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INTRODUCTION AND THEORY

Beginning with the pioneering work of Richard Alexander (1979), approaches based on evolutionary biology have been applied to an increasingly wide range of human societies, including hunter-gatherer societies (e.g., Chagnon 1983; Hill & Kaplan 1988), tribal societies (e.g., Barkow 1991; Irons 1979) and stratified societies (e.g., Betzig 1986; Dickemann 1979; Kroll & Bachrach 1990; MacDonald 1990; Weisfeld 1990). The research thus far indicates that evolutionary biology provides a powerful paradigm for understanding human behavior and suggests that this body of theory will eventually provide a paradigm that encompasses all of the social and behavioral sciences. The purpose of this essay is to extend the evolutionary paradigm to the study of possible group strategies occurring within human societies.

This book is likely to be highly controversial and troubling to many, since it depicts Judaism as a fundamentally self-interested group strategy, which has often been in competition with at least some sections of gentile society. Bear in mind, however, that evolutionary theory is not a "feel good" theory. The theory of Judaism presented here implies that Judaism must be understood as exhibiting universal human tendencies for self-interest, ethnocentrism, and competition for resources and reproductive success. But an evolutionary theory must also suppose that these tendencies are in no way exclusive to Judaism. Indeed, the theory of anti-Semitism proposed in a companion volume, *Separation and Its Discontents: Toward an Evolutionary Theory of Anti-Semitism* (MacDonald 1995; hereafter referred to as *SAID*), essentially states that gentiles also are self-interested, are ethnocentric, and engage in competition for resources and reproductive success.

The evolutionist is regarded in many circles as a nasty and unwelcome interpreter of ethnicity and ethnic conflict. But the evolutionist is also keenly aware of the ways in which our ideologies can rationalize our self-serving behavior. And, in a very real sense, we cannot afford to continue to hide our heads in the sand while ethnic conflict continues to escalate. A basic thesis of these volumes is that ethnic conflict can be greatly

illuminated by evolutionary theory. But evolutionary and psychological theory also provides some strong suggestions regarding the mechanisms for ameliorating this conflict. Only by understanding the past can we attempt to change the future in an intelligent manner.

THE IDEA OF A GROUP EVOLUTIONARY STRATEGY

The question of whether Judaism is properly conceptualized as a group evolutionary strategy is of great theoretical interest. Mainstream Darwinism from its origins has emphasized natural selection at the level of the individual or the gene, not the group. This powerful tendency has continued in most recent formulations of sociobiology, beginning with the seminal work of G. C. Williams (1966) and culminating in E. O. Wilson's (1975) synthesis.

Within this tradition, applications of evolutionary theory to human behavior have tended to conceptualize individuals as free agents whose self-interested behavior has been shaped by evolutionary forces acting on psychological mechanisms. Human social relationships are viewed as permeated by conflicts of interest, but research has tended to focus on the individual actor confronting an infinitely fractionated social space. Within that social space, individual strategy is viewed as depending crucially on biological relatedness to other individuals (the result of kin selection theory [Hamilton 1964]), as well as on several other individual difference variables, such as sex, age, and resource control.

Within this individualist perspective, the group is nothing more than a concatenation of self-interested individuals. Cooperation among individuals is understood as depending on perceived benefits to each individual. For example, Alexander (1979, 1987) emphasizes that humans tend to cooperate or even behave "altruistically" in the face of external threats—a point that is of some importance in developing an evolutionary understanding of Jewish history (see below and Chapter 6). Thus, Alexander's theory of socially imposed monogamy proposes that wealthy males give up their ability to have many wives or concubines in order to elicit the cooperation of lower-ranking males. The result is an egalitarian mating system, since each male would then have access to the same number of females independent of such characteristics as wealth and social status. Alexander proposes that such an egalitarian group would have a great deal of internal cohesion because lower-status males would have a stake in the system and would therefore cooperate more with the elite. Such a group would therefore have an advantage over other groups in which lower-ranking males perceive themselves to be exploited by higher-ranking males.

Note that in this analysis of behavior within the group each individual male is viewed as continually assessing his self-interest. If external conditions become less threatening, so that there is no need for the wealthy males to elicit the cooperation of lower-ranking males, the wealthy males would be expected to revert to a strategy in which they maximize their accumulation of concubines and wives. Correspondingly, lower-status males would be expected to continually assess the benefits versus the costs of continued group cooperation versus defection.

The idea of group strategies presents a quite different paradigm for human behavior. From a group strategy perspective, human societies are seen as ecosystems in which

different human groups are analogous to species occupying a common ecosystem and engaging in competition and/or reciprocity with each other. Thus, in the natural world, an ecosystem may comprise producer species as well as several levels of predator species and parasitic (and hyperparasitic) species. Species may also enter into mutually advantageous roles *vis-à-vis* each other—what ecologists term *mutualism*. Each species may be viewed as having an evolutionary strategy by which it adapts to a particular ecosystem.

The analogy with humans would be that stratified human societies offer the possibility of complex intrasocietal ecological strategies. D. S. Wilson (1989; see also Wilson & Sober 1994) has developed the theory of group-structured populations in which groups of individuals (coalitions) separate themselves off from the other members of the species. These groups can then be proposed to vary in their level of within-group altruism, ranging from extremely altruistic to completely individualistic. Because of their very high level of cooperation and even self-sacrifice, individuals within altruistic groups may then have higher biological fitness on average (i.e., leave more offspring) than individuals in individualistic groups. The result is that there is natural selection between groups.

A main purpose of the following section is to develop the theoretical basis for the claim that humans, perhaps uniquely among animals, are able to create and maintain groups that impose high levels of altruism on their members. Moreover, it is argued that the fundamental mechanisms rely ultimately on human abilities to monitor and enforce group goals, to prevent defection, and to create ideological structures that rationalize group aims both to group members and to outsiders.

These uniquely human abilities to create and enforce group strategies essentially remove all theoretical strictures regarding human social organization. For humans, the limits of human social organization are defined only by the limits of the human imagination. We shall see, however, that such a proposition most certainly does not imply that evolutionary thinking is therefore irrelevant to thinking about human social organization. It may indeed be the case that there are no interesting theoretical limits on the types of strategies that humans can invent, but whether or not these strategies are evolutionarily successful is a question that inevitably remains. And, in the present case, a primary burden of this book will be to show that Judaism as a group evolutionary strategy has often been a highly successful strategy for acquiring resources and achieving reproductive success within gentile host societies.

THEORETICAL BASICS: THE PLACE OF SOCIAL CONTROLS, IDEOLOGY, AND PLASTICITY IN EVOLUTIONARY THEORY

Evolution and Social Controls

Crucial to the discussion of Judaism in traditional societies will be evidence that social controls acting within the Jewish community have had an important role in maintaining the strategy. This in turn raises the general issue of the role of social controls in an evolutionary theory of human societies.[1]

Social controls can range from subtle effects of group pressure on modes of dressing to laws or social practices that result in large penalties to violators. Stratified societies are characterized by the possibility of very stringent controls on human behavior, and Betzig

(1986) presents many examples in which high levels of centralized political control (i.e., despotism) are associated with control over the persons and behavior of others. In the case of Judaism, there were often powerful community controls that minutely prescribed behavior in a wide range of settings, including modes of dressing, religious observance, business practices, and the type and extent of contact with gentiles.

Social controls that regulate behavior need not be viewed as determined by ecological contingencies or by evolutionary theory. For example, social controls supporting a socialist economic system may be viewed as being in the interests of many individual members of human society (presumably the lower social classes). On the other hand, social controls supporting a *laissez faire* capitalist society may also be viewed as being in the interests of other members of the society (presumably including successful capitalists). That the imposition of social controls will result in these types of economic or political systems is always a possibility, and there is thus no evolutionary reason to suppose that one or the other will necessarily characterize a given society. Conflict of interest over the distribution of economic resources is predicted by evolutionary theory, but whether socialism, *laissez faire* capitalism, or some intermediate form results from this conflict is underdetermined by evolutionary theory.

Within the present theoretical perspective, therefore, social controls are viewed as the outcome of internal political processes whose nature is underdetermined by evolutionary/ecological theory. Corresponding to this indeterminacy, these social controls may be quite insensitive to the genotypic or phenotypic characteristics of the individuals to whom they apply and cannot be analyzed reductionistically (i.e., as a genetic characteristic of individuals): Thus, whether or not one supports the idea of welfare payments to the poor, there may be strong penalties on avoiding taxes. Similarly, it will be seen in Chapter 6 that individual Jews could be prevented by the Jewish authorities from avoiding taxes that helped support the Jewish poor or from overbidding for economic franchises in competition with other Jews. Group interests could therefore be maintained, even if individual interests suffered.

Evolution and Ideology

Besides social controls, another theoretically important feature of the present treatment is the proposal that the religious ideology of Judaism is essentially a blueprint for a group evolutionary strategy (see Chapter 3). The point here is that although ideology often rationalizes evolutionary goals, it is underdetermined by evolutionary theory. Ideologies, like group strategies generally, may be viewed as “hopeful monsters” whose adaptiveness is an empirical matter.

The present essay describes Judaism as an evolutionary ideology and provides some indication of how this ideology has succeeded or failed in practice. Ideologies imply that factors internal to the individual, such as an individual’s personal beliefs, norms, and attitudes, often motivate and rationalize behavior. An evolutionary analysis of ideology proposes that individuals tend to believe what is in their self-interest (e.g., E. O. Wilson 1978), and there is certainly good evidence for this phenomenon in the psychological literature (e.g., Krebs, Denton, & Higgins 1988). However, like social controls, ideologies can be relatively insensitive to individual self-interest and are underdetermined by biological theory (see also Boyd & Richerson 1985).

The main reasons for supposing that ideologies in general are underdetermined by evolutionary theory are that (1) ideologies often characterize an entire society (or, in this case, the subculture of Judaism), and (2) ideologies are often intimately intertwined with various social controls. In the case of Judaism, and as described in Chapters 3–6, these social controls act within the Jewish community to enforce the stated ideological goals of maintaining internal cohesion, preventing marriage with gentiles, enforcing altruistic behavior toward other Jews, and excluding those who fail to conform to group goals. To the extent that an ideology characterizes an entire group, it becomes insensitive to individual self-interest, and to the extent that it is reinforced by social controls, it is possible that individuals who do not benefit from adopting the ideology will be socialized to do so. This is especially important because the thesis here is that Judaism is an altruistic group strategy in which the interests of individuals are subservient to the interests of the group (see especially Chapter 6).

As in the case of social controls and also because ideologies are so often intricately bound up with social controls, it is not possible to predict which ideology will prevail within a particular group. For example, ideologies may be egalitarian or anti-egalitarian. They may promote the deregulation of human behavior, or they may foster strong social controls on behavior. Like social controls, personal ideologies are strongly influenced by complex, group-level political processes and are thus not analyzable in a reductionistic manner as solely the property of an individual.

Theoretically, the ideologies and internal social controls that form the basis of group strategies are thus seen as underdetermined. Although group strategies are influenced by evolved human psychological mechanisms (see below), group strategies are in an important sense *unnecessary*. As the great Jewish historian Salo Baron notes, “It is clear, therefore, that to answer our question concerning the survival of the Jews as a separate entity in the Diaspora we must turn to the Jews themselves. The decision was one which they were free to make” (Baron 1952a, 118). At certain times and places, individual humans have developed and participated in group strategies, and others living in the same areas have not.

Ideologies can underlie altruistic group strategies, such as that of ancient Sparta (described below; see MacDonald 1988a, 301–304), or they may underlie individualistic systems, such as traditional English liberal political theory, which has recently been triumphant in the West. In some cases, ideologies may be quite successful in presenting a blueprint of a successful group strategy, or the ideology may result in a system that is a complete failure. Thus, Alexander (1979) describes a religious sect that forbade sexual relations of any kind between its members. Not surprisingly, the sect was short-lived. Moreover, while the group strategy of the ancient Spartans was successful for a significant period, it was ultimately a failure.

The perspective adopted here is thus non-deterministic. Within this framework, historical analysis focuses on the origin and maintenance of Judaism as an evolutionary ideology and as characterized by a particular set of internal social controls on the behavior of Jews, but with no implication that Judaism is in some sense ecologically or genetically determined or that it is necessarily adaptive for Jews at any stage of their history. Because of the indeterminacy of social controls and ideology, these contextual variables can be influenced by such historical events as the outcome of military engagements, which are themselves theoretically underdetermined (e.g., the successful

conquest of Canaan after the Exodus—surely a necessary condition for the development of Judaism) or the outcome of particular historical events such as the Egyptian sojourn, recounted in Genesis and Exodus.

Within this framework, it is quite possible that successful experience in following a particular strategy will influence whether that strategy is continued in the future or is instead altered in some basic manner. Thus, for example, if living as a minority among the Egyptians during the original sojourn recounted in Genesis and Exodus had resulted in a large increase in wealth and population, a similar diaspora strategy might be viewed as viable in the future—a point that we shall return to in Chapter 8 when I attempt to develop an evolutionary perspective on the origins of Judaism as a group evolutionary strategy. The success of such a diaspora strategy could not have been foreseen with certainty, and its success may well not have been known beforehand by its participants, but, given the early indications of success, it would be rational to continue the strategy.

An evolutionary group strategy thus may be conceived, at least partly (see below), as an "experiment in living," rather than as the determinate outcome of natural selection acting on human populations or the result of ecological contingencies acting on universal human genetic propensities. Supporting these experiments in living are ideological structures that explain and rationalize the group strategy, including the social controls utilized by the strategy.

Social controls in the service of achieving internal discipline (such as, for example, preventing exploitation by cheaters or non-cooperators) are theoretically important for the development of a successful altruistic group evolutionary strategy (D. S. Wilson 1989; see below). But there is no reason why an experiment in living must include such controls. One could perfectly well imagine a group strategy in which there were no provisions at all to exclude cheaters and exploiters. Such a strategy would presumably fail in the long run, just as Alexander's (1979) celibate religious sect failed. But that is not the point. Experiments are experiments: Some are successful and well designed, and others are not. The evidence reviewed in later chapters suggests that Judaism has survived as a group evolutionary strategy (albeit with several important changes) at least since the Babylonian captivity. If this is so, there is the implication that it has been a well-designed evolutionary strategy.

From the present perspective, humans (and probably only humans) are viewed as having sophisticated cognitive abilities that enable them to develop strategies in pursuit of evolutionary ends (MacDonald 1991; Itzkoff 1993). Within this perspective, the evolved goals of humans have been genetically influenced by our evolutionary past, but there are no constraints at all on how humans attempt to achieve these goals. As Itzkoff (1993) notes, the evolved motivational goals of humans can be achieved through uniquely human cortical/symbolic systems, with the result that behavior is only indirectly linked with reproductive success.

This is an extremely important aspect of the present conceptualization. As an example that illustrates the general principle, many evolutionary psychologists propose that human males have evolved traits that result in their attempting to copulate with nubile females, so that, for example, the prospect of mating with such a female would be accompanied by positive affective responses (including pleasurable sexual arousal).

Such a goal may be evolutionarily programmed, but the means by which individual males achieve such an evolved goal may vary widely and may well not be under any

genetic control whatever. Thus, a male with the affective goal of copulating with females may pursue a wide range of strategies, involving, perhaps, resource accumulation and exchange, seduction accompanied by deception, courting and falling in love, military engagements in which women are seized, or even rape—all of which would result in the ability to mate with females. None of these strategies for obtaining this evolutionary goal need be genetically determined. Any could be invented by the human mind utilizing its extremely sophisticated domain-general cognitive abilities (MacDonald 1991).

These strategies therefore need not be the result of natural selection, but may be a completely invented or "made up" product of the human mind. Some such strategies may fail miserably, but there is no question that humans can attempt a wide range of solutions for achieving evolutionary goals. The conclusion must be that we cannot develop a deterministic theory of a creature whose behavior can be significantly manipulated by "voluntary symbolic meanings" (Itzkoff 1993, 292).

Whether these strategies are successful is therefore a purely empirical question, but there is no theoretical reason to suppose that a strategy needs to be ultimately adaptive in order to persist for long periods of time. Nevertheless, as will be seen, the data presented in subsequent chapters indicate that Judaism has been quite successful in an evolutionary sense over fairly long stretches of historical time, although it has been subject to rather extreme swings of fortune, chiefly as the result of anti-Semitic actions. As is the case with any group strategy in which the strategizing group resides within a wider human society, the ecological limits of success are importantly determined by the actions of the other members of the society.

In summary, Judaism is here considered fundamentally as a cultural invention that is underdetermined by evolutionary/ecological theory and whose adaptiveness is an empirical question. However, it does not follow that there are no biological predispositions at all for developing the type of group evolutionary strategy represented by Judaism. In Chapter 8, I suggest that the ancient Israelites were genetically predisposed to be high on a cluster of psychological traits centering around group allegiance, cultural separatism, ethnocentrism, concern with endogamy, and a collectivist, authoritarian social structure. Evidence cited there indicates that these tendencies are very strong among widely dispersed Jewish groups in traditional societies and that they appear to be more common among other Near Eastern peoples compared to prototypical Western societies. Further, it is suggested that Judaism itself resulted in a "feed-forward" selection process in which Jewish groups become increasingly composed of individuals who are genetically and phenotypically predisposed to these traits.

Thus, while the theory presented in Chapter 8 falls well short of being a deterministic theory, an important component of the theory is that being relatively high on certain psychological systems has constituted a powerful predisposition for the development of Judaism as a group evolutionary strategy.

Evolution and Plasticity

Because of the "made up," unnecessary character of human group evolutionary strategies, these strategies actually assume an important role for human plasticity. Humans possess a great deal of behavioral plasticity and flexibility and are able to manipulate their own environments in order to produce adaptive (and sometimes

maladaptive) outcomes (MacDonald 1988a, 1988b, 1989, 1991). A major misconception of many critics of evolutionary approaches is their supposition that evolutionary accounts necessarily imply a high degree of genetic determination of human phenotypes. However, there is overwhelming evidence that in fact human behavior is significantly (but not infinitely) plastic. For example, behavior genetic research on intelligence and personality indicates that although genetic variation is indeed an important source of individual variation among humans, environmental variation is also important.

This finding that environmental variation affects human development implies an important role for human plasticity—the idea that the observed level of a trait can be altered depending upon which environment is experienced (from the set of all normally experienced and even abnormal, extreme environments). Behavior genetic studies attempt to sample a representative range of environments normally encountered in a given society (not the effects of extreme environments), and within these studies environmental variation typically accounts for approximately half of the variation for personality traits (see Digman [1990]; Plomin & Daniels [1987]; [Rowe 1993] for summaries). There is also considerable evidence for environmental influences on intelligence, although genetic variation is also important (e.g., Plomin & Daniels 1987; Scarr & Weinberg 1983).

Human plasticity, which also includes mechanisms such as various forms of learning, provides a mechanism such that humans can adapt to environmental uncertainty and lack of recurring structure within a finite range. The point here is that societies and subcultures are able to take advantage of this plasticity and manipulate their own environments in order to produce adaptive phenotypes. In the case of Judaism, it will be argued in Chapter 7 that both eugenic practices (taking advantage of human genetic variation) and manipulation of environments (taking advantage of human plasticity) have been enshrined in religious ideology and intensively practiced. By manipulating environments in this manner, Judaism has been able to develop a highly specialized group strategy, which has often been highly adaptive in resource competition within stratified human societies.

CONCEPTUALIZING HUMAN GROUP STRATEGIES

The general topic of group strategies among humans is central to the present endeavor. Since this topic is yet fairly unexplored territory, it is of interest to make some general statements regarding human group strategies and to attempt to briefly describe some prominent examples.

1. A group is defined as a discrete set of individuals that is identifiably separate from other individuals (who themselves may or may not be members of groups). As Rabbie (1991, 238) notes, there is no agreement on the definition of a social group among social psychologists. The present definition is a very minimal requirement, stating only that the groups must be well defined and distinct from other individuals or groups. Thus broadly defined, the concept would apply to football teams or members of modern corporations where membership is quite fluid and permeable. Political entities would also be groups in this sense. In the present case, evidence will be provided in Chapter 4 that Judaism has been characterized throughout its history by segregation from gentile societies and that

there was very little permeability between Jewish and gentile groups, at least in traditional societies.

2. Separation between groups can be actively maintained or maintained as the result of coercion. Groups actively maintaining separation between themselves and other groups are defined as engaging in group evolutionary strategies. It is of some practical importance to distinguish group partitions that are voluntary and self-imposed from those that are involuntary and imposed by others. Genetic and cultural segregation and a particular pattern of relationships may be imposed on one group by some other group(s) in the society. Thus, if slavery and genetic segregation of one ethnic group is imposed by another ethnic group, it is reasonable to view the behavior of the latter as a group evolutionary strategy because it is actively maintaining genetic and cultural segregation from the other group. Such a situation would hardly qualify as a strategy on the part of the enslaved group, but may well be a strategy by the enslaving group.

In the present case, the evidence provided in Chapters 3 and 4 indicates that Judaism has actively maintained genetic and cultural segregation and thus qualifies as a group evolutionary strategy. There are many other historical examples where group partitions have been actively imposed on another group. For example, the ancient Spartans enslaved another ethnic group (the Helots) (Hooker 1980). The point here is that this arrangement would qualify as a group evolutionary strategy for the Spartans because the genetic segregation is actively maintained by the strategizing group, but it would not qualify as an evolutionary strategy for the enslaved Helots, since there is good evidence that the Helots attempted to end their enslavement. Similarly, the *Nethinim* lived among the ancient Israelites as a genetically and culturally segregated lower caste, perhaps deriving from the peoples originally displaced after the Exodus (see discussion in Chapter 3). The *Nethinim* were never incorporated within the Jewish people.

3. Strategizing groups can range from complete genetic segregation from the surrounding population to complete panmixia (i.e., random mating). Strategizing groups maintain a group identity separate from the population as a whole, but there is no theoretical necessity that the group be genetically segregated from the rest of the population. Thus, Wilson, Pollock, and Dugatkin (1992) note that one theoretically attractive possibility for the evolution of altruism in some life forms is that altruism could evolve in populations of "alternating viscosity." In these populations, altruism within a group of close relatives early in the life cycle (the viscous phase) allows the group to have more offspring. However, individuals from these altruistic groups must then disperse and mate randomly with individuals from the rest of the gene pool (the non-viscous phase). Since population regulation is postulated to occur only during the non-viscous phase, the altruistic groups are protected from invasion by selfish individuals. But this is accomplished despite the fact that genetic segregation is not maintained in the non-viscous phase.

At a theoretical level, therefore, a group strategy does not require a genetic barrier between the strategizing group and the rest of the population. Group evolutionary strategies may be viewed as ranging from completely genetically closed (at the extreme end of which there is no possibility of genetic penetration by surrounding populations) to genetically open (at the extreme end of which there is completely random mating [termed *panmixia*]). In the case of Sparta, membership in the group of Spartan citizens was entirely hereditary, and there is no indication of any interbreeding between the Spartans

and the Helots (see MacDonald 1988a, 301ff). In the case of Judaism, evidence will be provided in Chapter 2 that in fact there have been significant genetic barriers between Jews and gentiles, and in Chapters 3 and 4, it will be shown that these barriers were actively maintained by a variety of cultural barriers erected by Jews against significant gentile penetration of the Jewish gene pool. The evidence provided there indicates that through the vast majority of its history Judaism has been near the completely genetically closed end of this continuum.

However, while it is clear that panmixia between Jews and gentiles has never occurred, there has been some gentile penetration of the Jewish gene pool. In the present volume, therefore, it is hypothesized that historical Judaism has been a fairly genetically closed group evolutionary strategy in which genetic differences between Jews and gentiles have been actively maintained by Jews. Moreover, the data summarized in Chapters 3 and 4 indicate that extremely powerful cultural barriers have been erected by Jews in order to prevent assimilation into gentile societies.[2,3]

4. Altruism within strategizing groups may be facilitated by kinship relationships within the group. Beginning with Hamilton's (1964) seminal essay on kin selection theory, evolutionary models have shown that relatives have a lower threshold of altruism than non-relatives (D. S. Wilson 1991; Wilson & Sober 1994). From an evolutionary perspective, it is expected that the cohesiveness of the group and altruism within the group are facilitated by the existence of significant genetic commonality within the segregating group and a corresponding genetic gradient between the segregating group and the rest of the society. Further, if there were a genetic gradient separating the segregating group from the surrounding society, the temptation for individuals of the segregating group to defect from the group strategy is lower.

In Chapter 2, it will be shown that Judaism has been characterized by the existence of a genetic gradient separating Jews from gentiles and that indeed there is significant genetic commonality among Jewish groups widely separated in time and space. From the standpoint of evolutionary theory, the thesis of this essay is that Judaism may be viewed as consisting of a large kinship group whose members are widely separated in space, but whose behavior is nevertheless strongly influenced by their kinship ties (see especially Chapter 6). Moreover, since many diaspora Jewish communities were founded by only a very few families and since immigration to these communities by other Jews was often discouraged, biological relatedness within Jewish communities was often quite high (Fraikor 1977). The fundamental kinship nature of Judaism and its role in facilitating within-group altruism will thus figure prominently in the present treatment. Similarly, the very high levels of altruism characteristic of Spartan society (see below) may well have been facilitated by the close kinship ties of the group.[4]

5. Powerful group controls on individual behavior are often an important mechanism for promoting altruism and ensuring conformity to group interests in strategizing human groups. Although high levels of kinship within strategizing human groups are expected to lower the threshold for altruism, kinship by itself is not expected to be sufficient to result in high levels of altruism. The entire edifice of modern evolutionary theory implies that self-sacrificing behavior is highly problematic. Models of group selection face the difficulty that the forces of population regulation inevitably lead to the evolution of selfishness within groups (Wilson, Pollock, & Dugatkin 1992). This problem is especially acute in large groups where the ties of genetic relatedness become quite weak and are

thus unable to support high levels of self-sacrifice. As a result, in the absence of coercion, individuals are expected to quickly defect from group strategies in which individual interests are not being maximized.

Boyd and Richerson (1992) have shown that punishment allows for the natural selection of altruism (or anything else). In the case of human groups, punishment that effectively promotes altruism and inhibits non-conformity to group goals can be effectively carried out as the result of culturally invented social controls on the behavior of group members. Thus, while it may well be that group-level evolution is relatively uncommon among animals due to their limited abilities to prevent cheating, human groups are able to regulate themselves via social controls so that theoretical possibilities regarding invasion by selfish types from surrounding human groups or from within can be eliminated or substantially reduced (Wilson & Sober 1994).

Facilitating altruism by punishing non-altruists can be viewed as a special case of the general principal that social controls can act to promote group interests that are in opposition to individual self-interest. Group strategies must typically defend themselves against "cheaters" who benefit from group membership, but fail to conform to group goals. Human societies are able to institute a wide range of social controls that effectively channel individual behavior, punish potential cheaters and defectors, and coerce individuals to be altruistic.

In the case of Judaism, the central authority of the *kehilla* system of self-government in the diaspora provided a powerful mechanism for excluding Jews (often termed "informers") who failed to conform to group goals by, for example, collaborating with gentiles against the interests of the Jewish community or who engaged in behavior such as dishonest business practices with gentiles that was likely to lead to anti-Semitism. Moreover, as indicated in Chapters 4 and 6, there were strong community sanctions on individuals (and their families) who violated group norms against intermarriage with gentiles, socialized with gentiles, patronized businesses owned by gentiles, or attempted to bid against other Jews who owned franchises obtained from gentiles.

Another example of a group evolutionary strategy based on high levels of within-group altruism supported by community controls is provided by the ancient Spartans (see MacDonald 1988a, 301–304); 1990). The Spartans originated as a group of biologically related Dorian tribes. As proposed here also with respect to Judaism, these kinship ties within the Spartan community presumably lowered the threshold for altruism, but ultimately it was the highly centralized political authority of the state that produced a strong sense of group goals and self-sacrifice among the Spartan citizens. As Hammond (1986) notes, the Dorian state formed "a remarkably compact and almost indestructible community . . . it generated an intense patriotism and dynamic energy" (p. 101). The Spartans were known for their self-sacrifice and willingness to give their lives for the state. "[T]he Spartan, from his childhood on, has learnt to give his life for his country, without any hesitation. Not only the state, the laws, the leaders, and the comrades expect this of him, even his own mother finds it natural that her son should be either victorious or dead" (Tigerstedt 1974, 20).[5]

6. Altruistic group strategies often develop controls that effectively limit the extent of within-group altruism. Altruistic group strategies run the risk that an altruistic strategy could be invaded by freeloaders who would take advantage of the altruism of some group members. This indeed is the fundamental difficulty that makes the evolution of altruistic

groups in the natural world so problematic. Strictly speaking, there is no theoretical requirement that altruistic group strategies adopt limits on altruism, but evolutionary theory suggests that without such limits the strategy is likely to fail. In the case of Judaism, the evidence presented in Chapter 6 indicates that there were indeed limits on Jewish altruism, including various sorts of discrimination against poorer Jews by setting quotas on marriage and minimum dowries and by directing Jewish charity preferentially toward more closely related Jews.[6]

7. The minimization of conflicts of interest within the group is expected to facilitate the willingness of individuals to cooperate and engage in altruism. As indicated in the above discussion of Alexander's (1979) theory of socially imposed monogamy, egalitarian institutions are expected to facilitate cooperation and altruism within the group. This point can perhaps best be seen by considering the expected consequences of despotism on cooperation and self-sacrifice by lower-status males. Research in evolutionary anthropology has indicated that the vast majority of stratified human societies have been characterized by despotism and intensive polygyny by wealthy males (e.g., Betzig 1986; Dickemann 1979; MacDonald 1983). In a despotic situation, lower-status males are more likely to perceive themselves as exploited by upper-status males and as benefiting little from cooperation or altruism. Self-sacrifice and voluntary cooperation in such a situation are expected to be minimal because the benefits of such behavior are more likely to accrue to the despot while the costs are borne by the lower-status males. At the extreme, if the lower-status male is a slave, cooperation and self-sacrifice can only occur as the result of coercion. The expected association between egalitarianism and altruism can be seen by again considering ancient Sparta. We have already noted the high level of altruism among the Spartans, but there is also evidence for a pervasive egalitarianism among the Spartan citizens, including sexual egalitarianism (Hammond 1986, 104; Jones 1967, 37).

Egalitarianism may well facilitate altruism and cooperation within strategizing groups by minimizing social conflict, but there is no reason to suppose that egalitarianism is the only mechanism available to a strategizing group that would have this effect. The important point is to minimize conflicts of interest within the group, and although egalitarianism accomplishes this result, other mechanisms are possible.

In the case of Judaism, the material reviewed in Chapters 5–7 indicates that there were indeed powerful forces that tended to minimize conflict of interest within the Jewish community, including economic cooperation and patronage and high levels of charity. Nevertheless, the data do not indicate that Judaism has typically been characterized by a high degree of social and political egalitarianism. Rather, the historical record suggests that Judaism for much of its history has been characterized by the development of a highly competent elite who acted in the interests of the entire group and whose wealth came ultimately not from exploiting other Jews, but as a result of economic transactions with the gentile community.

In Chapter 7, evidence is provided that Jewish education and eugenic practices were directed at producing such an elite and that access to elite status was meritocratic. Thus, although Jewish groups have been far from egalitarian, the allegiance of lower-status Jews may well have been fostered because they benefited both directly and indirectly from the economic activities of the elite and because they could hope that they or their

children could attain elite status through merit. Conflict of interest within the community was minimized.

8. Altruism and internal cohesion within a strategizing group are expected to be maximized in situations of external threat. The importance of group conflict in producing powerful cohesion within groups combined with hostility toward outgroups is apparent in the writings of several 19th- and early-20th-century anthropologists, such as Spencer, Tylor, and Sumner (see van der Dennen 1987). Among evolutionary theorists, Alexander (1979, 1987) has emphasized the importance of external threat in creating high levels of cohesion, cooperation, and self-sacrifice. In situations of external threat, individual self-interest increasingly coincides with the survival interest of the group, and since Jews have typically lived as a minority group in the midst of an often hostile gentile society, this mechanism for producing altruism and within-group solidarity may well be of considerable importance. Although statements linking altruistic behavior with external threat are difficult to verify, several historians of Judaism have concluded that external threat has indeed been an important mechanism for social cohesion and altruism among Jews (see Chapter 6). The external threats represented by the other Greek city-states and the Persian Empire may well also have been a strong influence on the extraordinary levels of social cohesion and altruism exhibited by the Spartans.

9. In addition to mechanisms of social control that involve monitoring and enforcing compliance with group goals and excluding cheaters, group strategies may also rely on psychological mechanisms that predispose humans toward adopting group strategies. The theoretical analysis of groups presented here has emphasized the importance of social controls that monitor and enforce group goals and exclude cheaters. Nevertheless, it has also been suggested that group strategies may be facilitated by specific evolved psychological mechanisms promoting group allegiance, cultural separatism, ethnocentrism, concern with endogamy, and a collectivist, authoritarian social structure. Such mechanisms will be a vital concern here. Individuals high on these traits may be more prone to develop highly cohesive, exclusionist group strategies, and, once constituted, there may be self-selection processes that ensure that individuals who are high on these traits are less likely to defect from the group strategy and individuals who are low on these traits are likely to be forcibly excluded from the group. These issues are discussed in Chapters 7 and 8.

10. Because of the problematic nature of altruistic behavior, altruistic group strategies will tend to have highly elaborated mechanisms of group socialization. Besides the psychological mechanisms mentioned in the previous section, another very important psychological aspect of Judaism as a group evolutionary strategy appears to involve intense socialization toward group identification and within-group altruism. There is good reason to suppose that, in the absence of social controls, natural selection alone could not have produced altruistic human groups. Psychological mechanisms are thus likely to be biased toward self-interest, and, as a result, it is not surprising to find that altruistic group evolutionary strategies among humans are characterized by intensive socialization pressures focused on the inculcation of altruism and acceptance of group, rather than individual, goals. A major theme of Chapter 7 will be that Judaism, at least in traditional societies, has been characterized by community-controlled education in which children are socialized to accept group goals, such as cultural separatism and within-group altruism, and to reject important elements of gentile culture.

Other altruistic group strategies have also placed an important emphasis on socialization for group goals. Among the Anabaptist groups (including the Hutterites mentioned above), there is an important emphasis on being able to have complete control over children's education and to avoid education in secular schools (see Hostetler 1992). An important feature of ancient Sparta was that the state assumed the entire responsibility for childrearing after the early years. Children were viewed as the property of the state and were taken away from the home and educated "according to a rigorous discipline of quasi-military type" (Hooker 1980, 137). Complete obedience to authority and total allegiance to group goals were emphasized, including the acceptance of making the ultimate sacrifice for the good of the group.

11. While competition between groups is a common consequence of group strategies, between-group competition is not a necessary consequence of the development of group strategies. The thesis of Chapter 5 of this volume is that Jews as a cohesive, genetically and culturally segregated group have often engaged in intense resource and reproductive competition with the host society. However, such between-group competition is not necessary to the general concept of an evolutionary group strategy.

Certain fundamentalist religious groups, such as the Amish, may well be examples of non-competitive group strategies. These strategies essentially advertise to the surrounding society that they are not going to engage in resource competition with the larger society. Thus, the Amish have continued to utilize the technology of the 18th century in their agricultural practices, minimizing competitive relationships with the host society. One might tentatively term these strategies "benign group strategies," since, although as a defenseless minority they appear to rely on the host society's good will for their very existence, there is no attempt to compete with the host society. Indeed, by adopting outmoded agricultural practices and avoiding modern secular education there is the virtual assurance that they will not outcompete the host society. It is as if they say to the host society: "We want to go our separate way; we promise not to compete with you and will only engage in economic reciprocity and never attempt to economically exploit you." Hasidic Jews may function in this manner in contemporary societies and their non-competitive status would ameliorate anti-Semitism directed against them (see *SAID*, ch. 2).

12. Strategizing groups span the range from ecological specialists to ecological generalists. A further dimension that is relevant to the conceptualization of group strategies is whether there is a consistent set of relationships between the strategizing group and other groups such that in ecological terms the strategizing group may be viewed as an ecological specialist. In the case of the Spartans, there was a consistent relationship between themselves and their Helot slaves. Moreover, Sparta was completely specialized as a military state to the point that its citizens produced no art or literature. Every male adult was a citizen-soldier in the service of the state. Clearly, the Spartan group strategy was highly specialized, and training in this highly specialized military role began early in life. This intensive socialization for military prowess (as well as for self-sacrifice and a group orientation) was extremely rigorous, and the results were spectacularly successful: Despite their small size, the Spartans achieved the status of a world power and remained undefeated in military engagements on land for at least two centuries until the attrition caused by the constant warfare eventually resulted in Sparta's decline.

The specialization of the Spartans undoubtedly was an element in their success as a group, but there is no theoretical reason to suppose that group strategizers must necessarily specialize in a distinct role *vis-à-vis* other groups. It was suggested above (see note 3) that upper-caste Indian Brahmins may be viewed as following a genetically fairly open group evolutionary strategy. This caste clearly had a highly specific caste relationship to other groups in Indian society, but there is no reason to suppose that they developed a highly specialized set of behaviors analogous to the military specialization of the Spartans.

Moreover, it is quite conceivable that a strategizing group would be entirely opportunistic in its relationships with other groups within a society—adopting one strategy under one set of circumstances and a quite different strategy under another. Nevertheless, although an opportunistic strategy is conceivable, it is unlikely to be as successful as specialization for abilities that are always advantageous in economically advanced human societies. As in a natural ecosystem, it verges on theoretical impossibility for one species to develop the role of predator, parasite, and primary producer.

Similarly, in the extremely competitive human environment, a high level of specialization appears to be advantageous. Specialization allows for the development of cultural practices directed at becoming extremely competent at a particular type of role. If this role is commonly available within human societies or is useful in intersocietal competition, then the strategizing group will be able to be highly competitive because the group can specialize in traits suited to that role.

The strategizing group can engage in intragroup eugenic practices for traits conducive to the successful pursuit of the ecological role. (The Spartans practiced infanticide against any weak or sickly children. Significantly, the decision was made not by the parents, but by the central authorities—another indication of the privileged position of group interests over individual interests.) In addition, the strategizing group can develop environments that are ideally suited for the development of the desired traits. (In the case of Sparta, there was a prolonged and intensive education in military skills, as well as a strong emphasis on socializing affective bonding among the male citizens.)

In the case of Judaism, it will be argued that there has been a considerable degree of specialization such that Jews have in general attempted to fulfill and have quite often succeeded in fulfilling a particular type of economic and social role within human societies. The evidence reviewed in Chapter 7 indicates that Judaism has emphasized eugenic practices as well as cultural practices and ideological structures that foster a specific set of phenotypic traits (especially intelligence, high-investment parenting, and allegiance to the group) that are advantageous in stratified human societies. By specializing in these traits, Jews have been able to compete successfully with gentile members of many societies for positions in which literacy and intelligence are important (see Chapter 5). Moreover, because Jews have possessed these traits and because Jews have maintained genetic and cultural segregation from the societies they have resided in, Jews have often been utilized by alien ruling elites as an administrative class governing native subjects (see Chapter 5). Thus, the thesis of this volume is that Jews have attempted to develop and have often succeeded in developing a specialized role within human societies.

Moreover, another result of this specialization is that Jews in the diaspora have almost never been engaged in what ecologists term *primary production* (i.e., in the human case, working as a laborer in agriculture). Rather, the data reviewed in this volume (see especially Chapter 5) indicate that Jews have become specialized for occupational niches at the upper levels of the human energy pyramid. And in ecological terms, this implies that Jews as a group, like other high-status groups in traditional human societies, serve as consumers of energy produced by lower-status gentile members of society laboring in the area of primary production.

CONCLUSION: THE FIVE INDEPENDENT DIMENSIONS OF HUMAN GROUP EVOLUTIONARY STRATEGIES

These twelve statements are related to five theoretically significant independent dimensions relevant to conceptualizing human group structure in evolutionary terms: (1) a dimension ranging from complete voluntarism, in which the strategizing group voluntarily adopts its strategy, at one extreme to complete coercion, in which the group is forced to adopt significant aspects of its strategy, at the other; (2) a dimension ranging from complete genetic closure, in which the group is closed to penetration from other individuals or groups, at one extreme to complete genetic openness (panmixia), at the other; (3) a dimension ranging from high levels of within-group altruism and submergence of individual interest to group interests at one extreme to complete within-group selfishness at the other; (4) a dimension ranging from high between-group resource and reproductive competition at one extreme to very little between-group resource and reproductive competition at the other; and (5) a dimension ranging from high levels of ecological specialization at one extreme to ecological generalization at the other. It is proposed that human group evolutionary strategies vary along all of these dimensions independently.

Because of the lack of theoretical strictures on human group evolutionary strategies, the structure of this volume will reflect the need to provide empirical evidence regarding the status of Judaism on these five dimensions. Although qualifications to these propositions will be necessary at various points in the argument, the burden of this essay will be to show that historical Judaism can be reasonably conceptualized as follows: (1) Judaism is a self-imposed, non-coerced evolutionary strategy, although at times anti-Semitic actions have had effects that dovetailed with Judaism as an evolutionary strategy; (2) Judaism is a fairly closed group strategy in which much effort has been devoted to resisting genetic assimilation with surrounding populations, and, moreover, this effort has been substantially successful; (3) Jews have typically engaged in resource and reproductive competition with gentile societies, often successfully; (4) there is a significant (but limited) degree of within-group altruism, traditionally enforced by powerful social controls and always enshrined in religious ideology; and (5) there is a significant degree of role specialization, specifically specialization for a role in society above the level of primary producer characterized by cultural and eugenic practices centered around intelligence, the personality trait of conscientiousness, high-investment parenting, and group allegiance.

At a fundamental level, a closed group evolutionary strategy for behavior within a larger human society, as proposed here for Judaism, may be viewed as pseudospeciation:

Creation of a closed group evolutionary strategy results in a gene pool that becomes significantly segregated from the gene pool of the surrounding society. Within the strategizing group, there is increasing specialization so that the group is able to become extremely adept at occupying a specific type of niche that is commonly available in human societies. If the strategizing group then undergoes a diaspora and therefore lives among a wide range of human societies, members of the strategizing group, like conspecifics in the natural world, will have greater genetic ties with the dispersed members of their ingroup than with the other members of the society in which they live. Moreover, the within-group genetic commonality predisposes strategizing group members to relatively high levels of within-group altruism and cooperation, while the genetic barrier between the strategizing group and the surrounding society facilitates instrumental behavior directed toward the surrounding society. Moreover, the strategizing group is able to protect itself against freeloading individuals by instituting powerful social controls and belief systems so that a significant level of altruism is maintained within the strategizing group and cheaters who compromise group interests are punished.

Evidence supporting the thesis that Judaism is an ecologically specific strategy can reasonably be found by looking at Jewish religious ideology and practice as well as by examining marriage practices that might suggest inbreeding for specific traits. Contemporary data on distributions of phenotypic traits, such as intelligence and parental investment, among Jews is also confirmatory evidence for cultural selection for particular specialized traits. Moreover, the theory of a specific strategy is supported if there is evidence that Jews have tended to hold particular types of occupations in a wide range of societies and that the individuals holding these occupations have been relatively fertile compared to others within the Jewish community. If these patterns are a reasonably expectable outcome of Jewish religious ideology and practice and if they recur in a wide range of historical societies, then it is reasonable to suppose that this pattern of relationships is not the result of coercion, but represents an evolutionary strategy.

One difficulty in establishing that Judaism is an evolutionary strategy is that one must deal with immense stretches of historical time—at least the time span from the Babylonian captivity (587 B.C.) to the present. There is thus likely to be considerable historical variation in the extent to which these hypotheses are correct, and there is certainly variation in the amount and trustworthiness of available historical data.

Nevertheless, much of this difficulty can be obviated by the availability of contemporary genetic data on populations that have been separated for many centuries. Thus, even if we do not know the extent of conversions and intermarriage in many historical eras or the extent to which Judaism officially or unofficially encouraged genetic admixture at particular times, the finding of significant genetic segregation in contemporary populations would indicate that endogamy (non-panmixia) within the Jewish community was a significant force throughout Jewish history and thereby would support the hypothesis that Judaism has been a predominantly closed group evolutionary strategy.

It should be noted that there has in fact been a great deal of similarity among Jewish communities scattered around the world in traditional societies. For example, Katz (1961b, 9) states that “Jewish history to some extent repeats itself, not only in the temporal dimension, but primarily in the spatial dimensions. The history of Jewish communities, though they still possess their own unique ingredients, read like variations

of the same theme." To a great extent, "the widely scattered sections of the Jewish people represent a uniform social entity" (p. 11; see also Ritterband 1981, 3).

This powerful commonality over historical time can also be seen at the ideological level. Neusner (1987, 165) finds that although there have been several "Judaic systems" throughout history, they are "of a type":

> All of the continuator-Judaisms claimed to stand in a linear and incremental relationship to the original. They made constant reference to the established and authoritative canon. They affirmed the importance of meticulous obedience to the law. Each one in its way proposed to strengthen or purify or otherwise confirm the dual Torah of Sinai. . . . One system after another took shape and made its own distinctive statement, but every one of them affirmed the definitive symbolic system and structure of the original.

Thus, although it will be necessary to consider some very interesting and important variations among historical Jewish communities, it will be apparent that there is also an overwhelming social and ideological unity to historical Judaism. To anticipate the conclusion, the evidence reviewed in the following chapters indicates that for all practical purposes Judaism may be viewed as a unitary group evolutionary strategy.

NOTES

1. The discussion in this and the following section follows MacDonald (1983, 1988a, 1988b, 1989, 1990).

2. However, the data discussed in *SAID* (ch. 10) indicate that the relaxation of these cultural barriers in recent times has led to fairly high rates of genetic admixture, although the ultimate status within the Jewish community of these genetically mixed individuals remains doubtful, and some Jewish groups continue to completely resist genetic assimilation. These data strongly suggest that the perpetuation of a group evolutionary strategy in which there is a genetic gradient between the segregating group and the host society is extremely difficult and must be actively maintained.

3. An example of a fairly open group evolutionary strategy is provided by the caste system of India, as described by E. O. Wilson (1975, 555). In India, wealthy, powerful males were able to mate with many lower-status concubines (Betzig 1986; Dickemann 1979). As a result, even though the upper-caste males had a high level of reproductive success, there were only slight variations in gene frequencies and morphological traits between the castes. Presumably, in the case of India, there was a relative homogenization of the genetic composition of the population because of female hypergamy: The genetic composition of the entire population came to resemble the composition of the reproductively successful upper-class males. Nevertheless, since there were indeed some differences in gene frequencies resulting ultimately from rigid social barriers between the castes, upper-caste status in India may be viewed as a group evolutionary strategy that approaches panmixia, but that closes access to positions of highest breeding potential to genetic penetration from lower castes. Alterations in gene frequency thus occurred in a

top-down manner, as wealthy, powerful Brahmin males were able to have a disproportionate effect on population gene frequencies.

Zenner (1991, 79) notes that overseas Hindus living in diaspora conditions have tended to strongly resist genetic assimilation with the surrounding society. Such behavior contrasts with that of the overseas Chinese: Zenner (1991, 78ff) shows that, despite considerable ethnocentrism, overseas Chinese living in diaspora conditions were quite tolerant of intermarriage and actively participated in local religions. Such behavior would be expected in the long run to lead to complete assimilation.

4. There is no general expectation that human group strategies will be characterized by high levels of within-group altruism based on kinship ties. In the case of the Indian caste system described in note 3, there is no reason to suppose that upper-caste status is in any way based on within-group altruism. Based on Dickemann (1979), upper-caste males controlled high levels of resources and political power, and there was a high level of intermarriage among the elite. Such marriages among the elite functioned quite differently than concubinage relationships with lower-status females, since the offspring of such marriages were assured of inheritance rights. However, there is no reason to suppose that these upper-caste males behaved in an altruistic, self-sacrificing manner toward each other (although there was presumably a great deal of caste solidarity among them). And, obviously, there is no reason whatever to suppose that the use of lower-status females as concubines of the wealthy represented altruism on the part of lower-status males. Coercion is a far more likely explanation for this state of affairs.

5. Sexual relationships in Sparta also indicate a high level of within-group altruism. Lacey (1968) notes a Spartan ideology opposed to sexual jealousy and the persistent and unequivocal evidence for wife-sharing among them. Community social controls that facilitate within-group altruism have occurred in other human groups. Writing of pre-industrial England, Laslett (1983; see also Quaife 1979) notes that solvent households took in paupers as servants, perhaps as official village welfare policy, and he also notes the commonness of transfer payments from the households of the more prosperous to those of the less prosperous during the 17th and 18th centuries. The Hutterites, as described by D. S. Wilson (1989; see also Wilson & Sober 1994), appear to represent a highly self-sacrificing group strategy, which simply excludes those not willing to submerge their own interests to those of the group.

6. Although there were community controls favoring altruism in 17th-century England, altruism was far from complete. Although starvation was not common, Quaife (1979, 22) finds that individuals who had been forced to accept apprentices and servants sometimes responded by treating them very badly. Moreover, Quaife finds that the authorities strongly discouraged illegitimate offspring because these individuals would have to be supported by the poor rate. Wrightson (1980) and Amussen (1988) also note the very harsh treatment of bastard bearers in mid-17th-century England, with repeat offenders committed to a year in prison.