

This is the accepted manuscript of: “Macro Theory in Sexual Science”, Chapter Four in: John DeLamater and Rebecca Plante (Eds.) Handbook of the Sociology of Sexualities, Springer, 2015.

MACRO THEORY IN SEXUAL SCIENCE

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Part One: Macro Theory and the Birth of Two Disciplines

In the late 19th and early 20th century two new disciplines came to the attention of the Western world—sociology and sexual science. The problems of the industrializing and urbanizing world led people to search for a new way of gaining knowledge about their changing social and sexual lives. There were people who helped these newborn disciplines grow by honing new lenses with which to see more clearly the new world in which they lived. Part of this dramatic process was the building of explanatory macro theories that could theoretically draw a portrait of the intertwining segments of the rapidly changing Western societies.

Theory, whether macro or micro, refers to explanations that help us understand how certain changes occur, how social problems can be contained, and hopefully how our overall society works. Theory, more formally put, is composed of logically interrelated concepts, that put forth propositions about what is being studied, in a way that can be empirically researched. Macro theory focuses on comparing societies or studying major segments of a human society such as our social classes, our sexual customs, or our basic institutions. These macro units are the structural parts of a society and they were of great interest in the very beginning years of sociological theory and still require our attention today (Comte, 1896; Spencer, 1901; Stark, 2009).

The difference between macro and micro theory is rooted in the size of the unit studied. Micro theory would explain how people in a marital dyad or a friendship triad communicate with each other or how small groups of people work to create changes they desire in the broader society. Bear in mind that these two levels of analysis logically have to relate to each other because micro and macro units impact each other (Collins, 1988; Hechter, 1983; Stark, 2009).

To illustrate the interaction of macro and micro theory one need only examine the classic macro study of suicide by Emile Durkheim wherein he stated that the degree of integration or cohesion in a large group would determine the suicide rate in that group (Durkheim, 1951). Durkheim was dealing with individual acts of suicide in different groups and thus there is a micro aspect (individual) and a macro aspect (group) to this theory and one can choose to focus upon either one or both of them. Group integration is built from the acts and feelings of individuals and so the two basic variables in Durkheim's theory—integration and suicide-- both have a macro and micro theoretical level that can be explored. Durkheim chose to focus on the macro level of relationships in different groups and so he stressed “social facts” above individual facts. To him this macro level was the key sociological level of analysis that had been overlooked by other disciplines.

In sum then, there is no impassable separation or invidious distinction between micro and macro theory. The choice is a matter of what excites a scholar's interest rather than being a better or worse choice. Both structure (social forces) and agency (individual power) go together in the real world just like micro and macro do in the theoretical world.

The researcher and theoretician can separate these levels but in reality they flow into each other (Collins, 1988; Mead, 1934; Skinner, 1985).

I have used sociologists like Durkheim to illustrate macro theoretical levels because they are very well known in the social science community and their work clearly illustrates macro theory (Marx, 1904; Weber, 1930). There also were macro theories in the early years of sexual science put forth by people like Sigmund Freud, Havelock Ellis, and Magnus Hirschfeld (Ellis, 1936; Freud, 1957; 1962; Hirschfeld, 1932, 1936). But Durkheim's work more formally presents tested macro theoretical ideas.

The beginning of sexual science in the U.S. was focused on social problems like prostitution, venereal disease and "purity" issues while in Europe the focus was more on homosexuality and transvestites. There were major debates over whether research or societal reform should be the focus of sexual science. This new field was also seen as a therapeutic discipline dealing with sexual "pathologies." The focus here was on sexual "illnesses" of people and the analysis was done by medical doctors (Krafft-Ebing, 1886). Both Ellis and Hirschfeld believed that homosexuality was determined by heredity but there was much debate on this issue with the politicians of that day. In 1907 Dr. Iwan Bloch, a dermatologist, moved to broaden the field by including social scientists in the study of sexuality. It was he who proposed an all inclusive name for the study of sexuality—sexualwissenschaft—sexual science (Bloch, 1928).

The very promising development of sexual science in Europe came to a sudden halt in the early 1930s when Hitler took power in Germany. One of his earliest actions was to burn the books and papers at the Institute for Sexual Science that had been founded by Magnus Hirschfeld (Hirschfeld, 1932). Of course, the work of Sigmund Freud was also

important in the development of sexual science. But it was controversial and the English sexual scientist, Havelock Ellis, took issue with a number of Freud's psychoanalytic concepts such as the Oedipus Complex (Ellis 1936; Freud, 1962; Grosskurth, 1980). There were many important ideas in the work of men like Hirschfeld, Freud and Ellis, but there was also a good deal of competitiveness and at that time there was not an abundance of research and theory work that could enter into such disputes.

Sociology became a department in the 1890s in both Europe and America, but sexual science did not gain acceptance as an academic department in those early years. In my mind, Ellis's work was the most central to those with a social science interest. Ellis stressed comparing our ideas about sexuality by seeing whether they held up when analyzing sexuality in other societies. He used studies in anthropology by Malinowski to test out and critique some of Freud's ideas (Malinowski, 1929; Ellis, 1936).

After Hitler attacked sexual science, the curtain fell on sexual science work in Europe for the next two or three decades. The leadership baton was passed to America in the work of Alfred Kinsey starting in the late 1930s (Kinsey, et.al., 1948; Kinsey, et.al., 1953). Kinsey's work was very important and influential but it was basically descriptive and not theoretically presented. We can't go into more historical detail here but for a most interesting account of the development of the field of sexual science in both Europe and America there are good sources to consult (Bullough, 1994; Haeberle, 1978; Money & Musaph, 1977). For our purposes here we will now turn to some of the macro theoretical work in America starting in the 1960s and going up to the present day..

Part Two: Macro Studies on Sexuality in America

In Parts 2 and 3 of this chapter, I present two of my macro theories on sexuality and compare each of them with macro theory work done by other social scientists. I aim to illustrate some of the diversity of macro theory projects and increase awareness of the processes by which macro theory is created in America. In Part 4 I will present more recent macro work and also review work by Harvard biologist Edward Wilson, in order to show how biological macro theoretical work on sexuality fits with social science macro theoretical work on sexuality today.

The Autonomy Theory of Premarital Sexuality

The family textbooks in the 1950s stressed abstinence and portrayed premarital sexuality as involving predominantly lust and selfishness and having no redeeming characteristics. In these textbooks the double standard in premarital sexuality was only lightly touched upon. Also, the work of Kinsey and his colleagues on sexual behavior was often ignored or cherry picked to fit with the text author's preconceptions. In addition, I strongly felt that we were ignoring the scientific study of sexual attitudes toward premarital sexuality. At that time I believed that we were about to witness a major increase in premarital sexuality and so we needed a more thorough and unbiased perspective on premarital sexuality (Reiss, 1960; 235-241).

In 1958 I began work on a scale measuring premarital sexual permissiveness. With the help of four hard working senior sociology majors I built two 12-item scales measuring premarital sexual attitudes towards males and towards females. I tested my scales in 1959 at two high schools and two colleges in Virginia. Comparing answers in the male and female scales afforded a measurement of a double standard attitude. Each scale had questions on premarital kissing, petting and coital behavior. For each of those

three sexual behaviors there were four questions asking about acceptance of the behavior under different levels of affection. In 1989 I revised the scale into a short four item scale that focused on premarital coitus using four questions that varied the degree of affection. This new form was tested successfully in both the U.S. and Sweden (Schwartz and Reiss, 1995). Both the original and the short form of the scales are still in use by researchers (Reiss, 1967; 2011a).

Using research funds that I received from the National Institute of Mental Health, I was able to add my premarital scale questions to a questionnaire for a national sample of 1500 respondents fielded in 1963 by the National Opinion Research Center (NORC) from the University of Chicago. I also administered the scales at two more colleges, one in New York and one in Iowa. The scales met all the Guttman Scale requirements in the national sample and in all the school samples. Guttman scales rank answers to the questions in a ladder formation, with specific steps from low to high. (Stouffer, et. al.1950). The successful laddering of the questions on premarital sexual permissiveness in the national and all six student samples implied that there was an American cultural ranking of the acceptability of these different sexual behaviors that my scales were measuring.

The NORC national sample also enabled me to test a number of demographic variables that could be used to build and test ideas concerning factors that promote or inhibit changes in premarital sexual permissiveness. There were questions on education, income, occupation, marital status, number of children, region of the country, religion, age, race, sex, self happiness, school segregation, racial integration, and political preference (Nixon vs. Kennedy). This national sample was the first representative

national probability sample validating scales measuring premarital sexual permissiveness (Reiss, 1964a, Reiss, 1964b, Reiss, 1965). The 1963 attitude responses have been used as a baseline from which to measure attitude changes toward premarital sexuality over the past half century (Reiss & Miller, 1979; Reiss, 2001; 2006).

The premarital sexual revolution in America is best dated as being clearly underway by 1965 and proceeding in an upward arc until about 1975 when it leveled off. The percent accepting premarital coitus in my 1963 national sample was 20%; in 1965 another NORC national sample found 28% accepting premarital coitus; in 1970 another NORC national sample showed 52% acceptance; and in 1975 the General Social Survey (GSS) fielded by NORC showed 69% acceptance (GSS, 2013; Klassen, et.al., 1989; Reiss, 1967; Scott, 1998). . A move from 20% to 69% in twelve years can be called a sexual revolution. The acceptance rate in the 2012 GSS was 73%, not much of a change in this measure since 1975 (GSS, 2013). My major goal in my study, besides testing the reliability and validity of my scale, was to understand the social factors that could change people's premarital sexual permissiveness.

The student data covered a number of similar variables but it added additional variables such as dating experiences, love conceptions, sexual behaviors, guilt reactions, and perceived sexual permissiveness of parents, peers and close friends (Reiss, 1967, Appendices). Note that these questions involve individual factors concerning dyadic reactions, experiences and perceptions—these were micro variables being used in a macro study of our shared national premarital sexual attitudes. In addition, the demographic factors that I mentioned above were macro variables related to social class, race, age, gender and such.

Since there was little existing social science knowledge of what would influence a person's views of premarital sexual permissiveness, I had to use an inductive approach in which I carefully examined the relationships of the different variables in my data and then induced my theoretical explanation. I will spell out, below, the seven propositions and the overarching theory that I developed.

First, I searched for a variable in the national sample that I felt could impact premarital sexual permissiveness (PSP). Religiosity as measured by church attendance seemed to fit that bill. Organized religion generally promotes a conservative, restrictive view of what is premaritally sexually acceptable. Religiosity did show a strong negative relationship to my PSP scales in both the student samples and the national sample. I found that the relationship of church attendance to PSP was much stronger among females compared to males and much stronger among whites compared to blacks. These race and gender tables specified the relation of church attendance to PSP (Reiss, 1967, Chap. 3). Now the question was, could I derive one proposition, one theoretical explanation, that would explain the race and gender differences in the relationship?

I sought to find what common factor blacks and males have that distinguishes them from whites and females. I concluded that in American society blacks and males are both more accepting of PSP than are whites and females, and so perhaps the theoretical explanation is that the lower a group is on acceptance of PSP the more likely they are to be impacted by factors such as church attendance. Whites and females are traditionally lower on PSP than blacks and males and their attitudes did seem to be more alterable by social factors such as the rate of church attendance. So the data fit with my explanation.

I checked this relationship and found it held in each of my student samples. Of these four race/sex groups, the one with the lowest PSP and thus most likely to move up in PSP if their church attendance or other conservative influences decreased would be white females. That prediction has been checked over the decades since my study. White females have made the most dramatic changes in PSP (Hofferth, et.al., 1987; Laumann, et.al., 1994, 323; Singh & Darroch, 1999). These findings build confidence in the explanation I devised.

Proposition One states:

The lower the traditional level of sexual permissiveness in a group, the greater the likelihood that social pressures will alter individual levels of sexual permissiveness.

The second proposition grew out of my check on the relation between one's social class and PSP. The student samples and the national sample surprised me by not showing any relationship between social class and PSP—I had expected a negative relationship which was what Kinsey had found (Kinsey, et.al., 1948, 1953). I searched for a socio/cultural factor that might alter this lack of a relationship between social class and PSP. I found to my surprise that when I controlled on the dimension of liberal/conservative (in non-sexual areas) the social class relationship changed dramatically. In a liberal group the relation between social class and PSP was positive but in a conservative group it was negative! Put these liberal and conservative groups together and they cancel each other out. However, examine them separately and the relationship is no longer masked and it appears in two different forms.

Liberal groups are the most likely to maintain high levels of PSP despite factors like church attendance that can reduce PSP. The upper classes showed the greatest differences between liberal and conservative groups—the lower classes showed the least difference between liberal and conservative groups (Reiss, 1967, 66-71). So these first two propositions would logically imply that the most likely group to maintain high PSP would be an upper class liberal group of males. I should add here that this proposition on class and liberalism in my data works better with whites than with blacks. The small size of the black upper class sample may be a factor here. Blacks overall showed a general negative relation of social class and PSP.

Proposition two states:

The higher the amount of general liberality in a group, the greater the likelihood that social forces will maintain high levels of sexual permissiveness.

Proposition three addresses family influences on PSP. There are more ties to the marital and family institutions for females than for males and the third proposition states that these family ties restrict the ease with which female sexual permissiveness will change. For example, in my student samples romantic love and exclusiveness of dating showed a positive relationship to PSP but mostly for females. Males had high PSP regardless of love and exclusiveness. The accepted PSP level in the family institution was much lower than the accepted level in the youth groups. So the more closely bound you are to your parents the less likely you were to increase your PSP. We have seen in propositions 1 and 2 that these family ties can be altered for various sub groups. Nevertheless, the family ties still are a factor that has influence.

Proposition three states:

Male and female differences in ties to the family institution will create differences in the factors that influence their premarital sexual permissiveness.

Proposition four deals with issues of gender equality. In my results there is gender inequality in abstinence; males were allowed more petting than are females, and also in the double standard where males were allowed more coital rights than women have. Believers in abstinence and the double standard are of course lower in PSP than those who accept coitus equally for men and women. There is thus support for increased permissiveness leading to increased gender equality. Inequality is surely still with us since even today only 20% of congress is female, there are no female Catholic priests, more University professors are male, and men still earn more than women. Such structural inequality in basic institutions means that we'll find gender inequality in sexuality as well but less of it in high PSP groups.

Proposition four states:

Within the abstinence and double standard codes, the higher the overall level of permissiveness in a group the greater the extent of equalitarianism.

The fifth proposition examines the influence of parental values. I found that parental values influence a person's starting level of PSP, but how long did the influence last? Behavior seemed to generally come first, and acceptance (not rejection) of that behavior, most often followed. This process of change once one starts dating is explained in part by the first four propositions concerning the impact of sexual acceptance, liberality, family ties, and gender equality but parental values also play a part in determining the speed at which PSP will increase.

Proposition five states:

The level of permissiveness in the values one derives from parents will be a key determinant of the number, rate and direction of changes in one's premarital sexual standards.

Here in proposition six we have another determinant of PSP—peer influence. The finding that older and more permissive young people see themselves as more distant from their parents supports the view of an increasing tendency to free oneself from parental controls.

Proposition six states:

There is a general tendency for the individual to perceive his/her parents' permissiveness as a low point on a permissive continuum and his/her peers' permissiveness as a high point, and over time to increasingly place his/her self closer to peers, and close friends.

Proposition seven, the last proposition, deals with another way that the family impacts a young person's PSP. Older siblings were found to be lower on PSP than their younger sibs, and divorced parents were higher on PSP than married parents. Finally we found that children who had no siblings were the highest on premarital sexual permissiveness. The battle lines between courtship and family pushes and pulls are writ large in this proposition.

Proposition seven states:

Responsibility for other family members (as a sibling or as a parent) diminishes one's premarital permissiveness and the more courtship involvement one has (as a young person or as a divorced parent) the higher the level of permissiveness.

The final and most important step in my research was to see if I could formulate a single theoretical statement from which all seven propositions could be derived. The crucial question was: Is there some common element that can be found in all seven of these propositions?

After careful analysis I concluded that the element that was present in all seven propositions was autonomy. Whether you're speaking of a courtship group or a single person, the greater the level of autonomy, the greater the level of permissiveness will be and so my overall theoretical statement was:

Within a modern society the higher the degree of autonomy of an individual or a courtship group, the higher the level of premarital sexual permissiveness.

I call this summary statement the Autonomy Theory. The assumption underlying the power of autonomy is that there is individual and group pressure pushing towards high levels of premarital sexuality and so if given autonomy the move will be toward more PSP. All seven propositions show this power of autonomy regarding PSP and they also display the underlying assumption of this theory that there is pressure (societal and biological) to increase PSP. The very fact that we found social and cultural aspects aimed at inhibiting autonomy implies that many people believe there is a tendency to increase PSP. The sexual revolution of the 1960s and 1970s changed the social world towards higher youth autonomy (Reiss, 1960; 2006). I believe that one major reason for the change was the higher proportion of women employed who had preschool children. The percent was 12% in 1950 and in 2011 it had grown to about 70% (Kreider & Elliott, 2010). This gave more autonomy to children and also to women. Of course, there were many other factors as well. This autonomy theory is derived from American data but I

believe my theory is also relevant for societies in Western Europe from which our culture derives. See my account of sexuality and gender in Sweden for data on differences and many similarities (Reiss, 1980c).

How closely are attitudes linked or tied to behaviors? The NORC has studied this and they report quite significant correlations between attitudes and behaviors (Reiss, 2001). Was I able to predict attitudes and behaviors using the autonomy theory? One test was to examine the results found by other professionals who tested my theory and its propositions. Together with a graduate student of mine, Brent Miller, we examined the outcomes of such research (Reiss & Miller, 1979). The retests generally supported my propositions. I mentioned earlier that my prediction that white females would change the most in the sexual revolution also was supported. I believe my 1963 national sample can be used as a measure of the public views at the beginning of the sexual revolution that occurred 1965-1975. My 1963 national sample can be obtained from the Kinsey Institute.

Finally, let me note some limitations of my study. The national sample was of people 21 and above and is representative of the country but the student sample came from just three states. So to more accurately test social factors impacting both adults and younger people we must utilize more representative youth samples. Also, my measure of liberality and conservatism was a proxy measure and it would be much better if I could have had an established scale to do this measurement. There also is the question of whether my Autonomy Theory can be applied to all segments of our society, or to other Western societies or to non-industrial societies. Finally, my study was limited to

heterosexuality and so the question is open regarding whether it applies to GLBT attitudes and behaviors.

Another National Study of Sexuality in America

To expand the reader's view of Macro theory I turn to a 1992 comprehensive study of human sexuality from a sociological point of view, undertaken by Edward Laumann, John Gagnon, Robert Michael and Stuart Michaels. The advent of HIV/AIDS in the early 1980s led to increased interest in learning more about sexuality in order to contain the spread of this new deadly disease. Laumann, et al.'s research was aimed at doing just that and at first it was supported by federal government grants. However, after political attacks by right wing politicians the government support was retracted and Laumann and his colleagues had to find private foundation funding. This clash with political reality when one is doing sex research is not an uncommon event (Reiss, 2014).

The theoretical basis of the study chosen by the authors focuses on scripting theory, choice theory and social network theory. These "theories" are approaches or orientations and are different from the "substantive theory" that I developed in my own work. A substantive theory refers to specific hypotheses relating variables. To illustrate, proposition two affirms the difference between liberal and conservative groups in maintaining high levels of permissiveness. An orientation may tell you to pay attention to specific liberal and conservative variables but it will not state how those variables relate to changes in sexuality. —As Robert Merton stated, orientations are a "point of departure" toward theorizing (Merton, 1967, 141). The three orientations that Laumann mentioned do not spell out propositions regarding how a specific, "script, choice or network" relates to a specific type of sexual attitude or behavior. To develop specific,

substantive propositions you need to examine the variables used in a study and see how they relate to each other. I don't reject orientations. I take an eclectic view of them and use them mainly when they fit into the problem area I am examining.

Laumann, et.al. states that the design of their study, the National Health and Social Life Survey (NHSLs), limited the measurements of factors in the script, choice of network orientations and so they instead focused on six "master statuses" that they use throughout the book to break down the results. These six statuses are gender, race/ethnicity, age, education, marital status, and religious affiliation. These are six of the statuses used by Alfred Kinsey and his colleagues in their work (Kinsey, et.al., 1953, 31-36; Kinsey, et.al., 1948, 75-82). The NHSLs sample represents the 18-to-59-year-old American population and the 90 minute interview they used covered in depth a great many areas related to sexual behavior and attitudes. They had a good response rate of 79% and a sample of 3432 people interviewed by the NORC.

Here are some significant findings from their survey. Masturbation is not a frequently studied area of sexuality and that adds value to their findings. They found that among married couples 57% of the husbands and 37% of the wives had masturbated in the past year (Laumann, et.al., 1994, 82). They report also that blacks masturbated less than whites and that for both racial groups, about half of those who did masturbate felt guilty about it. Laumann and his colleagues did not attempt to build explanations of the racial or marital difference in masturbation. They examined the differences in masturbation behavior by educational background—a measure of social class. One interesting finding was that for those whose education was less than high school the male/female difference in achieving orgasm during masturbation was 60% vs 46%. But

for those in the highest educational group (masters degree or more) the difference was 95% males vs. 87% females (Laumann, et.al., 1994, 82). The male/female differences in orgasmic masturbation are somewhat less in highly educated people but more importantly they support the idea that the higher educational groups have much more success in reaching orgasm in masturbation. In addition they reported that higher educated people masturbated more frequently than lower educated people and that the masturbation rates were not associated with frequencies of other sexual behaviors. So masturbation was not predominantly due to a lack of other sexual outlets. These findings would be worth exploring further.

Laumann's study defined homosexual behavior by asking about desire and self definition. By self definition they report 2.8% of the men and 1.4% of the women responded that they were homosexual or bisexual (Laumann, et.al., 1994, 293). Using behavior as the definition of homosexuality, they report 4.9% of the men and 4.1% of the women had a same gender sexual experience after turning 18 (Laumann, et.al., 1994, 303). Measuring homosexuality since puberty they found 9.1% of the men and 4.3% of the women had some same gender sexual behavior (Laumann, et.at., 1994, 305). The authors report that in the 12 largest cities in the U.S., where one third of the U.S. population lives, they found 16% of the men and 5% of the women had same gender sexual relationships since puberty (Laumann, et.al., 1994, 305). Further some 17% of the men and 10% of the women in these cities said they felt sexual attraction for the same gender (Drescher, 1998).

Sexual frequency reported by men and women was quite similar. Ten percent had no sex in the past year and going up to about a third who had sex two or more times a

week (Laumann, et.al, 1994, 88). The definition of having sex used in this survey was very broad: It included any sexual activity with a person that involved “genital contact and sexual excitement” (Laumann, et.al, 1994, 67). So this could be oral sex or anal sex or penile/vaginal sex or mutual masturbation, etc. Laumann and his colleagues did break down the frequency of sex by marital status and reported just under 7 times a month for marital couples and just under 9 times a month for cohabiting partners (Laumann, et.al., 1994, p. 92).

The lack of multivariate analysis in all the data analysis was a limitation in this study. For example, they report similar rates of sexual relations for fundamental Protestants and for moderate Protestants. However, other studies reported lower rates for fundamental Protestants (Billy, et.al., 1993, 54) and so there is reason to check further as to why this was not found by Laumann et.al. To be sure that this finding is not a spurious relationship one would want to be sure that fundamentalist Protestants were not younger or more likely to be married than were moderate Protestants. If age and marital status are related to type of Protestant, then controlling on them could change the relation of rates of sexual relations and type of Protestant. Laumann, et.al. did analyze some of the bivariate tabular results using sophisticated logistic regression techniques but other tables were left in bivariate format .

When looking at men and women ages 18-29 and checking sex during the last five years we find that more than 60% of this group had two or more partners—in fact about 25% of this group have five or more partners in the last five years (Laumann, et.al, 1994, Table 5.1B, 178). Their data does show that over half the cohabiting relationships end within one year and extra dyadic sexuality occurs often before the final break. In

marriage 25% of married men and 15% of married women report having extramarital sex (Laumann, et.al., 1994, p. 216).

Laumann and his colleagues used a threefold classification of sexual norms or attitudes: Reproductive, Relational or Recreational. Not having direct measures they took questions from earlier NORC studies that they thought would be useful in measuring the three types of sexual norms. They did a cluster analysis of the responses to these nine questions and found correlational patterns that they then tried to relate to the three types of sexual norms. Perhaps others will work further on scales measuring these concepts. We also need to examine whether these three types of sexual norms fully cover the field of sexual norms and to what degree these three types overlap with each other.

Their data could be used to develop theoretical explanations, or assess theory proposed by others. For example, there are findings that can be used to assess some of my propositions. They report that from the 1970s to the 1990s females and whites increased their sexual behavior more than did males and blacks. That fits very well with my proposition one (Laumann, et.al, 1994, 322-324).

This study was one of the most important additions to our knowledge of sexuality since the work of Kinsey. Bear in mind that Kinsey's studies were also basically descriptive but they were quite influential. Descriptive studies can have considerable value if other people will analyze the data in terms of a theory. . It was from just such a study, as the 1963 NORC research, that I developed my autonomy theory. Laumann has published other work in which his theoretical stance is much more visible (Laumann, et.al., 2000, 2004, 2006). There are also more recent studies that can bring up to date some of the Laumann, et.al. findings and afford additional sources for formulating

theoretical explanations (Bruckner & Bearman, 2005; Chandra, et.al., 2011; Herbenick, et.al., 2010, Jones, et.al., 2012; Reece, et.al., 2010).

Part Three: Cross Cultural Macro Theories

The Cross Cultural PIK Linkage Theory

We turn now to two macro research studies, both seeking to develop a sociological theory that can explain human sexuality in a way that would cover virtually all types of societies in our world today. I will first present my macro theory and the research testing it and then compare it to another major theory and research project.

In 1980 I was looking for a new challenge. The most exciting project that I could think of was to analyze sexuality customs in cultures around the world to identify what parts of human society are universally related to the sexual behavior and attitudes in a society. Assuming those universal linkages are found, the theoretical task would then be to explain how each of these universal linkage areas operate to structure sexual customs in our societies. I also wanted to examine the differences in the way these universal linkages are operationalized in various societies.

I spent four years reading everything I could find on sexuality customs in a great many societies (Reiss, 2004). I also spoke to anthropologists, psychologists, sociologists, therapists, and philosophers to obtain their guidance and suggestions on my project. I used the Standard Cross Cultural Sample (SCCS) of the best studied 186 non-industrial societies to empirically check my theoretical propositions (Murdock & White, 1969). In addition I used what good quality research there was of sexual customs in the U.S. and other industrialized societies.

Much of our confusion in comparing societies stems from lack of clarity and precision in our definitions. One key term is gender. I use the term gender role to refer to the set of scripts that societies apply to males and females' sexual customs. There are societies with more than two genders—the traditional Navajo American Indian group is one of them-- but the Western world has just two(Reiss, 1980a, 57; 1986, 85). Gender is a socially defined category but gender roles are not 100% socially produced (Fausto-Sterling, 2000). There may well also be biological reasons for the particular scripts that are assigned to males and females and I will discuss that later. However, in this project my focus was predominantly on finding and explaining the universal *sociological* linkages that organize our sexual lives.

I define human sexuality in a particular culture as consisting of those scripts shared by a group that are supposed to lead to erotic arousal and in turn to genital response. Of course, I recognize that there are attitudes and behaviors that lead to genital arousal and response that are not in the shared cultural scripts of a particular group in a society. When such unscripted acts become common, they often are then added to the shared script. To illustrate: The increased popularity of oral sex once the sexual revolution began in 1965 was one such sexual innovation that led to oral sex taking a larger role in today's sexual repertoire (Laumann, et.al., 1994, Chap. 3). So macro theorists need to pay attention to how individual micro scripts influence our broad macro cultural scripts (Chafetz, 1984). No matter what kind of theory we are portraying and what discipline we call home, it takes more than one brush to paint the complexity of our social system

I started with the assumption that the two most common outcomes of sexual relationships are physical pleasure and self disclosure. Physical pleasure is rather obvious although by no means is it always guaranteed. Self disclosure requires a bit more of an explanation. First, note that the very act of being seen enjoying the pleasure of sexual intercourse is itself a self disclosure—you don't usually do that in front of just anyone. Further, a person's character is revealed by the degree to which they pay attention to self pleasure versus partner pleasure. In this and other ways we self disclose to our sexual partners many things about ourselves—some verbally, many unintentionally.

In all cultures the meaning of sexuality will be connected in some fashion with pleasure and disclosure. This is so whether sexuality is encouraged or discouraged, approved or disapproved. Also, cultures seem aware at some level that pleasure and disclosure in any relationship can lead to bonding between people. Some cultures, in order to avoid bonding, may encourage rapid change of partners or sex with prostitutes. Other pleasure-oriented cultures will encourage sexuality but see it in a playful fashion as when Professor Elwin describes how the Muria in central India view sexuality: "...the penis and the vagina are in a 'joking relationship' to each other...sex is great fun...it is the dance of the genitals." (Elwin, 1947, 419). Other societies pressure people to save sexuality for love or other serious affectionate relationships. The double standard is always underlying all these sexual standards, even though Western cultures today are less restrictive of female sexuality—sexuality is still not an even playing field..

After all my explorations, I identified three areas of social life that strongly influence the way sexuality is integrated in all societies. The first universal societal

linkage is to Power Differences by Gender. I define power, as Max Weber did, as the ability to influence others despite their resistance. The second linkage was to Ideological Beliefs of Normality. Ideologies are the emotionally powerful beliefs in a society that are the sources of judging many behaviors as good or bad and as “normal or abnormal.” The third universal societal linkage of sexuality was to Kinship as in Extramarital Jealousy Norms. These norms define how each gender should express or inhibit marital sexual jealousy. These three universal societal linkages comprise the heart of my theory of the universal determinates of the basic structure of sexual customs in any human society. My acronym for this theory comes from the key concept in each linkage area (Power, Ideology, Kinship) and so I refer to this theory as the PIK Linkage Theory.

The SCCS is a secondary data source; it does not have the full set of questions I would have liked but it was the best data source we have on non-industrial societies. This sample was a good testing ground for my ideas. Any universal linkage of sexuality to other social structures would have to be present in these 186 societies.

Power and Gender Differences: The first thing to examine in gender power differences is the tie to the raising of children in different types of societies. The mother is almost always tied closer than the father to children. In a hunting and gathering society of perhaps 50 to 100 people, the childrearing role is ranked close to equal with the hunting role that males predominantly perform. Accordingly, these small hunting and gathering societies are higher in gender equality than are most other types of societies.

With the development of agriculture about 10,000 years ago the male/female power difference increased radically. This change is particularly seen in the intensive agricultural societies where male strength becomes a factor. Agricultural societies lead to

cities and to thousands of people living near each other. Class systems are formed and institutions become more specialized. Women are respected but they are not given equal power. Women's tie to the childrearing role limits what she can do in the economic and political institutions and that lowers the power she has in that society. The male advantage in power outside the home then structures the sexuality scripts for men and women. Here are the building blocks of the double standard edifice in sexuality and most other areas of life. As expected, the SCCS data showed that intensive Agricultural societies were likely to define women as inferior to men.

When we get to modern industrial societies, the power of women does increase especially as they enter the marketplace but clearly males still dominate the power roles in the economic and political institutions in Western industrial societies. If you wish to afford women greater equality with men, then you will need to accommodate changes in women's ties to child rearing. You find movements in this direction in Western European countries which provide leaves with pay when a child is born and more flexible hours of work. In addition you need to pursue more equality in the economic and political institutions for women. The 20% female share in the U.S. Congress is one of the lowest in the Western world and our less than 80% pay for women in the same line of work clearly hinders equality (Stark, 2009). Men and women are still far from equal. In the SCCS we see evidence of greater equality when we look at horticultural societies wherein women's work is highly valued for it involves a great deal of the planting and gathering of essential foods (Chafetz, 1984; Roos, 1985; Whyte, 1978). In fact the Hopi Indians in our southwest has been defined by anthropologist Alice Schlegel as very close to gender

equal (Schlegel, 1977). But even there you find that males will often develop methods for increasing their power (Reiss, 1986, 95-97).

I used the SCCS to evaluate my position concerning gender equality being different in hunting and gathering and agricultural groups. My first check using the SCCS was to search for the determinants of the belief that “females are inferior to males”. The code a society received for that belief was surely a measure of male power. I used path analysis in my data checks in order to try to understand how different factors impacted the belief in female inferiority (Reiss, 1986, Diagram 4.1, 89). I found that the extent of agriculture did significantly correlate with a belief in female inferiority. In addition I saw that agriculture also increased class stratification, and tightened the tie of the mother to the care of her infant and increased the acceptance of a machismo ethic that stressed male strength and aggressiveness. All these changes in agricultural societies tied the mother to domestic tasks and isolated her from the public sphere where societal power is exercised

My interest in gender power differences was aimed at showing how this can affect sexual relationships in human societies. My theoretical assumption asserts that powerful people seek to maximize their control over the valuable elements in their societies. Sexuality is one of the valuable elements in a society—power can be used to either maximize or minimize sexual interactions. Evidence of this in the SCCS data showed that as gender inequality decreases, the frequency of women’s premarital and extramarital sexual behavior approaches that of men. More on this when we get to the third linkage.

Ideological Beliefs of Normality: Any part of culture that is highly valued will be regulated in the moral codes of that society and those codes will be buttressed by strong

emotions or ideologies. Moral systems are based upon the assumptions that a society makes concerning the nature of human beings and how they should and can behave. These fundamental assumptions about human nature form the core of what we call our ideologies. The sexual norms that are accepted or rejected vary considerably in different cultures but I found that the linkage of sexuality to the docking area of ideology is always present.

The General Social Survey (GSS) is a widely used source of data on American society. That national sample is now carried out every two years by the National Opinion Research Center (NORC) at the University of Chicago. These bi-annual surveys can be used to examine trends in the acceptance of different sexual behaviors and attitudes. The most striking trend in the U.S. in recent years comes from the sharp rise in the acceptance of homosexuality since the early 1990s. Homosexuality is a behavior that arouses strong emotional responses and so it fits into the ideological category we are discussing here (Drescher, 1998). . In 1973 the GSS showed that 19% of the respondents accepted homosexual behavior as “wrong only sometimes” or “not wrong at all.” In 1993 that percent rather suddenly increased to 29%. The rate then rose consistently and by 2012 it was 51% (GSS, 2013). Given the supportive 2013 U.S. Supreme Court ruling on homosexual marriage I assume that this percent will continue to rise.

Ronald Inglehart reported similar increases in the acceptance of homosexuality in many countries in his 1990 world survey (Inglehart, 1997). Homosexuality is an important area to study because for many generations feelings about homosexuality had been strongly negative. Both the changes in attitudes toward homosexuals and the

changes in premarital sexual attitudes in 1965-1975 exemplify that rapid changes in traditional sexual attitudes can occur (Reiss, 2001; 2006; 2014).

The sexual ideology of normality derives its meaning from the values of the power structures in the broader society. We can see this in the concept of premature ejaculation. If we go back 100 years we would find a society in which the male's concern for the female's orgasm would be of far lesser importance than it is today. As our gender roles became more equal in the post WW2 world we became more concerned about female orgasm and the notion of premature ejaculation came into vogue. Males who reached orgasm in 15 seconds after entering the vagina were viewed as having a psychological problem-- a "disorder." However, if a female reached orgasm in 15 seconds would she be thought of as having a sexual disorder? So clearly the basic moral culture is the basis for defining some sexual acts as "abnormal" and that holds in all the societies I examined. In East Bay in Melanesia most males reach orgasm in 15-30 seconds and the male who doesn't is considered to have a "delayed ejaculation" (Davenport, 1965, 185). The sexual ideology may change but everywhere I looked I saw societies morally evaluating sexuality—nowhere was it just a private act.

In Western culture, especially in the past, religion had a key role in defining sexual normality. Religion is more powerful in America than in most Western European societies but even here we see contraception and abortion behaviors increasingly influenced by other parts of our society (Reiss, 2014).. Societies can change the evaluation of some forms of sexuality, but they can't remove it from ideological beliefs about how our sexual life should be choreographed.

Kinship and Extramarital Sexual Jealousy: This is the third and last universal linkage area for sexual customs. Marriage is a key institution in our kinship system. As a sociologist I would define jealousy as a boundary protecting mechanism for what a society feels are important relationships. In this sense jealousy is an alarm system, a protective emotion aimed at maintaining an important relationship when it is threatened by an intruder. When this happens the primary emotional feelings one has are anger, hurt, and depression which, we label as jealousy. Societies spell out when, if ever, an extramarital sexual relationship is allowed and if that blueprint is violated, jealousy and other emotional reactions may occur.

When we look cross culturally we find that women often react to extramarital sexual jealousy with depression and men often respond more with anger. Buunks and Hupka's research on seven nation – U.S., Mexico, Netherlands, Ireland, Soviet Union, Hungary and Yugoslavia – shows this to be the case (Buunk & Hupka, 1987). They report that in extramarital sexuality the more affluent the society, the more the rights of people to be autonomous will be stressed. But in all seven societies, men were clearly given more autonomy. This lesser power of women in a society makes the depression response to jealous situations understandable. But we can see from these seven countries, as well as from the SCCS societies, that all societies are aware of sexual jealousy in marriage and in other important relationships. And most importantly, the ways of dealing with extramarital sex reflects the overall level of gender equality in that society (Banfield & McCabe, 2001; Glass & Wright, 1992; Reiss, et.al., 1980b, 1980c).

The awareness by people of the pleasure and the bonding properties of sexuality alerts all societies that if they want a relationship like marriage to last, they best develop

norms that give marriage priority over other sexual relationships even in situations where extradyadic relationships are, under some conditions, accepted (Blumstein & Schwartz, 1983). On a more psychological level, jealousy is seen as produced by the threat that a person feels when their partner violates the priority of their relationship. This is the psychological core of the jealous reaction in non-industrial societies as well as in our Western societies. Attitudes toward extramarital sexual behavior have not become more accepting in the last 50 years. The GSS in 2012 found that, in America, only 11% thought it was acceptable.

Despite the power differential of men and women around the world, extramarital sexual relationships are not only for husbands. In the Turu culture of Tanzania a wife may find a man she wants as a lover. She will become friendly with that man's wife and help arrange for her husband to work together with that man in cultivation and cooperative labor projects (Schneider, 1971, 66). At times the husband may object to her choice but the wife then may throw his double standard in his face by showing how he has a mistress but is trying to forbid her a lover.

Philip Blumstein and Pepper Schwartz (1983) studied extramarital relationships in a large sample of heterosexual married couples, cohabiting couples and homosexual couples and found that all three of these types of relationships there were norms regulating extra-dyadic sexual relationships. There always are some boundaries that should not be crossed. These boundaries support the priority of the stable relationship over the affair. The lesbian couples were the least likely to accept extradyadic relationships. Married couples had stronger restrictions than did cohabiting or gay male couples. The overall aim of these restrictive norms appears to be to segregate the

extramarital relationship and keep it from weakening the existing dyadic relationship. Sexual jealousy and other emotions will result if these limits are violated.

To further test some of my ideas about sexual jealousy and gender power I analyzed the 80 non industrial cultures from the SCCS that Ralph Hupka studied in his analysis of jealousy (Hupka, 1981). In these 80 cultures I found three direct determinants of the severity of husband's sexual jealousy—the importance of property, the importance of marriage, and the presence of a male kin group (Reiss, 1986, Diagram 3.1, 68). I see all three of these variables as proxy measures of male power. For example, in virtually all cultures property is owned by men and so the more property is emphasized, the more support there will be for male power. Marriage importance also is a proxy for male power in that its importance goes with the passing of power to descendants. Male kin groups are also an indirect measure of power because in a patrilineal society power and other resources are passed down through the male line.

The three male power variables have positive relationships with each other, which further supports their integration as male power measures. When these indices of male power are present, men feel justified in displaying sexual jealousy if their wives stray from their restraints. I should add here that female premarital sexuality was more restricted in societies with high scores on the three male power variables. No such control was placed on male premarital sexuality. As female power increases there is more open display of female jealousy and female feelings of depression decrease (Hupka, 1981).

Basically of the three universal linkages I see the gender power linkage as the most important variable in my explanation of human sexuality (Crawford & Popp, 2003).

As I have shown, power comes into play in the other two linkages of ideologies and extramarital jealousy. Nevertheless, both ideology and extramarital linkages have their own influences as I've tried to indicate. And it is difficult to disaggregate the feed back loops that exist between these three linkages of human sexuality. It would be of great theoretical value to have someone study the interaction of these three universal linkages. Also, I believe that using the PIK Linkage Theory as a guide to study sexuality in any society will move our field to a higher level of understanding of the sociological basis of human sexuality. I should also note that autonomy is a measure of power and so there are ties between my autonomy theory and my PIK theory that can be explored.

For those with more applied interest, I mention that the PIK Linkage Theory has been analyzed in Europe as an aid to managing the risks of HIV infections (Devin and Meredith, 1997). Also, Edward Laumann's 2006 work on subjective sexual well being in 29 cultures is a study that can be helpful to those working in applied areas such as therapy or those interested in theoretizing regarding causes of feelings of sexual well being (Laumann, et. al., 2006)..

A Post-Industrialization Theory

Now let's turn to a macro cross cultural theory concerning the important changes that are occurring as Western societies move from industrial to post-industrial societies. Ronald Inglehart used the World Values Survey (WVS) of 43 societies in 1980 and 1990 and later studies, covering over 70% of the world's population He used these data to build a theoretical explanation of societal change. Almost all of the 43 societies were studied with a nationally representative sample (Inglehart, 1971, 1997, 1998, 2003, 2009).

His theoretical approach starts with the assertion that major changes happened after WW2 in Western European countries. He sees a new generation being raised with high degrees of economic security. Starting around 1970 that generation led the world into a late stage of industrialization. The industrial revolution promoted an emphasis on material things, and gave some societies a chance at creating economic security for their peoples. The post-World War II generation in Europe maximized that sense of security by developing welfare states. In the U.S. we had the development of Social Security, Medicare and Medicaid, all of which promoted our sense of economic security. Inglehart's theory then asserts that good economic security leads to a growth of non materialist values. Instead of just seeking financial success people start to emphasize well being and quality of life. Autonomy and self participation in government processes accompany these changes. Here is a possible theoretical tieup to my autonomy theory and the power dimension in my PIK theory.

Important for our interests in sexuality and gender are Inglehart's findings that between 1980 and 1990 major changes toward more equal gender roles and more acceptant attitudes towards gays and lesbians were occurring. I have earlier in this chapter discussed some of these changes in sexuality and gender. One area of disagreement between Inglehart's findings and the GSS survey findings I presented was in the increased acceptance of extramarital sexuality in Inglehart's World Value Samples. To compare, the GSS showed a rise of acceptance of extramarital sexuality in the U.S. during the 1970s to 16% and then a drop in the 1980s to 8%, and in 2012 it was 11% (GSS, 2013; Reiss, 2006, 206). One question Inglehart used to measure extramarital sexual attitudes was: "Married men/women having an affair is never justified"

(Inglehart, 1997, 367). The GSS also used one question: “What is your opinion of a married person having sexual relations with someone other than the marriage partner?” So the different wording could make for different answers. What is needed are well tested scales to measure these attitudes (Fisher, et.al., 2011; Reiss, 1980b; 2011b). This is not easy to always do but using good methodology is an essential part of creating good theory.

Inglehart sees the increased economic security and the changes in cultural beliefs and values in the area of sexuality and elsewhere as interrelated processes. His view places the interactive process between security and cultural beliefs as taking place in a political context. He paints a macro view of these interactions. In addition, Inglehart more directly brings in agency, or individual impact, on these macro structures of society as an additional factor involved in these changes. He sees this new type of society as a post-industrial society. I believe he dropped the term “postmodern” that he originally used to describe this new society because to many people, that term focuses on a relativistic and subjective view of individual and social life.

Some understanding of postmodernism can be very helpful to anyone working in sexual science. Michel Foucault, a French philosopher, was one of the founders of the postmodern approach that viewed power, rather than knowledge, as the key element in the human sciences (Foucault, 1980; Skinner, 1985). The human sciences would include such fields as sociology, psychology, anthropology and Medicine. This move away from knowledge to power thereby removed human science as a path to understanding. Postmodernism then is a relativist position questioning any “outsider” view of the world such as all science proposes. Pierre Bourdieu a noted French sociologist calls this

postmodern perspective a form of “epistemological agnosticism”—a denial of knowing any way to obtain a scientific view of the world (Bourdieu & Wacquant, 1992, 48n). I agree and I too see postmodernism as a form of relativism and irrationality. Without human science as a source of knowledge, what basis do we have for understanding our social world (Reiss, 1999, 236-245; Reiss, 2006, 169-174; Skinner, 1985, 65-81)?

Inglehart’s data shows how the richer societies are the first ones that have solved the economic security problems enough for new values to develop and the poorer societies are more likely to seek security in religion and traditional gender roles than are people in the rich societies. His data did generally show that there was a trend over the decades towards self expressive values in most countries studied. The Nordic countries are the leaders in this move towards post-industrialism values and they display the economic and political changes that go with that trend (Kontula, 2009; Reiss, 1980c).

There are two key hypotheses in his Post Industrial theory upon which his full explanation is based. First is the Search Hypothesis that states that the greatest value goes to things in short supply. So in wealthier nations economic security loses value and new values develop. Secondly, the Socialization Hypothesis that posits that the values influencing you during your first 25 years of life will continue to be important to you. This hypothesis supports the future growth in wealthy nations of Post Industrial values that influenced the post WWII generation. Inglehart examined the data on births out of wedlock and divorce rates. He notes that both of these are much more common and more accepted normatively today. These value changes go with a reduction in the felt value of religion. He asserts that in this change agency and structure show reciprocal relations

with each other and this exemplifies how individual actions can impact macro social structures.

He points out the greater pluralism in views on homosexuality and abortion and in the lives of those who are living in more post-industrial societies rather than industrial societies. He notes that general sexual permissiveness is higher in post-industrial societies. As I've noted, his views here fit with my autonomy theory by showing that greater sexual permissiveness goes with greater autonomy in post-industrial societies. Another value change he reports among post-industrialists is the rise in the percent who say that a child needs a two parent home but at the same time there is increased acceptance of extramarital sexual permissiveness. Perhaps this seeming conflict disappears if the post-industrialists are in more "open" marriage arrangements so that extramarital sex may be less likely to lead to divorce. The broader acceptance of extramarital sexuality may well go with the generally more pluralistic set of post industrial values. In line with pluralism, post-industrial societies seem to have a minimalist philosophy regarding constraints on choices, i.e., use them only when absolutely necessary.

One basic caveat I have is that the trend toward post-industrial values is very attractive to most people who consider themselves liberals. I am a liberal and as I went over his research and theory I kept asking myself, can today's world with all its problems really be moving towards such an attractive liberal society? When your results fit so well with your basic values, it is time to re-check them very carefully. I want to be sure we can be confident of the validity of the measures used for the key value changes. I fully endorse Bourdieu's concept of *reflexivity* where he asks all of us to subject ourselves to

the same careful analysis as we use on our data (Bourdieu & Wacquant, 1992, 41). Perhaps in the next WVS Inglehart could utilize alternate measures of some of the key concepts to see if they agree with the older findings. Another way to build confidence in the results would be to examine more findings of other surveys and see if they support his findings and his predictions. Inglehart's work and his ideas are exciting and well worth exploring further.

Part Four: Recent Macro Theoretical Studies

We have covered four major macro theory studies in Parts Two and Three. I will here very briefly point to three recent macro theory award winning journal articles. These have all been published between 2008 and 2011—so macro theory is still very much in style today.

Richard Lippa, a psychologist, compared biological evolutionary models and social structural models concerning gender differences in 53 countries with 200,000 participants in a BBC Internet Survey (Lippa, 2009). He explored sex drive, sociosexuality (restricted vs. unrestricted sexual attitudes & behaviors), height, gender equality, and economic development. He found both models could predict some of the variables and concludes that we need a hybrid model of biological and social structural influences. For example, he found women more variable than men and found that gender equality and economic development predated sex differences in sociosexuality. But he found sex drive and height fit more with a biological model. He also asked for more precise and nuanced predictions about sex differences across nations in order to better design an integrated socio-biological theory that would be a valid Hybrid Model.

A study by Deanna Carpenter, a psychologist, and her colleagues tested new scales to measure sexual inhibition and sexual excitation (Carpenter, et.al., 2008). This study tested the scales on over 2000 undergraduates to examine women and men's similarities and differences. The researchers reported that women, compared with men, scored higher on sexual inhibition and lower on sexual excitation. They present a factor analysis of men's and women's scores to find shared and unshared themes. The women reported less attraction to casual sex, and more attraction to their own gender. Despite these and other differences the gender factor structures were quite similar. The authors discuss the relative role of biological and socio/cultural factors in the similarities and differences noted.

A third and final recent award winning journal article used macro theoretical ideas from the work of Sari van Anders and her colleagues (Van Anders et. al, 2011). They start with a theory that the responses of hormones to social contexts are the proximate mechanism of evolutionary pathways to pair bonds and other social bonds. Van Anders, et. al., cite the importance of testosterone and oxytocin in pair bonding in other species. Their theory is that testosterone and peptides provide a set of predictors and a classification system for social behavioral contexts related to social bonds. Testosterone is found in the outcomes of both antagonistic and protective aggression. The authors further examine evidence in this study for developing further their macro theory.

These three recent articles indicate the increasing attempts to deal with biological and sociological factors in a unified fashion. None of them are by sociologists but it is surely time for more sociologists to venture forth and see what macro theoretical

formulations can be developed out of a union of sociological and biological macro theory.

I would also suggest that we start to develop more sociological research and theory on the area of sexual ethics. To that end I suggest that the reader examine the 1997 book where my wife and I found strong evidence for the proposition that asserted if the U.S. were to change its sexual ethic from its current restrictive traditional ethic to the ethic of sexual pluralism we would significantly lower our rates of rape, AIDS, teen pregnancy and child sexual abuse (Reiss & Reiss, 1997).

Sociology and Biology: A Scientific Match?

The plea for sociologists becoming more conversant with evolutionary theory and other aspects of biology has been raised by at least two past presidents of the American Sociological Association (Lieberman & Lynn, 2002; Massey, 2002). Biology is a far better fit with sociological research and theory than is physics or chemistry. A major division of biology is concerned with humans and thus it, like sociology, is in part a human science. Developing macro theory concerning human sexuality by sexual scientists who are knowledgeable in both biology and sociology would be of extraordinary importance for the future of sexual science..

To illustrate the kind of macro theoretical work that sociobiologists today are doing, I will review an exciting 2012 book by the founder of sociobiology, Edward O. Wilson of Harvard University. It will display some of the theory and methods used by biology today and some of the controversies that exist. No single book can represent a discipline but Wilson is an important person in Biology. His new perspective brings society into a clearer focus for biologists. So controversial or not, his work is worth

discussing here. My review should afford the reader some insights regarding whether sociological approaches to the study of sexuality can fruitfully combine with biological science (Salk & Hyde, 2012).

Wilson's Biological Perspective

The book's title: The Social Conquest of Earth shows the macro scope of Wilson's theoretical treatise. He begins with three very broad philosophical questions: "Where do we come from? What are we? and Where are we going?" He sees today's civilization as composed of people with stone age emotions, medieval institutions, and Godlike technology. He feels we are in trouble and his book is intended to help find a way out. Wilson proposes a controversial new perspective on evolutionary theory and compares it to the reigning perspective in evolutionary theory. This new perspective is his answer to the three questions about human beings that he raises. He seeks to add to the evolutionary approach a focus on the importance of group life. So this should surely interest us as social scientists.

He starts by explaining how humans developed a "eusocial" type of society. A eusocial society contains people who are concerned about the welfare of each other—a society with cooperation and altruistic acts being performed. He sees this type of society beginning about one million years ago with the control of fire and the development of campsites and the growth of our ability to handle tools. Eusocial development in humans is portrayed by Wilson as the key to the survival of human groups. It led to a division of labor and more bonding between men and women who were sexually involved with each other (Mead, 1934).

The prevailing evolutionary theory concerning humans that he critiques is called the “kin selection theory”, aka “inclusive fitness theory.” Basically this accepted theory states that altruism developed from behavior towards very close genetic kin with whom one was “nested” at these early campsites. The closer the genetic kinship tie, the more likely altruistic behavior would develop. He argues that this theory is not supported by the evidence and he offers his eusocial evolutionary theory as a needed restatement (Wilson, 2012, 51). His evolutionary theory proposes a dual-level selection instead of just an individual selection assumption. He accepts selection as targeting individual traits of members of the group (the old view) *but* he adds to that the importance of forces of selection that target traits of one’s group compared to other groups (the new view). Wilson sees altruistic acts by some individuals as necessary for the survival of the group. He believes his dual selection theory should now replace the old kin selection theory.

The old evolutionary theory stated that the individual level of genetic fitness depended on acts that were helpful to the survival of that individual whereas the group level of fitness that Wilson stresses depended on acts that supported the group in competition with other groups. The group level promotes altruistic actions and pressures individuals to think of survival as not just of themselves but of others in that group. The tribal group afforded security to all those in the group. As noted, there is a sexual bonding element in his view that is strengthened by the event of campsites using fire and people staying together.

He does give a significant role to cultural changes and talks of the interaction of culture and genetics and how this can lead to genetic changes where it advantages survival due to culturally healthier diets, or disease preventing cultural beliefs that

advantage certain people or groups. He sees this as creating genetic changes for future generations. Wilson's disagreements with kin selection theory are illustrated in studies of eusocial societies in ants and bees where their development fits best with his multilevel individual/group selection and its reproductive advantages. He feels there is little support for the older kin selection theory except as a secondary force in selectivity (Wilson, 2012, 51).

The integration of cultural and genetic changes is more accepted today in biology than it was a few decades ago, before the genome research was undertaken and completed (Salk & Hyde, 2012). Wilson states that the true core of human nature today are the epigenetic rules between genetic and cultural forces. He discusses the gene/culture evolution and sees some of these rules going back a few million years. Epigenetics refers to heritable changes in gene expression that are not caused by changes in DNA but related to environmental effects (Salk & Hyde, 2012, Rutter, 2002). Those gene/culture interconnections are not hardwired and are changeable over time. He notes that cultural evolution can smother genetic evolution by lifestyle changes that limit the expression of some genes but major genetic changes also occur as when 60,000 years ago people broke out from Africa and there was an explosion of new mutations (Wilson, 2012, 197-198).

Wilson illustrates his epigenetic gene/culture evolutionary perspective by examining incest taboos (Wilson, 2012, 199-204). He sees the cultural incest taboo as based in part on the lack of sexual interest that occurs when people during the first 30 months of their life are raised together. The cultural incest norm here fits with the genetic finding that incest can lead to serious biological handicaps for offspring. Incest

taboo is an example of gene/cultural coevolution. Wilson notes that in general the bias or strong impact on behavior of some genes is high as in incest taboos but it can be very low as in things like clothing customs. Low genetic bias means that cultural input can impact a gene or set of genes and keep them from having a powerful impact on behavior. Genes vary in the bias or power of their input and culture enters in easily in low genetic bias areas but has some input even in high bias areas.

The ending of the book surprised me. It is there that Wilson puts forth his belief that God doesn't exist and organized religion is a form of tribalism. The existence of God is not an issue debated much in sociology. Perhaps the God issue comes in as a result of the clashes biologists have had with right wing conservatives about evolutionary theory in the schools. However, this is hardly something that can be settled by scientific research. Science deals with the natural world, not the supernatural world. At the start of the book Wilson took a swipe at philosophy and states that philosophers can't answer his three questions (Where do we come from? What are we? and Where are we going?) because philosophy is a maker of "failed models of the human mind" (Wilson, 2012, 9). When Wilson states that neither religion nor philosophy can answer his three questions, he seems to be eliminating other sources of knowledge and thereby expanding what biology is capable of dealing with. I see science as one source of knowledge, one epistemological source, but not the only such source (Kagan, 2009; Longino, 1990; 2002; Proctor, 1991). Science is the preferred source for the natural world but as I've indicated, there are questions that cannot be answered by any science and the existence of God is one such question (Reiss, 1993).

Obviously, the study of human sexuality is a major concern of both social science and biology. However, bear in mind that to work together we will have to learn new concepts such as Wilson's dual level selection evolution theory. Also, we need to learn more about the kin selection theory and certainly epigenetics, and see the contrast in the "proximate" causation interests of social science (how a structure or process works today) vs. the "ultimate" causation interests of much of biology (why the structure or process exists in the first place). The same type of exposure to social science concepts must be faced by any biologist who wants to utilize sociological concepts and theories such as those I have covered in this chapter. That person would have to become familiar with concepts of agency, structure, post-industrialization, covert culture, latent and manifest functions, role taking, etc. We need some "bridge" people to help smooth out the complex theoretical and research passage way between our disciplines before we can more easily produce interdisciplinary works of theory and research. We have to more fully understand each other before we can work together. A union of disciplines will also require efforts to arrive at some common definitions of shared concepts as basic as gender, sexuality, and culture.

In addition, despite the seemingly important role of the social group in his proposed evolutionary concept, in the last chapter of the book he sums things up by saying: "Humanity is a biological species in a biological world....Our lives are restrained by the two laws of biology: all of life's entities and processes are obedient to the laws of physics and chemistry; and all of life's entities and processes have arisen through evolution by natural selection" (Wilson, 2012, 287). It's difficult to find in this statement any explicit recognition of the role of culture and society in evolution or elsewhere. I do

not see a clear place for macro theory in sociology in this summation. It seems to imply that culture and society are subsidiaries of biological forces, rather than independent influences. His words elsewhere in the book contradict this conclusion but this statement in the last chapter did make me wonder about the *independent role* that culture plays in his thinking. Perhaps Wilson was just reflecting his devotion to biology but his words did cause me concern.

I see all humans as being born into the pushes and pulls of both culture and genetics. There is not just a genetic low and high “bias” but there is also a low and high “bias” socio/cultural force that must be dealt with. These two culture/gene influences interact and impact each other in ways that we are just now discovering. I see no way to fully separate these two major influences on our lives. The power of *both genes and culture* must vary by what type of situation we are investigating and in what type of socio/cultural system and what set of genes are involved. Studying the variation in that complex interaction should be our focus (Reiss, 2006; Rutter, 2002).

Nevertheless, now is the time for the more adventurous individuals in sexual science to join with those exploring the interactions of biology and sociology in research, theory, concepts and assumptions regarding sexuality (Salk & Hyde, 2012). These efforts can greatly expand our knowledge of who we are and what we can scientifically explain about our lives. I feel confident that some of you reading this will take up this challenge and build a unifying bridge between our two disciplines.

The Future of Sexual Science

I cannot close this chapter without saying a few words about the crucial importance of Ph.D. programs in sexual science for theoretical development. As of 2015

we have two Ph. D. programs in Human Sexuality in fully accredited Universities. In 2013 Widener University in Chester, Pennsylvania activated the first fully accredited American Ph.D. program awarding a degree in human sexuality. In 2014 the California Institute of Integral Studies in San Francisco opened a new Ph.D. program in human sexuality. Ph. D. programs with a multidisciplinary and scientific approach will afford us the background in sociology and biology that will enable us to integrate our work in these two disciplines. My wish is that the Kinsey Institute at Indiana University will institute a Ph.D. program in sexual science with emphasis on a scientific approach within a multidisciplinary framework. That bold move by the University that supported the birth of the Kinsey institute would greatly advance the legitimacy of our field of study and contribute significantly to its future growth.

I would conclude with the plea for more emphasis in our published research efforts on theoretical development and more encouragement for those who do this sort of work (Bancroft, ed, 2000; Reiss, 2006). My analysis and suggestions regarding theory development are aimed at advancing our field of sexual science, particularly, in the area of the social science study of human sexuality. We need to move toward an answer to the question raised by Robert Lynd in 1939 in the title of his book Knowledge for What? Explaining human sexuality in our theoretical work will more clearly show the world that scientific knowledge can enhance our lives and help us build a better society (Deven & Meredith, 1997; Finkelhor, 2013; Reiss & Reiss, 1997, Reiss, 2014;).

The field of sociology has been split since its beginning among those who emphasize descriptive data, those who stress theory and philosophical approaches, and those who are reformers and want to focus on our social problem areas (Turner & Turner,

1990). I would support integrating all three approaches in our work. Each of us can favor one approach, but let's be pluralistic rather than combative or evangelical about our different choices. (Reiss, 2014). At this point in time I give priority to the development and testing of theoretical explanations that can be helpful in the containment of our many sexual problem areas (Reiss & Reiss, 1997; Reiss, 2006). I believe we should always keep in mind that our work in sexual science is not just about theory and research—our efforts should also be designed to help people make their sexual lives less troubling and more rewarding.

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