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Evolutionary Psychology and the Explanation of Ethnic Phenomena

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Abstract: In a recent series of articles, Hislope (1998, 2000) and Harvey (2000a, 2000b) have raised questions about the usefulness of "evolutionary theory" especially for any purpose other than identifying "distal" causes of ethnic phenomena. This article responds to those views and argues that evolutionary psychology shows great promise in contributing to the explanation of contemporary ethnic identities and ethnic conflict. The authors argue that an evolutionary psychology approach embraces research conducted through conventional social science approaches, helps to complete explanations of the proximate causes of ethnic conflict, and can recast thought and encourage new areas of research about important issues in the ethnic conflict field. Illustrations are provided in support of each of these points. Some of these arguments have been heard before with respect to the general role of evolutionary theory in explaining social phenomena but they are arguments we think bear repeating and illustrating in the context of the study of ethnic phenomena. Before examining the ways that evolutionary psychology can contribute to social science explanation of ethnic phenomena, we summarize the general evolutionary psychology approach to the study of social behavior.

Keywords: affective intelligence model, Balkans, Bosnia, ethnic conflict, fitness cliff, inclusive fitness, intolerance, kinship bonding, martyr, nationalism, proximate cause, Rwanda, social norms, threat

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Evolutionary Psychology Approach

An elaborate description and defense of the general evolutionary psychology approach to the study of social science phenomena is found in Tooby and Cosmides (1990, 1992), Cosmides and Tooby (1994) and Buss (1995). Because ethnic

phenomena and ethnic conflict are human social phenomena there is no obvious reason why evolutionary psychology cannot be applied to their study and, indeed, ample reason why it makes sense to do so. Van den Berghe (1981), Johnson, (1986) and Salter (2000), for example, have strongly suggested that psychological mechanisms revolving around kinship bonding are pivotal in generating ethnic behaviors.

More broadly, an evolutionary psychology approach posits that, through the process of natural selection, humans have acquired a diverse array of mental mechanisms. Each one is designed to respond to the demands of a specific environmental problem or task that is relevant to the survival and reproductive success of the individual and has been repeatedly encountered by humans in the environment of evolutionary adaptation. Persistent exposure to a particular environmental problem over large numbers of generations results in the evolution of a well-defined adaptation in the form of a psychological mechanism.

In general, evolved psychological mechanisms are thought to operate in an algorithmic fashion. Scanning and filtering functions of a mechanism identify environmental stimuli that constitute a particular environmental problem or task and elicit specific emotions and behaviors that address the problem or task in ways that contribute to its adaptive resolution. Evolved psychological mechanisms are thought to exist for addressing innumerable problems and tasks such as: mate choice, hunting, alliance formation, and reputation-building, to name only a few. Among the problems and tasks relevant to ethnic phenomena are: group bonding and cooperation for both benign and malevolent purposes, and responses to the menace of group threat and conflict.

Embracing Conventional Research

Research that adopts an evolutionary psychological approach can be quite complementary with traditional social science research that addresses these same ethnic phenomena. When developed insights of evolutionary psychology are brought into the analysis explanations can be expanded and given more meaning. To the point, an especially crucial aspect of the explanation of ethnic phenomena involves the description of human nature. The most common way of facilitating explanations among traditional researchers is to adopt *ad hoc* and implied assumptions about human nature and to investigate causal factors consistent only with those assumptions. In contrast, evolutionary psychologists do not take "nature" for granted and, instead, hypothesize about the relevant mechanisms of the human brain that come into play as humans engage in ethnic behaviors. They bring novel elements to an explanation by fleshing out hypotheses about the possible connections among environmental stimuli, mental activity, and actual behaviors that generations of adaptations have given us. Evolutionary psychology approaches synthesize traditional dichotomies between so-called nature and nurture by acknowledging the interaction between environment and culture on the one hand and the genetically-

inspired mechanisms and molds of human social behaviors on the other. Ultimately, behaviors result from these interactions as environmental events trigger mental mechanisms, shape the paths of human development, and even co-evolve with the mechanisms themselves (Ridley, 2003; Marcus, 2003).

The evolutionary concept of "inclusive fitness" (developed by Hamilton (1964, 1970, 1971) and West-Eberhard (1975) and popularized by Wilson (1975) and Dawkins (1979, 1982)) has provided a dramatic boost to the explanation of social behavior. Inclusive fitness refers to the idea that humans enhance the spread of genes like their own by acting beneficently towards close kin and that natural selection would have favored genes that expressed such beneficent behavior. While the basic concept is widely accepted in the evolutionary psychology field, the role of inclusive fitness in explaining the existence of altruism and bonding for groups larger than families and clans is still developing. Van den Berghe (1981) and Johnson (1986) have emphasized evolved mechanisms that activate kinship bonding whenever humans recognize appropriate "markers" in others (i.e., encounter specific initiating environmental stimuli) such as ethnic features, language, and mere association. These markers serve as indicators for whomever might qualify as remote or perceived family among the multitudes of contemporary societies. Rushton (1989) identifies phenotypic similarities as the stimuli that initiate kinship bonding mechanisms. Goetze (1998) argues that all of these psychological mechanisms likely evolved in hunter-gatherer society but their ability to generate bonding in large-scale groups derives, in part, from the mobility of modern humans and the difficulties in mobile societies of actually locating real kin. Hence, humans exhibit at least minimal bonding emotions and behaviors with large numbers of surrogate family.

In traditional research, debate about the depth and durability of ethnic attachments has been carried on between the primordialists who see such bonding as strong, extremely durable and originating far into a sometimes mysterious past and circumstantialists who see group bonding as ephemeral and interest-driven (Scott, 1990). While not sealing the case for primordialism, inclusive fitness concerns provide at least some scientific footing for the position and reduces some of the mystery about group origins by demonstrating how strong, durable ethnic group attachments might have formed and persevered.

An historian, Peter Mentzel (2000) utilizes the concept of a kinship bonding mechanism to explore variation in the origins of nationalist loyalties and viable nation-states in the Balkans, especially as they developed under the rule of the Ottoman Empire. To begin, he notes that nationalism, the politically active expression of ethnic identity, resulted in more effective and stable nation-states in Croatia, Serbia, Greece, and Bulgaria than in the territories largely populated by Albanians. The former can all point to politically autonomous units emerging as the cohesion and strength of the Ottoman Empire waned. By the 19th century, Serbia established a full-fledged nation-state that would endure through the Yugoslav period and maintain its cohesiveness despite disastrous attempts by Serbian political elites to establish a Serbian Empire all its own, despite the essential loss of the region of

Kosovo, and despite the economic deprivations imposed by NATO bombing and a regime of economic sanctions. In contrast, an Albanian political entity did not develop until the Yugoslav era, failed to incorporate the lion's share of the adjacent Albanian population, and has continued in a status so fragile that a collapsing pyramid scheme nearly tore the fledgling Albanian state asunder.

A traditional issue for scholars and for Mentzel is explaining the development of nations or nation-states and in the particular case, why the Croats, Serbs, Bulgars, and Greeks, and even Bosnians have been successful at state-building and the Albanians were relatively unsuccessful. A traditional answer has been to assert that nationalisms are constructions of political elites designed to serve their political ends and that elite manipulations are the focal point for understanding the building of nation-states (See, for example, Rothschild, 1981; Mason, 1994). This approach begs the question, however, of why such constructions would have resonated with mass populations or why they would have failed to do so.

Mentzel's analysis provides a persuasive connection between elite manipulations and the responses of the masses. Following the work on kinship bonding and especially that of Johnson (1986), he argues that kinship is the foundation stone for the often cooperative, emotional and fairly durable attachments that individuals make to larger social associations and, ultimately, to national groups. The evolved psychology of kinship is not perfectly refined and humans react in kin-like manner (forge strong attachments to nonkin) when the triggers of kinship attachment are invoked. Calls to protect the *Motherland*, for example, can stir the sacrificial behaviors of broad classes of unrelated peoples. This can work even when political leaders — and institutions more generally — lack a democratic base of public legitimacy. The archetypal case is Josef Stalin's appeal to fight for 'Mother Russia' against the German invaders. Not everyone listened, but the point is that even Stalin eschewed an ideological or personal appeal in this instance, understanding at a fundamental level that kinship had the best chance of working under the most dire of conditions.

Mentzel's unique contribution here is in showing how a layered development of ever larger associations could produce national level associations and how the absence of this line of development serves as an obstacle to the leap from direct kin-based groups to the enormous and often demanding associations of nations and nation-states. He argues that clan-based associations needed to pass through intermediate associations that were constructed on evocation of kin sentiments before they could make the leap to national groups. In the Balkans, the intermediate associations that would perform those functions were the “autonomous confessional associations,” more commonly thought of as religious associations. Except for Croatia, the growth of Balkan nationalisms could be traced to the religious “millets” organized in the Ottoman Empire. According to Mentzel, these formal, nonterritorial associations were coterminous with the less formal religious groups that had developed as large-scale, transcendent replacements for earlier clan associations. The evocation of kinship had enabled these religious associations to emerge and were

given added impetus by Ottoman organizational schemes. These events had succeeded in pushing social organization into large-scale associations that were, nonetheless, cemented by deep-seated emotional attachments. The final step in the transition to nationalisms was to define territories and add political status to these large-scale associations. Nation-states in the Balkans can be seen as territorial and political extensions of religious associations or, as in the Bosnian case, as more or less tenuous alliances among these associations.

Albania is the exception. Religious associations apparently never succeeded in forging clan associations into transcendent associations. Albanians adhere in significant numbers to Catholicism, Orthodox Christianity, and Islam but those faiths did not serve to organize clans or to evoke extensively the triggers of kinship affiliation that an organization of clans would have enabled. Interclan relations and amalgamations were not coterminous with religious affiliation. Lacking religious grounds, elites attempted to build national identity out of a sense of common language, but this effort was limited by the obvious reality that Albanians spoke two distinct languages. In Mentzel's (2000, p. 251) own words:

> To restate all of this one could argue that Albanian nationalists faced such a difficult task precisely because they needed to confront (and attempt to co-opt) kinship relations such as the Albanian clans directly without being able to use confessional group attachments as an intermediary or disguised kinship association. Hence, Albanian nationalist intellectuals stressed linguistic nationalism in their attempts to build an Albanian national consciousness, an effort made difficult because of the Gheg/Tosk division.

Efforts to develop national identities and states in most Balkan communities succeeded because of a progressive effort to expand the scale and depth of associations that elicit kin-based affiliations. Efforts to forge a national identity in Albania have not yet culminated in comparable success because the evocation of kinship affiliation was not or could not be used to forge a progression of supra-kin associations. In paralleling traditional scholarship and in studying the construction of national identity, Mentzel has rendered the variation in a truly important and widely studied political phenomenon more understandable by elaborating on a fundamental concept from the repertoire of evolutionary psychology. Hopefully, Mentzel's work will inform and enrich the continuing work of traditional scholars in this field.

Completing Explanations

The categories of research examined here are by no means exclusive. Mentzel's research was clearly directed at completing an explanation of national identities. Because it was so firmly embedded in traditional historical research, we chose to use it as an example of the first category, “embracing conventional

research." The research reported on below could also be placed in the same category. We place it in the category of "completing explanations," however, because of its potential in making complete an explanation of ethnic conflict where the lack of completeness is especially salient.

This research (Goetze and Smith, 2004) demonstrates how evolutionary psychology has the potential for playing an important role in constructing explanations of ethnic conflict that include the *proximate* causes of ethnic conflict. This suggestion actually runs counter to the positions of Hislope and Harvey who, in a previously noted series of articles (Hislope,1998; 2000; Harvey,2000a; 2000b), review the contributions of evolutionary theory to the study of ethnic conflict. These authors argue that evolutionary theory has the capacity to identify only the *distal* causes of ethnic conflict.

While acknowledging that evolved traits are important in such distal explanations, Hislope (2000, pp. 161-162) prefers to focus on "culture" as the source of proximate explanations:

> A second reason for the inclusion of genetic factors when a dependent variable appears explained by culture revolves around the difference between proximate and distal explanations. While culture may stand in an unmediated and direct causal path to any given behavioral trait, what makes the cultural factor possible could be a certain biological predisposition, a gene, or a novel turn in the evolutionary history of the species. Hence, exploring distal causal factors helps to complete the chain of causation and provides an understanding of why things are the way they are. If sociobiologists were to frame their study in such exploratory "distal" terms, it is likely they could silence some of their more severe critics.

Later, Hislope (2000, p. 174) offers his view on the extent of the reach of evolutionary theory - the longest reach being in the cultural evolutionary variant:

> The argument advanced herein is that the articulation of cultural evolutionary theory represents theoretical progress over sociobiology, but its explanatory payoff remains limited due to the role of contingency in human affairs and the significance of non-evolutionary, proximate causal factors. While evolutionary theory undoubtedly elucidates the development of all organic life, it would seem to operate best at macro-levels of analysis, "distal" points of explanation, and from the perspective of the long-term. Hence, it is bound to display shortcomings at micro-level events that are highly contingent in nature.

Likewise, Harvey (2000b, p. 184) finds evolutionary theory wholly inadequate for

even contributing to the explanation of micro events such as the outbreak of war and ethnic violence:

> Research on evolutionary theory, phenotype matching and kinship affiliations is extremely useful for understanding the root causes of patriotism, nationalism (both ethnic and non-ethnic), xenophobia, and even racism. But it cannot explain ethnic war - that particular subset of human social interaction that involves a high level of inter-group violence and hostility. Nor can it account for variations in the severity and timing of ethnic violence more generally. Stronger explanations for this variability focus on environmental forces, some of which underscore the prominent role played by ethnic elites in the mobilization process.

We can easily share the observation that evolutionary theory has previously offered little in the way of adding to proximate explanation of ethnic conflict. That condition is, we believe, only temporary and Hislope and Harvey have underestimated the potential that evolutionary psychology offers in forming proximate explanations of social behavior including the outbreak of ethnic conflict. Again, we do not claim that evolved mechanisms are the only source for constructing explanations of social behaviors. We agree with Hislope that monocausal explanations of social phenomena are unlikely to be sustainable. We do argue, however, that evolved psychological mechanisms typically play large roles in accounting for most social behaviors including the outbreak of ethnic conflict. And, what often seem to be cultural events independent of and cut off from evolutionary processes may themselves have evolved as functional adaptations that complement or activate embedded psychological mechanisms.

In a preliminary study of the triggers of ethnic conflict, Goetze and Smith (2004) report on a mechanism derived from evolutionary psychology premises that illustrate these interactions in the context of group mobilization for conflict. In particular, they posit an alarm mechanism that disposes individuals to organize in the defense and offense of their ethnic group when viable and deadly threats to the security of their group are experienced. The behavioral manifestations of this mechanism are precisely the organization of group defense and offense when threats are encountered and, as activating stimuli, the dissemination of threats (cultural phenomena) by political elites who wish to engender a conflict situation.

Why would humans possess such a mechanism? Alexander (1979, section 4) has speculated that humans developed alarm mechanisms that might even be specific to human threats as a result of cumulative experiences in the environment of evolutionary adaptation. Once humans had emerged as the dominant species able to defend against nonhuman predators, their most feared competitors were other humans and especially other humans who were organized as a group for the purpose of predatory mayhem. Behaviors that served as responses to threats from other humans

may have been necessary for immediate survival and became adaptive as threat circumstances were repeated over the generations.

One can imagine that an array of menacing stimuli provokes defensive reactions and that an array of behaviors could manifest those reactions. A plausible speculation is that murderous threats and actions directed at members of an ethnic group due to their ethnic identity are included among the array of menacing stimuli. Likewise, behavioral dispositions to organize group defense or offense in the face of those threats are included among the array of adaptive reactions. Empirical evidence that such connected stimuli and behaviors are universal across cultures and group conflict conditions would constitute considerable support for believing them to be part of an evolved psychological mechanism - their universality arguing for adaptations formulated early and effectively in the EEA. Goetze and Smith (2004) report on two such cases of intense, violent ethnic group conflict in Bosnia and Rwanda, respectively, and examined the circumstances that preceded the outbreak of organized hostilities in each case.

In Bosnia in 1995, the contagion effect of group hostilities in neighboring regions was clearly in play. Croat and Serb (officially, Yugoslav) forces had recently engaged in a full-scale war and tensions in Bosnia about what Serbs in the region might do next were certainly high. Serbian elites within Bosnia who controlled television transmissions began disseminating reports of Muslim atrocities against Serbian villagers in which the latter were reportedly murdered by the former. No documentation that these events actually occurred has been put forward suggesting very strongly that the reports were concocted by Serbian elites in order to send off alarm bells in the minds of the Serbian masses. In many Serbian villages, the organization of militias soon followed and these militias were, in turn, often organized into more regular forces for carrying on systematic hostilities within Bosnia.

These media messages about Muslim atrocities were, of course, available to Muslim elites and masses and one would expect that Muslims would organize militias in alarm over Serbian activities. Yet initially, Muslims did not commence organization of communal militias on a widespread basis. Perhaps the messages did not deliver the same provocative stimuli as they delivered to the Serbs. More likely, however, reactions are conditioned by the degree of vulnerability of the group to assaults by other groups. Groups that are most vulnerable and relatively defenseless against communal assaults, as the Muslims were at that time, have often tended to keep a low profile reminiscent of the "freeze" tactics that other small mammals assume when confronted with superior predators. A "rational" explanation of this behavior is that individuals in vulnerable groups assess that their own defense preparations could provoke other groups into preemptive assaults and that the balance of forces does not offer favorable outcomes to the vulnerable group. Humans surely make calculations of this sort but only evolutionary psychology offers an explanation as to why some manner of calculation clicks on in these types of situations - such situations have been repeatedly encountered in the environment of evolutionary

adaptation and selection favored mental mechanisms that could generate behaviors that optimally responded to the threats to survival and reproduction.

In Rwanda in 1994, Hutu elites disseminated messages over mass media that made reference to Tutsi atrocities committed against Hutu villagers, but Hutus required little convincing as the reality of recent Tutsi assaults on Hutus in neighboring Burundi was common knowledge. Again, the atmosphere was already tense and Hutu elites needed only to persuade Hutus that similar massacres could easily occur in their own country. In fact, the media campaign was geared primarily to spurring the organization of Hutus for the purpose of massacring Tutsis and eliminating the latter from the country.

At least within Rwanda itself, Tutsis lacked resources to mount any kind of defense against what developed as genocidal killing. Hence, in most regions of the country, their reaction was predictably oriented toward the "freeze" alternative and little organization was observable among them to combat Hutu assaults. Only the regions bordering Uganda experienced a military response. Tutsis had held important positions within the Ugandan army and constituted an important proportion of its manpower. Out of that military diaspora, a Rwandan army (Rwandan Population Front or RPF) was forged that ultimately invaded Rwanda and drove out the Hutu militias as well as the regular Hutu army units. All of this happened despite the relatively small numbers of Tutsis in the Rwandan population (at any time no more than 20%) and despite the nearly successful attempt at massacring the entire Tutsi civilian population. Perhaps two-thirds of the Tutsi population would be slaughtered before the RPF would take control of the country. The massive acquiescence of the Rwandan Tutsis was notable for its uniformity of form -- almost no civilians attempted any resistance or attempted to organize a resistance - and its universality - all civilians appeared to react in the same fashion. An evolved psychological mechanism that generates uniform behaviors in response to similar and powerful stimuli offers as much explanation as any for the lack of variation in behaviors, a pattern that seems anomalous from a common sense point of view.

At the same time, variation in response to murderous threats was clearly apparent across the Balkans and Rwandan cases and across the groups within the Balkans. Goetze and Smith posit that a complex of stimuli that include murderous threats and perceived military capabilities affect whether freeze or mobilization responses emerge. Another possibility is that perceived credibility of reports of murderous assaults shapes mobilization responses. Clearly, false reports of group assault will encounter different responses from one society to the next. Some societies will be disposed to accept these reports as true. Others will dismiss them rapidly as without substance. In the USA, reports from white supremacists groups that Jews and African Americans are murdering whites are generally not believed. The important issue then becomes: what are the environmental conditions that nurture disbelief in one society or, conversely, what are the environmental conditions that make such reports credible?

Recasting Thought

Evolutionary theory can recast thought, encourage new areas of research, and generate novel hypotheses about important issues in the ethnic conflict field and help to determine which areas of research are especially important.

Threat Mechanism

A unique question raised by an evolutionary psychology approach is exactly how does an evolved psychological mechanism function? How do specific behaviors connect algorithmically with specific environmental stimuli? Marcus, Wood, and Theiss-Morse (1998) attempt to isolate the workings of what they call a threat mechanism. In particular, they develop a model that connects specific environmental stimuli with a set of behaviors that they label *intolerance*. They are interested in intolerance directed at members of an out-group, typically some manner of ethnic or racial group. The primary problem, as they see it, is to identify the environmental stimuli that provoke intolerant behaviors. Identifying the right stimuli can be accomplished, however, only by gaining understanding of the process through which stimuli are translated into behaviors.

They begin their model-building task by first reviewing features of two general models that have been used to explain threat behaviors — a rational actor model and a symbolic politics model. The salient features of a rational actor model include an assessment mechanism that initiates intolerance behaviors whenever threatening stimuli are perceived. More specifically, the mechanism surveys the environment and assesses the probability of a dangerous event occurring. Intolerance behaviors are seen as coping devices designed to ameliorate or nullify the danger. An individual might attempt to deprive a group of political rights, for example, if members of that group are engaging in behaviors that have a high probability of infringing on the status of one's own group.

A symbolic politics model identifies provocative behavior as the mere presence of a member of a group that is associated with a threat earlier in one's life or the presence of some symbol of the group. People respond to these symbols in intolerant ways not because they pose real threats or even a probability of real threat in the contemporary environment but because the symbols acquired a negative valence (through cultural transmission or conditioning) at a distant time in the past. Environmental stimuli are not assessed through rational calculation that evaluates the degree of threat but almost subconsciously in a way that arouses emotional responses. By triggering affect and emotion, intolerant behaviors are set in motion. The type of stimuli that initiate this sequence are deviations from norms - an action, event, or person that represents a violation of the status quo and carries the associated negative valence.

Marcus, Wood, and Theiss-Morse (1998) find fault with these models and propose a new model that corrects for deficiencies. They cite previous work (Kinder

and Sears, 1981) that demonstrates that the degree of threat posed in a contemporary environment fails to elicit appropriately measured intolerance responses and other studies (Hamill, Wilson, and Nisbett, 1980; Jennings, Amabile, and Ross, 1982; Kahneman and Tversky, 1982; Nisben and Ross, 1982) that show that the human brain may not be adept at processing threats in a conscious calculated manner. They note that rational calculation of threat is unlikely to be the process invoked in threatening circumstances because rational calculation is a relatively time-intensive process and threats need rapid responses. Hence, the subconscious, affective system of processing is more likely to be invoked because this system processes stimuli at very rapid speeds.

However, the notion that even the affective system is triggered to produce coping responses by high values on a differentiated threat dimension may by misguided. The degree of immediate danger is not likely to be the activating stimuli. Instead, the authors suggest that threat responses tend to be provoked when out-groups are perceived to be engaging in violations of accepted societal norms - in other words, alarm bells tend to go off when out-groups are disrupting the societal environment - an intriguing conclusion that suggests a new class of behaviors that ought to be examined in the search for proximate causes of ethnic conflict.

In a clever experimental design, Marcus, et al (1995) tested the validity of the rational choice model, the symbolic politics model, and their own affective intelligence model. First, subjects were given the opportunity to rate a wide variety of different groups according to their likes and dislikes. This procedure enabled subjects to "rely on their previously secured affective disposition ..." Two weeks later the same subjects were confronted with alternative scenarios involving actions of groups that they had rated as "least-liked." The actions were distinguished by whether the disliked groups were moving into positions in society where they could pose danger to the subject or by whether the actions of the group violated accepted norms of social or political behavior. Thus, the scenarios created an opportunity to assess, on the one hand, the likelihood of threat and, on the other hand, the violation of social norms. In an initial study, the subjects were presented with written scenarios and in a subsequent study, subjects were presented with actual news broadcasts. The results were similar in both studies. They found that the degree of threat did not provoke differences in tolerance/intolerance evaluations as measured by a post-experiment questionnaire. However, violations of social norms did elicit more intolerant responses, thereby, supporting that aspect of the affective intelligence model that identifies norm violations as the environmental activators of the mechanism that generates intolerant behaviors.

In a follow-up experiment; Marcus, Wood, and Theiss-Morse (1998) also measured the affective-anxiety levels of subjects as they were being exposed to news broadcasts that did or did not display violations of social norms. They found that anxiety levels were significantly higher when violations of social norms were present in the news broadcasts, again lending credence to the notion that processing of the threat was taking place on an emotional level rather than on the level of rational

calculation.

Many real-world cases of conflict offer at least casual support for the affective intelligence model. Recent developments in the Arab-Israel conflict comprise a case in point. During that summer of 2000, President Clinton attempted to broker an agreement between Israel and the Palestinian Authority that would settle longstanding, even ancient, land claims. The bargaining focused on what percentages of the West Bank and Gaza Strip would be controlled by the Palestinian Authority, after further devolution of authority from Israel. While no meaningful agreement on the main issues emerged between representatives of the respective sides, both Yasser Arafat and Ehud Barak seemed open to continuing negotiations, with either Clinton or (more likely) someone else as the intermediary. In other words, the "peace process," as it became known, seemed to be moving forward in an incremental fashion, subject to the usual short-term disappointments such as those experienced in the summer meetings. The likelihood of violence in the conflict, in at least an impressionistic sense, seemed at an all-time low.

All of this changed dramatically and in a manner consistent with the framework of affective intelligence soon after negotiations lapsed. A visit by Ariel Sharon to the Temple Mount in the early fall of 2000 ignited street violence from Palestinians at a level not seen since the Intifadah of the late 1980s. This simple act, by one person, brought the logic of affective intelligence into play.

Through his visit to a site holy to both Jews and Arabs in the Old City of Jerusalem, Sharon violated what appeared to be a basic social norm within the peace process. As a living symbol of Israel's incursion into Lebanon in 1982, Sharon, within the context of the winding down of the Arab-Israel conflict, would not be expected to enter a high-profile point of dispute such as the Temple Mount. For Palestinians this constituted an extreme departure from what appeared to be a long-term commitment by Israel to self-restraint. Thus Sharon's visit became the stimulus for a Palestinian response that, in the language of Marcus, et al., consisted of intolerance behaviors. As would be expected by the logic of affective intelligence, the processing of threat appeared to be taking place on an emotional level and largely in the form of social norm violations rather than through rational calculation.

Marcus and his colleagues presented us with a model of how an evolved psychological mechanism processes threat stimuli and converts these stimuli into intolerance behaviors. Their work exemplifies the fruitfulness of examining the actual workings of psychological mechanisms that come into play as ethnic group conflicts develop and argues strongly for a research program that examines the workings of a range of psychological mechanisms that may be involved in the elicitation of ethnic behaviors.

The affective intelligence model describes a psychological mechanism that generates intolerance behaviors. Some of the details of that model may have relevance for developing more refined explanations of other ethnic phenomena including mobilization for violent group conflict. Reports of ethnic massacres signify an extreme degree of threat and it is hard to dismiss the influence of these reports in

triggering group mobilization. However, massacres are also clear violations of social norms and these aspects of massacres may play a more prominent role in activating group responses than one might initially think.

Suicide Bombing

Behaviors surrounding suicide bombing are not exclusively ethnic phenomena, but are important and frequently overlap with ethnic phenomena, especially when a bombing targets a group that is of a distinctly different ethny.

Atran and others[1] have explored the genesis of suicide bombing and, in particular, why individuals become suicide bombers. These authors utilize several ideas from evolutionary psychology to generate novel hypotheses about the motives of suicide bombers and about the factors in their environments that could generate their terrorist behaviors.

Initially, Atran (2003a) cites the work of Krueger and Maleckova (2002) and Krueger (2003) whose profiles of Palestinian suicide bombers reveal few traits that set them apart from other individuals in their societies. Suicide bombers are at least as educated and at least as economically well-off and employed as the general population. Moreover, they are not notably more religious than others at least prior to their recruitment into terrorist organizations. Importantly, they also exhibited no pattern of personality pathology that could have set them apart from others. Hence, the socio-economic and personality profiles of suicide bombers offer few obvious clues about why they choose this line of work and puts scholars at something of a loss in trying to explain these choices. Where can we look then to answer why individuals join terrorist organizations and engage in suicide bombings?

Suicide bombers may not be very different from the general population in their societies. However, it does not follow that the societies themselves are profiles of normality. Acknowledging this environmental condition and drawing inspiration from evolutionary thought, Atran and his commentators derive at least three explanatory hypotheses. The first is a sociobiological one that focuses on individual motives. The second hypothesis points to macro-environmental conditions that create so-called "fitness cliffs."[2] And, finally, a third hypothesis points to the fictive kinship of the small group environment of terrorist organizations as a determining factor in suicidal behaviors. These are interwoven hypotheses in the sense that the explanation embodied in the first hypothesis sets the stage for the second and third hypotheses.

Among the few distinctive traits that stand out among suicide bombers are their maleness and unmarried status. Lacking children of their own and any immediate prospects of bearing any, unmarried males might be more inclined to sacrifice, up to forfeiture of their own lives, for the sake of the welfare of others who are born and nurtured by others but perceived to be kin. The resort to the sacrifice of one's own life for perceived kin may make sense, however, only in a society where conditions in the environment have resulted in diminished life prospects. The choice to engage in suicide bombing can be viewed then as a fundamental inclination to

enhance one's inclusive fitness. However, single unmarried status hardly serves as the sole condition pushing young males into such drastic acts. In societies characterized by violent military occupation, inadequate medical care, and minimal economic opportunities life tends to be brutish and short. The prospects for fruitful and fecund family life are especially dim for unmarried males and the support of already existing kin might assume relatively higher adaptive value than marshalling resources for one's own future, i.e., where the cliff of fitness abruptly descends. Martyrdom can bring financial rewards to existing kin but more importantly, confers status on entire clans. Suicide bombings typically impose damage on society's enemies and are viewed by many as enhancing future outcomes for that society.

Events with origins exogenous to the society may created the fitness cliff or render it dramatically steeper. The occupation of Palestine by Israeli troops is an often cited example of an event that has eroded the life prospects of Palestinians. In explaining why Palestinians take up suicide bombing, Jessica Stern (2003: 38) remarks in her book on religious terrorists: "Hopelessness, deprivation, envy, and humiliation make death, and paradise, seem more appealing." She goes on to cite an elderly resident of Jenin: "Look around and see how we live here… Then maybe you will understand why there are always volunteers for martyrdom Every good Muslim understands that it's better to die fighting than to live without hope."[3] Life tends to be short in Palestine, employment opportunities few even for the well-educated, and the reproductive prospects for unmarried males relatively unfavorable. In these conditions, dying in the interests of altering the fitness cliff for the Palestinian community could, in theory, be a superior means of transferring one's genes into future generations in these conditions. Still, if unmarried male status and oppressive conditions were sufficient to generate suicide bombers then one could expect most unmarried males in such societies to engage in such extreme terrorism and it appears that they do not even though in some societies (e.g., Palestinian society) over 70% of the population supports "martyrdom" operations (Atran, 2003: 5).

According to Atran (2003a: 4-6, 10-11), the final piece of the explanatory puzzle derives from the interactions within terrorist organizations. Atran proposes that the influence of the terrorist organization, in particular, the influence of the small, terrorist cell explains the final commitment to suicide. Arguably, the unit for which humans are most willing to sacrifice and the unit exercising the greatest influence on humans is the family. Natural selection provided humans with mechanisms that created tight, emotional bonds with immediate kin. As Goetze (1998) argues, however; mobility, modern society, and globalization have torn people away from their natural families. Modern humans, still operating with the mechanisms of kinship that evolved in hunter-gatherer society, now find themselves in search of substitutes. The small, terrorist cell serves as a meaningful substitute to family and it is not surprising that members end up forming strong emotional bonds with each other as well as the typical sacrificial inclinations of close family. Leaders of terrorist organizations cultivate and manipulate these emotional bonds and steer their expression toward political goals of the terrorist organization.

Like any hypotheses, these three need to withstand evaluation through empirical comparisons. Indeed, some scattered evidence casts doubt on the accuracy of elements of the hypotheses. The "fitness cliff" hypothesis presumes that life opportunities for potential suicide bombers have recently plummeted. Yet, Atran reports that most bombers, while sometimes underemployed for their education levels, have relatively positive life opportunities — certainly no worse than that of comparable individuals in their societies. Even the sociobiological hypothesis is challenged by data indicating that over one-third of the suicide bombers of the Liberation Tigers of Tamil Eelam in Sri Lanka and over two-thirds of bombers of the Kurdish Workers Party in Iraq have been women (Schweitzer, 2000: 82-83 and reported in Stern, 2003: 53). Despite these disconfirming data, these hypotheses still provide some compelling and novel insight into some emerging and unexpected facts about the activities of suicide bombers. The disparity between these data and hypotheses raises new issues about how situational factors and environmental conditions may differ across these societies and may even be activating different mechanisms that, nonetheless, result in similar behaviors, that is, suicide bombing. As they are refined with empirical observations, these hypotheses seem likely to contribute in meaningful ways to explanation of these crucially important phenomena.

All of these cases demonstrate that there need not be antagonism over the approach taken by traditional scholars and practitioners of evolutionary psychology. Traditional research provides valuable data and important elements of useful explanations. Clearly, an evolutionary psychology approach can contribute to these explanations in multiple ways. It can extend traditional research on ethnic phenomena, fill in proximate explanations of ethnic conflict, or open up new areas of research and thought. Most studies of ethnic phenomena using an evolutionary psychology approach fulfill more than one of these missions.

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Notes

1. *Interdisciplines*, a website for interdisciplinary research in the humanities, organized an online conference on *Understanding Suicide Terrorism* in 2003. Featured were articles by Scott Atran (2003a) and Nilufer Gole (2003) as well as extended commentary by a host of other scholars. This discussion draws on the work of this conference, especially Atran's whose related work can be found in the pages of *Science* (Atran 2003b).
2. This discussion on "fitness cliffs" is drawn from Pitchford's (2003) commentary on Atran's work and also from Chisholm (1999: Chapter 6, The Cost of Continuing).
3. First cited in P. Jacobson (2001).

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