

RELIGION AND CULTURAL SURVIVAL

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The role of religious practices in cultural evolution and the interrelations of religious and other cultural practices are the topics of this paper. This paper provides a descriptive analysis of the social and historical conditions of which religious practices have been generated. Additionally, the relation of religious practices to the outcome of cultural survival is discussed. Our analysis draws upon a number of distinctions: cultural vs. noncultural practices, religious vs. nonreligious, religious vs. moral, and moral vs. other cultural practices. We address the significance of these distinctions to the role of religious practices in cultural survival and conclude with a discussion of the challenges facing behavior analysts as cultural engineers.

Religious practices of one type or another are aspects of all cultures. Traditionally, religion has been understood as a structure established for the guidance and comfort of persons who lack other means of escaping from the exigencies of life. Sociologists, anthropologists, theologians, and others have written extensively on the subject. Researchers studying the sociology of religion have appealed to theoretical perspectives, such as "rational choice theories," in an effort to understand religion's influence in our society (Batson, Schoenrade, & Ventis, 1993; Becker & Eiesland, 1997; Sherkat & Ellison, 1999). However, little elaboration as to the nature of religious practices, the circumstances responsible for their stability over time, and their relevance to cultural survival from a naturalistic, behavioral perspective has surfaced. The prevalence of religious practices and beliefs across all cultures and history warrants attention from behavioral psychologists; and such scrutiny has begun to emerge from within the behavior analytic community. A number of these formulations (e.g., Biglan, 1995; Glenn, 1989) have benefited from interdisciplinary contacts, significant among these have been commerce with behavioral anthropology (Harris, 1979). Others have proceeded on more specifically behavioral grounds (e.g., Hayes, 1988; Kantor, 1982; Malott, 1988; Skinner, 1972). Nevertheless, whereas the analysis of cultural practices

and their role in cultural survival has broadened the scope of behavioral psychology considerably, religious practices have attracted relatively little attention (although see Schoenfeld, 1993).

Our aim in this paper is to contribute to an understanding of religious practices, the conditions responsible for their origin and maintenance, as well as the relation they sustain to the outcome of cultural survival from a naturalistic perspective. In presenting this analysis, first, the definition of religious practices is isolated from other types of cultural practices. This isolation is achieved by comparing and contrasting behavioral analyses of cultural and noncultural practices, religious and nonreligious practices, religious and moral practices, and between moral and other cultural nonreligious practices. Having drawn distinctions, we attempt to show how the characteristics of religious practices suggest somewhat different circumstances for their origin and maintenance than prevail for other types of cultural practices. Finally, we address the implications of religious practices for cultural survival. We conclude with a discussion of the role of behavior analysts as cultural engineers.

Isolation of the Definition of Religious Practices

Distinction between Cultural and Noncultural Practices

Marvin Harris' (1979) "cultural materialism" provides a point of entry for our discussion. Harris distinguishes between the infrastructural requirements of cultures and the practices sustained in cultures. Infrastructural requirements are made up of production/reproduction contingencies emerging from the physical environments where cultures have evolved. Thus, infrastructural contingencies participate in the survival of a group in a particular environment; therefore determine a class of noncultural practices.

Cultural practices are identified in units called "actones." "Actones" are divided into structural and superstructural types, distinguished primarily on the basis of whether the practice relates people to other people, or people to things and/or institutions (i.e., organizations). Structural practices are those that regulate relations among individuals in groups, pertaining primarily to domestic and political issues. Superstructural practices involve regulations between individuals and institutions, including scientific, religious, governmental, artistic, and ideological institutions.

Both types of cultural practices (e.g., structural and superstructural) are assumed to emerge from the infrastructural requirements of cultures. Simply stated, cultural practices satisfy infrastructural requirements and arise specifically because they do so. Harris (1977, 1985) provides numerous examples of the emergence of cultural practices out of infrastructural requirements, including the practice of cow worship and prohibition of eating beef in India. According to Harris, India's population had increased beyond the productive capacity of the environment. To support the increased population, more efficient use of land became necessary. Specifically, it became necessary to produce crops for direct

human consumption, rather than first running those crops through cattle, then eating the cattle. This change further required the preservation of cattle to support farming efforts. Despite the need for a change of cultural practices, the privileged Brahmans and Kshatriyas continued to eat beef; and to make this possible, employed taxation, confiscation, and other coercive measures to induce the peasants to donate their surplus animals to the temples (Harris, 1985, p. 55). This coercion, Harris argues, led to the development of a number of popular religions with rules prohibiting the killing and eating of cattle, and these "non killing religions had great mass appeal" (Harris, 1985, p. 55), particularly to the masses whose few remaining cattle were being eaten by the elite.

In summary, Harris' materialistic analysis suggests that cultural practices evolve in accordance with changes in the culture's infrastructural requirements. Additionally, the relationship between cultural practices and infrastructural requirements is essential for group survival. Hence, survival is the overriding contingency and outcome measure.

In agreement with Harris, Glenn (1989, see also Glenn & Malagodi, 1991) asserts that those practices that are consistent across individuals over generations, in addition to contributing toward group survival are cultural practices. Glenn takes issue with Harris' approach, however, for his neglect of the role of verbal behavior in cultural survival. Structural and superstructural practices, she argues, are comprised of verbal behaviors, for the most part, in the form of rules. According to Harris (1979, p. 59) however, verbal behavior such as scientific thinking and practices can not assume a material social existence unless those thoughts and practices result in material products that satisfy infrastructural requirements. Harris (1979, p. 275) asserts that rules do not govern behavior; they facilitate, motivate, and organize behavior. The governance of behavior from Harris' perspective should be found in the material products as conditions of social life, not in verbal products such as rules.

Harris' rejection of the role of verbal rules reflects his assumption that verbal behavior is a function, not of environmental variables, but rather of cognitive processes, ideas, and the like. In contrast, behavior analysts consider verbal behavior to be a function of the same types of environmental events as nonverbal behavior. Hence, while Harris points to a direct relationship between the nonverbal/materialistic aspects of cultural practices and prevailing infrastructural requirements; Glenn and other behavior analysts consider both the verbal and nonverbal aspects of practices in such a relation. From Glenn's perspective, cultures include speakers, listeners, and interlocking contingencies among them. "A cultural practice is a set of interlocking contingencies of reinforcement in which the behavior and behavioral products of each participant function as environmental events with which the behavior of other individuals interacts" (Glenn, 1988, p. 167).

According to Skinner (1953, 1972), those practices of an individual that depend upon the practices of the group are cultural practices. Thus, behaviors making up cultural practices conform to standards of a given

community. Other behavior analysts, notably Baum (1994, p. 214), make a similar analysis, defining cultural practices as learned behaviors shared by members of a group, acquired as a result of group membership, and transmitted from one group member to another. The distinction between noncultural and cultural practices in these analyses is that the former are sustained by natural/nonsocial contingencies, whereas the latter are shaped and maintained by social/cultural contingencies. The transmission of noncultural practices is likened to classical conditioning, whereas the transmission of cultural practices, is likened to operant conditioning, although both may be group practices.

Hayes' (1988) analysis of cultural practices and their maintenance distinguishes between cultural practices and individual adjustments. This distinction is based on two conditions: strength and transmission. The strength of an individual adjustment is measured by its longevity and probability within the individual's repertoire; whereas the strength of a cultural practice is measured by its prevalence in a group. Furthermore, cultural practices are strengthened and transmitted interindividually while adjustments are strengthened and transmitted intraindividually. Additionally, Hayes' analysis focuses on the survival of the cultural practice itself versus the survival of the group.

In a somewhat different view, Kantor (1982 p. 10-11)¹ defines cultural behaviors as those acquired and shared by individuals as a function of the group auspices under which they have developed. Cultural responses are coordinated with attributed stimulus functions of objects, and noncultural actions are coordinated with their natural stimulus functions. For example, when a Hindu perceives a cow, or a Jew or Muslim perceives a pig, their noncultural perceptual responses to the biological properties of these objects (i.e., particular mammal) can be distinguished from their cultural responses to attributed properties (i.e., unclean or sacred). This distinction is a critical one, in that the identification of a behavior as cultural vs. noncultural can not be drawn along formal lines. Otherwise stated, cultural responses may be formally similar to noncultural responses with regard to response topography yet different from a functional standpoint. "The cultural response of taking off one's hat upon entering a house may be exactly like the contingent action of grasping one's hat when a sudden gust of wind threatens to blow it away" (Kantor, 1982, p. 11). Noncultural responding will generalize across cultural groups, unlike cultural responding.

Unlike other behavior analysts, Kantor (1982) emphasized the arbitrariness of cultural practices. From his perspective, cultural behaviors, though perhaps emerging from conditions that Harris has defined as infrastructural, do not necessarily continue to play this role

¹The estate of Helene J. Kantor (1919-1993) has given the Archives of History of American Psychology the inventory and copyrights of The Principia Press, long the publisher of the works of J. R. Kantor (1888-1984). Accordingly, Kantor's book can be obtained through the Archives of the History of American Psychology at the University of Akron, Akron, OH 44325-4302.

after their initial establishment. Cultural behaviors become disconnected to the originating infrastructural contingencies by virtue of their evolution over time as verbal constructions, nonmorphologically restricted. Simply stated, culture is a verbal phenomena, therefore, cultural and verbal behavior are inseparable in analysis. Accordingly, one of the most distinguishing characteristics of a cultural group is a shared language.

Kantor (1982) also dealt with the conditions under which cultural behaviors are sustained and those under which they show change. He asserted that cultural conduct continues to exist as a factor in a total historical complex because certain things and circumstances persist in anthropological systems, and because cultural conduct clusters around persisting religious political and social institutions. In addition, cultural practices may appear to be inflexible because they are performed by a number of people. This stability varies not only with the distribution or the size of the group that performs such behavior, but also with its temporality. Stability of cultural conduct is said to depend upon the characteristics of the stimulus objects associated with it, such that the more indefinite and pervasive the stimulus object, the more stable the cultural behavior. As Kantor suggested, this accounts for the stability of ideals, beliefs, and other cultural acts.

Possibly the most significant difference between Kantor's (1982) and other behavioral perspectives is that Kantor clearly delineates between social and cultural groups. This distinction is often neglected by others, or, at times, implied; however, often the terms "social" and "cultural" are used interchangeably. According to Kantor (1982), sociological groups are defined on the basis of topographical boundaries. Sometimes these boundaries are geographic, such as mountains, or they may be systems, such as governmental and economic organizations. Social groups are simply aggregations of people and such group behavior is not necessarily psychological, as is cultural behavior. The important distinction is that social behavior is not conventional or arbitrary like cultural behavior but determined by more fixed boundaries. For example, the U. S. health care system may be conceptualized as a sociological boundary in that it is a system of rules and regulations that restrict an individual's activities within the confines determined by the system. It is an economic order, subject to the constraints of a capitalist society, and is therefore a fixed, not an arbitrary, system. Nonetheless, there is considerable interrelatedness of sociologic and cultural groups. Society is the situation where psychological cultural institutions arise and where psychological cultural responses are acquired. Cultural institutions, as defined by Kantor (1982) are common stimuli that "correspond to a shared response from a group" (p. 9). Hence, a medical system as a social organization also establishes a psychological collectivity in that the activities of providers within the health care system share specific types of interbehavior with institutionalized objects, persons, and/or beliefs. Westernized medical culture inheres traditional Judeo-Christian duality translated into a soma/psyche dichotomy that affects all areas of medical research and

practice. The difficulties of Western medicine to treat consumers belonging to religious collectivities that do not recognize a duality of body and spirit, or believe supernatural etiologies of illnesses, has been well documented (Helman, 1990; Lock & Gordon, 1988). One society may contain many different psychological collectivities and cultural institutions just as one society may contain different linguistic and religious groups. From an interbehavioral perspective, it can be argued that Harris' (1979) structural and superstructural "actones" are not all necessarily cultural practices, but social practices, whereas Glenn's (1989; Glenn & Malagodi, 1991) interlocking contingencies of rules are cultural practices. Thus, Kantor's distinction between social and cultural interbehaviors provides an explanation for disparities between different behavioral analyses of culture, particularly in the area of the role of verbal behavior.

In summary, there is substantial support that cultural practices are conditioned by social or verbal influence, despite Harris' relative exclusion of these factors. Disagreement arises, however, in the analysis of selection and maintenance of cultural practices. Although some assume that cultural practices are maintained, ultimately, by their relation to cultural survival as an outcome, others provide alternative explanations. For example, Hayes' accounts for the maintenance of cultural practices by reference to the complexity of other contingencies (e.g., strength of an adjustment and strength of a practice) that operate in a cultural context, as opposed to suggesting a final outcome that inevitably connects all practices. Likewise, Kantor avoids comments on final outcomes, focusing instead on a number of factors (e.g., group size, history, the characteristics of cultural stimuli) that contribute to the longevity of cultural behavior. In as much as final outcomes are assumed and not known, the reluctance of Hayes and Kantor to attribute current practices to such outcomes seems reasonable and will be discussed in further detail later. First, we will return to our isolation of definitional categories.

Distinction between Religious and Nonreligious Cultural Practices

Cultural Anthropology

Harris (1979) does not distinguish between religious and nonreligious practices with regard to establishing conditions. However, Harris' analysis does provide a distinction with regard to preservative factors. According to Harris, ceremonial practices, absent in the case of nonreligious practices, are the primary means by which religious practices are sustained. Further, these ceremonial practices evolve into specific rules that serve to maintain rule following, in general, as a means of social control.

Malott (1988) makes a similar analysis, arguing that the materialistic contingencies that form the basis of cultural practices are not direct-acting, because they are too delayed, too improbable, or too small. Therefore, they can not control cultural practices directly. Instead, materialistic contingencies become indirect-acting, receiving support from direct-acting behavioral contingencies established by verbal rules.

For example, incest taboos require support from rules such as "you are going to hell if you practice incest, even once" because the direct, materialistic rule, "each time you practice incest you'll have a very small but cumulatively significant negative effect on your tribe's chances of survival" specifies a temporally remote contingency (Malott, 1988, p. 194).

Malott (1988) does not discuss the relative stability of rules over time, despite changing infrastructural requirements. Rules, formulated in support of infrastructural requirements, should change as these requirements change. On the contrary, cultural rules seem to outlive the requirements responsible for their establishment. Religious rules pertaining to the avoidance of certain foods, or their prohibition on particular days, appear to have outlived their utility with respect to cultural survival. This stability may be an outcome of rules becoming disconnected from the originating infrastructural requirements, thus, becoming impervious to changes in, including the disappearance of, such requirements. Glenn (1989) recognizes the possibility of disconnection, arguing that behaviors comprising superstructural practices may become increasingly out of line with changing "infrastructural metacontingencies" (e.g., contingent relation between the dominant practices and the outcomes) and thus with infrastructural requirements.

Glenn (1989) considers the possibility that verbal behavior, shaped and maintained as part of a cultural practice, may obscure the relationship between individuals and their environments. She argues that given the continuously changing character of infrastructural metacontingencies, the likelihood of superstructural verbal practices "misdetermining" relations between human organisms and their environment is great, leading to the isolation of superstructure from infrastructure. This circumstance is not trivial, in that superstructural practices involving inaccurate descriptions of the relations between humans and their environments may hinder adaptation to infrastructural changes. Interbehaviorally speaking, dissociations between cultural practices and Harris' "infrastructural" requirements is to be expected because of the restricted characteristic of changing infrastructures and arbitrariness of cultural institutions; a less likely dissociation would be between infrastructural requirements and sociological systems.

Behavior Analysis

Behavior analysts, like a majority of cultural anthropologists, draw no fundamental distinction between religious and nonreligious practices. Skinner (1972, p. 116) argued that religious practices are shaped and maintained by contingencies of reinforcement, which are codified as rules that promote the survival of the group. Given that group survival is the overriding contingency responsible for establishing all cultural practices, no fundamental distinction between religious and nonreligious practices was maintained by Skinner. Other scientists operating from a behavior analytic perspective, notably Baum (1994), make a similar analysis, drawing no essential distinction between religious and nonreligious

behavior. From Skinner's perspective, religious practices do have some distinguishing characteristics. They are maintained by specialists, or religious authorities, and they are sustained with the additional support of ceremonies, rituals, and stories. Similarly, the distinction between religious and nonreligious behavior, in Schoenfeld's (1993, p. 8) view, is in the practical thrust of words that appear, on the surface, as impractical. On the surface, Schoenfeld's analysis appears to situate people in a world dominated by a metaphysical vocabulary of phrases, metaphors, images, and parables. However, a close examination of Schoenfeld's analysis suggests that this religious vocabulary is oriented toward the natural environment and is constructed on the basis of worldly materials. The practical thrust of words, then, may be understood in terms of the degree to which a word corresponds with aspects of the biological and/or psychological environment. In short, Schoenfeld maintains that religious practices remain connected to infrastructural requirements. Totemistic religions, such as found in Australian aboriginal cults, engender beliefs in the soul, spirits, and gods, and the elaborate rituals surrounding the totem often represent a spiritual tie to ancestor's souls via the totem. However, the totems are natural objects or species in the environment and functionally relate members to nature; many of the religious ceremonies are designed to assure water, good weather, or crops (Lessa & Vogt, 1965).

According to Kantor (1981, 1982) religious practices are cultural practices and, as with all cultural practices in general, may become arbitrary and irrelevant to sociological (e.g., Harris' infrastructural) requirements. Religious interbehaviors are maintained through the continuing presence of stimulus objects with inherent religious functions, such as churches, icons, and religious symbols. Hence, religious beliefs, attitudes, and ideas continue to emerge despite their indifference to infrastructural circumstances because they cluster around persisting religious institutions. Such actions are historically functional: They are performed because they have been performed in the past. The distinction between nonreligious and religious cultural practices is made on the basis of institutional stimuli: Religious institutions correlate with "atheistic, theistic, and deistic institutions" (Kantor, 1982, p. 185).

In summary, behavior analytic perspectives generally hold that religious and nonreligious practices are indistinguishable with respect to the conditions of their establishment, namely infrastructural requirements leading to group survival. Consequently, distinctions between religious and nonreligious behavior must be located in conditions related to their maintenance, as opposed to their establishment. Some behavior analytic perspectives have explicitly asserted that religious practices may become disconnected from infrastructural requirements over time and hence may be irrelevant to the goal of cultural survival. Before discussing maintenance in a more detailed manner, however, it will be helpful to elaborate on the distinction between religious and nonreligious practice by isolating the differences between religious and moral practices, and between moral and other cultural practices. First, let us distinguish religious practices from moral behavior.

Relationship Between Religion And Morality

One of the central issues in the analysis of religion is that of the relation between morality and religion. Schoenfeld (1993), Kantor (1981), and others have addressed the ambiguity of the relationship between these two types of action. The notion that morality is dependent on religion is widely maintained by theologians who argue for the need to return to religion; by moralists seeking to promote civic or personal virtue; by educators advocating the teaching of religion in public schools, and by politicians advocating for family and other "traditional" values.

Assuming a dependence of morality on religion does not necessarily mean that morality is *logically* dependent on religion. It may mean, instead, that morality is *historically* dependent on religion (Kantor, 1981; Schoenfeld, 1993), or that morality is *psychologically* dependent on religion. In this regard, Schoenfeld (1993, pp. 129-134) purports that the principal distinction between moral codes and religious codes is that the latter imply greater and more rigid behavioral discipline. In comparing morality and religion, Schoenfeld argues that religion is less subject to opportunism and manipulation because it is assumed to emerge from a divine and hence unchanging source.

An alternative interpretation is possible, however. Derivation from a divine source may make the manipulation of the opportunistic circumstances for religious practice more effective. In other words, religious practices rest on a number of ultimate metaphysical constructions which, in turn, are subject to manipulation by divine authorities. By virtue of a truth criterion of authority, the justification of religious practices are appreciably vulnerable to manipulation by self-professed religious figures.

By way of illustration, most Islamic scholars argue that the Koran forbids suicide (Wright, 1985, p. 36-37). However, during the war between Iran and Iraq, the religious government in Iran, comprised of divine authorities, used specific passages from the Koran to legitimize and promote self-sacrifice, or what could be called religious suicide, among the followers. The passages from the Koran read as follows: "Wars come to provide martyrs and God may prove those who believe," and "Paradise is only to be attained when God knows who will really strive and endure." No one has a history of direct contact with death, however. As Hayes (1992) has indicated, "personal death" is a verbal construction consisting of many stimulus functions based on various relations with other events. In the case of religious suicide, death is associated verbally with heaven. Heaven, by definition, can not be directly experienced, as can houses, cars, and parks. But by way of a transfer of functions through relational classes, it is possible for the word, "Heaven" to acquire stimulus functions similar to those of a garden with fountains and shade, in which believers will be entertained by beautiful metaphysical beings with "complexions like rubies and pearls" (Brooks, 1995). Hence, through derived relations with other directly experienced events, "heaven" may come to function as

an effective consequence for rule following. Under these conditions, one may become a martyr, a "soldier for God," and martyrdom may be seen as a ticket to heaven.

Another example, provided by Brooks (1995, pp. 43-44), that demonstrates an opportunistic manipulation of a religious code by divine authorities, is as follows. In Islamic Shiism, *sigheh* is a prenuptial practice agreed upon by a man and a woman, and sanctioned by a clergyman. This practice can last as short as a few minutes or as long as 99 years. Usually the man pays the woman an agreed upon sum of money in exchange for a temporary marriage. The usual motive is sex, but some temporary marriages are agreed upon for other purposes. When sex is the motive, the transaction differs from prostitution in that the couple must go before a cleric to record their contract; and in Iran, any children born of the union are legitimate and the parents are required to assume responsibility for them. After termination of the contract, the woman is not allowed to engage in another practice of *sigheh* or marriage for a period of 4 months and 10 days. This way, a child conceived during the previous contract can be identified and traced back to his/her legitimate father. Otherwise, *sigheh* is free of the responsibilities of marriage. The couple may make any agreements they wish regarding how much time they will spend together, how much money will be involved, and what services, sexual or otherwise, each will provide.

Shiites believe Muhammad approved of *sigheh*. Nevertheless, *sigheh* was not favored as a practice until after the Iran-Iraq War. The establishment of this practice was legitimized by the Iranian religious leaders in the following manner: Religious leaders argued that the war had left behind a lot of young widows, many of them without hope of remarriage. Such women were said to be in need of both material support and sexual satisfaction. At the same time, many young men who could not afford to set up a house for a bride were postponing marriage. Sexual tension needed healthy release, and since *sigheh* existed for that purpose within Islam, why not use it? Here, group survival seems to be promoted through sanctioned sexual practices, as well as controlled reproductive practices.

In summary, it is unclear whether religious practices are best understood as embodying truth derived from divine authorities, or are instead merely codes specifying moral actions because of their practical utility or relation to infrastructural requirements. Further, with respect to practical utility, it is difficult to determine if such moral actions are adaptive. In other words, is the utility of moral practices pertinent to cultural survival or is it pertinent to other goals of cultural authorities or leaders? We will examine these alternatives in more detail shortly. First, however, we will consider the distinction between *moral and other cultural practices*.

Nonreligious Practices: Distinction Between Moral and Other Cultural Practices

Moral practices are cultural practices. Yet, not all cultural practices have moral implications. Hence, clarity as to the distinction between moral and

cultural practices is warranted. An attempt to draw a distinction between these two types of practices has been made by behavior analysts.

According to Skinner (1972, pp. 112-113), a value and/or a moral judgment points to an ultimate contingency that is social in nature and is generated by the "customary practices" of the group to which the speaker and the listener belong. As pointed out by Baum (1994, pp. 206-208), moral rules point to more general contingencies inhering in the cultural practices of the group. For example, stealing will not only be punished by a child's parent but will also be punished by society. Moral behavior results from a history of reinforcement or punishment by other members of the group, not only the child's parents.

From a Kantorian (1981, p. 159) perspective, a moral situation is a specific act involving a choice as to whether a person should or should not perform a certain act, because doing the act is either right or wrong, good or bad, proper or improper. Whether it is right or wrong to perform a certain act depends on a standard or criterion. Such standards are prescriptions typically adopted by a group, though occasionally by an individual. To reiterate, the primary feature of a moral situation is a choice of a person interacting with some other person or thing as a stimulus object, in view of a code or standard recognized by the performing person. The value functions of good and bad or right and wrong, in such situations, do not have their sources in the natural properties of stimulus objects. Instead, they are attributed to stimuli under group auspices. These attributions are shared among members of a particular collectivity of persons, and the value functions of stimuli in those situations are generalized across that collectivity (Parrott, 1986). For instance, the moral character of ingesting hallucinogens is very different between religious collectivities. Whereas Christians generally condemn consumption of consciousness altering substances, instead condoning such acts as fasting in order to obtain spiritual enlightenment, many Mexican Indians celebrate peyote rituals as a means toward spiritual knowledge (Lessa & Vogt, 1965). Moral prescriptions determine the expression of pain and bereavement across different cultural groups regardless of a similar degree of physical injury or personal loss between members of the differing collectivities (Helman, 1990; Kleinman & Good, 1985).

Schoenfeld (1993, pp. 129-134) argues that both moral and social codes guide the conduct of people toward other people. Moral codes tend to characterize the behavior of larger groups of people than do social codes, however; and for this reason are less flexible than social codes. To put this another way, moral codes tend to be less susceptible to change in the face of changing cultural circumstances.

Nonetheless, moral codes may be susceptible to change as a function of deliberate acts by authorities, and when this occurs, their impact may be quite powerful. Schoenfeld argues that susceptibility to change is enhanced when the preliminary behaviors setting the occasion for moral behavior are loosely defined and when the authorities enforcing moral codes are relatively powerful. Simply said, the more loosely set up

the definition of a moral code and the more powerful the authority enforcing it, the more likely it is that those authorities will enforce a different and more favorable code, given circumstances warranting this change. For example, the political and economic climate of the United States during the Civil War participated in overriding the moral prohibition against killing one's fellow citizen, including one's own family member, as circumstances dictated. According to Schoenfeld, such opportunistic manipulation of moral codes results in instability and chaos in a culture.

In summary, moral codes are distinguishable from cultural codes in that they (a) point to an ultimate contingency acknowledged by a group, (b) are more dependent upon a standard or criterion established by a group, and (c) are more likely to be sustained in larger groups and are less susceptible to modification and/or manipulation by changing cultural circumstances. These characteristics, while implying greater stability of moral codes over time, also imply that their deliberate manipulation may produce a greater magnitude of effect than is available by the manipulation of cultural codes.

Maintenance of Cultural Practices Through the Interaction of Religious and Nonreligious Behaviors

Religious and nonreligious practices do not exist independently in culture. Rather, they interact in a variety of ways. These interactions constitute one important means by which both types of practices are sustained. In this regard, religious actions may influence nonreligious actions and vice versa. We consider such reciprocal influences in the following sections.

Influences of Religious Actions on Nonreligious Actions

For our purposes, nonreligious actions may be divided into two groups. One group consists of those actions governed by nonreligious rules, but influenced by religious factors. For example, many moral rules or codes such as "Do not steal," have been influenced by religious factors, such as the "Ten Commandments." More specifically, in many instances of an individual's interaction with his or her cultural environment, the verbal discriminative stimulus, "Do not steal" may have been associated with a particular set of consequences, one being going to jail, as well as other social punishers such as being rejected by friends or family and society in general. However, in situations where the probability of being caught for stealing is low, other means of sustaining rule following may be necessary for social order. One such means is the view that God is ever-present and ever-watchful and will exact an ultimate punishment for such behavior. Consequently, religious factors may be involved in both the production and maintenance of rule following.

The second condition under which an interactive relation between religious and nonreligious practices may be demonstrated is the case in which actions are governed by religious rules but have nonreligious

consequences for the actors and the culture. For example, in Iran, marriage is a religious action with nonreligious consequences. Marriage is legal in Iran when the groom, the bride, and bride's father sign a wedding contract, or "aqd." The contract's main purpose is to document how much the groom pays the bride upon marriage, and how much more he will have to pay her if he later decides to divorce her. A well-written aqd can work to right some of the inequities in Islamic family law, by setting out a woman's right to work, her right to continue her education, or by adding grounds for divorce to the very few allowed her under sharia law (Brooks, 1995, p. 56). In this case, the action of marriage, while religious in character, is sustained by virtue of its nonreligious societal outcome. Religious beliefs can have subtle, indirect effect on nonreligious practices by virtue of linguistic function. Consider some contemporary metaphors of acquired immune deficiency syndrome (AIDS): AIDS as a "plague," as "moral punishment," as "war," all reflecting medieval notions of divine retribution, stigmatizes a virus as a folk illness, and obstructs progress toward prevention and cure (Helman, 1990).

Influences of Nonreligious Actions on Religious Actions

The influence of nonreligious actions on religious actions may also be considered in two ways. First, those actions governed primarily by nonreligious rules, but with consequences for religion. For instance, in the war between Iran and Iraq, the practices of many military officers and soldiers were governed by military rules specifying the consequences of defending their country from its enemies. However, the consequences of rule following during this war were generally considered religious, given that the main goal of the religious government was to conquer the world by eliminating the enemies of Islam. The second group includes actions that are primarily governed by religious rules but are influenced by nonreligious factors. For example, when the armies of Islam swept into India, Muslims were appalled by the practice of sati, in which widows, upon their husbands' death, would burn themselves alive on their husbands' funeral pyres. These women, banned by their religious faith from remarriage and reduced by their husbands' deaths to poverty and contempt, would choose to end their lives through sati (Brooks, 1995, p. 282). In this case, the nonreligious circumstance of the culture's inability to sustain unmarried women is responsible for religious rule following.

In summary, religious and nonreligious practices interact in a variety of ways and may be important or necessary for the maintenance of each within a culture. The preservation of particular practices by the deliberate manipulation of these interrelations is commonplace. Presumably, the motivation of authorities with the power to manipulate practices is centered in the value of outcomes produced. That value, explicitly or implicitly, is group or cultural survival.

Disconnection of Religious Practices

Complications

In our attempt to understand the origin and maintenance of religious practices, we have illustrated a number of distinctions between cultural and noncultural practices and between religious and nonreligious practices. Further, we have elaborated on the distinction between religious and nonreligious practices by clarifying the differences between religious and moral practices, and between moral and more general cultural practices. In doing so, we have identified those practices which are specifically religious in type.

In addition, we have illustrated the interactions between religious and nonreligious practices by providing examples of these interactions. Through the process of making these distinctions and accounting for their interactions, we have considered the possibility that religious practices (and by way of interaction, nonreligious practices) may become disconnected from infrastructural requirements over time and may, as a result, become irrelevant to cultural survival. Our aim in this final section is to consider the processes by which practices may become disconnected from infrastructural requirements, characteristics of practices that have become disconnected, and the consequences of disconnection for cultural survival.

Although cultural survival may be the ultimate consequence of cultural practices, the outcome of manipulations directed toward this end can not be observed. Simply stated, whether or not a culture survives is a future event and, as such, is not yet possible to observe. Further, in as much as cultures sustain given sets of practices, it is not possible to determine the value of those practices, relative to others *not* prevailing, in achieving the outcome of survival: Another set of practices might have achieved the same outcome. Likewise, some of the practices sustained in a given culture may have been irrelevant or even detrimental to the outcome eventually achieved. These possibilities suggest further consideration of cultural practices in terms of their relationship to eventual outcomes.

Many theorists, including Glenn (1989) and Kantor (1982, pp. 163-192), have suggested that cultural practices may become disconnected from originating conditions, such as infrastructural requirements, yet, nonetheless continue to prevail. This disconnection may render practices irrelevant, or worse, hazardous, to cultural survival. Although Glenn (1989) recognizes a potential for disconnection, she does not provide an account of the process by which disconnections from infrastructural requirements may occur. Kantor's (1982) analysis may provide some guidance in this respect.

Kantor (1982, pp. 163-192) defines cultural behavior as learned interactions with institutionalized stimuli, acquired under group auspices and shared among members of a psychological collectivity. Much human conduct, in his view, constitutes activity of this sort, including beliefs and ideas. Kantor argues that what people believe as members of a group

may bear little relationship to their actual experiences. In other words, beliefs, ideas, and imaginative behavior, which are not directly connected to such fundamental needs as food and shelter, may take on unexpected qualities from an ecological standpoint. One reason for this drift away from ecological circumstances, according to Kantor, has to do with the abstract character of verbal behaviors of this type. Accordingly, the ecological context in which a belief arose and has relevance may become generalized beyond the specificity of that context. The outcome may be that beliefs are sustained in contexts where they are not relevant.

Kantor further argues that these processes of abstraction in the articulation of beliefs and generalization in the specification of their relevant contexts become more prevalent as civilizations become more complex. Abstraction and generalization, in other words, are strategies developed to communicate and deal with such complexity. Disconnection of beliefs from specific ecological circumstances fosters even greater drift away from the originating circumstances.

When the details of cultural experience (much of which took place in a distant past) can no longer serve as standards against which to evaluate the adequacy of beliefs, beliefs become susceptible to other influences. Among these other influences are the motivations of believers, the power of authorities to sustain particular beliefs in the service of particular ends, and the logical practices of cultures in collecting particular beliefs into sensible belief systems. To reiterate, this drift away from original infrastructural requirements is possible of correction only by reinstating the details of the specific contexts in which particular beliefs arose. Reinstatement is possible, however, only when both the agent of action and the outcome of that action are subject to scientific observation. When either the causes of particular effects or the effects of those causes are not subject to direct observation, corrective practices of this sort are not able to be implemented, with the result that beliefs concerning them are free to drift in keeping with other influences.

It is this last issue which makes religious practices particularly susceptible to disconnection and continuous drift away from the infrastructural requirements responsible for their origin. By definition, religious practices entail the participation of metaphysical entities that are not subject to direct observation. Consequently, corroboration among observers as to the characteristics of those events is not possible and the corrective practices normally available for the realignment of beliefs therefore can not be implemented. This circumstance permits cultural belief practices to drift over time, and this drift, along with ever-changing infrastructural requirements, may eventuate in a complete disconnection of religious practices from the infrastructural requirements responsible for their original establishment. Once disconnected, their relevance to cultural survival comes into question. Before dealing with this issue of survival relevance, however, we must address the stability and maintenance of practices once they have become disconnected from infrastructural requirements. How are such disconnected practices sustained in cultures?

Kantor (1982, pp. 165-192) provides a number of suggestions in this regard. First, the scope of religious beliefs tends to be greater than that of other types of beliefs, concerning such things as the origins of the universe, the meaning of life, and so on. Kantor argues that as the scope of beliefs increases beyond the life experiences of individuals, the origins of those beliefs become obscured. Beliefs come, as such, to have an existence independent of the individuals holding them, and they are rendered immutable as a result. Further, the larger the group holding particular beliefs and the longer these practices have prevailed, the more likely they are to remain stable in the culture. Cultural change, in other words, occurs more rapidly with respect to practices of lesser longevity, held by fewer people. Groups holding common religious beliefs tend to be larger than any other collectivities of people, and the beliefs themselves tend to be older than any other. In short, religious actions continue to be performed by large groups of people merely because they *have been* performed by large groups of people over long periods of time.

The maintenance of disconnected religious practices may also be a function of motivational variables on the part of believers. This circumstance is particularly likely to prevail when practices pertain to highly intimate subject matters. Religious beliefs are of this sort to a greater degree than other types of beliefs in that they speak to such concepts as the soul and will of the individual, not to mention the issue of personal salvation. The more intimate and personally favorable the belief, Kantor (1982, pp. 165-192) argues, the more likely it is to be sustained regardless of any connection it may have to actual ecological circumstances.

Finally, Kantor (1982, pp. 165-192) argues that religious beliefs are sustained in cultures by virtue of the beliefs having been associated with symbols, such as religious icons, used during religious rituals. That is to say, religious beliefs are sustained through the continuous existence and manipulation of symbolic representations within cultural contexts.

Assuming that religious practices may be sustained in cultures despite having become disconnected from infrastructural requirements, and assuming that disconnection allows for a drift in these practices under the influence of other variables, there is reason to believe that they may become arbitrary and irrelevant to cultural survival. Further, it is possible that their interactions with nonreligious practices may impact those nonreligious practices, thereby bringing about arbitrariness and irrelevance to cultural survival of both kinds of practices.

Alternatively, it can be argued that disconnection occurs in the relation of social practices to infrastructural requirements by virtue of a greater strength of influence by cultural practices; that the sociological organization of groups drifts from infrastructural contingencies because of the strength of cultural practices. In other words, the arbitrariness of religious practices assures cultural survival, that is, survival of religious culture, and the subsequent influence of religious practices on nonreligious practices affects the sociological organization from which all cultural practices originally emerged. Conflicting contingencies between

infrastructure, sociological organization, and cultural practices, from this perspective, are viewed as a dynamic, ever-changing interaction. Only when social organization disconnects with infrastructural requirements does the strength of influence shift, such as in Harris' example of India's cow worship. Historically, perhaps one of the most obvious examples of the dynamic relation between infrastructure, society, and religious culture is the social status of women. Populations are controlled by the number of fertile females available for impregnation, not by the number of available fertile males, and reflect reproductive infrastructural requirements. Religious cultural beliefs emerged from and maintained a sociological organization whereas women were bounded and restricted to limited roles assuring their place as reproductive organisms. The determination of women as unclean, subordinate, and less evolved than men by early church fathers persisted throughout history and became integrated across a vast scope of nonreligious cultural practices, such as medicine and other sciences (Agonito, 1977). However, women's position in social organization has shifted during periods of infrastructural stress. Examples include changes during wartime and the industrial revolution. Consequent shifts in religious practices have emerged, most notably an accommodation of women as religious authorities, for instance, female rabbis. Nevertheless, originating religious beliefs persist and it can be argued that disconnected religious beliefs regarding women have remained somewhat static and continue to exert influence. Simply stated, new religious practices may have emerged from changes in society and have been added to a disconnected antiquated religious culture rather than an evolution of religious culture *per se*. Thus, cultural survival as an outcome measure of the relevance of cultural practices ignores the relevance of intervening sociological organization between infrastructural contingencies and cultural contingencies, both religious and nonreligious. However, it is the unique character of religious culture that allows religious practices to persistently transcend the interrelationship between infrastructure, social organization, and nonreligious cultural practices.

The Role of Behavior Scientists

The possibility that both religious and nonreligious practices may become irrelevant to cultural survival draws into question the activities of behavioral engineers working in the service of assuring cultural survival as a goal. To work toward this goal, it must be possible to evaluate the extent to which practices of various types will contribute to cultural survival. Otherwise, there is no reason to support or foster one set of practices over another. Unfortunately, however, we can not know the future outcomes of practices until the future arrives; neither can we be certain of the relevance to survival even of current practices, because their currency is not necessarily an indication of their relevance in this regard. Given this situation, the purpose and role of the cultural engineer are unclear. Rather than attempting to bring about cultural change toward specified future ends by *manipulating* practices of unknown significance with respect to such

ends, perhaps our efforts might better be spent in scientific *description* and *interpretation* of the evolution of cultural practices.

Nothing of the latter sort may be achieved so long as religious practices are conceived as embodying ultimate and absolute truth, handed down by divine authorities in the service of achieving incomprehensible ends. This view of religious practices leaves no room for scientific analysis and speculation. The alternative is to approach religious practices as aspects of human activity having certain distinguishing characteristics; those characteristics, in turn, implying distinctive arrangements of controlling variables. We may, in other words, merely provide an analysis of the factors participating in the establishment and maintenance of religious practices over time. The same inevitably applies to all cultural practices, as well as to their interrelations. To suggest that our aim as behavior scientists or cultural engineers is other than this—to suggest that what has occurred, is occurring, or may be made to occur is in the *service* of cultural survival—is a nonscientific proposition. The end implied by such a proposition can never be appreciated, and the means to achieve it can never be known. However, if we view ourselves as social engineers, rather than cultural engineers, our outcome measures become more accessible. Effects of social change in the form of laws and other contingencies that determine social organization change relatively rapidly and can be quantified, from within small organizational groups to larger national and worldwide groups. We assume that cultural practices, including religious practices, will inevitably emerge, as all cultural practices emerge from social practices. Our inability to access the effects of cultural change on cultural survival becomes irrelevant when our focus shifts from cultural to social engineering. As social engineers, our goals become pragmatic and context-specific to current economic and political outcomes reflecting infrastructural contingencies. In conclusion, given the nature of cultural behavior, our analyses may best be restricted to description and interpretation, whereas, our “engineering” efforts may, at best, be indirect and uncertain. Regardless, pragmatic intervention can be achieved, albeit, targeting a different level of analysis: social practices. Potential consequent cultural change is left to future generations of behavior analysts to describe and analyze.

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