometimes
4. Fairly often
5. Very often

About what proportion of your friends date? Would you say ...

1. None of them
2. Less than half of them
3. About half of them
4. More than half of them
5. All of them

About what proportion of your friends engage in petting? Would you say ...

0. Do not know
1. None of them
2. Less than half of them
3. About half of them
4. More than half of them
5. All of them

About what proportion of your friends have intercourse? Would you say ...

0. Do not know
1. None of them
2. Less than half of them
3. About half of them
4. More than half of them
5. All of them

We are also interested in how you have spent your time since the beginning of Fall term. For each of the activities listed below, tell me the number of the response that best indicates how involved you have been in that activity.

Talking or doing things with friends.

1. Not much at all
2. Not too much
3. Average amount
4. Quite a bit
5. A lot
6. Does not apply (missing value)

Talking or doing things with roommates or housemates.

1. Not much at all
2. Not too much
3. Average amount

4. Quite a bit
5. A lot
6. Does not apply (missing value)

A factor analysis using an oblique rotation with Kaiser normalization (assuming factors are fairly correlated with each other, i.e., Delta = 0) suggested three factors. A factor pattern loading of .30 or higher was deemed as evidence that a particular item loaded on a given factor. These factors and their loadings are presented below.

	FACTOR I	FACTOR II	FACTOR III
How many friends you have ...	.39820 *	.12100	.14518
How many are close friends ..	.76615 *	.00778	-.06623
How many are friends with each other	.20895	.02670	.07928
How many friends know what you do sexually	.67298 *	-.18184	-.14684
How often do you talk about what you do sexually	.37230 *	-.21534	.11375
Talking/doing things with friends	.07498	.01015	.81137 *
Talking/doing things with roommates or housemates ..	-.02238	-.05866	.60674 *
How many of your friends date	.01850	-.33707 *	-.01388
How many of your friends are engaged in petting	-.05412	-.87188 *	.05755
How many of your friends have intercourse	.04114	-.76230 *	.03648
Eigenvalue	2.27706	1.28018	.56982
Percent of Variance	55.20	31.00	13.80
Cumulative Percent	55.20	86.20	100.00

Since factor three had an eigenvalue of less than 1.0, it was decided to use factors one and two as measurements of peer-group orientation. In the present study, these respective factors will be referred to as "self-disclosure to peers" and "perception of peers' sexual intimacy". The index of self-disclosure to peers was constructed by adding responses to the four statistically significant items under factor one (indicated by an asterisk) resulting in a range of 2 to 24.

A low score represented low disclosure while a high score represented high disclosure of self to peers. Similarly, the index of perception of peers' sexual intimacy was constructed by adding responses to the three statistically significant items under factor two and ranged from 1 to 15. A low score represented perception of a low level while a high score represented perception of a high level of peers' sexual intimacy.

(3) Sex-Role Ideology:

Each respondent was asked his or her personal conceptions of masculinity and femininity. The present analysis, however, will focus only upon the definition of femininity as a measure of sex-role ideology because the role of women is thought to be more sensitively related to contraceptive practices and the abortion issue. A major issue of the women's movement is the right of women to control their fertility and their bodies, and to avoid unwanted births through abortion (Westoff and Westoff, 1971: 145 - 146). The following two open-ended questions were designed to elicit information on sex-role ideology.

We are interested in your present viewpoint on what it means to be masculine and feminine. At the present time, what do you think it means to be masculine?
(PROBE: How does a masculine person behave? What kinds of feelings do they have? Note: Make sure respondent defines nonvernacular terms).

And what do you think it means to be feminine?
(PROBE: How does a feminine person behave? What kinds of feelings do they have? Note: Make sure respondent defines nonvernacular terms).

Specific and detailed guidelines were set by the research team to code the open-ended responses into the following categories:

1. Conservative Ideology
2. Moderate Ideology
3. Liberal Ideology
4. Other (nonclassified) Ideology

Coding the open-ended responses into these categories was carried out by the following procedure. First of all, a random sample of responses was selected, each of which was coded by every member of the research team according to the set guidelines. After all resulting misconceptions were discussed and clarified, ten coders were trained and given the same randomly selected responses to be coded once again according to the set guidelines. The three coders whose classifications of the responses were most accurate and similar were hired to do the rest of the coding. Each of the three coders was given the responsibility to code the open-ended responses to the total sample. Subsequently, each coded response was compared among the three coders; if any two classifications were the same, that category was considered a valid measure of the respondent's sex-role ideology. If, however, each of the coders had a different classification, the category of sex-role ideology was referred to members of the research team for arbitration.

The guidelines set for coding the open-ended responses to the meaning of femininity are presented below:

1. Conservative Ideology: An ideology of femininity was considered conservative if a respondent expressed qualities which are traditionally attributed to appropriate behavior for women. A conservative ideology of femininity suggests qualities such as nonaggressive, emotionally expressive, affectionate, nurturant, and concerned about interpersonal relationships. The following is an example of a conservative ideology of femininity.

"Southern belle, coy, frail emotions, behave very delicately, always nice, flowery" (Respondent # 3159).

2. Moderate Ideology: An ideology of femininity was considered moderate if a respondent expressed some of the above traditional qualities in conjunction with nontraditional qualities. A moderate ideology of femininity suggets qualities such as athletic and forceful, physically attractive, and mannerly. The following is an example of a moderate ideology of femininity.

"Secure within herself, be herself. No rowdiness. She should care about her appearances. Be neat" (Respondent # 3451).

3. Liberal Ideology: An ideology of femininity was considered liberal if a respondent expressed qualities which could be classified into one or a combination of the following categories: rejection of traditional sex-role stereotypes, denial of differences in behavior between men and women, and expectation of nontraditional sex-role behavior. A liberal ideology of femininity suggests qualities such as aggressive, independent, adventurous, or athletic. The following is an example of a liberal ideology of femininity.

"I do not think it is someone who has to stay in the home" (Respondent # 3267).

4. Other (nonclassified) Ideology: An ideology of femininity was classified into the "other" category if it was not clear enough to be classified into conservative, moderate, or liberal ideology. The following is an example of the "other" category.

"I hate the word, do not want to answer" (Respondent # 3653).

For the purpose of the present study, however, the "other" category is considered as missing data.

(4) Sex Knowledge:

The index of sex knowledge was derived from nine items, each of which examined the respondent on some aspect of reproductive and contraceptive knowledge. Each item had only one correct response. The respondents were requested to circle the response they thought was correct. The items and responses which followed are presented below. The correct responses as used in the present study are followed by an asterisk.

The condom can be used:

0. Once *
1. Twice
2. Three times
3. Until it wears out
4. Don't know

In the rhythm method of birth control the safe period is:

0. Just before menstruation
1. Just after menstruation
2. About 2 weeks after menstruation
3. From just before to just after menstruation *
4. Don't know

Ovulation and menstruation usually occur:

0. Simultaneously
1. Within 24 to 48 hours of each other
2. Approximately 14 days apart *
3. Approximately 21 days apart
4. Approximately 28 days apart
5. Don't know

If a woman using the birth control pill forgets to take a pill one day she should:

0. Take two the next day *
1. Immediately stop having intercourse until her next period
2. Take two the next day and stop having intercourse
3. Call her physician immediately
4. Don't know

Foam is most effective when used in conjunction with:

0. Withdrawal
1. Douche
2. Condoms *

3. Diaphragm
4. Rhythm
5. Don't know

The diaphragm is:

0. Worn by the woman at the entrance to the vagina
1. Placed over the penis by the woman
2. Worn by the woman at the cervix *
3. A small plastic device placed in the uterus
4. Don't know

A woman cannot get pregnant unless she has an orgasm during intercourse:

1. True
2. False *
3. Don't know

A male at birth has all the sperm he will ever need to be fertile:

1. True
2. False *
3. Don't know

Withdrawal works because no sperm are released until the man ejaculates:

1. True *
2. False
3. Don't know

A factor analysis using an oblique rotation with Kaiser normalization suggested two factors. A factor pattern loading of .30 or higher was deemed as evidence that a particular item loaded on a given factor. These factors and their loadings are presented below.

	FACTOR I	FACTOR II
The condom can be used	.31458 *	.14685
In the rhythm method of birth control the safe period is	.31169 *	-.14933
Ovulation and menstruation usually occur ..	.58260 *	-.42536
If a woman using the birth control pill forgets to take a pill one day	.34959 *	-.00865
Foam is most effective when used with	.45164 *	.06802
The diaphragm is	.50900 *	.08617
A woman cannot get pregnant unless she has an orgasm during intercourse	.45462 *	-.02892
A male at birth has all the sperm he will ever need to be fertile	.06110	.22375
Withdrawal works because no sperm are released until the man ejaculates	.58131 *	.22706

Eigenvalue	1.66482	.33731
Percent of Variance	83.20	16.80
Cumulative Percent	83.20	100.00

Since factor two had an eigenvalue of less than 1.0, it was decided to use factor one as a measurement of sex knowledge. The index of sex knowledge was constructed by counting the number of correct responses given by each respondent on the eight items (followed by an asterisk) which significantly loaded on factor one. This index thus ranged from 0 to 8. A low score represented low sex knowledge while a high score represented high sex knowledge.

(5) Sexual Permissiveness:

The sexual permissiveness scale measures attitudes of the respondents regarding premarital sexual involvement for never-married males and females. The scale was based on eight items, each of which measured the attitudinal position of each respondent regarding an intimate behavior which was most acceptable between a male and a female in four encounters: casual acquaintance, friendship, affection, and love. The eight items were stated as follows:

What is the most intimate behavior you feel is acceptable for a male to engage in with a female he has just met or knows only casually?

What is the most intimate behavior you feel is acceptable for a male to engage in with a friend of the opposit sex?

What is the most intimate behavior you feel is acceptable for a male to engage in with someone he has affection for but does not love?

What is the most intimate behavior you feel is acceptable for a male to engage in with someone he loves?

What is the most intimate behavior you feel is acceptable for a female to engage in with a male she has just met or knows only casually?

What is the most intimate behavior you feel is acceptable for a female to engage in with a friend of the opposit sex?

What is the most intimate behavior you feel is acceptable for a female to engage in with someone she has affection for but does not love?

What is the most intimate behavior you feel is acceptable for a female to engage in with someone she loves?

Each of the above items was followed by five degrees of sexual intimacy:

0. No physical relationship
1. Kissing
2. Light petting (above waist)
3. Heavy petting (below waist)
4. Intercourse

Because the large majority of both male and female respondents indicated that sexual intercourse was an acceptable behavior between a male and a female in a love relationship, a decision was made to eliminate these two items from the construction of the measure of sexual permissiveness. The mean scores of items 4 and 8 were, for males: 3.64 and 3.63; for females: 3.59 and 3.56, respectively.

When dichotomized into low and high permissiveness, the remaining six items were found to form a Guttman scale (coefficient of reproducibility, .9364 and .9494; coefficient of scalability, .8267 and .8205; minimum marginal reproducibility, .6328 and .7179 for male and female respondents, respectively). However, the cutting points for these items differed for male and female respondents, depending on the marginal distribution of each item. An attempt was made not to create extreme marginals, i.e., greater than 80 or less than 20 percent, a practice which is recommended in the construction of Guttman scales (Dotson and Summers, 1970). The cutting points for these items for male and female respondents are presented below.

	MALES		FEMALES	
	Low	High	Low	High
Male/casual acquaintance	0-2	3-4	0-1	2-4
Male/friend	0-2	3-4	0-1	2-4
Male/affection	0-2	3-4	0-1	2-4
Female/casual acquaintance	0-2	3-4	0-1	2-4
Female/friend	0-2	3-4	0-1	2-4
Female/affection	0-2	3-4	0-1	2-4

The above reported coefficients of reproducibility and scalability indicate that the suggested Guttman permissiveness scale is both unidimentional and cumulative. The coefficient of reproducibility is generally set at a minimum of .90 while the coefficient of scalability is set at a minimum of .60 as requisites for considering the scale cumulative, unidimentional, and internally consistent (Dotson and Summers, 1970: 207 - 208). An individual's scale score, found by summing the number of "high" responses to the six items, would, therefore, vary from 0 to 6, with 0 being the least and 6 being the most sexually permissive attitude. This scale score denotes not only the number of items "passed" but which items were "passed". That is, if a respondent scored high on the sixth item, in more than 90 percent of the instances, he or she would also have scored high on the preceding five items. Therefore, the several scale scores do not only indicate the number of items but also which items were passed by each respondent. Two slightly different orders of items were found to form the sexual permissiveness scale for males and females. These are sequenced below from high to low difficulty of acceptance.

MALES	FEMALES
Female/casual acquaintance	Female/casual acquaintance
Male/casual acquaintance	Male/casual acquaintance
Female/friend	Female/friend

Male/friend	Male/friend
Female/affection	Male/affection
Male/affection	Female/affection

Thus, among both males and females, high sexual permissiveness between a female and her male acquaintance was the most difficult to accept. High sexual permissiveness between a male and someone he has affection for was easiest for male respondents to accept; high sexual permissiveness between a female and someone she has affection for was easiest for females to accept.

Information on the following six variables (nonvirginity, frequency of intercourse, number of lifetime intercourse relationships, contraceptive use, contraceptive efficacy, and level of commitment to intercourse partner) was elicited through the use of "Time-Line Chart" (see Appendix A for details).

(6) Nonvirginity:

In the present study, the variable is the sexual status of a respondent at the time of the interview. Its attributes are:

0. Virgin status
1. Nonvirgin status

(7) Frequency of Intercourse:

This variable was measured with reference to the current or the most recent partner among respondents who have ever been in intercourse relationships. If a respondent was simultaneously involved in more than one intercourse relationship, the longest relationship was selected for the analysis.

(8) Number of Lifetime Intercourse Relationships:

This variable is the total number of partners with whom intercourse took place during the lifetime of the respondent.

(9) Contraceptive Use:

Contraceptive use was measured with reference to the current or the most recent intercourse relationship. If a respondent was currently in an intercourse relationship with several partners, the longest relationship was used to examine contraceptive behavior. Contraceptive use was broken down by percent of time each contraceptive method was used compared to other contraceptive methods employed in a relationship. If multiple contraceptive methods were employed simultaneously one hundred percent of the time, the most effective method was chosen as the method used in that relationship. Contraceptive use is, therefore, categorized into three levels:

1. Contraceptive methods were never used
2. Contraceptive methods were used less than 100 percent of the time
3. Contraceptive methods were used 100 percent of the time

(10) Contraceptive Efficacy:

The different contraceptive methods and the percent of time each was used in a relationship were categorized into four categories from least effective to most effective:

1. No contraception
2. Rhythm, withdrawal
3. Diaphragm, jelly, condom, condom and foam
4. Pill, IUD

To construct the index of contraceptive efficacy, a weighted average of efficacy was calculated. Since one category was assumed to be more effective than others, each was weighted differently. This was done by multiplying the first category by 0, the second by 1, the third by 2, and the fourth by 3. Then, the results were added and the sum was divided by 4. To illustrate, suppose that for one respondent, methods of contraceptive use are broken down as in the following: no contraception, 25 percent; condom and foam, 25 percent; and IUD, 50 percent. To calculate contraceptive efficacy for this respondent, the following mathematical procedure takes place:

No contraception	25 x 0 =	0
Condom and foam	25 x 2 =	50
IUD	50 x 3 =	150
		200 ÷ 4 = 50

Therefore, the number 50 is an index of contraceptive efficacy for this respondent in a particular relationship. The above mathematical procedure results in an index with a range of 0 to 75. A low score represents low efficacy while a high score represents high efficacy of contraception.

(11) Level of Commitment to Intercourse Partner:

Five levels of commitment to the current or the most recent intercourse partner were identified. These were: casual acquaintance, friendship, affection, love with no plans to marry, and love with plans to marry. For the purpose of the present analysis, these levels of commitment were collapsed into:

0. No love relationship (the first three levels)
1. Love relationship (the last two levels)

(12) Residence:

Data on size of the community in which the respondents lived during their last two years of high school were secured through the following question.

How large was the community your family lived in during your last two years in high school?

0. Rural area
1. Village or town in a rural area (less than 2,500 population)
2. Village or town in a rural area (2,500 to 50,000 population)
3. Small city (50,000 to 250,000 population)
4. Suburb of small city
5. Medium city (250,000 to 1,000,000 population)
6. Suburb of medium city
7. Large city (1,000,000 or more)
8. Suburb of large city

(13) Religious Affiliation:

The following question was used in order to obtain data on the respondents' religious affiliation.

What is your present religious preference? (Get specific affiliation).

1. Protestant (Denomination: _____)
2. Roman Catholic
3. Jewish (Reformed, Conservative, or Orthodox)
4. Hindu, Moslem, or Buddist
5. Personal
6. Agnostic
7. Atheist
8. Other (Specify) _____

Upon inspection of the frequency count, the number of respondents who indicated no religious preference, agnostic, atheist, or personal religion was 35 and 27 percent for male and female respondents, respectively. Subsequently, it was decided to classify respondents according to the following categories of religious affiliation:

0. No religion
1. Non-Catholic religion
2. Catholic religion

(14) Religiosity:

Measurement of religiosity was assessed through the following question.

How religious are you now? Would you say ...

1. Not at all religious
2. Not so religious
3. Religious
4. Fairly religious
5. Very religious

(15) Abortion Attitudes:

Eight items were included in the questionnaire to measure abortion attitudes. These items were originally part of fifteen items used by Mirande and Hammer (1974) in interviewing never-married female undergraduate students about their attitudes toward abortion. These items were slightly modified in the present study in order to make them applicable to both males and females. Each of the items was followed by a six-point scale ranging from "strongly agree" to "strongly disagree". These items are presented below.

It is all right for a woman to have an abortion:

1. If she felt that she could not emotionally cope with being pregnant
2. If she did not want to marry the person who got her pregnant
3. If she was not ready to get pregnant
4. If she did not want her parents to find out that she was pregnant
5. If she felt being pregnant would make it difficult for her to continue her education
6. If the person who got her pregnant would not marry her
7. If she did not want her friends to find out that she was pregnant
8. If she felt that she would be left out of social activities

When responses to each item were dichotomized ("agree," "disagree"), they formed a Guttman scale (Coefficient of reproducibility, .9187 and .9320; coefficient of scalability, .7932 and .8256; minimum marginal reproducibility, .6070 and .6100 for male and female respondents, respectively). Each individual's scale score was constructed by counting the number of "agree" responses. This resulted in a scale with a range of 0 to 8, with 0 being the most conservative and 8 being the most liberal attitude toward abortion. Each of the scores on the Guttman abortion scale represents a response pattern. Two slightly different orders of items were found to form the abortion scale for males and females. The order of items in terms of most difficult to least difficult to accept were, for males, 8, 7, 4, 5, 6, 3, 2, 1; for females, 8, 7, 4, 6, 5, 3, 2, 1.

STATISTICAL PROCEDURES

Since testing each of the five hypotheses of this study involves the evaluation of the statistical significance of a relationship between a dependent variable, Y, and a set of independent (control and predictor) variables, X_i, multiple regression was deemed as the appropriate statistical method for this study. Multiple regression permits a decomposition of variance in Y scores into that component which is explained by the control and the predictor variables and that component which is unexplained. The decomposition of the total explained variance into that part contributed by a specific independent variable can be accomplished in two ways; namely, the standard regression method and the hierarchical method.

The standard regression method involves the evaluation of the overall dependence of Y on a set of independent variables, X_i. Indicators of this dependence are expressed in terms of semipartial regression coefficients associated with each of the independent variables. If there are one dependent variable (Y) and two independent variables (X_1 and X_2) in a regression equation, the semipartial correlation between Y and X_1 is calculated by taking out the effect of X_2 from X_1 and correlating the resulting residual ($X_1 - \hat{X}_1$) with Y. The square of this semipartial correlation coefficient is interpreted as the increment in the explained variance of Y due to the addition of X_1 to the regression equation already containing X_2. The statistical significance of this increment is tested by an F ratio which is calculated according to the following equation:

$$F_{SR} = \frac{R^2_y(1.2)/k}{(1 - R^2_{y.1,2...k})/(N - k - 1)}$$ where,

$R^2_y(1.2)$ = proportion of variance in Y explained by variable X_1, after controlling for the effects of X_2,

$R^2_{y.1,2...k}$ = the proportion of variance explained by all independent variables,

k = number of independent variables in the equation, and

N = the sample size.

For the general case, the increment to the explained variance in Y attributable to X_i where $i > 2$ can be tested by:

$$F_{SR} = \frac{R^2_y(i.1,2...(i-1)...k)/k}{(1 - R^2_{1,2...i...k})/(N - k - 1)}$$

It is evident that the calculations of these increments to the explained variance in Y treat each independent variable X_i as if it were entered into the regression equation after all other independent variables.

The hierarchical regression method is an alternative approach to the decomposition of the explained variance in Y scores. Employing this approach, the dependence of Y on a set of independent variables, X_i, is also expressed in terms of semipartial regression coefficients associated with each of the independent variables. However, the analysis, interpretations, and evaluation of the significance of these semipartial correlation coefficients are slightly different. While in the standard regression method each of the independent variables is treated as if it were entered last into the equation, in the hierarchical approach each of the independent variables is entered into the regression equation according to a specified inclusion order predetermined by the researcher. In this respect, a researcher can evaluate the net incremental contribution of one or more independent variables, X_1, to the total explained variance in Y over and above that portion of variance explained by all other independent variables already contained in the regression equation in a previous step(s). The statistical significance of this contribution is calculated according to the following equation:

$$F_{HR} = \frac{(R^2_{y.1.2...k_1} - R^2_{y.1.2...k_2})/(k_1 - k_2)}{(1 - R^2_{y.1.2...k_1})/(N - k_1 - 1)}$$ where,

$R^2_{y.1.2...k_1}$ = the proportion of sum of squares accounted for by both the control and predictor variables,

$R^2_{y.1.2...k_2}$ = the proportion of sum of squares accounted for by the control variables,

k_1 = the total number of control and predictor variables,

k_2 = the number of control variables,

N = the sample size.

In the present study, the hierarchical method was deemed as more appropriate than the standard regression method because each of the hypotheses of this study examines the effect of a predictor variable on a respective dependent variable after the effects of several control variables have been taken out of a predictor variable(s). This analysis will, therefore, involve two separate levels of inclusion. In the first level, the control variables will be introduced into the regression equation in order to let them account for their portion of variance in Y scores. In the second level, the predictor variables will be added to the regression model in order to determine their incremental contribution to the total explained variance, over and above that which is explained by the control variables. Furthermore, since there is no hypothesized causal order within a given inclusion level to determine the orderly inclusion among either the control or the predictor variables, the variables in an inclusion level will be added to the regression model in stepwise fashion.

The following assumptions which underlie the general statistical technique of multiple regression analysis are necessary for the validity of tests of statistical significance and for meaningful results (see Kerlinger and Pedhazur, 1973: 47 - 48; Kim and Kohout, 1975: 341).

1. The dependent variable, Y, and independent variables, X_i, are interval-scaled.
2. The sample is randomly selected.

3. The scores of a dependent variable, Y, are normally distributed at each value of the independent variables, X_i, and, therefore, have equal variances.
4. The relationship between a dependent variable, Y, and the independent variables, X_i, is both linear and additive.
5. The error terms are independent of each other.

That the F ratio is a robust statistic means that it remains stable when the assumptions underlying multiple regression are relaxed (Kerlinger and Pedhazur, 1973: 47 - 48). A significance level of $p \leq .05$ was chosen to reject the null hypothesis.

STRUCTURAL EQUATIONS

Using the hierarchical multiple regression as the statistical method for this study, the following structural equations represent the six research hypotheses.

H_1: $$y_1 = a + \sum_{i=1}^{3} b_i x_i + b_4 x_4 + e$$

$$y_2 = a + \sum_{i=1}^{3} b_i x_i + b_4 x_4 + e \quad \text{where,}$$

y_1 = self-disclosure to peers,

y_2 = perception of peers' sexual intimacy,

a = the intercept,

$\sum_{i=1}^{3} b_i x_i$ = three control variables (religious affiliation, religiosity, and residence),

$b_4 x_4$ = year in school, and

e = the error term;

H_2: $y_1 = a + \sum_{i=1}^{3} b_i x_i + \sum_{i=4}^{5} b_i x_i + e$

$y_2 = a + \sum_{i=1}^{3} b_i x_i + \sum_{i=4}^{5} b_i x_i + e$

$y_3 = a + \sum_{i=1}^{3} b_i x_i + \sum_{i=4}^{5} b_i x_i + e$ where,

y_1 = the sex-role ideology measure,

y_2 = the sexual permissiveness measure,

y_3 = the sex knowledge measure,

the first summation is as for Hypothesis 1, and

$\sum_{i=4}^{5} b_i x_i$ = the two measures of peer-group orientation;

H_3: $y = a + \sum_{i=1}^{3} b_i x_i + \sum_{i=4}^{6} b_i x_i + e$ where,

y = probability of nonvirginity,

the first summation is as for Hypothesis 1, and

$\sum_{i=4}^{6} b_i x_i$ = the sex-role ideology, the sexual permissiveness, and the sex knowledge measures;

H_4: $y = a + \sum_{i=1}^{3} b_i x_i + b_4 x_4 + e$ where,

y = the abortion attitudes measure,

the first summation is as for Hypothesis 1, and

$b_4 x_4$ = probability of nonvirginity;

H_5: $y_1 = a + \sum_{i=1}^{4} b_i x_i + \sum_{i=5}^{6} b_i x_i + e$

$y_2 = a + \sum_{i=1}^{4} b_i x_i + \sum_{i=5}^{6} b_i x_i + e$ where,

y_1 = the measure of contraceptive use,

y_2 = the measure of contraceptive efficacy,

$\sum_{i=1}^{4} b_i x_i$ = four control variables (religious affiliation, religiosity, residence, and commitment to intercourse partner).

$\sum_{i=5}^{6} b_i x_i$ = measures of number of intercourse partners and frequency of intercourse with the current or the most recent partner;

H_6: $y = a + \sum_{i=1}^{4} b_i x_i + \sum_{i=5}^{6} b_i x_i + e$ where,

y = the abortion attitudes measure,

the first summation is as for Hypothesis 5, and

$\sum_{i=5}^{6} b_i x_i$ = the measures of contraceptive use and contraceptive efficacy.

As mentioned in Chapter Two, these six research hypotheses are tested separately for male and female respondents. The findings of the analyses are presented in the following chapter.

CHAPTER FOUR

PRESENTATION OF FINDINGS

The central thesis of this study was that as a result of college attendance, a chain of events which influence abortion attitudes occurs. The peer group was regarded as an important link between college attendance and the development of attitudes toward abortion. It was hypothesized that as year in school increases, one's orientation toward peers also increases. The peer group was thought to be more liberal, as well as to become more powerful than the family of orientation, in shaping one's attitudes toward abortion. More nontraditional sex-role ideology, greater sex knowledge, and greater sexual permissiveness were thought to be three consequences of greater peer-group orientation that would encourage sexual intercourse. Subsequently, a greater number of lifetime intercourse partners and a greater frequency of intercourse with the current or the most recent intercourse partner were thought to increase contraceptive use and efficacy. Greater and more efficacious use of contraception was regarded to be associated with an awareness of pregnancy risk, with a desire to avoid conception, and with an awareness of abortion as an alternative method of avoiding parenthood should contraception fail. Therefore, greater and more efficacious use of contraception should be associated with more liberal attitudes toward abortion. This series of events is tested below.

Year in School and Peer-Group Orientation

It was hypothesized that as year in school increases, one's orientation toward peers also increases, net of the effects of religious affiliation, religiosity, and residence. In this study, two dimensions of peer-group orientation have been identified. The first dimension measured the degree of the respondent's self disclosure to peers while the second dimension measured the respondent's perception of the degree of the peers' involvement in sexual activities.

Tables 4.1 and 4.2 present the zero-order correlation coefficients for variables in Hypotheses I through IV. For both male and female respondents, year in school was positively and significantly related to the two measures of peer-group orientation; to the three hypothesized consequencies of greater peer-group orientation: sexual permissiveness, sex knowledge, and sex-role ideology; to the probability of nonvirginity; and (except for female respondents) to abortion attitudes. These relationships suggested that college attendance might be causally related to the liberalization of abortion attitudes. Furthermore, it appeared that the peer group, by providing role models encouraging sexual intercourse, might be an important link in the causal chain but that the sequence of events was probably different for males and females.

In order to examine the relationship between year in school and the two dimensions of peer-group orientation within a multivariate framework, two multiple regression equations, each with two levels of inclusion were, therefore, administered. Since the effects of religious affiliation, religiosity, and residence on one's choice of peers were

Table 4.1 Matrix of Zero-Order Correlation Coefficients for Variables in Hypotheses I Through IV; Males (N = 219).

	Year in School	Self-Disclosure	Peers' Intimacy	Sex. Permissiveness	Sex Knowledge	Sex-Role Ideology	Nonvirginity	Abortion Attitudes	Religiosity	Religious Affiliation
Self-Disclosure	.26[b]									
Peers' Intimacy	.38[b]	.20[b]								
Sexual Permissiveness	.31[b]	.24[b]	.39[b]							
Sex Knowledge	.43[b]	.15[a]	.29[b]	.35[b]						
Sex-Role Ideology	.14[a]	.04	.16[b]	.10	.12[a]					
Nonvirginity	.43[b]	.29[b]	.51[b]	.39[b]	.36[b]	.10				
Abortion Attitudes	.21[b]	.10	.19[b]	.54[b]	.28[b]	-.01	.32[b]			
Religiosity	-.09	.00	-.15[a]	-.36[b]	-.16[b]	-.08	-.17[b]	-.32[b]		
Religious Affiliation	-.10	-.04	-.14[a]	-.31[b]	-.07	-.13[a]	-.16[b]	-.31[b]	.37[b]	
Residence	.05	.13[a]	-.02	.10	.07	-.04	.11	.08	.03	-.05

a- Significant at < .05 level.
b- Significant at < .01 level.

Table 4.2 Matrix of Zero-Order Correlation Coefficients for Variables in Hypotheses I Through IV; Females (N = 263).

	Year in School	Self-Disclosure	Peers' Intimacy	Sex. Permissiveness	Sex Knowledge	Sex-Role Ideology	Nonvirginity	Abortion Attitudes	Religiosity	Religious Affiliation
Self-Disclosure	.27[b]									
Peers' Intimacy	.36[b]	.34[b]								
Sexual Permissiveness	.17[b]	.09	.24[b]							
Sex Knowledge	.28[b]	.24[b]	.38[b]	.20[b]						
Sex-Role Ideology	.17[b]	.11[a]	.10	.14[b]	.20[b]					
Nonvirginity	.46[b]	.11[a]	.36[b]	.25[b]	.51[b]	.14[a]				
Abortion Attitudes	.04	.03	.23[b]	.30[b]	.25[b]	.05	.30[b]			
Religiosity	.04	.03	-.16[b]	-.26[b]	-.16[b]	-.05	-.20[b]	-.35[b]		
Religious Affiliation	-.07	-.03	-.12[a]	-.03	-.07	-.06	-.13[a]	-.21[b]	.45[b]	
Residence	.05	.09	.16[b]	.05	.11[a]	-.01	.17[b]	-.01	.07	.09

a- Significant at < .05 level.
b- Significant at < .01 level.

thought to precede the effect of year in school, religious affiliation, religiosity, and residence were introduced as a first inclusion level while year in school was introduced as a second level of inclusion in the regression model.

The overall goodness-of-fit test for the total variance in self-disclosure to peers explained by the independent variables yielded statistically significant F ratios of 4.83 and 5.54 for male and female respondents, respectively (Table 4.3). Although the F ratios were statistically significant at the .01 level, they were not large and the whole model did not explain more than approximately eight percent of the total variance in y for either male or female respondents.

Neither of the control variables nor their cumulative effect was significantly related to one's self-disclosure to peers. However, as was expected, after the effects of religious affiliation, religiosity, and residence had been removed from the measure of self-disclosure, year in school had a statistically significant incremental contribution to the explained variance in y. The signs of the zero-order correlation coefficients and the standardized beta coefficients were positive, as was hypothesized. The hierarchical F ratios for year in school were 14.75 and 18.99 for male and female respondents, respectively, and were significant at the .01 level.

The relationship between year in school and perception of peers' sexual involvement is presented in Table 4.4. The overall goodness-of-fit test for the total variance in y explained by the full regression model yielded statistically significant F ratios for

Table 4.3 Hierarchical Regression of Self-Disclosure to Peers Upon Year in School.

Independent Variables	Simple r	R^2	b	Beta	F_{SR}[a]	F_{HR}[b]
MALES (N = 219):						
Residence	.13	.01806	.20	.12	3.30	
Religious Affiliation	-.04	.01936	-.14	-.02	.12	
Religiosity	.00	.01958	.11	.03	.22	$F_{1-3} = 1.43$
Year in School	.26	.08281	1.00	.25	14.75^c	$F_4 = 14.75^c$
						$F_{1-4} = 4.83^c$
FEMALES (N = 263):						
Residence	.09	.00805	.13	.08	1.63	
Religious Affiliation	-.03	.00941	-.16	-.03	.17	
Religiosity	.03	.01134	.09	.03	.14	$F_{1-3} = .99$
Year in School	.27	.07913	1.09	.26	18.99^c	$F_4 = 18.99^c$
						$F_{1-4} = 5.54^c$

a- Standard Regression Approach: $F_{SR} = \dfrac{r^2_{y(i.1,2...k)}/1}{(1 - R^2_{y.1,2...i...k})/(N - k - 1)}$

b- Hierarchical Regression Approach: $F_{HR} = \dfrac{(R^2_F - R^2_R)/(k_F - k_R)}{(1 - R^2_F)/(N - k_F - 1)}$

c- Significant at < .01 level.

Table 4.4 Hierarchical Regression of Perception of Peers' Sexual Intimacy Upon Year in School.

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
MALES (N = 219):						
Religiosity	-.15	.02301	-.23	-.09	1.70	
Religious Affiliation	-.14	.03196	-.33	-.08	1.35	
Residence	-.02	.03262	-.05	-.04	.49	F_{1-3} = 2.41
Year in School	.38	.16193	1.07	.36	33.02[a]	F_4 = 33.02[a]
						F_{1-4} = 10.34[a]
FEMALES (N = 263):						
Residence	.16	.02701	.21	.16	7.98[a]	
Religiosity	-.16	.05598	-.50	-.17	7.37[a]	
Religious Affiliation	-.12	.05990	-.12	-.03	.19	F_{1-3} = 5.50[a]
Year in School	.36	.18425	1.11	.36	39.33[a]	F_4 = 39.33[a]
						F_{1-4} = 14.57[a]

a- Significant at < .01 level.

male ($F = 10.34$; $p < .01$) and female ($F = 14.57$; $p < .01$) respondents. The regression model explained approximately 16 percent and 18 percent of the variance in y for males and females, respectively.

The independent and the cumulative effects of the control variables were statistically significant only for female respondents (Table 4.4). For females, greater urbanism of the community in which the last two high-school years were spent was positively related (Beta = .16), religiosity was negatively related (Beta = -.17), while religious affiliation was not significantly related to a perception of peers' sexual intimacy. As was expected, after the effects of religious affiliation, religiosity, and residence had been removed from y, year in school added a significant increment to the explained variance for both male ($F_{HR} = 33.02$; $p < .01$) and female ($F_{HR} = 39.33$; $p < .01$) respondents. The signs of the standardized beta coefficients were in the expected direction: for males, Beta = .36; for females, Beta = .36.

In conclusion, the above analyses indicated that, for both male and female respondents, year in school was positively and significantly related to peer-group orientation, net of the effects of religious affiliation, religiosity, and residence. This finding, however, must be viewed with caution. It is not possible to conclude that peer-group orientation is causally related to year in school from the present cross-sectional data. An alternative hypothesis may suggest that students who were less integrated into the peer-group subculture might have been less likely to remain in college through the senior year. Therefore, the positive and statistically significant relationship between year in school and peer-group orientation might be functionally

related to the attrition of students who were not well integrated into the peer-group subculture. Since the effect of selective attrition cannot be assessed in this cross-sectional study, this problem must be examined in future research. This issue will be discussed more fully in Chapter Five.

Peer-Group Orientation, Sex-Role Ideology, Sex Knowledge, and Sexual Permissiveness

Peer-group orientation was thought to be an important link between length of college attendance and permissive abortion attitudes. It was hypothesized that as one becomes more oriented toward peers over the four college years, he or she tends to develop a nontraditional sex-role ideology, attain a greater sex knowledge, and express more permissive sexual attitudes. In order to test these hypothesized relationships, three separate multiple regression equations were administered, each of which considered one of the hypothesized consequences of greater peer-group orientation as a dependent variable. Since the effects of religious affiliation, religiosity, and residence were thought to occur prior to the effects of peer-group orientation, the former three variables were the first inclusion level; and the two measures of peer-group orientation, the second inclusion level in each regression equation.

As was not expected, the overall goodness-of-fit test for the total variance in sex-role ideology explained by the control and the predictor variables did not yield a statistically significant F ratio for either male or female respondents (Table 4.5). Furthermore, with one exception, none of the control or predictor variables or their

Table 4.5 Hierarchical Regression of Sex-Role Ideology Upon Self-Disclosure to Peers and Perception of Peers' Sexual Intimacy.

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
MALES (N = 219):						
Religious Affiliation	-.13	.01603	-.10	-.10	1.95	
Residence	-.04	.01846	-.01	-.05	.47	
Religiosity	-.08	.01934	-.01	-.02	.05	$F_{1-3} = 1.41$
Perception of Peers' Sexual Intimacy	.16	.03998	.03	.14	4.19[a]	$F_4 = 4.60$[a]
Self-Disclosure to Peers	.04	.04026	.00	.02	.06	$F_5 = .06$
						$F_{4-5} = 2.32$
						$F_{1-5} = 1.79$
FEMALES (N = 263):						
Religious Affiliation	-.06	.00355	-.04	-.03	.24	
Religiosity	-.05	.00453	-.02	-.03	.19	
Residence	-.01	.00456	-.01	-.02	.15	$F_{1-3} = .40$
Self-Disclosure to Peers	.11	.01598	.02	.09	1.73	$F_4 = 3.00$
Perception of Peers' Sexual Intimacy	.10	.01931	.02	.06	.87	$F_5 = .87$
						$F_{4-5} = 1.93$
						$F_{1-5} = 1.01$

a- Significant at < .05 level.

cumulative net effects were significantly related to sex-role ideology. For male respondents, after the effects of religious affiliation, religiosity, and residence had been removed from sex-role ideology, the perception of peers' sexual intimacy contributed a statistically significant increment to the explained variance in y. The sign of the standardized beta coefficient was in the expected direction (Beta = .14). That is, as male college students perceived a greater degree of sexual intimacy among their peers, they were likely to express a more non-traditional sex-role ideology. This finding should, however, be interpreted with caution since the total variance in sex-role ideology explained by the regression model was quite small (4 percent).

A greater knowledge of sex was thought to be a second consequence of a greater peer-group orientation. The analyses addressing this hypothesized relationship are found in Table 4.6. The overall goodness-of-fit test for the total variance in sex knowledge explained by the full regression model yielded statistically significant F ratios of 5.62 ($p < .01$) for male and 10.86 ($p < .01$) for female respondents. Of the control variables, only religiosity was significantly related to sex knowledge and, as would be expected, the signs of the standardized beta coefficients were negative for both males (Beta = -.13) and females (Beta = -.13). However, taken together, the control variables explained a statistically significant portion of the variance in sex knowledge only for female ($F_{HR} = 3.55$; $p < .01$) respondents.

After the effects of religious affiliation, religiosity, and residence had been removed from sex knowledge, the cumulative net effects of the two dimensions of peer-group orientation added a

Table 4.6 Hierarchical Regression of Sex Knowledge Upon Self-Disclosure to Peers and Perception of Peers' Sexual Intimacy.

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
MALES (N = 219):						
Religiosity	-.16	.02710	-.19	-.13	3.75[a]	
Residence	.07	.03274	.05	.07	1.11	
Religious Affiliation	-.07	.03282	.05	-.02	.09	F_{1-3} = 2.43
Perception of Peers' Sexual Intimacy	.29	.10801	.14	.26	15.04[b]	F_4 = 18.04[b]
Self-Disclosure to Peers	.15	.11659	.04	.10	2.07	F_5 = 2.07
						F_{4-5} = 10.10[b]
						F_{1-5} = 5.62[b]
FEMALES (N = 263):						
Religiosity	-.16	.02434	-.20	-.13	3.82[a]	
Residence	.11	.03946	.04	.06	.91	
Religious Affiliation	-.07	.03947	.07	.03	.16	F_{1-3} = 3.55[a]
Perception of Peers' Sexual Intimacy	.38	.15942	.18	.31	25.26[b]	F_4 = 36.82[b]
Self-Disclosure to Peers	.24	.17448	.06	.13	4.69[a]	F_5 = 4.69[a]
						F_{4-5} = 21.02[b]
						F_{1-5} = 10.86[b]

a- Significant at < .05 level.

b- Significant at < .01 level.

statistically significant increment to the explained variance in y for both male (F_{HR} = 10.10; $p < .01$) and female (F_{HR} = 21.02; $p < .01$) respondents. After the effects of the control variables had been taken into account, the two measures of peer-group influence explained an additional 8.4 percent of the variance in sex knowledge for males but 13.5 percent for females. Moreover, the beta coefficients showed that the effects of perceiving the sexual intimacy of peers and of disclosing oneself to them on gains in knowledge of sex were stronger for females (b = .18 and .06, respectively) than for males (b = .14 and .04, respectively). This statement is particularly true for the self-disclosure dimension, which did not attain statistical significance among the males (F_{HR} = 2.07). Thus, it appeared that the peer group provided more sex education for females than for males and that this function was partially facilitated by the women's willingness for self-disclosure.

Greater sexual permissiveness was thought to be a third consequence of greater peer-group orientation. The data addressing this hypothesis are presented in Table 4.7. The overall goodness-of-fit test for the variance in sexual permissiveness explained by the full regression model yielded statistically significant F ratios of 14.70 ($p < .01$) and 6.88 ($p < .01$) for male and female respondents, respectively. For male respondents, both religious affiliation and religiosity were significantly related (F_{SR} = 8.99 and 8.40; $p < .01$, respectively), while for female respondents, only religiosity was significantly related (F_{SR} = 18.23; $p < .01$) to sexual permissiveness. The direction of the relationship was negative as would be expected. These relationships indicate that Catholic males, and more religious male and female respondents were less permissive in their attitudes toward premarital

Table 4.7 Hierarchical Regression of Sexual Permissiveness Upon Self-Disclosure to Peers and Perception of Peers' Sexual Intimacy.

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
MALES (N = 219):						
Religious Affiliation	-.31	.09664	-.56	-.19	8.99[b]	
Religiosity	-.30	.13600	-.34	-.19	8.40[b]	
Residence	.06	.13940	.04	.05	.64	$F_{1-3} = 11.61^{b}$
Perception of Peers' Sexual Intimacy	.37	.23900	.21	.29	22.82[b]	$F_{4} = 28.01^{b}$
Self-Disclosure to Peers	.21	.25651	.07	.14	5.02[a]	$F_{5} = 5.02^{a}$
						$F_{4-5} = 16.78^{b}$
						$F_{1-5} = 14.70^{b}$
FEMALES (N = 263):						
Religiosity	-.26	.06526	-.46	-.28	18.23[b]	
Religious Affiliation	-.03	.07532	.32	.12	3.50	
Residence	.05	.07880	.02	.02	.14	$F_{1-3} = 7.38^{b}$
Perception of Peers' Sexual Intimacy	.24	.11678	.11	.19	8.58[b]	$F_{4} = 11.09^{b}$
Self-Disclosure to Peers	.09	.11803	.01	.04	.37	$F_{5} = .37$
						$F_{4-5} = 5.72^{b}$
						$F_{1-5} = 6.88^{b}$

a- Significant at < .05 level.

b- Significant at < .01 level.

sex than were non-Catholic males, and less religious male and female respondents, respectively. For male respondents, religious affiliation and religiosity had equal beta coefficients (Beta = -.19) while for females, religiosity had the largest beta coefficient (Beta = -.28) of any predictor variable. Lack of statistical significance of the effect of religious affiliation on sexual permissiveness for female respondents, may be explained by the greater intercorrelation between religious affiliation and religiosity among females than among males ($r = .45$ and .37, respectively) (Tables 4.1 and 4.2). Thus, for females, the relative importance of the effect of religious affiliation on sexual permissiveness became smaller in magnitude after religiosity had been statistically controlled. Residence did not have a statistically significant effect on sexual permissiveness for either male or female respondents.

After the cumulative net effects of the control variables had been removed from sexual permissiveness, the cumulative net effects of the two dimensions of peer-group orientation yielded statistically significant F ratios of 16.78 ($p < .01$) for males and 5.72 ($p < .01$) for females. While for both men and women, the perception of peers' sexual intimacy was more important in developing sexually permissive attitudes than was one's self-disclosure to one's peers, the recognition of peers' sexual conduct exerted a stronger influence on males' than on females' sexual permissiveness ($b = .21$ and .11, respectively). This process was furthered by self-disclosure among males ($b = .07$; $p < .05$) but not among females ($b = .01$). Therefore, it appeared that interaction with the peer group was more influential among males than among females in the development of sexually permissive attitudes.

In conclusion, the above analyses indicated that the net effect of at least one measure of peer-group orientation was significantly related to sex-role ideology for male respondents only, but was significantly related to sex knowledge and sexual permissiveness for both males and females. That is, a greater peer-group orientation contributed to greater sex knowledge and greater sexual permissiveness, net of the effects of religious affiliation, religiosity, and residence. These findings partially supported Hypothesis II.

Sex-Role Ideology, Sex Knowledge, Sexual Permissiveness and Nonvirginity

In Chapter Two, research findings were cited which indicated that sex-role ideology, sex knowledge, and sexual permissiveness were associated with sexual intercourse. Therefore, it was hypothesized that a more nontraditional sex-role ideology, a greater sex knowledge, and a greater sexual permissiveness would be associated with a greater probability of nonvirginity. The pertinent data analyses addressing this hypothesized relationship are presented in Table 4.8.

The overall goodness-of-fit test for the total variance in nonvirginity explained by the full regression model yielded statistically significant F ratios for both male ($F = 8.73$; $p < .01$) and female ($F = 18.84$; $p < .01$) respondents. Although the zero-order correlation coefficients between religiosity and nonvirginity were significant at the .01 level for both males ($r = -.17$) and females ($r = -.20$), the original relationship became nonsignificant in a multivariate framework. Therefore, it appeared that the relationship between religiosity and nonvirginity was probably spurious and was perhaps a function of sex

Table 4.8 Hierarchical Regression of Nonvirginity Upon Sex-Role Ideology, Sex Knowledge, and Sexual Permissiveness.

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
MALES (N = 219):						
Religiosity	-.17	.02788	-.02	-.04	.34	
Residence	.11	.04078	.01	.08	1.55	
Religious Affiliation	-.16	.04958	-.03	-.04	.40	$F_{1-3} = 3.74^{a}$
Sex Knowledge	.36	.15816	.07	.27	16.49^{b}	$F_{4} = 27.60^{b}$
Sexual Permissiveness	.34	.19633	.05	.22	10.08^{b}	$F_{5} = 10.11^{b}$
Sex-Role Ideology	.10	.19813	.03	.04	.48	$F_{6} = .48$
						$F_{4-6} = 13.15^{b}$
						$F_{1-6} = 8.73^{b}$
FEMALES (N = 263):						
Religiosity	-.20	.04042	-.03	-.07	1.48	
Residence	.17	.07522	.02	.13	5.95^{a}	
Religious Affiliation	-.13	.07837	-.05	-.07	1.56	$F_{1-3} = 7.34^{b}$
Sex Knowledge	.51	.29112	.11	.44	66.06^{b}	$F_{4} = 77.43^{b}$
Sexual Permissiveness	.25	.30555	.03	.12	5.00^{a}	$F_{5} = 5.34^{a}$
Sex-Role Ideology	.14	.30627	.02	.03	.27	$F_{6} = .27$
						$F_{4-6} = 28.03^{b}$
						$F_{1-6} = 18.84^{b}$

a- Significant at < .05 level.

b- Significant at < .01 level.

knowledge and permissiveness. While the zero-order correlation coefficient between residence and nonvirginity ($r = .17$) was statistically significant, it remained significant (Beta = .13) in a multivariate framework for female respondents only. This finding suggested that female respondents who came from larger residential areas were more likely to be nonvirgins than females who came from smaller residential areas. Considered jointly, the control variables contributed a significant portion to the explained variance in nonvirginity for both male ($F_{HR} = 3.74$; $p < .05$) and female ($F_{HR} = 7.34$; $p < .01$) respondents.

Of the test variables, the net effects of sex knowledge and sexual permissiveness were significantly related while the net effect of sex-role ideology was not significantly related to nonvirginity for male and female respondents. That is, as respondents attained a greater sex knowledge from peers and developed more permissive attitudes about sex, the more likely they became to begin sexual intercourse. Therefore, it seems plausible to contend that in addition to transmitting clinical knowledge about sex, the peer group is also likely to convey an orientation which encourages sexual behavior both explicitly, through sexual permissiveness (Mirande, 1968; Teevan, 1972; and Schulz et al., 1977), and implicitly, through sex knowledge (Lewis, 1973; Spanier, 1976a, 1977). Although sex knowledge was a better predictor of nonvirginity than was sexual permissiveness for both males and females, the effect of sex knowledge was greater for females ($b = .11$) than it was for males ($b = .07$), while the effect of sexual permissiveness was greater for males ($b = .05$) than it was for females ($b = .03$). While the full regression model yielded F ratios significant at the .01 level for both males ($F = 8.73$) and females ($F = 18.84$), the model

explained a greater percentage of the variance in nonvirginity for females (31 percent) than for males (20 percent). These findings, therefore, partially support Hypothesis III. It is important to remember, however, that in cross-sectional data, it is impossible to examine directly the temporal ordering of increases in sex knowledge, sexual permissiveness, and nonvirginity. This issue will be discussed in the concluding chapter.

Nonvirginity and Attitudes Toward Abortion

It was proposed in Chapter Two that premarital intercourse would be related to attitudes toward abortion. Premarital intercourse was operationalized by the nonvirginity of the respondent. For the hypothesized relationship to hold, it would then be necessary for those who have ever engaged in premarital intercourse to perceive the possibility of a conception, to define the conception as undesired, and to recognize abortion as the ultimate means of averting unwanted parenthood. This approach further assumes that the hypothesized developmental sequence is nonregressive, i.e., that it depends not upon the existence of an intercourse relationship at the present time but upon the occurrence of such a relationship at all. As such, the subjectively experienced risk of unwanted parenthood was thought to have a lasting effect upon one's attitudes toward abortion.

To examine the hypothesis that premarital intercourse would be causally related to abortion attitudes, these attitudes were regressed upon a measure of premarital intercourse history (nonvirginity). Since religious affiliation, religiosity, and residence were thought to exert

earlier effects upon abortion attitudes, these three variables became the first inclusion level and, nonvirginity, the second inclusion level in the regression equation. Greater religiosity was associated with more unfavorable abortion attitudes for both male (Beta = -.21) and female (Beta = -.28) respondents (Table 4.9). Furthermore, religious affiliation had a statistically significant negative effect on abortion attitudes for male respondents only (F_{SR} = 8.36; $p < .01$). Lack of a statistically significant effect of religious affiliation on abortion attitudes for female respondents may be explained by the greater intercorrelation between religious affiliation and religiosity for females (r = .45) than for males (r = .37). The cumulative effects of the three control variables explained a statistically significant portion of the variance in abortion attitudes (F_{HR} = 12.68 and 12.63 for males and females, respectively; $p < .01$). As hypothesized, non-virgins had more favorable attitudes toward abortion than did virgins (Beta = .25 and .24 for males and females, respectively). The regression model explained variance in abortion attitudes slightly better for males (21.1 percent) than for females (18.1 percent). Therefore, Hypothesis IV was supported.

Frequency of Intercourse, Number of Lifetime Intercourse Partners, and Contraceptive Use and Efficacy

Three relational mechanisms were hypothesized to link a history of premarital intercourse to more favorable attitudes toward abortion. Since not everyone ever engaged in sexual intercourse subjectively defines oneself as fecund (Luker, 1977), the relationship between premarital intercourse and a positive evaluation of abortion

Table 4.9 Hierarchical Regression of Attitudes Toward Abortion Upon Nonvirginity.

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
MALES (N = 219):						
Religiosity	-.32	.10184	-.50	-.21	9.94[a]	
Religious Affiliation	-.31	.14397	-.72	-.19	8.36[a]	
Residence	.08	.15037	-.06	.06	.74	F_{1-3} = 12.68[a]
Nonvirginity	.32	.21128	1.54	.25	16.53[a]	F_{4} = 16.53[a]
						F_{1-4} = 14.33[a]
FEMALES (N = 263):						
Religiosity	-.35	.12385	-.70	-.28	18.79[a]	
Religious Affiliation	-.21	.12743	-.21	-.05	.70	
Residence	-.01	.12763	-.04	-.03	.29	F_{1-3} = 12.63[a]
Nonvirginity	.30	.18114	1.51	.24	16.85[a]	F_{4} = 16.85[a]
						F_{1-4} = 14.27[a]

a- Significant at < .01 level.

was thought to develop only if (1) there had ever been a recognition of a risk of conception, (2) the conception was labelled as unwanted, and (3) abortion was seen as a way of terminating an undesired pregnancy.

Unfortunately, the data chosen for this dissertation did not afford measures of the respondent's subjectively perceived fecundity. As such, it was necessary to develop a surrogate measure of this phenomenon. Therefore, it was reasoned that among those with a premarital sexual history, the frequency of sexual intercourse and the number of lifetime intercourse relationships would promote a conscious concern with conceptive risk, which would lead not only to contraception among the never-married but also to the most efficacious means. This sequence of events was thought to be more likely among urbanites, non-Catholics, the less religious, and those for whom the context of intercourse was not love. As such, the assumption of contraception, especially the more efficacious techniques, was thought to be an indicator of the awareness of conceptive risk.

Not only an awareness of conceptive risk but also a wish to minimize that risk and a definition of abortion as an effective means to avert unwanted parenthood were thought to condition the development of favorable abortion attitudes among the never-married who had a history of premarital sex. Lacking a direct measure of the wantedness of an imminent conception, it was reasoned that such a pregnancy would be more likely to be wanted by those whose current or most recent intercourse relationship occurred within a context of love. Thus, the level of commitment to the current or the most recent intercourse partner

became the surrogate measure of the "wantedness" of a premarital conception. It was further theorized that a subjective perception of abortion as an efficient means of ending an unwanted conception would be most common among urbanites, non-Catholics, and the least religious. It was to examine these hypothesized relational mechanisms linking premarital sexual history to positive attitudes about abortion that the final two hypotheses were framed.

It was stated in Hypothesis V that number of lifetime intercourse partners and frequency of intercourse with the current or the most recent partner should promote a greater and a more efficacious use of contraception. Subsequently, Hypothesis VI stated that a positive association was expected between greater and more efficacious use of contraception, and abortion attitudes. These relationships were hypothesized to be statistically significant after controlling for the effects of religious affiliation, religiosity, residence, and commitment to intercourse partner.

Tables 4.10 and 4.11 present the zero-order correlation coefficients for the variables in Hypotheses V and VI. At the zero-order level, the data do not show the expected significant relationships. Of the control variables, only among males were religiosity and commitment to intercourse partner significantly related to contraceptive use ($r = .27$; $p < .01$ and $r = .18$; $p < .05$, respectively). Of the two test factors, only frequency of intercourse with the current or the most recent partner was significantly related to contraceptive efficacy for both male ($r = .25$; $p < .01$) and female ($r = .43$; $p < .01$) respondents. As for abortion attitudes, religious affiliation and

Table 4.10 Matrix of Zero-Order Correlation Coefficients for Variables in Hypotheses V and VI; Males (N = 100).

	Number of Intercourse Partners	Frequency of Intercourse	Contraceptive Use	Contraceptive Efficacy	Abortion Attitudes	Religiosity	Religious Affiliation	Residence
Frequency of Intercourse	.01							
Contraceptive Use	-.09	.11						
Contraceptive Efficacy	.01	.25[b]	.60[b]					
Abortion Attitudes	.24[b]	.28[b]	-.05	-.06				
Religiosity	-.02	-.09	.27[b]	.12	-.34[b]			
Religious Affiliation	-.10	-.21[a]	.15	-.01	-.20[a]	.30		
Residence	-.17[a]	.02	.15	-.03	.00	.18[a]	-.05	
Commitment to Intercourse Partner	-.32[b]	.42[b]	.18[a]	.10	.02	.10	.04	.03

a- Significant at < .05 level.

b- Significant at < .01 level.

Table 4.11 Matrix of Zero-Order Correlation Coefficients for Variables in Hypotheses V and VI; Females (N = 113).

	Number of Intercourse Partners	Frequency of Intercourse	Contracep-tive Use	Contracep-tive Effi-cacy	Abortion Attitudes	Religiosity	Religious Affiliation	Residence
Frequency of Intercourse	.01							
Contraceptive Use	.09	.06						
Contraceptive Efficacy	.03	.43[b]	.48[b]					
Abortion Attitudes	.02	.19[a]	-.06	-.01				
Religio-sity	-.08	-.11	.03	-.02	-.38[b]			
Religious Affiliation	-.09	-.07	.00	-.05	-.17[a]	.52[b]		
Residence	.06	.19[a]	.04	.06	-.09	.28[b]	.18[a]	
Commitment to Intercourse Partner	-.36[b]	.21[a]	-.02	.14	-.11	.06	-.04	.07

a- Significant at < .05 level.

b- Significant at < .01 level.

religiosity were the only predictor variables which were significantly related among males ($r = -.20$; $p < .05$ and $-.34$; $p < .01$, respectively) and females ($r = -.17$; $p < .05$ and $-.38$; $p < .01$, respectively).

In a multivariate framework, these relationships did not change. The overall goodness-of-fit test for the total variance in contraceptive use (Table 4.12) explained by the full regression model yielded a statistically significant F ratio for male respondents only ($F = 2.21$; $p < .05$). Furthermore, of the four control variables, only religiosity was statistically significant for contraceptive use; and this finding was, once again, limited to male respondents ($F_{SR} = 4.50$; $p < .05$). The direction of the relationship was positive (Beta = .22), indicating that the more religious male respondents tended to be greater users of contraception than were less religious respondents. These findings were surprising. Male respondents had a greater number of lifetime intercourse relationships ($\bar{X} = 2.6$) than did female respondents ($\bar{X} = 1.8$), and perhaps* male respondents were more likely to have been involved in simultaneous intercourse relationships. Thus, male respondents may have had more difficulty in recalling precisely the percent of time contraception was employed, than did females in a particular intercourse relationship; and this difficulty may have been greater among less religious than more religious males. Therefore, systematic biases in recall of contraceptive use may explain why religiosity was significantly related to use among males but not among females and was positively related to that use among males. Frequency

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* Although data on simultaneous intercourse relationships were obtained on the "Time-Line Chart" (see Appendix A), these data are not yet available for analysis.

Table 4.12 Hierarchical Regression of Contraceptive Use Upon Frequency of Intercourse and Number of Intercourse Partners.

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
MALES (N = 100):						
Religiosity	.27	.07453	.09	.22	4.50[a]	
Commitment to Intercourse Partner	.18	.09882	.10	.10	.67	
Residence	.15	.10852	.02	.10	1.03	
Religious Affiliation	.15	.11502	.07	.10	.99	$F_{1-4} = 3.09^a$
Frequency of Intercourse	.11	.12413	.02	.11	1.03	$F_5 = .98$
Number of Intercourse Partners	-.09	.12491	-.01	-.03	.08	$F_6 = .08$
						$F_{5-6} = .53$
						$F_{1-6} = 2.21^a$
FEMALES (N = 113):						
Residence	.04	.00194	.00	.01	.02	
Religiosity	.03	.00237	.02	.05	.18	
Religious Affiliation	.00	.00278	-.01	-.01	.02	
Commitment to Intercourse Partner	-.02	.00322	.00	.00	.02	$F_{1-4} = .09$
Number of Intercourse Partners	.09	.01145	.03	.09	.85	$F_5 = .89$
Frequency of Intercourse	.06	.01499	.01	.06	.38	$F_6 = .38$
						$F_{5-6} = .63$
						$F_{1-6} = .27$

a- Significant at < .05 level.

of intercourse and number of lifetime intercourse relationships did not have significant or cumulative net effects on contraceptive use for either male or female respondents. This finding does not support Hypothesis V.

The overall goodness-of-fit test for the total variance in contraceptive efficacy explained by the full regression model (Table 4.13) yielded a statistically significant F ratio for female respondents only ($F = 4.22$; $p < .01$). Furthermore, none of the four control variables had a statistically significant independent or cumulative net effect on contraceptive efficacy for either male or female respondents.

Of the two test variables, frequency of intercourse with the current or the most recent partner had a statistically significant net effect on contraceptive efficacy for male ($F_{HR} = 6.35$; $p < .05$) and female ($F_{HR} = 21.60$; $p < .01$) respondents. Men and women having intercourse more frequently in their current or most recent affair employed the more efficacious contraceptives. Furthermore, this relationship was stronger for females than for males, the metric coefficients being 4.05 and 2.64, respectively. The second test variable, number of lifetime intercourse relationships, did not have independent or cumulative net effects on contraceptive efficacy for either gender. Therefore, this test yielded partial support for Hypothesis V.

Contraceptive Use, Contraceptive Efficacy and Attitudes Toward Abortion

Hypothesis VI stated that greater contraceptive use and efficacy would be related to more favorable attitudes toward abortion, net of the

Table 4.13 Hierarchical Regression of Contraceptive Efficacy Upon Frequency of Intercourse and Number of Intercourse Partners.

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
MALES (N = 100):						
Religiosity	.12	.01378	2.80	.16	2.17	
Commitment to Intercourse Partner	.10	.02232	-1.43	-.03	.07	
Residence	-.03	.02546	-.56	-.07	.43	
Religious Affiliation	-.01	.02811	.04	.00	.00	$F_{1-4} = .69$
Frequency of Intercourse	.25	.08959	2.64	.28	6.20[a]	$F_{5} = 6.35^{a}$
Number of Intercourse Partners	.01	.08969	-.10	-.01	.01	$F_{6} = .01$
						$F_{5-6} = 3.15^{a}$
						$F_{1-6} = 1.53$
FEMALES (N = 113):						
Commitment to Intercourse Partner	.14	.02078	3.10	.07	.59	
Residence	.06	.02349	-.30	-.04	.18	
Religious Affiliation	-.05	.02603	-.66	-.03	.07	
Religiosity	-.02	.02692	.88	.06	.27	$F_{1-4} = .73$
Frequency of Intercourse	.43	.18997	4.05	.43	21.07[b]	$F_{5} = 21.60^{b}$
Number of Intercourse Partners	.03	.19281	.70	.06	.37	$F_{6} = .37$
						$F_{5-6} = 10.89^{b}$
						$F_{1-6} = 4.22^{b}$

a- Significant at < .05 level.

b- Significant at < .01 level.

effects of religious affiliation, religiosity, residence, and commitment to intercourse partner. The data testing these hypothesized relationships (Table 4.14) showed that the model explained less variance in abortion attitudes among males (R^2 = 13.7 percent; $p < .05$) than among females (R^2 = 15.5 percent; $p < .01$). Religiosity had the largest and only statistically significant F ratio for both males (F_{SR} = 10.00; $p < .01$) and females (F_{SR} = 13.01; $p < .01$). The more religious respondents had less favorable attitudes toward abortion. As such, Hypothesis VI was not supported.

Ad Hoc Analyses

Hypotheses V and VI have not interpreted why nonvirgin respondents tended to express more favorable attitudes toward abortion than did virgin respondents. It was argued earlier that the perception of conceptive risk was an important condition for the development of permissive abortion attitudes among those who have become sexually active. Perhaps contraceptive use and contraceptive efficacy were not good measures of this perception and resulted in nonsupport of the final two hypotheses. This point will be elaborated in Chpater Five. A more reliable measure for one's perceived fecundity in the present study would probably be the discussion of pregnancy with the intercourse partner. It would seem that conversations about conceptive risk would encourage self-perceptions of fecundity. Unfortunately, this variable had two drawbacks: it was asked only of respondents who had had more than one intercourse relationship and referred only to the current or the most recent affair. The question and its open-ended responses were:

Table 4.14 Hierarchical Regression of Attitudes Toward Abortion Upon Contraceptive Use and Contraceptive Efficacy.

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
MALES (N = 100):						
Religiosity	-.34	.11543	-.79	-.34	10.00[b]	
Religious Affiliation	-.20	.12512	-.41	-.11	1.16	
Residence	.00	.12801	.04	.04	.14	
Commitment to Intercourse Partner	.02	.13058	.26	.04	.20	$F_{1-4} = 4.70^{b}$
Contraceptive Use	-.04	.13250	.59	.10	.62	$F_{5} = .21$
Contraceptive Efficacy	-.06	.13702	-.01	-.09	.49	$F_{6} = .49$
						$F_{5-6} = .35$
						$F_{1-6} = 2.46^{a}$
FEMALES (N = 113):						
Religiosity	-.38	.14311	-.90	-.39	13.01[b]	
Commitment to Intercourse Partner	-.11	.15113	-.56	-.10	1.06	
Residence	-.09	.15168	.03	.02	.07	
Religious Affiliation	-.17	.15199	.07	.02	.04	$F_{1-4} = 4.84^{b}$
Contraceptive Use	-.06	.15456	-.36	-.06	.35	$F_{5} = .33$
Contraceptive Efficacy	-.01	.15489	.00	.02	.04	$F_{6} = .04$
						$F_{5-6} = .18$
						$F_{1-6} = 3.24^{b}$

a- Significant at < .05 level.

b- Significant at < .01 level.

How often do/did you and your partner talk about the possibility of pregnancy? Would you say ...

1. Never
2. Seldom
3. Sometimes
4. Fairly often
5. Very often

With this alternative measure of perceived fecundity, Hypotheses V and VI were reformulated as Hypotheses VII and VIII, respectively. Since the above question was asked only of those having had at least two intercourse partners, it was decided to eliminate the number of lifetime intercourse partners as a predictor variable.

Hypothesis VII. The greater the frequency of intercourse with the current or the most recent partner, then the greater the discussion of pregnancy, after the effects of religious affiliation, religiosity, residence, and commitment to intercourse partner have been controlled.

Hypothesis VIII. The greater the discussion of pregnancy with the current or the most recent intercourse partner, then the more favorable the attitudes toward abortion, after the effects of religious affiliation, religiosity, residence, and commitment to intercourse partner have been controlled.

The overall goodness-of-fit test for the total variance in discussing pregnancy risk predicted by Hypothesis VII did not yield statistically significant F ratios for either male or female respondents (Table 4.15). Of the independent variables, only frequency of intercourse had a statistically significant net effect on discussion of pregnancy risk and for male respondents only ($F_{HR} = 10.53$; $p < .01$). A greater frequency of intercourse was associated with a greater

Table 4.15 Hierarchical Regression of Discussion of Conceptive Risk Upon Frequency of Intercourse.

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
MALES (N = 52):						
Commitment to Intercourse Partner	.09	.00756	-.10	-.04	.09	
Religiosity	-.06	.01183	-.07	-.09	.35	
Religious Affiliation	.01	.01328	.22	.17	1.31	
Residence	-.03	.01328	-.01	-.02	.03	$F_{1-4} = .16$
Frequency of Intercourse	.41	.19714	.20	.47	10.53[a]	$F_5 = 10.53$[a]
						$F_{1-5} = 2.26$
FEMALES (N = 41):						
Residence	.43	.18123	.14	.39	3.72	
Commitment to Intercourse Partner	.01	.18880	-.16	-.08	.28	
Religiosity	.21	.18956	.03	.04	.40	
Religious Affiliation	.12	.18979	.02	.02	.16	$F_{1-4} = 2.11$
Frequency of Intercourse	.23	.19293	.03	.07	.14	$F_5 = .14$
						$F_{1-5} = 1.67$

a- Significant at < .01 level.

discussion of conceptive risk (Beta = .47). As for female respondents, none of the predictor variables had a statistically significant effect on y. Therefore, Hypothesis VII was supported only for male respondents.

On the other hand, the overall goodness-of-fit test for the total variance in abortion attitudes predicted by Hypothesis VIII yielded statistically significant F ratios of 4.76 and 4.39 ($p < .01$) for males and females, respectively (Table 4.16). Of primary interest was the finding that after the effects of religious affiliation, religiosity, residence, and commitment to intercourse partner had been removed from abortion attitudes, discussion of conceptive risk explained an additional statistically significant portion of the variance in y. A greater discussion of pregnancy risk was associated with more favorable attitudes toward abortion. While this finding was true for both males and females, the effect of discussion of conceptive risk on abortion attitudes was stronger for females (b = 1.09) than for males (b = .75). Furthermore, the full regression model explained a greater percentage of the variance in abortion attitudes for females (R^2 = 38.6) than for males (R^2 = 34.1). For both genders, religiosity remained significantly related to abortion attitudes (Beta = -.41 and - .60 for males and females, respectively). These findings, therefore, support Hypothesis VIII.

Summary of the Direct Effects of the Study Variables on Attitudes Toward Abortion

The analyses thus far treated the effects of year in school, peer-group orientation, sexual permissiveness, sex knowledge, and sex-role ideology, frequency of intercourse, and number of lifetime

Table 4.16 Hierarchical Regression of Attitudes Toward Abortion Upon Discussion of Conceptive Risk.

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
MALES (N = 52):						
Religiosity	-.44	.19011	-.97	-.41	9.53[b]	
Commitment to Intercourse Partner	-.18	.22074	-1.29	-.20	2.77	
Religious Affiliation	-.28	.25373	.65	-.18	2.07	
Residence	.00	.26817	.15	.13	1.00	$F_{1-4} = 4.31$[b]
Discussion of Conceptive Risk	.27	.34080	.75	.27	5.07[a]	$F_{5} = 5.07$[a] $F_{1-5} = 4.76$[b]
FEMALES (N = 41):						
Religiosity	-.51	.26473	-1.46	-.60	12.69[b]	
Commitment to Intercourse Partner	-.06	.27086	-.39	-.07	.23	
Residence	-.14	.27975	-.05	-.05	.09	
Religious Affiliation	-.22	.28170	.15	.05	.09	$F_{1-4} = 3.53$[a]
Discussion of Conceptive Risk	.22	.38553	1.09	.36	5.91[a]	$F_{5} = 5.91$[a] $F_{1-5} = 4.39$[b]

a- Significant at < .05 level.

b- Significant at < .01 level.

intercourse partners as indirect effects on the formation of attitudes toward abortion among persons who had ever had sexual intercourse. Subjective perception of pregnancy risk, a hypothesized direct effect, was operationalized by two different categories of surrogate measures, the first being contraceptive use and efficacy. Thus, to examine whether the variables hypothesized to have indirect effects might also exert direct influences on abortion attitudes, the latter were regressed upon all study variables (Table 4.17).

Of the control variables, religiosity remained negatively and significantly related to favorable abortion attitudes for male and female respondents. Of the test variables, frequency of intercourse was significantly related to abortion attitudes for both male and female respondents. The direction of the beta weights was positive (Beta = .24 and .26, respectively) meaning that a greater frequency of intercourse was associated with more liberal attitudes toward abortion. For male respondents, sexual permissiveness also contributed a statistically significant increment to the explained variance in y ($F_{HR} = 11.92$; $p < .01$). That the direction of the beta weight was positive (Beta = .31) supports earlier research showing a greater sexual permissiveness was associated with more favorable attitudes toward abortion (Maxwell, 1970; Mirande and Hammer, 1974). The direct effects of year in school and peer-group orientation were not statistically significant for either male or female respondents.

A second category of surrogate measures for subjective perception of one's pregnancy risk was the discussion of such risk with the current or the most recent intercourse partner. Thus, to

Table 4.17 Summary Table of Hierarchical Regression of Attitudes Toward Abortion Upon the Study Variables (Model I).

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
MALES (N = 93):						
Religiosity	-.35	.12382	-.62	-.26	6.36[a]	
Religious Affiliation	-.19	.13313	-.09	.03	.06	
Commitment to Intercourse Partner	.04	.13843	-.06	-.01	.01	
Residence	-.03	.13850	.06	.06	.33	$F_{1-4} = 4.77^b$
Sexual Permissiveness	.40	.24229	.40	.31	8.22[b]	$F_5 = 11.92^b$
Frequency of Intercourse	.30	.29051	.30	.24	4.86[a]	$F_6 = 5.84^a$
Sex Knowledge	.25	.31686	.21	.11	.97	$F_7 = 3.28$
Number of Intercourse Partners	.23	.33299	.17	.15	1.91	$F_8 = 2.03$
Perception of Peers' Sexual Intimacy	.03	.34504	-.14	-.13	1.53	$F_9 = 1.53$
Year in School	.27	.35230	.27	.08	.56	$F_{10} = .92$
Contraceptive Efficacy	-.04	.36019	-.03	-.20	2.61	$F_{11} = 1.00$
Contraceptive Use	.00	.37565	1.03	.18	2.03	$F_{12} = 1.98$
Self-Disclosure to Peers	.09	.38077	.06	.08	.64	$F_{13} = .65$
Sex-Role Ideology	.10	.38287	-.18	-.05	.26	$F_{14} = .26$
						$F_{5-14} = 3.09^b$
						$F_{1-14} = 3.46^b$

Table 4.17 Continued.

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
FEMALES (N = 104):						
Religiosity	-.39	.15486	-.76	-.32	7.50[b]	
Commitment to Intercourse Partner	-.12	.16398	-1.01	-.17	2.54	
Residence	-.15	.16551	-.12	-.10	.87	
Religious Affiliation	-.20	.16558	.04	.01	.01	F_{1-4} = 4.91[b]
Frequency of Intercourse	.19	.20623	.36	.26	5.65[a]	F_5 = 5.02[a]
Sex Knowledge	-.02	.21434	-.20	-.11	1.03	F_6 = 1.00
Self-Disclosure to Peers	.15	.22605	.08	.12	1.27	F_7 = 1.45
Number of Intercourse Partners	.01	.23059	-.13	-.07	.51	F_8 = .66
Contraceptive Efficacy	.00	.23391	-.01	-.08	.42	F_9 = .41
Year in School	-.01	.23535	-.18	-.05	.26	F_{10} = .17
Perception of Peers' Sexual Intimacy	.12	.23730	-.05	.05	.19	F_{11} = .24
Sex-Role Ideology	.05	.23814	.10	.03	.10	F_{12} = 1.00
Contraceptive Use	-.02	.23875	.18	.03	.08	F_{13} = .07
Sexual Permissiveness	.08	.23915	.03	.02	.05	F_{14} = .05
						F_{5-14} = .86
						F_{1-14} = 2.00[a]

a- Significant at < .05 level.

b- Significant at < .01 level.

examine whether year in school, peer-group orientation, sexual permissiveness, sex knowledge, and sex-role ideology, and frequency of intercourse might have direct as well as indirect effects upon abortion attitudes in this second model, abortion attitudes were regressed upon all study variables (Table 4.18).

Religiosity exerted the strongest direct effect upon abortion attitudes (males: Beta = -.45; females: Beta = -.51). Commitment to intercourse partner explained a statistically significant proportion of the variance in abortion attitudes for male respondents only (F_{SR} = 8.00; $p < .01$), meaning that a greater commitment to the intercourse partner was associated with more conservative attitudes toward abortion. Considered together, the cumulative net effects of the control variables explained a statistically significant proportion of the variance in abortion attitudes for both male and female respondents.

Since it was proposed in this study that the effect of the peer group on abortion attitudes was to operate through sex-role ideology, sex knowledge, sexual permissiveness, and frequency of intercourse, then, when all the test variables were introduced into the regression equation, only perception of conceptive risk (a hypothesized direct effect) should attain a statistical significance. The analysis yielded compatible results only for female respondents. For females, discussion of conceptive risk was the only test variable which had a statistically significant effect on abortion attitudes (F_{HR} = 5.76; $p < .05$). For male respondents, frequency of intercourse remained significantly related to abortion attitudes (F_{HR} = 13.09; $p < .01$). Year in school and sex knowledge also contributed statistically significant

Table 4.18 Summary Table of Hierarchical Regression of Attitudes Toward Abortion Upon the Study Variables (Model II).

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
MALES (N = 47):						
Religiosity	-.43	.18112	-1.07	-.45	10.59^{b}	
Religious Affiliation	-.24	.20638	-.56	-.16	1.07	
Commitment to Intercourse Partner	-.13	.23330	-2.24	-.36	8.00^{b}	
Residence	-.10	.23387	.07	.06	.26	$F_{1-4} = 3.21^{a}$
Frequency of Intercourse	.40	.41926	.49	.44	10.11^{b}	$F_{5} = 13.09^{b}$
Year in School	.32	.53718	1.14	.29	4.03^{a}	$F_{6} = 10.19^{b}$
Sex Knowledge	.22	.58325	.63	.27	4.10^{a}	$F_{7} = 4.31^{a}$
Sex-Role Ideology	.07	.58753	-.31	-.09	.45	$F_{8} = .39$
Self-Disclosure to Peers	.14	.59210	.05	.08	.38	$F_{9} = .41$
Perception of Peers' Sexual Intimacy	.00	.59229	.02	.02	.02	$F_{10} = .02$
Sexual Permissiveness	.30	.59254	-.03	-.02	.02	$F_{11} = .02$
Discussion of Conceptive Risk	.22	.59254	.00	.00	.00	$F_{12} = .00$
						$F_{5-12} = 3.74^{b}$
						$F_{1-12} = 4.12^{b}$

Table 4.18 Continued.

Independent Variables	Simple r	R^2	b	Beta	F_{SR}	F_{HR}
FEMALES (N = 37):						
Religiosity	-.58	.34028	-1.32	-.51	5.21[a]	
Commitment to Intercourse Partner	-.09	.35339	-.94	-.16	1.08	
Residence	-.20	.35576	-.24	-.21	1.19	
Religious Affiliation	-.27	.35640	.16	.05	.07	$F_{1-4} = 4.43^{b}$
Discussion of Conceptive Risk	.20	.45719	1.08	.33	4.12[a]	$F_{5} = 5.76^{a}$
Frequency of Intercourse	.21	.49678	.17	.12	.43	$F_{6} = 2.36$
Sex Knowledge	.07	.51789	-.20	-.10	.34	$F_{7} = 1.27$
Perception of Peers' Sexual Intimacy	.37	.53493	.23	.26	1.49	$F_{8} = 1.03$
Sex-Role Ideology	.28	.54777	.45	.13	.77	$F_{9} = .77$
Self-Disclosure to Peers	-.03	.56137	-.12	-.16	.78	$F_{10} = .81$
Year in School	-.14	.56366	.22	.05	.13	$F_{11} = .13$
Sexual Permissiveness	.29	.56376	.01	.01	.01	$F_{12} = .01$
						$F_{5-12} = 1.43$
						$F_{1-12} = 2.58^{a}$

a- Significant at < .05 level.

b- Significant at < .01 level.

increments to the explained variance in y (F_{HR} = 10.19; $p < .01$ and 4.31; $p < .05$, respectively) for males. That the relationship between year in school and abortion attitudes was statistically significant (Beta = .29), may suggest that the attrition of less peer-group integrated students throughout the college years may have yielded a significant positive effect on attitudes toward abortion. While for female respondents, the effect of peer-group orientation on abortion attitudes may be through increasing sex knowledge, sexual permissiveness, sexual intercourse, and the perception of conceptive risk, the peer-group effect on males' abortion attitudes probably operates through enhancing sex knowledge but primarily through encouraging a greater frequency of intercourse.

This difference between males and females in pathways through which the indirect effect of the peer group operates on abortion attitudes may be related to differences in the amount of time spent with peers or the usefulness of peers in providing sex information. One may also argue that since women are the ones who get pregnant and have to deal with the consequences of unwanted pregnancy, they may be more likely than men to be concerned about controlling their fertility. This concern may make females more receptive than males to sex knowledge available from the peer group and may explain why the effect of the peer group on the sex knowledge was greater for female than for male respondents (Table 4.6). The indirect peer-group effect on abortion attitudes which operated through frequency of intercourse was apparently stronger for males than for females. Perhaps as Komarovsky (1976) has suggested, male peer groups pressure their members to engage in sexual intercourse often as a proof of virility. The present study

suggests that if frequent intercourse encourages sexual partners to discuss pregnancy risk, a liberalization in the abortion attitudes of both partners may result. The implications of these findings will be discussed in the following chapter.

CHAPTER FIVE

CONCLUSIONS

The general theoretical approach in this dissertation assumed that college attendance provides a socialization experience toward permissive abortion attitudes. The prime socializer was proposed to be the peer group, which was thought to assume a more liberal and powerful influence than the family of orientation in shaping one's attitudes toward abortion. The peer group was thought to encourage the development of a more nontraditional sex-role ideology, a greater clinical knowledge of sex, and greater permissive attitudes toward premarital intercourse. These three developments were then thought to promote the initiation of sexual intercourse. Among the sexually active, a greater number of lifetime intercourse relationships and a greater frequency of intercourse should afford many empirical tests, as it were, of one's ability to conceive, and should thereby heighten one's awareness of conceptive risk. Furthermore, a recognition of one's fecundability should induce more tolerant attitudes toward methods to control conception, perhaps including abortion. A chain of six major research hypotheses was developed to test each of these ideas. Since the effects of religious affiliation, religiosity, residence, and commitment to intercourse partners were thought to occur prior to the effects of the test factors, the proposed relationships in Hypotheses I through IV were adjusted for the first three control variables, while the proposed relationships in Hypotheses V and VI were adjusted

for all four control variables.

The analyses suggested that one's orientation to peers increased with college tenure, net of the effects of religious affiliation, religiosity, and residence. With one exception, sex-role ideology was not related to peer-group orientation, as was hypothesized. The lack of a statistically significant association between sex-role ideology and peer-group orientation may have been due to the relatively small variance in sex-role ideology. Since sex-role ideology was coded: (1) conservative ideology, (2) moderate ideology, or (3) liberal ideology, persons in the "moderate" category may have held heterogeneous attributes about sex roles. The variance in sex-role ideology was smaller for male than for female respondents. A one-way analysis of variance between sex-role ideology and year in school indicated no statistically significant association for male respondents ($F = 2.35$; $p > .05$) while it yielded a small but statistically significant F ratio ($F = 5.80$; $p < .01$) for female respondents. The statistically significant F ratio for females may be functionally related to the greater attrition rate of traditionally sex-role oriented female than male students due to marriage or premarital pregnancies (Astin, 1975). Furthermore, while it was expected that year in school would be positively related to nontraditional sex-role ideology, the mean scores of the latter measure across year in school indicated inconsistent results (Table 3.1). For male respondents, freshmen and juniors were more nontraditional in their sex-role ideology than were sophomores and seniors, respectively. Similarly, among female respondents, sophomores were more nontraditionally sex-role oriented than were juniors.

Perception of peers' sexual intimacy had a small positive effect on nontraditional sex-role ideology for males. On the other hand, sex knowledge and sexual permissiveness were related to at least one dimension of peer-group orientation for both male and female respondents. For female respondents, sex knowledge was significantly related to both of the dimensions of peer-group orientation. For male respondents, permissiveness toward premarital sexual behavior was significantly associated with both measures of peer-group influence. Therefore, the peer group may encourage premarital sexual intercourse primarily through providing clinical knowledge about sex (which tends to be tied with sexual overtones and values encouraging sexual experimentation) to women students and tolerance of premarital sexual unions to men students. Confidence in this interpretation was bolstered by the finding that the net effect of sexual permissiveness on the initiation of sexual intercourse was greater for male respondents, while the net effect of sex knowledge on this event was greater for female respondents. These conclusions, however, must be viewed with caution because the available data were cross-sectional. The temporal sequence of these relationships cannot be adequately explored without a longitudinal study. This limitation of the analyses will be discussed below.

In a study of abortion attitudes among college students, Maxwell (1970) reported a positive relationship between sexual permissiveness and abortion attitudes. Therefore, he contended that more favorable attitudes toward abortion were likely to develop among persons with greater sexual permissiveness and behavior because if conception were to occur, it might be terminated by abortion. Maxwell's hypothesis implied that a majority of persons engaged in

premarital intercourse should develop favorable abortion attitudes. However, in this study, it was argued that not everyone engaged in sexual intercourse would perceive the conceptive risk and, consequently, would minimize it through the use of contraception. Rather, it was hypothesized that a greater number of lifetime intercourse partners and a greater frequency of intercourse with the current or the most recent partner should bring about a greater perception of one's fecundability, which would be reflected in a greater and more efficacious use of contraception. Subsequently, it was hypothesized that the use and efficacy of contraception should be associated with more favorable attitudes toward abortion.

The analyses did not support these hypothesized relationships. Perhaps the measurements of contraceptive use and contraceptive efficacy did not adequately reflect the perception of one's conceptive risk. One possible explanation for this problem may be one of recall. Since many respondents had had several (in some cases simultaneous) intercourse relationships, and since more than one contraceptive method may have been used in a relationship, proper recall of contraceptive use may have been apparently a problem. Similar difficulties in measuring contraceptive use and efficacy were also reported among currently married women (Ryder and Westoff, 1971; Westoff and Ryder, 1977). As a result, a second measure of subjective perception of fecundity was employed.

It was thought that a discussion of conceptive risk with the current or the most recent intercourse partner would encourage self-perception of fecundity. For both male and female respondents who had had

at least two intercourse partners, a greater degree of discussion of conceptive risk was associated with more permissive abortion attitudes, net of the effects of religious affiliation, religiosity, residence, and commitment to intercourse partner. Therefore, subjective perception of one's fecundity may lead to a more favorable disposition toward abortion. However, when abortion attitudes were regressed upon all of the study variables, the indirect effect of peer-group orientation on abortion attitudes took place through discussion of conceptive risk only for female respondents. Therefore, future research should seek how male-female differences in abortion attitudes might result from differences in the character of their peer-group interaction. For example, it would be useful to explore whether male-female differences in time spent with peers or in sex composition of the peer group might lead to gender differences in sex-role ideology, sex knowledge, sexual permissiveness, and (ultimately) abortion attitudes.

Unfortunately, the above reported findings are limited due to the cross-sectional nature of the study. An alternative hypothesis suggests that the attrition of more conservative students over the college years may have significantly changed the social and demographic composition of remaining students, apart from changes caused by peer-group processes. That is, the greater peer-group orientation of upper- than lower-classmen may have been, in part, a result of the attrition of less peer-group integrated students over the four college years. Research suggests that due to the selective attrition of students, student composition becomes more homogeneous from the freshman to the senior years. For example, a higher probability of dropping out of college was associated with poor academic ability (Morrisey, 1971;

Zaccaria and Creaser, 1971; Astin, 1972; Peng and Fetters, 1978), lack of career commitments at the time of college entrance (Panos and Astin, 1968), low socioeconomic status and/or inadequate financial support (Bayer, 1968; Panos and Astin, 1968; Blanchfield, 1971; Astin, 1972), plans for early marriage and parenthood (Bayer, 1968; Bayer, 1969; Astin, 1972), being of a non-Protestant religion (Astin, 1972), and being a female student (Astin, 1972; Peng and Fetters, 1978). Therefore, senior students tended to be from a higher socioeconomic background, to have a greater academic ability and a greater career commitment, not to have plans for marriage and parenthood at the beginning of college years, and to be increasingly Protestant, in comparison to freshman students. Furthermore, the female-student composition tended to become more homogeneous than that of male students since females were more likely to drop out. To the extent that selective attrition changes the demographic and social composition of college students, selective attrition may have introduced biases into the study. Therefore, cautious interpretations of the findings are emphasized.

In order to partially resolve the issue of attrition, an indirect test was carried out by regressing abortion attitudes upon all study variables (Tables 4.17 and 4.18). It was reasoned that if sample attrition biased the conclusion that peer-group orientation indirectly affects abortion attitudes, then year in school might have a direct positive effect on abortion attitudes. Of major importance was the finding that year in school did yield a statistically significant direct effect on abortion attitudes among males. Therefore, selective attrition of students may have introduced an independent effect on attitudes toward abortion and, consequently, it must remain as an alternative hypothesis.

Since the issue of attrition cannot be satisfactorily resolved in a single cross-sectional study, the need for a longitudinal research design is emphasized. Such a study could be carried out by selecting a random sample of 1000 freshman, never-married, male and female students. They could be contacted by letter and asked to participate in a four-year study of abortion attitudes. The sample respondents would be interviewed during the Fall term over the next four years. Respondents interviewed during their freshman year would become the Year I cohort of the study; the same respondents would be contacted during their sophomore year and would become the Year II cohort of the study; and so forth. This research design makes possible the testing of the causal relationships involved, e.g., whether or not staying in school would lead to a greater peer-group orientation. If, for example, one's orientation to peers increases as he or she progresses from the freshman to the senior year, one may conclude that peer-group orientation may be causally linked to college tenure. The effect of sample attrition on this relationship could be estimated by comparing the peer-group orientations of drop-outs and non-drop-outs. A finding of no statistically significant difference for this comparison would further support the inference that peer-group integration is a developmental social process during college tenure. In a similar manner, changes in abortion attitudes could be examined for association with changes in sex-role ideology, sexual permissiveness, sex knowledge, and sexual experience.

The conclusions of this study are also limited to a sample of respondents who were homogeneous in many respects: white, never-married college students, ages 18 to 26, who had never engaged in sexual intercourse prior to college entrance and who did not experience a pregnancy

in the current or the most recent intercourse relationship. Furthermore, the study was limited to students at a state university in Michigan. Similar studies should be carried out among black and white college students in all regions of the country, in parochial and secular institutions which are both coeducational and noncoeducational. A more heterogeneous sample would permit an assessment of how race, region, and type of institution affect the relationships examined in the present study.

In spite of the limitations noted above, the findings of this study provide several directions for future research. For example, several studies (Meikle et al., 1973; Oswalt, 1974; Needle, 1975; Zelnik and Kantner, 1972; 1978) have indicated that a large proportion of young persons engaged in premarital intercourse did not use contraception. Lack of motivation to contracept may be directly related to the inaccurate perception of one's ability to conceive (Zelnik and Kantner, 1972; Shah et al., 1975). However, self-perception of one's fecundity may increase in the future due to the lower age of menarche (Cutright, 1972; Coe and Blum, 1972), the increase in the proportion of never-married young persons who engage in premarital intercourse (Robinson et al., 1972; Vincent and Stelling, 1973; Jessor and Jessor, 1975; King and Sobel, 1975; Lewis and Burr, 1975), and the delay of first marriages (Current Population Reports, 1978) that have been noted in recent years. As such, more research is needed to identify the technical and social-psychological factors producing a subjective awareness of one's fecundity. These efforts should employ direct measures of perceived fecundity status. The perception of one's fecundity may be critical to the formation of attitudes toward, and motivation to use, not only abortion but also other methods of pregnancy prevention.

The relationship between attitudes toward abortion and abortion behavior should be investigated. One value of studying abortion attitudes lies in the assumption that they reflect the demand for abortion. However, it may be debated whether abortion attitudes cause abortion, whether abortion causes abortion attitudes, whether there is a reciprocal relationship between attitudes and behavior, or whether there is no relationship at all. For example, the report of the Commission on Population Growth and the American Future (David, 1972) indicated that abortion attitudes and abortion behavior were not consistent among blacks, who had more conservative attitudes toward abortion but higher rates of abortion than did whites. This surprising finding may indicate an inconsistency between abortion attitudes and behavior. Therefore, the relationship between abortion attitudes and behavior deserves future research.

The present study implies that abortion attitudes in the U.S. may continue to liberalize in the 1980's. Since the age at first marriage climbed by one year for both males and females between 1970 and 1978, a continued trend toward later first marriage would mean an increase in the fecund life span during which women would be at risk of premarital sexual liaisons and premarital pregnancy. This risk of premarital pregnancy would be further heightened if the age at menarche continues to decline. Thus, the proportion of women seeking abortions would rise. Furthermore, that the effect of religious affiliation (Catholic vs. non-Catholic) on abortion attitudes was not statistically significant may indicate that religious affiliation is no longer a key factor affecting fertility behavior, the employment of birth control and, possibly, abortion. Based on national fertility studies, Westoff and Jones (1979)

reported that a trend toward convergence in fertility rates between Catholics and non-Catholics was in fact observed by the mid-1960's and that, by 1975, the difference in fertility had nearly vanished. The decline of Catholic fertility was believed to have resulted from the increasing defection of Catholics from the official Catholic Church position on contraception and abortion. On the other hand, the present study showed that religiosity remained a strong deterrent to the liberalization of abortion attitudes among a sample of college students in 1976. Opposition to abortion is grounded in beliefs about when human life begins (Blake, 1977b). Since these convictions, cross-cutting Catholic and non-Catholic populations (Blake, 1977b), may be based upon assumptions about a Creator, religiosity may continue to foment an abortion debate in the 1980's.

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APPENDIX A

TIME-LINE CHART

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TIME-LINE CHART

The following chart, known in the major study as the Time-Line Chart, was used in order to secure a wide variety of information about dating, sexual, and contraceptive behavior of each respondent. This information was later on coded into defined variables. Interviewers were informed about the purpose of the Time-Line Chart and were well trained in its administration. Below are the instructions which accompanied the Time-Line Chart and, for the purpose of illustration, a hypothetical example is presented.

TIME-LINE CHECKLIST FOR INTERVIEWERS.
(Note: The numbers listed under each step correspond to the numbers found on the Time Line).

Step A. Record required information in the upper right corner.

1. Transfer Interview Number from front page of interview schedule.
2. Check sex of respondent.
3. Record respondent's date of birth.
4. Number the pages of the Time Line by individual page and the total number of pages.

Step B. Determine the starting point of the Time Line horizontal (time) axis.

5. Write in the space provided under the first time interval the year in school during which the respondent first started going out with someone of the opposite sex; e.g., junior-high school or freshman-college.
6. Write the age of the respondent at the beginning of the school year during which he/she started going out in the space provided.

Step C. Complete the horizontal (time) axis from the starting point determined in Step B to the present by writing for each new school year the respondent's year in school and age at the beginning of that school year up to and including the current school year in the spaces provided under the time intervals. A maximum of 4 years can be recorded on one page. If more than one page is necessary make

sure each additional page is numbered. (Note: If there have been interruptions in the respondent's education other than normal vacation periods, indicate this at the bottom of the Time Line beneath the appropriate time interval. Additional notes may be made in the margin).

Step D. Complete the Relationship Section of the Time Line.

7a. Categorize each relationship the respondent has had with persons of the opposite sex according to the categories listed along the vertical axis between the top two heavy black lines of the Time Line.

7b. Indicate the duration of each relationship by drawing a horizontal line, opposite the appropriate relationship category, over the relevant time period. Indicate the start and end of each new relationship by a short vertical bar. Changes in a relationship can be shown by having a vertical bar at the beginning of the line indicating the start of the relationship, by having no bars on lines showing intermediate changes in the relationship, and by having a bar at the end of the line indicating the final state of the relationship. (Note: For relationships that last less than 3 months, please record the exact duration of the relationship somewhere above the line).

7c. Number each different relationship consecutively from the first to the current/most recent relationship. Write the number above the line and circle it. (Note: Changes within a relationship with the same person are indicated by using the same number; changes in relationships (i.e., different partners) are indicated by using different numbers).

7d. For the categories Casual Acquaintance and Friend, it is possible for the respondent to be dating several persons at the same time. Multiple partners for these categories are indicated by writing the number of partners above the line. Do not circle this number. If no number is written, it is assumed the respondent had only one partner. However, for the Affection and Love categories, each relationship should be considered separately.

Step E. Complete the Behavior Section of the Time Line.

8a. For each relationship, indicate the most intimate behavior the respondent has engaged in by drawing a line opposite the corresponding behavior category over the appropriate time interval. (Note: For all behaviors, except intercourse, this line is the same length as the relationship line. For intercourse relationships, the length of the line should represent only that period of time within the relationship during which intercourse took place).

8b. Write the relationship number above the beginning of each line and circle it.

8c. For intercourse relationships, write the codes for the type of contraceptives used, the percentage of time each contraceptive was used, the code for the frequency of intercourse, pregnancy scares and/or pregnancies or abortions below the line.

Step F. Complete the Cohabiting Relationship Section on the Time Line.

9. Indicate cohabiting relationships by drawing a line over the

appropriate time interval.

Step G. Check to see if the respondent would like to make any changes. Make appropriate corrections.

CODE LIST OF CONTRACEPTIVES

Pill (P), IUD (I), Diaphragm (D), Condom (C), Foam (F), Rhythm (R), Withdrawal (W), Morning After Pill (MAP), Other (O), No Contraceptive (NC).

FREQUENCY OF INTERCOURSE

0. Never had such a relationship/never had intercourse in this relationship
1. Only once
2. Two or three times total
3. More than three times total, but less than once a month
4. About once a month
5. More than once a month, but less than once a week
6. Once a week
7. Two or three times a week
8. More than three times a week

Dating, sexual, and contraceptive behavior of a hypothetical respondent number 5993 are presented on the Time-Line Chart below. This respondent was a male, born on October 12, 1956, a sophomore, and was currently involved in an intercourse relationship with someone he was in love with and planned to marry. This respondent started dating at the beginning of his junior year in high school. He dated seven casual acquaintances and ten friends during the academic year. He was simultaneously involved in an Affection-Relationship which was developed later on into a Love-Relationship but was terminated by the end of his senior year in high school. At the time this respondent came to college, he started a new Love-Relationship which was still continuing at the time of the interview. Simultaneously, he also dated four casual acquaintances.

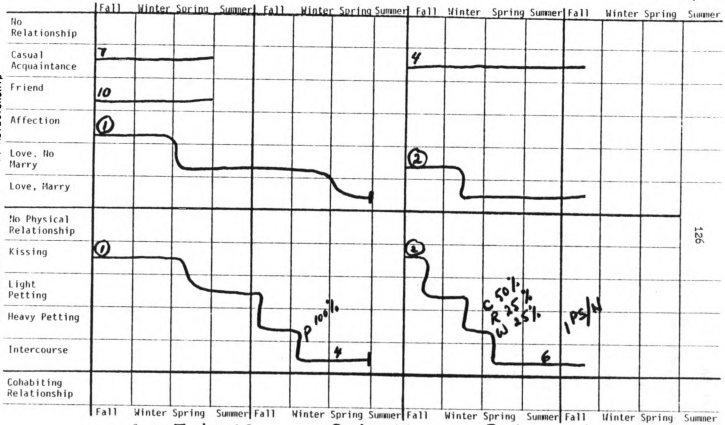
4. Page 1 of 1

TIME-LINE CHART

1. INTERVIEW # 5993

2. M ✓ F

3. BIRTHDATE 10/12/56



1126

Horizontal (Time) Axis

In high school, the respondent's behavior with the first partner developed over a two-year period from Kissing to Intercourse. Frequency of intercourse was "about once a month" and the birth control pill was used 100 percent of the time. No pregnancy scares or pregnancies took place in this relationship. In college, the respondent's behavior with the new partner developed over a one-half-year period from Kissing to Intercourse. Frequency of intercourse was "once a week". Overall contraception used in this relationship was broken down into: condom, 50 percent; rhythm, 25 percent; and withdrawal, 25 percent. This respondent had only one pregnancy scare which turned out to be negative.

In this study, the unit of analysis was the current or the most recent intercourse relationship. Therefore, the second intercourse relationship which started since coming to college would be selected for the measurement of frequency of intercourse, contraceptive use and contraceptive efficacy, and commitment to intercourse partner. Taken as a whole, the Time-Line Chart indicates that this respondent was nonvirgin, and the number of lifetime intercourse partners was two.