

Incest Avoidance, the Incest Taboo, and Social Cohesion: Revisiting Westermarck and the Case of the Israeli Kibbutzim¹

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During the past 50 years, a consensus has been forming around Edward Westermarck's idea that incest avoidance results from an aversion that develops when individuals are brought up in propinquity. The argument here presented counters this emerging consensus. Reexamining the case of the Israeli kibbutzim, the authors show that individuals who grew up in the kibbutzim's communal education system were in fact often attracted to their peers, and only rarely did they develop sexual aversion toward these peers. This article offers an alternative explanation to the problem of incest avoidance and the incest taboo, one that brings sociological factors back into the picture.

INTRODUCTION

The scholarly debate over the origins of incest avoidance and the incest taboo is now over a century old. In the past few decades a consensus seems to be forming over one of the major questions that has fueled this debate: What is the major cause for incest avoidance? Increasingly, scholars maintain that Edward Westermarck was right when he suggested in 1889 that early childhood association leads to sexual aversion, which is in turn the reason for incest avoidance (e.g., Erickson 1989, 1993; Lieberman and Symons 1998; Schneider and Hendrix 2000; Durham 2005; Wolf 2005b). Many of these scholars also support Westermarck's second

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proposition, that this aversion is the historical source of the incest taboo (e.g., Wolf 1993; Fessler and Navarrete 2004; Bateson 2005; Sesardic 2005).

This article challenges both assertions. We return to one of the classic case studies, celebrated by Westermarck's proponents as proof for his hypotheses—the case of the Israeli kibbutzim. We suggest that the highly cited former study, conducted in 1971 by anthropologist Joseph Shepher, suffers from a few major setbacks, the most important of which are Shepher's operationalization and measurement of sexual attraction and the conclusions he drew from his findings (i.e., that early association indeed leads to aversion). While Shepher examined marriage patterns among individuals socialized in the same peer group, we conducted in-depth interviews and analyzed them using a combination of qualitative content analysis and statistical regression analysis. We find that erotic attraction inside kibbutz peer groups was actually quite common and that feelings of sexual aversion were rare. Our results put into question the assertions that early association leads to aversion and that this aversion by itself is the reason for incest avoidance and for the incest taboo.

As an alternative we offer a sociological theory, one focusing on group cohesion as a key factor in predicting in-group sexual avoidance. We argue that individuals in small nonvoluntary groups that have high levels of social cohesion are less likely to be erotically attracted to their peers and even less likely to act on such an attraction than individuals in groups with low levels of cohesion. We further contend that such avoidance is a latent consequence of the desire to maintain the status quo. The potential social and personal price of sustaining a dyadic relationship in a small, nonvoluntary, and highly cohesive group is high as this jeopardizes the group's cohesion. At the same time, we recognize that other social and demographic factors—the gender of the individual, the level of openness toward sexuality in the general society, and the number of potential sexual partners—are important in determining individuals' attraction toward their peers. Looking at these factors may prove valuable in understanding not only the developments inside the kibbutzim but also the determinants of incest avoidance and the incest taboo. While we recognize that sexual attraction is influenced by both biological and sociocultural factors, we argue that the biological determinants have been overemphasized in the literature of the past few decades. We therefore offer an account that does not rule out evolutionist and psychological explanations but that at the same time brings back in social and cultural explanations.

Our study thus joins an ongoing project within sociology that involves claiming or reclaiming issues that have been abdicated to other fields, most notably (evolutionary) biology and psychology. This project may be traced back to the work of Durkheim ([1897] 1951), who demonstrated the social, rather than biological or psychological, predictors of suicide.

Similar endeavors have been made by scholars in areas such as crime and deviance (e.g., Merton 1938; Becker 1963; Hirschi 1969) and race and ethnicity (e.g., Osborne 1971; Devlin et al. 1997; Karabel 2005). Most notably, our study adds to the sociological literature on gender and sexuality over the past few decades, seeking to highlight the social and cultural determinants of gender differences (e.g., Kessler and McKenna 1985; Lorber and Farrell 1990; Fausto-Sterling 2000) and of sexual orientations and behaviors (e.g., Herdt 1997; Travis 2003; Gagnon and Simon 2005).

The article opens with a presentation of the Westermarck hypothesis. We briefly review the growing body of research presented during the past 50 years in support of Westermarck's aversion hypothesis and highlight some difficulties in this research and in the conclusions drawn from it. Next, we examine relevant studies on the Israeli kibbutzim and point out their flaws. The research design of the current study is then presented, followed by the findings, which show considerable attraction among kibbutz-raised individuals, along with very few descriptions of sexual aversion. The findings also demonstrate that differences in attraction toward peers can be predicted by differences in group cohesion, gender, the level of sexual openness in the kibbutz, and the number of potential partners. We conclude with a theoretical discussion that describes what our findings suggest about incest avoidance and taboos.

The Westermarck Hypothesis

In 1891, the Finnish philosopher, sociologist, and anthropologist Edward Westermarck published his highly influential book *The History of Human Marriage*, in which he first outlined the hypothesis that bears his name. Westermarck's major assertion was that "there is an innate aversion to sexual intercourse between persons living very closely together from early childhood" (1891, p. 320). Furthermore, he proposed, there is a distinct biological mechanism that produces this aversion to sexual activity (or even to the mere thought of such an act) among children who are raised together. An avid proponent of Darwin, Westermarck believed that this is an evolutionary mechanism that is designed to prevent the deleterious consequences of inbreeding. He stated that "those of our ancestors who avoided in-and-in breeding would survive, while the others would gradually decay and ultimately perish. Thus an instinct would be developed which would be powerful enough, as a rule, to prevent injurious unions" (1891, p. 352). Although this mechanism is largely manifested in kin, Westermarck did not see the instinctive aversion as a product of kinship per se. An instinct, he maintained, cannot distinguish between kin and nonkin.²

² In later writings Westermarck changed his terminology from *instinct* to *innate aver-*

Over the years, scholarly work has largely concentrated on the theoretical relationship between early propinquity and sexual attraction. However, Westermarck did not stop there. He further hypothesized that the innate aversion is the direct cause for the existence of an incest taboo in virtually all human societies. Westermarck suggested that the common feeling of aversion toward their kin leads people to a moral disapproval of the act, which is in turn manifested in laws and prohibitions of intercourse between near kin. Following Durham (2005), we henceforth refer to the first hypothesis (early association leads to aversion) as the *aversion hypothesis* and to the second (aversion is the origin of the incest taboo) as the *expression hypothesis*. While the expression hypothesis relies heavily on the aversion one, it may not be directly induced from it. Put differently, even if one establishes that intense early association indeed creates subsequent sexual aversion, this does not in any way lead to the conclusion that this aversion is the cause of the near-universal incest taboo.

Westermarck's hypothesis initially found support among many of his contemporaries and was largely considered a logical solution for both incest avoidance and the incest taboo (Wolf 1993). However, by 1920 only a few scholars still regarded the hypothesis as a plausible explanation. This turn largely resulted from the ascent of Freudian theories, which determined that the human psyche is largely motivated by incestuous impulses. Freud and his followers believed that were it not for the incest taboo sexual attraction between members of the nuclear family would have been the rule. In his *Totem and Taboo* ([1913] 1950), Freud rejected Westermarck's idea of innate aversion and asserted that the expressed repulsion people show when incest is brought up is, in fact, a form of reaction formation that is designed to conceal repressed attraction. In *A General Introduction to Psychoanalysis* ([1920] 1953), he further maintained that "an incestuous love-choice is in fact the first and regular one" (p. 220). According to Freud ([1930] 1989), the existence of human society is made possible only through the renunciation of such natural sexual feelings and sexual rights to family members.

Psychoanalytic explanations were extremely influential during the first half of the 20th century. But one did not have to adopt a Freudian view to reject Westermarck's ideas. The turn away from these ideas was also a result of social scientists' growing attention to the effects of culture and social institutions over human behavior. The prominent social scientists of that time offered two major alternative explanations for the incest taboo. First, figures such as Seligman (1929, 1935, 1950), Malinowski (1927, 1929), Murdock (1949), and Parsons (1954) each argued that in-

sion. However, he remained loyal to his original theory regarding the negative effects of early association on sexual attraction (e.g., Westermarck 1921, 1934).

cestuous acts are disruptive for the nuclear family. Incest, they charged, threatens to destroy the bonds of kinship that are fundamental to the development of societies and the maintenance of the social order. A second proposition, advocated by many anthropologists, emphasized the contribution of incest avoidance and the incest taboo to the formation of external social alliances. Proponents of this explanation saw the taboo as a cultural creation that is designed to make life more secure by increasing cooperation (e.g., Tylor 1888; White 1948; Murdock 1949; Sahlins 1960; Lévi-Strauss [1949] 1969). Despite the differences between these explanations, it is clear that until the 1960s the literature on incest and the incest taboo expressed an almost unanimous disavowal of the Westermarck hypothesis.

Then, just when it seemed that no one was willing to take Westermarck seriously anymore, the tables again turned. Starting in the late 1960s, the hypothesis was revived as a growing body of sociobiologists, evolutionary psychologists, and anthropologists presented an accumulation of research that they claimed unequivocally supported Westermarck's ideas (e.g., Wolf 1966, 1968, 1970; Shepher 1971, 1983; Bishof 1972, 1975; Alexander 1974, 1975; Parker 1976; Van den Berghe 1980; Bixler 1981). These scholars criticized the Freudian approach for its questionable empirical evidence. They argued (quite justifiably) that despite numerous attempts, neither Freud nor his followers supplied convincing empirical support for the incest preference claim. Westermarck's proponents also criticized the previously mentioned social scientists for adopting a circular functionalist reasoning that explains the emergence of the incest taboo with its results. For example, they contended that social alliances are the result rather than the cause of incest taboo.

In the following decades, support for the Westermarck hypothesis has continued to grow. Despite sporadic challenges, mainly from anthropologists (e.g., Graber 1984; Kopytoff 1984; Leavitt 1989, 1990; Harris 1991), the bulk of scholarly work on incest during the past two decades adopts Westermarck's aversion hypothesis (e.g., Erickson 1989, 1993; Bvec and Silverman 1993, 2000; Wolf 1993, 1995, 2005*b*; Williams and Finkelhor 1995; Lieberman and Symons 1998; Sesardic 1998, 2005; Schneider and Hendrix 2000; Fessler and Navarrete 2004). While some of these writers are more careful and talk about disinterest (Uhlmann 1992) or "a barrier specific to potentially reproductive acts rather than a general suppressor of sexual interest" (Bvec and Silverman 1993, p. 159), most align with Westermarck and use the term *aversion* when discussing the results of early association. Some even choose more forceful terminology, describing cosocialization as leading to feelings of *disgust* (e.g., Fox 1962; Fessler and Navarrete 2004; Lieberman 2006) or *abhorrence* (De Vos 1975).

A recent volume edited by Wolf and Durham (2005) claims to summarize the current state of knowledge on incest avoidance and the incest

taboo. Wolf, who wrote the introduction and one of the chapters, determines resolutely that “Westermarck was proved right . . . [although] we still do not know what causes us to respond to early association with an enduring aversion” (2005*b*, p. 10). This assertion is echoed throughout the volume as the rest of the authors either sum up supporting evidence for the aversion hypothesis or simply take it as a given. Opinions are less unanimous on the question of the incest taboo. While most (e.g., Wolf 1993, 2005*b*; Sesardic 1998, 2005; Fessler and Navarrete 2004; Bateson 2005) support Westermarck’s expression hypothesis, Durham (1991, 2005) rightfully clarifies that none of the current evidence can actually serve to verify this hypothesis (although it does not refute it either).

In sum, one may observe in the past two decades a near consensus regarding Westermarck’s aversion hypothesis. In the words of evolutionary psychologists Debra Lieberman and Donald Symons, the proposition that early cohabitation leads to sexual aversion “must be fairly obvious to anyone who has not been indoctrinated with the crippling dogmas of Freudianism or the social sciences” (1998, p. 73). Wolf (1993, 2005*b*) agrees, although he states it somewhat less bluntly. He concludes that “we avoid incest for natural, not cultural reasons,” and therefore all that is left is the question of why “we hate other incestuous persons” (2005*b*, p. 21).

But is the debate over incest avoidance really sealed, as Wolf suggests? Does early propinquity indeed produce an almost generic sexual aversion, or even worse, feelings of sexual disgust and repulsion? In the next section, we examine some of the evidence collected so far for the aversion hypothesis. We focus on the classic “natural experiments” and assess the extent to which the results of these studies justify the conclusions that have been widely drawn from them.

Putting Westermarck to the Test: Proof of Sexual Aversion?

The revival of the Westermarck hypothesis relies on two major sets of research: ethological (animal) studies and what are largely referred to as “natural experiments” with humans. First, proponents of the aversion hypothesis (e.g., Demarest 1977; Shepher 1983; Van den Berghe 1983; Wolf 1993; Pusey and Wolf 1996; Wilson 2001; Pusey 2005) cite studies of inbreeding avoidance in animals to support their arguments. They mention studies of birds (Lorenz 1970; Koenig and Pitelka 1979; Bateson 1982; Schoech, Mumme, and Moore 1991), mice (Yanay and McClearn 1972; Dewsbury 1982), prairie dogs (Hoogland 1982), hyenas (Kruuk 1972), and, most commonly, primates (e.g., Tokuda 1961; Sade 1968; Packer 1979; Itoigawa, Negayama, and Kondo 1981; Pereira and Weiss 1991; Kuester, Andreas, and Arnemann 1994; Smith 1995; Strier 1997), and they conclude that “although much is still unknown about the sexual

preferences in both animals and humans, the similarities are quite striking” (Bateson 2005, p. 27).

The ethological studies are not the focus of the current study, and a wide discussion of their relevance to the Westermarck hypothesis is beyond the scope of this article.³ However, four important points should be illuminated before we move on. First, the data do not always support the aversion hypothesis, and the results are often equivocal (e.g., Baker 1982; Shields 1982, 1987; Leavitt 1990). Second, despite the similarities, there are difficulties in using evidence that was collected in nonhumans to make conclusions about human behavior. Any such conclusion must be made with great caution, and, unfortunately, too often such caution is not taken. Third, the ethological studies do not really produce evidence for a specific biological mechanism that causes inbreeding avoidance in animals, although they conclude that such mechanisms exist. Finally, and most important in the context of the current study, the ethological studies do not really support the aversion hypothesis. While many of them report lower rates of inbreeding among early associates, this is, at most, evidence for reduced sexual attraction. The leap from such findings to terms such as “negative imprinting,” “aversion,” and “disgust” is incautious and misleading.

The last two points also apply to the few studies done in recent years on incestuous behaviors and attitudes in humans (Bvec and Silverman 1993, 2000; Lieberman, Tooby, and Cosmides 2003; Fessler and Navarrete 2004). These studies are presented as further support for the aversion hypothesis, but, like the ethological studies, they do not produce evidence for avoidance mechanisms and they do not demonstrate any generic aversion. The few classic natural experiments that are at the heart of the current study suffer from similar difficulties.

The resurrection of the Westermarck hypothesis relies first and foremost on three celebrated case studies, which are mostly referred to as natural experiments. The three are the studies of Wolf (1966, 1968, 1970, 1995, 2005a) on “minor” marriage (*sim pua*) practices in Taiwan, Shepher’s (1971, 1983) research on child socialization in Israeli kibbutzim, and the study by McCabe (1983) on arranged cousin marriages in Lebanon. These studies (in particular, the first two, which are much more extensive) are cited by practically every work that offers support for Westermarck and are presented as the ultimate proof for the aversion hypothesis. Before we get to Shepher’s study on the kibbutzim, which we wish to reexamine, let us first look briefly at the studies of Wolf and McCabe, which share very similar logic and conclusions.

³ For a wider discussion on the extent to which ethological studies support the Westermarck hypothesis, see a critical review by Leavitt (1990, 1992a, 1992b) and replies by Moore (1992) and Uhlmann (1992).

Starting in the late 1950s, anthropologist Arthur Wolf (1966, 1968, 1970, 1995, 2005*a*) has conducted extensive ethnographic research in northern Taiwan. He reports two distinct forms of arranged marriage: “major” marriage, in which the future husband and wife do not meet until their wedding day, and the “minor” form, in which a family adopts a young girl and raises her as a daughter but also as a future bride for their son. Wolf has examined the fertility and divorce rates of over 14,000 marriages. He finds that marriages of the major form produce 25% more children than minor marriages, while the divorce rate of minor marriages exceeds that of major marriages by a factor of 2.5 to 1. Wolf (2005*a*) also shows that in the minor form the age of the wife when adopted is positively correlated with later fertility rates and negatively correlated with divorce rates. In other words, when the wife is adopted at a younger age, fertility rates tend to decrease and divorce rates increase (these tendencies are even stronger when the wife is adopted before the age of three). Wolf believes that these findings provide the aversion hypothesis with unequivocal support.

Anthropologist Justine McCabe (1983) conducted her fieldwork in Lebanon during the 1970s. She studied the Arab practice of patrilineal parallel cousin marriages, the marriage of a man with his father’s brother’s daughter (FBD). The future husband and wife often grow up together, developing a sense of informality, jocularly, and intimacy such as characterizes the relationship of siblings. Following Wolf, McCabe examined fertility and divorce rates in one Lebanese village. She finds that fertility rates of FBD marriages are 23% percent lower than those of all other types of marriage. The percentage of FBD marriages ending with divorce is four times that of all other marriages. Like Wolf, McCabe concludes that early childhood association leads to sexual aversion.

A closer look at both Wolf’s and McCabe’s studies raises doubts about their conclusions. Both studies suffer from similar difficulties as tests for the aversion hypothesis. First, earlier critiques of Wolf (e.g., Graber 1984; Kopytoff 1984; Leavitt 1990) have raised alternative sociocultural explanations for why minor marriages are less “successful” than major marriages (Wolf himself brings up some of these alternatives before discarding them). One suggested alternative is that the lower fertility rates of minor marriages are a result of the adoption process itself. For example, it could be that the girls adopted were traumatized by the adoption process, or they could have been treated less favorably than the biological son (their future husband), leading them to resent him. Other alternative explanations stress the material, ceremonial, and status advantages of major marriages over minor ones. Wolf (1966, 1970, 1995) confronts these challenges and rejects them, concluding that the reluctance shown by the minor-marriage couples is indeed the result of sexual aversion.

We wish to add here two critiques of both Wolf’s and McCabe’s studies

that were not stressed enough in former reviews. First, the measurements for attraction used in both studies are problematic. While higher divorce rates and lower fertility rates could very well be the result of reduced sexual attraction, they could also result from a variety of other factors (some mentioned above). Therefore, we believe that other measures, most notably ones that inquire directly about the feelings of those involved, must be used when trying to assess sexual desire. The second critique relates to the conclusions drawn from the studies. Both Wolf and McCabe argue that their results support Westermarck's aversion hypothesis. However, the leap from less attraction to aversion is unsupported. Both the minor marriages and the FBD marriages produce fewer but still quite a number of children (Wolf and McCabe find that on average minor marriages and FBD marriages produce more than four children per family). Unless we assume that these children are the result of the wife's infidelity, it is clear that some sexual interest remains. Early association does not annihilate sexual desire; at most, it reduces attraction.

The Israeli Kibbutzim

The Israeli kibbutzim are rural collective communities. They were first formed at the beginning of the 20th century under the combined influence of Zionism and Marxist ideology. The kibbutz system was based on the principles of joint ownership of property, equality, and cooperation of production and consumption. Until the early 1980s, the education system in most kibbutzim was cooperative as well.⁴ From birth, children were educated in same-age peer groups that socialized together in one house under the supervision of a trained caregiver. They met with their parents for only two to four hours each afternoon at the parent's apartment, before returning to the communal children's house where they spent the night. This unique education system often created a sibling-like atmosphere among the members of a peer group.

Research on Israeli kibbutzim and the kibbutz education system is often cited by Westermarck's proponents as further support for their contentions. In particular, they refer to the study of Joseph Shepher (1971, 1983), who examines data on 2,769 married couples from 211 kibbutzim, covering 97.5% of second-generation adults who grew up in the kibbutzim's communal education system. Shepher finds that out of these only 14 couples came from the same peer group. Out of these 14, no couple had been socialized together throughout the first six years of life. Shepher concludes

⁴ Starting in the late 1970s, most kibbutzim gradually abandoned communal child rearing in favor of the traditional nuclear family. By the early 1990s, no kibbutz was still carrying on a communal education system (Dror 2001).

that this is “a strong case for Westermarck’s instinctive avoidance theory.” He adds that “this avoidance and aversion could not be attributed to prohibition or taboo . . . [since] evidence showed that such marriages were preferred by parents and other members of the kibbutz” (1983, pp. 59–60). Thus, he attributes the aversion to a process he calls “negative imprinting” that is complete by the age of six.

Shepher’s interpretation of the data suffers from a few major weaknesses. First, as Leavitt (1990) indicates, Shepher’s (and Westermarck’s) theory did not predict that sexual aversion would only be manifested in children reared together during the first six years of their lives. Rather, Shepher developed this theory to fit his findings, and much more research is needed to establish the “negative imprinting period” he proposes. Moreover, the results supplied by Wolf (2005*a*) do not support the contention that the process is complete by the age of six. While Wolf finds that association during the first years of life is especially important in reducing sexual attraction, he also reports that association at a later age reduces attraction (as measured by fertility and divorce rates).

Second, also questionable is Shepher’s contention that the avoidance was entirely voluntary, with no pressures applied by parents, teachers, and the peer group itself. Shepher claims that former research on the kibbutzim by Spiro (1958) and Talmon (1964) supports this argument. However, Talmon holds that children in the kibbutzim were committed to their peer group, which emphasized “all-embracing internal solidarity that discourages exclusive friendships or love affairs” (1964, p. 501). Thus, she believes that sexual attraction between opposite-sex peers is discouraged. Spiro, in an extensive ethnographic study of children in a single kibbutz, did not encounter sexual interactions between the members of the same peer group. However, like Talmon, he stresses that “all social activities are group—rather than couple—oriented” (1958, p. 327). According to Spiro, the parents, the *mosad* (the educational establishment), and the kibbutz authorities are “opposed to sexual intercourse among students” (p. 328), and “there seem to be almost no violations of the Mosad taboo on sexual intercourse” (p. 333).

Third, Shepher (1983) rejects studies that challenge his assertion that there were no prohibitions on sexual activity between members of the same peer group. Rabin (1965), for example, states that “kibbutz taboos and prohibitions in regard to sex play and sexual contacts are strict and unrelenting. These taboos apply primarily to members of the peer group with whom the contact is continuous for many years. The taboos are not unlike the brother sister taboos in the conventional family” (1965, p. 33). Psychologist Bruno Bettelheim writes that “to feel sexual desires for each other runs counter to the value of the youth society. . . . This is something on which parents, *metapelets* [care givers], kibbutz, and age-group agree.

It is wrong for the children to have sexual feelings for each other, period” (1969, p. 238). Finally, Kaffman (1977) argues that until the midsixties there were clear “puritanical” attitudes in the kibbutz community regarding sexual relations between adolescents. Once these attitudes changed, in the 1970s, peer sexuality became quite common and adolescents no longer expressed negative attitudes toward sexual practices.

Shepher dismisses all these, claiming that Rabin, Bettelheim, and Kaffman do not offer evidence for any taboo or prohibitions on marriage between members of the same peer group. However, he offers only one incidence to support his assertion that such marriages were preferred by parents and other members of the kibbutz—a humoristic remark by a parent to a boy who was found in another girl’s bed. Considering the body of opposing views mentioned above, this case seems esoteric.

Finally, we wish to propose that the two critiques mentioned earlier regarding the ethological studies and the studies of Wolf and McCabe are also very relevant to Shepher’s study. The assumption that the number of marriages is a valid measure of sexual attraction is highly questionable. It is particularly problematic if we consider that most of the children who grew up in kibbutzim did not marry at a very young age. Following graduation, almost all of them served in the Israeli army, where they were likely to meet other potential partners and develop romantic relationships. Shepher (1983) is aware of the problem with his measurement, but he dismisses it by stating that his deeper observations in a single kibbutz revealed similar patterns of premarital and marital sexual behavior. This explanation is hardly satisfying.

Our other critique relates to the conclusions Shepher draws from his study. While he finds fewer marriages than expected (according to his calculations, the expected ratio of marriages in small groups would be about 4%), he does not in any way show sexual aversion or, for that matter, even sexual indifference between the members of the same peer group. Rather than *asking* these children, adolescents, and adults about their feelings and preferences, Shepher examined formal, public, and officially recorded marriage documents. Thus, he could not penetrate into the subjective, private, and sometimes implicit feelings of those who grew up in Israeli kibbutzim.

Bringing Sociology Back In: A Theory of Social Cohesion

As we have seen, during the past two decades Westermarck’s aversion hypothesis has won growing support in the academic community. However, many of the studies that claim to validate it suffer from both theoretical and methodological shortcomings. Therefore, in the present study we wish to reinstate sociological explanations for incest avoidance and

the incest taboo. While the explanation we propose does not rule out evolutionary and biological determinants, it stresses *social cohesion* and *group unity* as major elements in the development of in-group sexual avoidance; that is to say, the degree of social cohesion in a given group is a major determinant of the tendency of individuals who are part of this group to be attracted to one another. More specifically, we suggest that, in small and highly consolidated nonvoluntary groups, individuals will be less likely to develop sexual attraction to one another. The reason for this hypothesized tendency is the recognition that a dyadic romantic relationship endangers the unity of the group and may even lead to its dissolution. Moreover, in nonvoluntary groups, such as the family and the peer group in the kibbutz, there is also a personal price for sexual encounters. Individuals realize that, when a romantic episode or even an attempt to initiate such a relationship fails, they still have to keep living in close propinquity to the other person. In contrast to the Westermarck hypothesis, then, our explanation emphasizes the social rather than the genetic price of in-group sexual relationships.

This theory, with its emphasis on social cohesion, clearly corresponds with Durkheimian notions of social order and consequent functionalist views of the social world. However, it should be clear that we do not wish to revive the functionalist claims of Malinowski (1927, 1929) and Parsons (1954). Our explanation does not in any way presuppose the existence of social groups and social institutions (such as the family or the peer group) as fundamental to the development of societies and the maintenance of the social order. Rather, we maintain that, when the institutional frame (be it family or any other small nonvoluntary group) is greatly cohesive and associations are dense, individuals identify the social and personal price of intimate dyadic relationships in terms of both group cohesiveness and potential embarrassment. Under such conditions, any expression of sexual emotions or drives may be consciously or unconsciously suppressed. This explanation corresponds with earlier ideas of social psychologists and anthropologists regarding the disintegrating dangers of sexual relationships in small groups. Firth ([1936] 1966), for example, in his work on the Tikopia Islanders in Polynesia, noted that "the work of Westermarck and others has shown there is a great deal of data which indicate the objections which native people have to incest . . . but there is hardly any material to demonstrate the disintegrating effect of such unions on the family group" (p. 295).

To test this theory and contrast it with prevailing explanations based on the Westermarck hypothesis, we return to the case of the Israeli kibbutzim. We believe that, in light of the pitfalls of the former study of this case (Shepher 1971, 1983) discussed above, there is a need to reexamine it employing a different method of investigation. Therefore, this study

seeks to explore in the first instance whether people who grew up in the kibbutz communal education system developed at any time in their lives attraction to members of their peer group, or whether, as predicted by Westermarck, they developed a sexual aversion toward these peers. If variability in the level of attraction is found, we will next examine different predictors that may account for this variability.

METHODOLOGY

In-Depth Interviews

Quite surprisingly, Wolf, McCabe, and Shepher all did not conduct (or at least neglected to report) interviews with their target populations to capture their feelings and experiences.⁵ All three researchers preferred “objective” statistics, such as the number of marriages, divorce rates, and birth rates, although these are dubious measures of sexual attraction. Wolf (1970) justifies his choice by stating that interviews would have most likely proved fruitless in light of the traditional nature of Chinese (and Taiwanese) society, which prevents people from discussing issues related to sexuality. McCabe (1983) did not devote enough resources to the study of avoidance, and her findings are preliminary. But Lebanese society is also traditional, and issues of sexual preferences are not commonly discussed. This limitation is much less relevant in the case of Israeli kibbutzim. By and large, kibbutz people are not religious or traditional, and acquiring data on their sexual preferences and feelings is a simpler task. Therefore, the kibbutz is an ideal case study in which to assess the feelings and preferences of those who grew up under siblinglike conditions but, as we show below, were not exposed to the same degree of sexual prohibitions that usually accompany sibling relationships.

We conducted 60 in-depth interviews with a representative sample of interviewees who grew up in the kibbutzim’s communal education system. The method of interviews allowed us to establish a relationship of closeness and trust with the interviewees, facilitating an open discussion and the sharing of personal experiences and feelings. The face-to-face inter-

⁵ Wolf (1966) relies mainly on formal statistics, which he backs up with personal impressions from his fieldwork and interviews with village informants, who shared with him the local gossip on marriage infidelity. Similarly, McCabe (1983), who focuses her study on other issues, examines mainly marriage and birth rate statistics. She conducted a small number of informal interviews to assess extramarital relations, but she does not report the results of these interviews, claiming that they are not complete enough to support any tendencies. Finally, Shepher (1971) complements his statistical marriage analysis with fieldwork observations on one kibbutz. In none of these cases were the cosocialized children, adolescents, or adults actually asked directly about their own feelings of attraction/aversion.

action also helped us clarify the questions and concepts we used and to ensure that our interviewees understood exactly what was meant by terms such as “attraction,” “aversion,” “social cohesion,” and “general atmosphere.” Finally, the interviews allowed us to expand the discussion, identify feelings and experiences that were not initially thought about, and enquire into the deeper meanings of emotions and statements.

Each interview lasted between one and two hours, in which time meticulous notes were taken. Although some of the interviewees were asked to remember feelings and events that occurred many years ago (over half a century for the oldest interviewees), they mostly showed no signs of forgetfulness. Most responded to our questions with details about their feelings at the time, the nature of the relationships in their group, and the general atmosphere in the kibbutz. We recognize that memories are often constructed and are influenced by later experiences. However, according to many of the interviewees, sexual feelings toward peers were not considered normal or socially legitimate in kibbutz society. Therefore, interviewees would have been more likely to fail to report or repress sexual attractions to peers than the reverse (i.e., to report attraction where none existed). Thus, it is quite reasonable to assume that feelings or experiences of attraction were underreported rather than overreported.

Aware of the possible dangers of data contamination and subjects' desire to please the researcher, we were careful not to be judgmental and not to expose our hypotheses beforehand. We also refrained from pressing the interviewees to supply answers corresponding with our own ideas and from directing interviewees toward memories of attraction that were not brought up voluntarily.

Population, Sampling, and Procedure

This study focused on individuals who grew up in the communal education system of the kibbutzim from birth for a period of at least six years before this system was replaced with the nuclear family child-rearing system. The age of six was chosen as the cutoff point based on existing dominant theories (e.g., Shepher 1983; Wolf 2005a) that suggest that the main effects of cosocialization on the development of sexual aversion occur by this age. By the early 1990s, the communal education system had already been replaced in all of the kibbutzim. Therefore, subjects had to be at least 20 years old at the time the interview was conducted (summer and fall of 2006), but there was no upper-bound age limit. The groups in which these subjects grew up typically had about 15 peers, with seven peers in the smallest group and 30 peers in the largest group. Most groups were made up of same-age peers (same birth-year cohorts), but some, especially in smaller kibbutzim, combined children with age differences

of up to three years. Typically, the groups remained stable throughout the years (ages 0–18), with low turnover rates. By focusing only on the relationships and feelings among those who spent at least the six first years of life together, we made sure that such turnover occurrences do not distort our findings and conclusions.

Many individuals in the target population no longer live in a kibbutz, and many of those who reside in a kibbutz today did not grow up in one. This made it difficult to obtain a comprehensive and exhaustive list of the population or even to have a random sampling frame. Therefore, in locating interviewees we had to rely on personal acquaintance and purposive sampling. While this method is not random, we made every effort to reach a sample that would be as representative of the population as possible. We therefore interviewed people who grew up in 22 kibbutzim of different sizes (between 200 and 1,000 residents in each), in various locations in Israel (north, center, and south), and in different kibbutz movements (Takam and Hashomer Hatzair, described below). Some of the interviewees reside today in the kibbutz they were born in, while others have moved to another kibbutz or to a different form of settlement (village, town, or city). We also included in the sample a nearly equal number of men ($N = 32$) and women ($N = 28$), and we allowed for representation of people of various age groups, including the second, third, and fourth generations of the kibbutzim. Despite efforts to reach gay individuals, none of the interviewees in the final sample identified as gay or as having same-sex attraction. Overall, the sample is highly representative of the target population. For a fuller description of the sample, see table 1.

The first contact with interviewees was made through a phone call. We gave a general introduction of the research, clarifying that it would focus on the relationships between those who grew up in the same cohort, and we scheduled a face-to-face interview. Only one person refused to conduct the interview following this initial contact. Five other interviewees were disqualified when it became clear during our phone conversation that they were not born in the kibbutz or that they had left the kibbutz for a long time period during their childhood. During the face-to-face interviews, none of the interviewees refused to answer the questions, and only a few expressed any discomfort when asked to discuss their feelings and experiences. To avoid leading the interviewees, we asked general questions, such as “What were the relationships within your group?” or “What feelings did you have toward the girls/boys in your group?” Most interviewees were happy to cooperate and talked at length about how they felt toward their peers (including sexual attraction) in response to these questions. In a few interviews, when we felt that the interviewees did not provide enough information to determine whether they were sexually

TABLE 1
CHARACTERISTICS OF THE INTERVIEWEES

| Characteristic | All | Women | Men |
|---|-------|-------|-------|
| Age group: | | | |
| 24–50 | 37 | 12 | 25 |
| 51–70 | 23 | 16 | 7 |
| Kibbutz movement: | | | |
| Takam | 50 | 22 | 28 |
| Hashomer Hatzair | 10 | 6 | 4 |
| Mean age | 44.95 | 49.07 | 41.34 |
| Mean no. of peers in the group | 14.83 | 15.79 | 14.00 |
| Mean no. of peers from the opposite sex | 6.38 | 7.04 | 5.81 |
| <i>N</i> | 60 | 28 | 32 |

attracted to their peers, we asked more directly whether such attraction existed, but we were careful not to convey any expectations about the way this question should be answered. As we clarified earlier, we believe that no reports of sexual attraction were made where such attraction did not in fact exist.

Analysis

Qualitative content analysis.—We first conducted a systematic qualitative content analysis of the interviews. This analysis enabled us to penetrate the delicate subtleties of the feelings and emotions expressed by interviewees. It assists in refining the interpretation of the interviews, enhancing both its precision and its complexity. The qualitative analysis sheds light on important feelings and experiences that cannot be usefully quantified and assists in articulating the interpretations that interviewees give to these emotions. When presenting these interpretations, we adopted a hermeneutic approach emphasizing the meanings people give to reality and to their actions and trying to mediate between the reader and the text. The data were analyzed according to the constant comparative method (Glaser and Strauss 1967; Lincoln and Guba 1985).

Statistical regression analysis.—To complement the qualitative analysis and locate the factors that are especially important in predicting attraction, we also conducted a statistical regression analysis of the interviews. While in-depth interviews are not regularly conducted for statistical analyses, in this case they proved to be the best method for reaching concrete and valid information regarding the variables of interest. Due to the delicacy of the topic (sexual attraction), we believe that the method of interviews allowed us to reach a more accurate account of interviewees'

feelings and to engage a more valid coding of the emotions experienced by them when compared to data coming from questionnaires.

The dependent variable was measured on a five-level ordinal scale (see below), but to make interpretation easier, this was later collapsed into a dichotomous measure of attraction/nonattraction.⁶ We therefore used a binary logistic regression to analyze the findings. The model specification is shown in the following mathematical notation:

$$\ln\left(\frac{P}{1-P}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon.$$

In this equation, the probability for attraction (P) is hypothesized to be determined by the constant (β_0), the estimated coefficients (β_1 to β_n), the independent variables (X_1 to X_n), and an error term (ε).

Dependent Variable

Attraction.—Interviewees were asked to rate their level of attraction to one or more of their peers on a five-point scale: (1) strong sexual aversion, (2) moderate sexual aversion, (3) sexual indifference, (4) moderate attraction, and (5) strong attraction. However, for the purposes of the statistical analysis, and since only two interviewees fell into the categories of strong or moderate aversion (see fig. 1 in the section on findings below), we collapsed the five original categories into two. Categories 1–3 (strong aversion, moderate aversion, and sexual indifference) were recoded into a new category of “no attraction” (0), and categories 4 and 5 (moderate and strong attraction) were recoded as “attraction” (1).⁷

To clarify the meaning of the term *sexual aversion*, we presented the interviewees with the example of the feelings that are often associated with the thought of sexual intercourse with one’s siblings. Interviewees who reported being attracted to one or more of their peers (in the form of sexual fantasies, erotic sensations, physical excitation, etc.) were classified as having attraction even when they were not attracted to other peers. After all, one is almost never attracted to all (or even most) of those who surround her or him. As is the case with attraction inside families, attraction to one cohort member in the kibbutz is therefore enough to refute claims of aversion or indifference. It is important to clarify, though,

⁶ Replicating our analyses with an ordinal dependent variable led to substantively identical conclusions.

⁷ Collapsing the variety of answers into binary categories reduces the wealth of the experiences reported by the interviewees. However, the qualitative part of our study compensates for this reduction by allowing the variety and complexity of emotions to be heard.

that we coded as attraction only cases in which interviewees reported feelings for those with whom they grew up from birth until at least the age of six (most interviewees remained in the same peer group until the age of 18). While some of the interviewees maintained a close relationship with their peers following school graduation, many no longer lived near their peers. Therefore, the dependent variable relates mainly (although not exclusively) to the feelings and practices of the interviewees during their adolescence, when most began to experience significant sexual attraction and some had their first sexual experiences. In contrast to the Westermarck hypothesis and to the conclusions of former studies, we hypothesized that many interviewees would report distinct attraction toward their peers.

Independent Variables

Group cohesion.—The level of social cohesion in a peer group was coded as a dummy variable, with two levels: high (0) and low (1).⁸ The category of low social cohesion was used when interviewees described their group as noncohesive and nonunified, with loose and distant relationships and a weak overall feeling of bonding among the group members (in many cases especially between males and females). Interviewees were coded as having high group cohesion when they reported strong unity in their group, with firm friendships and a sense of togetherness and team spirit. Often, these relationships were described as siblinglike, and interviewees claimed to maintain this sense of cohesiveness throughout their lives. One of the interviewees described this as “a brave friendship, yielding a sense of self-pride and of strength versus other groups.” By contrast, one of the interviewees who described his group as noncohesive talked about a relationship that was “not very close, with many fights and mutual ostracizing. The relationships between boys and girls were especially tense.” As discussed earlier, our theory suggests that strong group cohesion would lead to less sexual attraction. In addition, we also predict a reciprocal effect of attraction on group cohesion as strong attraction and dyadic intimate relationships between individuals may weaken feelings of group bonding and unity.

Gender.—Earlier research is not conclusive regarding the effects of gender differences on sexual attraction among those who grew up together. Wolf (2005a) claims that “males and females are equally sensitive to the sexually inhibiting effects of early association” (p. 86). Others, however, suggest that the inhibiting effects of early propinquity are stronger in females than they are in males (e.g., Ellis 1932; Walter 1997; Walter and

⁸ The reverse coding is designed to facilitate the interpretation of the results later on.

Buyske 2003). Like these latter scholars, we expect gender to be a predictor of attraction, with male interviewees (coded 1) reporting more attraction than female interviewees (coded 0). Both sociological and psychological explanations support such a prediction. Sociologically, studies have established that younger women are often more attracted to older men, largely due to the men's superior social positions. Psychological explanations stress the fact that women tend to mature earlier than men, and therefore they are attracted to older men, who have already reached their level of maturity, rather than to their peers. However, even in this respect, we must still take into account the cultural construction of mature masculinity and the mature body, as opposed to "childish" qualities, as an object of attraction and sexual fantasies (e.g., Connell 1995, 2000; Kimmel 1996; Shor 2008).

Age group.—Age was also coded as a dummy variable, with two levels: ages 24–50 (coded 0) and ages 51–70 (coded 1). This division is driven by the findings of previous studies on sexuality in the kibbutzim. Kaffman (1977) describes a marked sexual revolution in the kibbutzim during the late 1960s. While until the mid-1960s most adults and adolescents saw sexual activity as an expression of irresponsibility and of a weak personality, by the early 1970s the norm became one of marked sexual freedom. The current study focused on a relatively narrow time span when most interviewees reached adolescence. Interviewees who are today older than 50 years of age reached their adolescence before the late 1960s and the sexual revolution. Those who are younger than 50, by contrast, mostly matured in the post-sexual revolution era. Hence, if the general atmosphere in the kibbutz matters, younger interviewees would be more likely to report attraction toward peers than older ones.

General sexual openness in the kibbutz.—Interviewees were asked to rate the level of "sexual openness" in their kibbutz at the time they were growing up. Their answers were dichotomously coded as low (0) and high (1). Low openness represents high levels of what some interviewees called "sexual Puritanism," that is, general avoidance of talking about sex and sexual issues together with an explicit or implicit message that sexual relations and sexual behaviors are completely unacceptable. High openness represents an open sexual atmosphere, in which sex is an accepted topic of conversation and sexual practices during adolescence are considered normal and acceptable by peers, educators, and kibbutz members. As one may observe, the logic behind this variable is quite similar to that of the age group variable, in that both examine the general atmosphere around sexuality in the kibbutz. Therefore, we expect to find a high correlation and perhaps some multicollinearity between the two. However, while membership in a particular age group is an objective measure, the level of sexual openness was subjectively evaluated, based on the re-

sponses of the interviewees. Therefore, a high correlation between the two may indicate convergent validity.

Number of peers of the opposite gender in the group.—As mentioned earlier, all of the interviewees identified themselves as heterosexuals. Therefore, we may assume that interviewees are more likely to report attraction toward peers in groups with more peers from the opposite sex (in such groups one may find more potential partners and subjects for fantasy).

Number of peers in the group.—To make sure that the *opposite gender* term is really about availability of potential partners, rather than a dynamic pertaining to group size itself, we include a measure for the total number of peers. We hypothesize that in groups with higher numbers of peers, individuals would be more likely to report sexual attraction.

Kibbutz movement.—The interviewees all come from the two largest kibbutz movements, Takam (coded 0) and Hashomer Hatzair (coded 1), which include over 95% of the kibbutz population. While the differences between the movements today are quite minor, until the end of the 20th century, Hashomer Hatzair was relatively conservative with regard to sexual activity. One of the traditional “ten commandments” of the movement spoke of the “ideal of purity,” which included purity of thought, purity of action, and sexual purity. We predict that this relatively conservative sexual atmosphere will be manifested in less reported sexual attraction in kibbutzim from the Hashomer Hatzair movement.

FINDINGS

The findings of this research stand in stark contrast to Westermarck’s original aversion hypothesis and to the reigning consensus today. The most prominent finding is that almost none of the interviewees reported sexual aversion toward their peers (see fig. 1). Over half of the interviewees expressed either strong (33.3%) or moderate (20%) sexual attraction toward at least some of their peers. Many (43.3%) reported feelings of indifference, but only two female interviewees described their feelings as sexual aversion, and even then these feelings were quite conflicted and different from those commonly associated with siblings. Furthermore, even among those who reported feelings of sexual indifference, there were many who talked about others in their group or in other groups in the kibbutz who did have an intimate relationship with their peers, sometimes even one that resulted in marriage. Most of the interviewees rejected any comparison between their feelings toward their peers and those usually associated with siblings. The words of Sarah, 32, who described her feelings as indifference, illustrate this strain of thinking: “It is very different

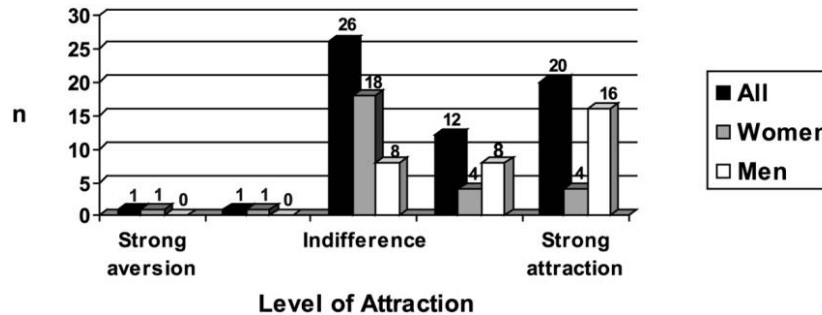


FIG. 1.—Interviewees' level of attraction toward their peers ($N = 60$).

from what I feel toward my brothers. With them the idea of sex clearly incites feelings of aversion. With my peers it was simply something that did not cross my mind.”⁹ The expression “it did not cross my mind” was in fact quite common among interviewees who described their feelings toward members of their group as sexual indifference, but most went on to explain they did not find the thought of erotic attraction to peers to be repulsive or offensive.

Overall, we found a wide and diverse range of feelings and practices. Many interviewees, even some among those who reported attraction, said that the way they felt toward their peers was, to use their phrase, “something different.” Many described a feeling of special closeness to their peers and a sense of conviviality and fraternity. Such feelings were particularly prevalent among older interviewees. These interviewees reached adolescence prior to the sexual revolution of the 1960s and the gradual dissolution of the original ideologies of the kibbutz, which stressed group unity and loyalty. For example, Rachel, age 59, described “a sense of common fate; of a team. We felt like we had to prove ourselves and our unity in comparison to other groups. It’s like a team that needs to prove itself and its self-worth.” Rachel claimed that, under this atmosphere, romantic or sexual relations with other group members were simply not an option. “I was not exactly indifferent, but was always interested in older guys. Some of my girlfriends told me about fantasies they had that involved boys from our group who grew up with us from the very beginning. But it was never fulfilled. We didn’t let that happen.”

Other interviewees described similar feelings of group intimacy and closeness but still reported some attraction to one or more of their peers. Some mentioned significant attraction to one specific person, often ac-

⁹ To protect the interviewees' confidentiality, all names have been changed. All interviews were conducted in Hebrew and later translated to English by the first author.

accompanied by a romantic interest, but indifference to the others. Esther, age 40, was very attracted to one of her classmates, and she desired a romantic relationship with him. He did not seem interested, and she was too shy to pursue him. She described her feelings toward other male classmates as sexual indifference. Nathan, age 38, also had a romantic interest in a classmate who he grew up with: "I was really turned on by her when I was about nine, and later on it developed into sexual attraction. I had fantasies about her, and wanted to see her and be near her. But it didn't develop into anything. For the rest of the girls I felt mainly indifference."

Those interviewees who expressed reduced (moderate) attraction often described their feelings toward their coreared peers as attraction that was somewhat weaker than what they felt toward nonclassmates. Aaron, age 24, exemplifies this pattern: "I definitely thought of my female peers as girls. I looked at them and was mildly attracted to them; somewhat less than to other girls, but the difference was not really big. . . . I had fantasies about the girls from my group, but more fantasies about other girls. I think this is largely because they were not that physically attractive." Some interviewees described their attraction to the peers they grew up with as a passing feeling, something that was present for a while during adolescence before fading away. David, age 36, reported:

In third and fourth grades we peeped under the girls' shirts. It was sexual, but very juvenile. . . . Later on—when the girls became girls and we became boys—the sexual tension became very strong. We didn't think, "Just a minute, they are like our sisters." It was part of the intimacy and closeness, and there was also sexual excitement involved, because it was convenient and we knew it was not going anywhere. . . . They [the girls from the group] were explicitly objects of sexual fantasies. On the one hand, they were not an option. On the other, they were the ones that we could experience with. You jerk off in the shower. Which breast are you going to fantasize on? Your classmates' of course, the ones you saw. . . . There were half-incidental touches, and it was not a secret. It was in the open and with consent. But it was also clear to everyone that it is not going to be fully consummated. At least I felt so, but I think others did too. Later on, when sex became a real option and we made real attempts to pursue it, we looked for other objects—younger girls.

We can see then that many interviewees, even some among those who felt strong attraction, saw the relationship as "something different," and often they could not envision full intercourse and a romantic relationship as a legitimate option. But there was also a significant minority (about 10 interviewees; most of them, but not all, younger men) who described

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their feelings toward the peers they grew up with from the very beginning as clear and strong sexual attraction, not different in any way from the attraction felt toward other potential partners and sometimes even stronger. Ben, age 34, recalled:

I was always attracted to girls from my peer group. No less than to other girls. Actually, I am still attracted to them today. Definitely! There was no difference between the attraction I had to those who grew up with me from birth and the attraction to other girls who joined the group at a later age. Until I was about 16 I was not very interested in girls. But from then on I began to be attracted to the girls in my group. I thought about them as sexual objects, was aroused by their presence and by casually touching them, and believe that this feeling was mutual. [When asked if he did anything about this attraction, he replied:] I was too naive to try anything. I wanted to have sex with the girls in my cohort very much, but it simply did not turn out that way. And I know I was not the only one who had these feelings. I talked to other boys in my group, and they expressed similar feelings.

The case of Ben is illustrative of a general phenomenon. Although over half of the interviewees expressed strong or moderate sexual attraction to their peers, only three of them reported having full consensual sexual intercourse with others from their group (others described some sexual practices, at times forced, which did not reach full intercourse). How can one account for such avoidance? The interviewees themselves offer a few major explanations. Table 2 presents the distribution of these explanations. First, interviewees talked about the general atmosphere in the kibbutz when they were growing up. Shepher (1971, 1983) suggested that the general atmosphere toward sexuality in most kibbutzim was always quite permissive. But, similar to the findings of Rabin (1965), Bettelheim (1969), and Kaffman (1977), our interviewees attested to a different state of affairs. At least until the late 1960s, and to an extent even after that, most kibbutzim held a rigid conservative approach to sex and sexuality. Sex was not talked about, and sexual relationships outside marriage were considered illegitimate. Under this atmosphere, even when they felt attraction, most interviewees were not bold enough to defy the norm. Ruth, age 63, who was in love with one of her peers, recalled:

I loved him very much, and was also very much attracted to him. We became a couple, but it was never consummated, because it was highly unorthodox at the time. I really wanted to consummate our love physically, and so did he, but I never let it happen. I was afraid that something awful is going to happen if we do.

TABLE 2
 TYPICAL RATIONALES GIVEN BY INTERVIEWEES FOR NOT BEING SEXUALLY
 ATTRACTED TO PEERS OR FOR NOT TRYING TO FORM SEXUAL RELATIONSHIPS WITH
 THEM DESPITE THE ATTRACTION

| RATIONALE | WAS NOT ATTRACTED TO PEERS | | DID NOT INITIATE A RELATIONSHIP | | TOTAL |
|---|----------------------------------|-----|---------------------------------------|-----|-------|
| | Women | Men | Women | Men | |
| The kibbutz had a general atmosphere that did not encourage sexuality | 16 | 2 | 1 | 4 | 23 |
| Negative messages about relationships between same-group peers | 9 | 4 | 3 | 5 | 21 |
| Age homology (peer was not mature enough) | 18 | 3 | 3 | 0 | 24 |
| They were like siblings | 5 | 5 | 0 | 0 | 10 |
| Peers were not very attractive physically, mentally, or intellectually | 2 | 1 | 1 | 2 | 6 |
| Did not want to hurt the integrity of the group | 8 | 7 | 4 | 11 | 30 |
| Afraid of being turned down | 0 | 2 | 3 | 10 | 15 |
| There were other available options | 6 | 4 | 5 | 9 | 24 |
| <i>N</i> | 20 | 8 | 8 | 24 | 60 |

NOTE.—Some interviewees mentioned more than one of the above reasons.

And what was this awful thing? Miriam, age 56, revealed how she was taught to fear sexual intercourse when growing up:

It was absolutely clear that sex is out of the question. The educators threatened us that if we have sex we will have to go through an abortion and will not be able to have children later on in life. It made a huge impression on me, and the whole subject of sexuality looked very bad. I remember thinking to myself, "I wish that by the time I have to have children they invent something else, and we will not be forced to have sex." The education in general was very puritan, and any sign of sexuality was actively suppressed. . . . A girl who dressed nicely was considered "a mattress." Those who wore short pants were called "sluts."

A second barrier for sexual relationships were the messages that came from kibbutz society regarding such relationships between same-group peers. In contrast to the claims of Shepher (1971, 1983), many interviewees talked about an environment that was, to say the least, unsupportive of such relationships. This impression was not limited to older interviewees. Debbie, age 40, who had a relationship that included sex with a male peer who was brought up with her, described the first time she realized that she was attracted to him:

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Around the age of 16 I felt something in the air; very subtle. Today I know that it was attraction. But when I saw him then in the swimming pool and discovered that he is a man I couldn't name it. Attraction to a group member was something that I couldn't really think about. I guess the taboo was too strong.

Others shared similar experiences. Jacob, age 30, who was attracted to a few coreared girls from his class, explained why things never developed into a sexual relationship: "It was always 'in the air' that classmates are not supposed to be attracted to each other. It was very clear and well known; something weird." Jasmine, age 33, who had a long-term romantic relationship with one of her classmates when they were both in their midtwenties, heard more explicit statements: "When people who grew up in a kibbutz heard that I was the girlfriend of one of my classmates, they said, 'What is this, incest?' I always got the feeling that kibbutz people see it this way. For them, classmates are supposed to be like siblings." April, age 37, also talked about the message from those around her, and she compared it to the incest taboo:

Even when I had the hots for someone, I knew it was impossible. I called it "discovering tigresses," because it's not exactly incest. [In Hebrew, the second word in the term for incest (*gilui araiot*) is pronounced very similarly to the word for lions (*araiot*). *Gilui* means discovering. April used the phrase *gilui tigrisim* to emphasize that her desires did not exactly correspond to incest.] It seemed unnatural to me, as if we are going to have retarded children. So I gave myself all kind of excuses not to have sex with my classmates. . . . When the brain said that this is impossible, the fantasy stopped. [Regarding one of her classmates:] Rationally, I told myself that if he was not a classmate I would be attracted to him and fall in love with him. I felt excitement near him. Excitement, anxiety, butterflies in my stomach. But it was not like other boys, from outside the group. My brain took over and put a brake on it. It was very minimal; suppressed and oppressed. . . . It always seemed impossible and forbidden. . . . The brain says that you can fall in love with your classmate, but the thought of having sex with him is repulsive. It's not like thinking about sex with my brother, but . . . the message from society around is that the relationships inside the group must be ones of partnership and harmony.

This confession reveals a range of confused and conflicted emotions. April tries to present an opposition between feeling (heart) and thinking (brain), but it is not consistent. Sometimes the brain sides with the attraction, but at other times it is described as the thing that prevents this attraction from developing. On the one hand, April was sexually attracted to some of her male classmates. Yet, at the same time, the very idea of pursuing a sexual relationship with a peer seemed "unnatural" to her. Thus she experienced feelings of excitement and arousal but also a con-

sequent sense of shame and guilt (revealed by the use of terms such as “suppressed,” “oppressed,” and “forbidden”). The existence of a social taboo that directed these feelings is clear. Even if April was, as Westermarck frames it, “genetically programmed” to develop sexual aversion toward her peers, where would she have gotten the idea that having sex with a classmate would result in their children being retarded? The sense that in-group sexual relationships were analogous to family incest could only come from the society around her.

In contrast, however, some interviewees said that they never felt any pressure to avoid a relationship with their peers. Such testimony highlights the fact that there was considerable variation in social norms among different kibbutzim and in different time periods. It also reinforces the fact that, for the most part, the negative message regarding relationships between peers was not as strong as the taboo on family incest.

A third possible reason for the common avoidance of sexual relationships inside the group is age homology. This factor seems to have been especially important for women. Many of the female interviewees who said that they felt indifference toward their male peers indicated that this feeling was a result of the boys being too young. Naomi, age 68, explained: “The girls develop faster than the boys, and the boys become curious about them. But by the time the boys catch up, the girls already have someone from outside to satisfy their curiosity.” Hannah, age 61, who also felt indifference, agreed: “My classmates always seemed too juvenile. They were little kids; not interesting.” Jasmine, age 33, who had a relationship with one of her classmates when they were both in their midtwenties, reinforced the relevance of this factor:

I was always interested in older men from outside the group. When I was 16 I had a much older boyfriend from the kibbutz. The boys from my group were too juvenile for me. . . . [In regard to the relationship with her classmate:] It started from a sudden attraction, and developed into a romantic relationship. Suddenly I saw him in a different light. When we were at high school he wasn't really developed, both physically and mentally. But now he became another person, tall and mature.

A final explanation for avoiding sexual relationships with peers comes from Mike, age 32, who stated that he had been strongly attracted to a number of girls in his group with whom he was coursed. When asked why he did not do anything about it, Mike replied: “I didn't want to be stuck with it; didn't want something to happen and then I will be stuck with it. I really wanted to have a one-night stand with them, but was not willing to deal with the consequences.” Amos, age 35, introduced another related problem: “I was really shy and afraid to hit on someone and be rejected. Being rejected in such a closed group is even worse; I

didn't even think about it." These statements reveal an important and highly common facet of growing up in a small group with intense associations. The members knew that whether they liked it or not, they would have to keep associating with each other for many years to come. Therefore, they generally did not act on feelings of erotic attraction to a member of the peer group.

This last explanation is further supported by the few cases in which interviewees did act on their attraction toward peers. In all of these cases, the relationship (whether romantic or merely sexual) developed after the formal group frame had already dissolved or was just about to expire. Jasmine, age 33, described earlier, had the long-term relationship with her classmate only when they were both in their midtwenties. Dana, age 40, had to go through the army and then move to New York for a relationship with her former classmate to be possible:

After the army he came to visit me in New York, and we were together for a few months. During these months we were together all the time, although we didn't call ourselves a couple. But it included sex and intimacy. I realized that there is an attraction there that was held back for many years (we grew up together from the very beginning). It was possible abroad, but in Israel it ended. We never called it being a couple, perhaps because we were from the same group. . . . He was a classmate, and it could only happen in a far place. It was also a secret. Our families didn't know, and even today most people don't know about it. . . . We were already attracted to each other when we were 18, but nothing happened, because we were classmates then. When we were in New York we didn't feel like it's a sin, but there was a feeling of "Wow! This is something else." It's not guilt; something like incest, but without the guilt. There is something in it of the forbidden fruit—it's forbidden, but also allowed. I could never imagine. . . . But later on I found out from others that this is something that happens.

Dana's story exemplifies the problems of developing a relationship with a kibbutz classmate. The feelings were intense and long lasting, but the messages from around them as well as the intensity of the group were in the way. Only in far New York could a relationship develop, and even then it could not survive after returning to Israel. The relationship was also kept a secret, showing that it was not perceived as something that others in the kibbutz and the families would approve of. As in the case of April, the term "incest" is mentioned, but once again it is made clear that this is something else that does not provoke the feelings of intense guilt, aversion, or disgust often associated with incestuous relationships. The secrecy was also evident in the case of Lea, age 37:

When we were about 18, just before we went to the army, there was a time when we were making out like crazy. It was like an orgy; sometimes even more intensive than full intercourse. A few of us would get together in a

room, turn off the light, and start to make out. I did it with one or two boys from my group; ones who grew up with me from the very beginning. It happened a few times, but it was just sex; no romance. I guess I had sexual energies that demanded this. It was exciting. We didn't talk about it with others in the group; they didn't know about it. We were very enthusiastic about it, and it was very daring. But outside the dark room we were not very close. Part of the excitement came from knowing something no one else knew. I didn't tell anyone about it. In fact, this is probably the first time I'm talking about it.

The reader will notice that, once again, a sexual relationship could only form when it was clear that the compelling group frame was about to dissolve and the person would not have to deal with the consequences of a relationship or a sexual act for long. But even then it was kept secret from others. In fact, the secrecy added to the excitement, a feeling similar to what Dana described as "tasting the forbidden fruit." A relationship with a group member was clearly not something to boast about, suggesting that neither the rest of the group nor the kibbutz in general would have looked at it favorably.

In sum, individuals who were socialized in the kibbutzim's communal education system report a variety of feelings about the possibility of sexual interaction with other members of their age group. While many never saw their peers as potential romantic or sexual partners, over half of the interviewees reported some sexual attraction to peers. This attraction ranged from weak or sporadic feelings toward one classmate to long-lasting feelings of sexual desire toward a number of peers. One thing is clear: almost no interviewees equated erotic feelings for classmates with incest, and only two used the term "aversion." How may we account for this variety of emotions?

A statistical analysis may help us account for the variation in attraction levels. In table 3 we present the binary logistic regression estimates of sexual attraction. Overall, the results of this analysis support our claim that social factors are important in predicting attraction between those who grew up together in the kibbutzim's communal education system.¹⁰ More specifically, the degree of social cohesion in a group emerges as an important predictor for interviewees' attraction.

We present two models in table 3. Model 1 excludes general openness,

¹⁰ A test of the full model with all the independent variables against the constant-only model was statistically significant ($\chi^2 = 37.424$ for model 1 and $\chi^2 = 45.361$ for model 2). This indicates that the predictors, as a set, reliably distinguished between nonattraction and attraction. The Cox Snell R^2 for both model 1 and model 2 was quite high, along with the Nagelkerke R^2 . These values suggest that the independent variables may help to discriminate between nonattraction and attraction.

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TABLE 3
 BINARY LOGISTIC REGRESSION ESTIMATES OF ATTRACTION TOWARD PEERS
 (No Attraction = 0; Attraction = 1)

| Independent Variable | Model 1 | Model 2 |
|---|---------------------|--------------------|
| Group cohesion (high = 0; low = 1) | 4.69*** (108.54) | 4.38*** (78.81) |
| Gender (female = 0; male = 1) | 3.07* (21.59) | 2.39* (10.88) |
| Age group (young = 0; old = 1) | -2.83* (.059) | |
| General openness toward sexuality (low = 0; high = 1) | | 3.12* (22.73) |
| No. of peers in the group | -.11 (.90) | -.08 (.92) |
| No. of peers from the opposite gender | .79* (2.19) | .72* (2.06) |
| Kibbutz movement (Takam = 0; Hashomer Hatzair = 1) | .77 (2.15) | 1.30 (3.66) |
| Intercept | -3.10 (.05) | -8.72** (.00) |
| Baseline χ^2 (-2 log likelihood) | 31.82 | 31.48 |
| χ^2 change | 51.09*** | 51.44*** |
| Pseudo R^2 : | | |
| Cox Snell | .573 | .576 |
| Nagelkerke | .765 | .769 |
| Highest VIF | 1.98 | 1.93 |
| Mean VIF | 1.43 | 1.46 |

NOTE.— $N = 60$. The top number is the unstandardized coefficient. The number in parentheses is the odds ratio. VIF = variance inflation factor.

* $P < .05$.
 ** $P < .01$.
 *** $P < .001$.

and model 2 excludes age group.¹¹ As we predicted, in both models 1 and 2, higher levels of group cohesion predict less attraction toward other peer-group members when other predictors are held constant. The odds that a member of a noncohesive group is attracted to one of her or his peers increase by a factor that ranges from about 80 in model 2 to over 100 in model 1 when compared with the more cohesive groups. These ratios show a very powerful effect of group cohesion on attraction.¹²

¹¹ This interchange is designed to prevent the effects of multicollinearity. When calculating variance inflation factor (VIF) scores for the full model that included all seven variables, we found a VIF score of 2.44 for age group and a VIF score of 2.71 for openness. The latter value is higher than 2.5, indicating a potential problem of multicollinearity (Allison 1999). Indeed, following the exclusion of openness from model 1, the highest VIF score dropped to 1.98, and following the exclusion of age group from model 2 the highest VIF score is 1.93.

¹² Very similar results were received when we ran an ordered logistic regression with the dependent variable (attraction) measured on a five-level scale. Neither the sign nor the significance of any of the predicting variables differed, suggesting that collapsing attraction into a dichotomous variable did not result in the loss of significant data.

Gender emerges as another significant predictor in both models 1 and 2. In accordance with our hypothesis (and in contrast to Wolf's [2005*a*]), being a man predicts higher levels of attraction to peers. The odds that a man is attracted to one of his peers increase by a factor of over 10 in model 2 and by a factor of over 20 in model 1, suggesting that men are much more likely than women to be attracted to their peers.

Two other significant predictors of the dependent variable are age group and the general openness toward sexuality in the kibbutz. First, as we suggested above, interviewees from the older age group are less likely to have been attracted to their peers (model 1). Being a member of the older age group decreases the odds for attraction to a classmate by 94%. Second, in accordance with our hypothesis, higher levels of openness toward sexuality in a given kibbutz predict more attraction among interviewees (model 2). Individuals who grew up in kibbutzim with a relatively open sexual atmosphere are almost 23 times more likely to have been attracted to one or more of their peers than are those who grew up in a puritanical sexual atmosphere.

The number of potential partners from the opposite gender also has a significant positive effect on attraction. As we hypothesized, larger numbers of peers from the opposite gender predict more attraction. For each additional member of the opposite gender in the group, the odds that an individual is attracted to one or more of her or his peers increase by a factor of over two. In contrast to our prediction, the coefficients for the number of peers in the group and for the kibbutz movement are nonsignificant in both models 1 and 2. However, the nonsignificant result for the kibbutz movement variable should be treated carefully, considering the small number of interviewees from the Hashomer Hatzair movement in the sample.

CONCLUSION AND THEORETICAL IMPLICATIONS

This study has reexamined the Israeli kibbutzim as a seminal test case for Edward Westermarck's aversion hypothesis. Recognizing the methodological faults of previous studies, we returned to the kibbutzim and conducted in-depth interviews with people who grew up in the communal educational system. Westermarck suggested that intense association during the first years of life leads to sexual aversion. The findings of the interviews are contrary to this hypothesis and lend support to the primacy of various social and demographic factors in predicting sexual attraction. They show that human sexuality is a complex mix of biological, evolutionary, and sociocultural factors, which cannot be glossed as simplistically as Westermarck and his proponents do. They also bring back to center

stage sociological explanations for incest avoidance and the incest taboo and stress the need to seriously consider sociocultural views in any future study of these practices. Our study suggests that sociology has a lot to offer when studying these issues and that it should not completely surrender them to biologists and evolutionary psychologists.

First, let us look at the implications of our findings for Westermarck's aversion hypothesis and the growing consensus around its validity (see most notably Wolf and Durham 2005). The aversion hypothesis is quite clear cut: close proximity during the early years is expected to produce feelings of mutual aversion, whether the individuals are family members or not. Westermarck's proponents may argue that the findings of the present study do not negate this hypothesis and that this is a matter of negligible terminological differences. After all, almost half of the interviewees described their feelings as indifference, and some reported less attraction to peers than to other people. Does it really matter, one may ask, if the close association leads to less attraction, indifference, aversion, or disgust? Are all these not marginal variations of the same phenomenon—lack of sexual interest?

However, if we take Westermarck's aversion hypothesis seriously (as so many do), precise terminology is extremely important. The most common term used by sociobiologists and psychological evolutionists to describe the effects of early association on later sexual attraction is *aversion*. This term carries a negative psychological connotation and is often used by psychologists to describe phenomena such as taste aversion and aversion therapy. In the context of sexuality, aversion implies not simply less attraction but rather an active and consistent repugnance at the thought of sexual interaction with another. The repeated use of such a charged term allows some researchers to conclude that this "innate aversion" is, in itself, enough to produce sexual avoidance without the need for further social pressures. Therefore, perhaps the most important finding of the present study is that very few interviewees actually felt comfortable with the terminology of aversion and, on the contrary, many described strong attraction to peers. Taking these responses into account, it seems clear that early cosocialization by itself can hardly constitute a sufficient condition for sexual avoidance in a group.

Furthermore, we believe that our findings have significant implications not only for the kibbutz but also for the study of sexual avoidance in families, although any extrapolations must be made very carefully, as our study did not ask about relationships inside the family. The taboo on sexual relationships among family members is undoubtedly much stronger than the one found in some of the kibbutzim. Yet, despite this powerful taboo, studies have found considerable rates of incest inside nuclear families, in America and elsewhere, including between siblings (e.g., Meisel-

man 1990; Davies and Frawley 1994; Meigs and Barlow 2002). Unfortunately, many scholars who write about what they call the “universal incest avoidance/taboo” either ignore such findings or dismiss them as rare aberrations from the “natural biological imperative.” The findings of the current study challenge these assumptions. They suggest that the intimate association of those brought up together does not in and of itself prevent them from being attracted to each other. In fact, in some cases sexual curiosity has been strong enough to overcome social prohibitions.

Former studies have suggested that siblinglike relationships may teach us about the interaction among siblings. Following this logic, our study offers some initial directions for future research on the factors that may determine attraction towards siblings. First, drawing from the case of the kibbutzim, it would be interesting to test whether attraction is more common in families with loose connections, ones in which social cohesion is relatively low and no real sense of unity exists. Moreover, based on our study, one may suspect that, when attraction to other members of the family does exist, it would be more likely to be suppressed in families with higher levels of unity and cohesion. Individuals learn to recognize the social price of being attracted to one of their family members, and even more the price of consummating such an attraction. They understand that such a dyadic relationship would jeopardize both the integrity of the family as a whole and their own ability to maintain regular family relationships. In other words, there are significant nonbiological costs to incest that should be seriously considered when trying to account for the common avoidance of this practice.

Another finding of the study that may be important in the context of the family is the relationship between the number of potential partners of the opposite gender and sexual attraction reported by interviewees. In families, too, individuals may have greater levels of attraction toward siblings when the number of siblings from the opposite gender is higher (especially when age gaps exist). The finding that higher levels of openness toward sexuality in the kibbutz predict higher probability of attraction constitutes another blow to Westermarck’s aversion hypothesis. It reveals again that sexual avoidance among kibbutz peers was largely influenced by social factors and pressures. Future studies may examine whether there is a similar relationship between familial openness toward sexuality and the probability that a person would be attracted to her or his siblings.

Finally, gender was found to be a significant predictor of sexual attraction. Men were more likely to be attracted to their female peers than women to their male peers. Advocates of Westermarck’s aversion hypothesis may explain this disparity with the existence of differential psychological mechanisms in males and in females. However, the interpretations offered by our interviewees suggest a different explanation. Many

of the women in the study explained their lack of attraction to male peers by reference to the age homogeneity and the feeling that the boys in their group were too immature (both physically and emotionally) to become objects of romantic and sexual desire.¹³ By contrast, most of the men in our study who reported indifference or lower levels of attraction did not ascribe these feelings to the lack of age disparity. If age homology is indeed responsible for reduced sexual attraction among women, little can be inferred from the kibbutz peer groups to attraction in families. Families, unlike peer groups, often have significant age gaps between siblings. Therefore, we may expect some of the differences between men and women found in this study to fade away in the familial context, especially when older brothers and younger sisters are involved.

An additional explanation for the gender gap in attraction to peers is the differences in power positions between men and women. Despite the common ethos of equality, Israeli kibbutzim have had gender disparity and unequal power distribution from the very beginning (see, e.g., Bernstein 1992; Fogiel-Bijaoui 2007). Furthermore, even explanations that ascribe women's lack of sexual attraction to their peers to the physical and emotional immaturity of these peers should take into account the social and cultural construction of mature masculinity and the mature body, as opposed to "childish" qualities, as an object of attraction and sexual fantasies (e.g., Connell 1995, 2000; Kimmel 1996; Shor 2008).

Although we have argued here that much can be learned from the case of the kibbutzim about attraction between siblings, a word of caution must be added. This study revealed moderate levels of a social taboo on sexual and romantic relationships inside the peer groups of children and adolescents. However, there is clearly a large difference between these messages and the incest taboo. The latter is much stronger and well established, backed up in modern society by scientific warnings about catastrophic reproductive repercussions. Therefore, any predictions and extrapolations for the incest taboo that are based on the findings of the present study are at this stage merely speculative and must be empirically tested in order to produce valid conclusions. Furthermore, to be clear, we do not wish to argue here that biological and psychological factors play no role in incest avoidance. This study provides no support for such claims. However, the study does present significant challenges to Westermarck's aversion hypothesis, and it suggests that social factors, in particular the influence of group cohesion, must be seriously considered in future studies of incest avoidance and the incest taboo.

¹³ This pattern is hardly surprising considering the body of evidence showing women's preference for older male partners (Buss 1989; Van Poppel, Liefbroer, and Vermunt 2001; Groot and van den Brink 2002).

Before concluding, we wish to return to the second part of Westermarck's supposition, the expression hypothesis. As described earlier, according to this hypothesis the innate mechanism that leads to aversion between kin also explains the emergence of the nearly universal incest taboo, as the aversion leads to moral disapproval expressed in laws and prohibitions. The findings of the current study do not support this explanation.

When growing up, children in the kibbutzim spent on average much more time with their peers than with their siblings. In the ideal-typical communal education system, children usually associated no more than two or three hours a day with their siblings but spent almost all of their time (including all meals, showers, and sleeping time) with individuals from their peer group. According to the logic of the Westermarck hypothesis, which sees the taboo as no more than a by-product of aversion, we would therefore expect higher rates of attraction between siblings than between peers. But this was certainly not the case. While interviewees' attraction to their peers varied from moderate aversion (quite rarely) to strong attraction, almost none of them could equate these feelings to the way they felt when the idea of sex with a sibling was brought up. Except for one interviewee, virtually all clarified that the latter excited much deeper feelings of repulsion or unease and was deemed much more unthinkable and outrageous.

Hence, close childhood association by itself, when lacking the presence of a powerful taboo, does not lead to aversion. Westermarck's expression hypothesis is entirely based on the aversion hypothesis and not on an argument of less attraction. If individuals do not really feel aversion, why would they wish to ban others from having incestuous relations? Weakness of attraction is clearly not enough of an incentive to produce a taboo. No former study (e.g., Wolf 1966; Shepher 1971; McCabe 1983; Bvec and Silverman 2000; Lieberman et al. 2003) has established the presence of clear aversion (as distinguished from reduced attraction). Therefore, the expression hypothesis, which relies on the preexistence of such intense feelings prior to the taboo, seems quite implausible. The current study does not offer support for any alternative explanations regarding the origins of the incest taboo. However, the claim that the taboo emerged as a preventive response to widespread incestuous attraction rather than as the expression of an almost universal aversion seems quite plausible and merits further scholarly attention.

In conclusion, building on the case of the kibbutzim, this study substantially challenges the current consensus over incest avoidance and the incest taboo, and it reveals the weaknesses of Westermarck's theory and of subsequent sociobiological and evolutionary theories regarding incest. We have also demonstrated that sociological explanations, in particular ones that emphasize social cohesion, offer promising directions for further

research and must be seriously considered in any future endeavors. Current popular and academic discourse regarding erotic relationships among siblings is organized around the concept of incest. This concept is associated with explicit sexual practices and with the social taboo. Our study suggests the need to expand this framework through an examination of the variety of erotic emotions and fantasies that may be part of sibling relationships.

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