

REPLY

Socialization and Adolescent Reckless Behavior: A Reply to Jessor

JEFFREY ARNETT

The University of Missouri-Columbia

An elaboration is given here of the developmental theory of adolescent reckless behavior presented previously. The emphasis in this paper is on the socialization environment and how it acts to restrict or allow adolescent reckless behavior. Socialization is conceived here as having multiple dimensions: not just parents and peers but also school, community, the legal system, the media, and the cultural belief system. A comparison of the developmental basis of this theory and Jessor's theory is made. A research agenda is also included. © 1992 Academic Press, Inc.

Certainly any theory that is intended to explain adolescent reckless behavior must address not only the developmental predispositions that may incline adolescents toward participation in such behavior, but also the socialization environment. It is the socialization environment that will shape those predispositions (in particular sensation seeking and egocentrism) and influence the extent to which they are expressed as reckless behavior. Although in my theory (Arnett, 1992) more emphasis is placed on developmental predispositions than in Jessor's theory (Jessor, 1992), Jessor and I seem to be in agreement that the socialization environment is of primary importance in determining the extent to which adolescents participate in reckless/problem/risk behavior. A remaining question, and a point of some divergence between the two theories, pertains to the characteristics of the socialization environment that must be considered as potential influences on such behavior. In this paper, then, first adolescent socialization will be discussed, with additional information offered on the theory presented in the preceding paper (Arnett, 1992). Following this, further comment will be made on the developmental basis of adolescent reckless behavior, comparing Jessor's theory to the present theory. Finally, a research agenda will be presented.

The emphasis of the theory of broad and narrow socialization presented in the preceding paper is that, in considering the socialization of adolescents, *it is not enough to consider only the family and peers* as influences in adolescent socialization. By adolescence, in Western cultures, the in-

Correspondence and reprint requests should be addressed to Jeffrey Arnett, Ph.D., Department of Human Development and Family Studies, 31 Stanley Hall, University of Missouri-Columbia, Columbia, MO 65211.

fluence of the family has attenuated. Although the family remains important, other factors must be taken into account as well: the school, the neighborhood or community, the legal system, the cultural belief system, and the media.

The theory calls for a perspective that is both cross-cultural and historical. Although sensation seeking and egocentrism are argued to exist as developmental predispositions and possibilities in adolescents of every culture and historical period, the extent to which these tendencies find expression as reckless behavior and the forms of reckless behavior in which they are expressed vary greatly depending on which culture and which period is being considered.

The outlines of the theory of broad and narrow socialization were presented in the preceding paper, but the comments made by Jessor (1992) indicate that perhaps some further elaboration of the theory is necessary. In this paper, then, each of the elements of the model will be discussed. A summary of the theory is presented in Table 1.

First, a point of clarification on the definition and use of the term reckless behavior. Jessor's term, problem behavior, was rejected for use in the present theory because it has been used so as to include behavior such as alcohol consumption (any amount, in any circumstances) and sexual activity (with or without contraception) (Jessor & Jessor, 1977). These may be a "problem" in the eyes of many adults, but for the present theory it was decided that even including behavior such as low or moderate levels of alcohol consumption and sexual activity with contraception would mean casting the net over too wide an area for it to be conceptually coherent. The term reckless behavior was intended to circumscribe the area of interest more tightly, so as to include only behavior that has the *potential for immediate and serious consequences*. Alcohol consumption by itself does not fall into this area (except in cases of extreme overconsumption or when combined with other reckless activity), while alcohol consumption in combination with automobile driving does. Similarly, for an adolescent to be sexually active is not reckless, but for an adolescent to be sexually active without using contraception is reckless because of the potential for the immediate and serious consequence of pregnancy. Behaviors such as drug use and vandalism are included because of the potential legal consequences, and for drug use the possibility of overdose.

In the preceding paper (Arnett, 1992), it was stated that, on the level of culture, a distinction can be made in a general way between broad and narrow socialization. *Broad socialization* describes a culture in which there is no guiding, commonly held belief system to serve as a moral basis for what behavior is acceptable and what is not; a culture in which the independence and self-expression of the individual is considered a higher

TABLE 1
SUMMARY OF CHARACTERISTICS OF BROAD AND NARROW SOCIALIZATION

| Broad socialization | Narrow socialization |
|---|--|
| <p>Family: Few restrictions on adolescents' behavior, low monitoring of adolescents' whereabouts, parents encourage independence in their children.</p> <p>Peers: Promote and reward (with praise and esteem) reckless behavior in one another; being part of group leads individuals to behave recklessly in ways they would not if they were alone.</p> <p>School: No uniforms or dress code, little monitoring of attendance, low emphasis on discipline.</p> <p>Community: Large, diverse population. Autonomy and self-expression of the individual is considered a higher value than conformity to the standards and expectations of the community.</p> <p>Legal system: Legal restrictions on behavior are minimal. Punishments are light.</p> <p>Cultural belief system: No guiding, commonly held belief system to serve as moral basis.</p> <p>Media: Pervasive and unregulated, promote immediate gratification and self-indulgence.</p> | <p>Family: Restrictions on behavior and monitoring of whereabouts of family members are high. Responsibility to the family is considered more important than individuals' autonomy or achievements.</p> <p>Peers: Friends who share a disinclination for reckless behavior promote and reinforce that disinclination in one another.</p> <p>School: Uniforms required or dress code, attendance compulsory and strictly monitored, firm discipline.</p> <p>Community: Small, neighbors know each other. Adherence to the standards and expectations of the community is among the highest values, and individual autonomy and nonconformity are viewed with suspicion and contempt.</p> <p>Legal system: Tight legal restrictions on many aspects of behavior, backed up by swift and severe punishments.</p> <p>Cultural belief system: Children and adolescents are socialized strongly into believing one particular ideology that serves as the moral basis for behavior.</p> <p>Media: No media, or media are controlled strictly by the state and generally restricted to themes that promote self-restraint and self-sacrifice.</p> |

value than conformity to the standards and expectations of the community; a culture in which punishments for deviating from the standards and expectations of the community are light. In contrast, the term *narrow socialization* describes a culture in which children and adolescents are socialized very strongly into believing one particular ideology that serves as the moral basis for behavior; a culture in which adherence to the standards and expectations of the community is among the highest values, and individual autonomy and nonconformity are viewed with suspicion and contempt; a culture in which punishments for deviating from the standards and expectations of the community are severe and difficult to resist. How cultures characterized by broad and narrow socialization differ on each dimension of socialization is detailed below.

Family

Under broad socialization, adolescents are given a great deal of autonomy from the family and even encouraged to be independent and to strive for self-sufficiency, while under narrow socialization the family exercises tight control over the adolescent, sometimes even tighter than prior to adolescence. There have been and still are cultures (characterized by narrow socialization) in which female adolescents are not allowed to go out of the home unescorted, for example many Islamic cultures (Davis & Davis, 1989). This obviously lowers the likelihood of female adolescents in such a culture engaging in sexual activity, with or without contraception.

In the U.S., which is generally characterized by broad socialization, there is nevertheless a great deal of variation in the kind of restrictions parents place on their children. The work of Patterson (1982) and others indicates that the extent to which parents monitor the behavior of their adolescents is related to adolescents' participation in reckless behavior. Use of automobiles can be taken as an example. The adolescent who has his own car or who has unrestricted use of the family car obviously has a greater likelihood of driving at high speeds or driving while drunk than the adolescent who is not allowed to drive or is allowed to drive only in restricted circumstances. With the level of restrictions that parents establish for their adolescents, they influence the extent to which the adolescent's individual propensity for sensation seeking and egocentrism will be expressed as reckless behavior.

This should not be taken to imply that, in the socialization of adolescents within the family, only control is important, while warmth is insignificant. The importance of a balance between warmth and control in the socialization of children—at least within the context of the culture of the U.S., where virtually all of this research has been conducted—has held up well through decades of research (Baldwin, 1955; Baumrind, 1971; Becker, 1964; Maccoby & Martin, 1983). It is true that, in considering socialization in relation to adolescent reckless behavior, the focus in this model is on control, on the restraints applied during the socialization process which act to limit adolescents' participation in reckless behavior. But within the family, warmth can be an important influence in leading a child or adolescent to *want* to adhere to the restraints set by the parents. Abundant research has shown that, on the level of the family, severe control without warmth is generally ineffective in curbing antisocial behavior among children and adolescents (Eron, Walder, & Leftkowitz, 1971; Hoffman, 1960; Patterson, 1982; Radke, 1946; Sears, 1961). Warmth is the important link between the standard of behavior that parents advocate for their adolescent children and adolescents' adherence to that

standard. However, it is a key assertion of the model proposed here that there are many factors outside of the family that impinge on the socialization of adolescents. Even an excellent balance of warmth and control within the family may not be enough to avert reckless behavior among adolescents if other elements in the socialization environment tend radi- cally toward broad socialization.

Peers/Friends

Peers/friends are complex as a socialization influence. On the one hand, they act as an influence toward narrow socialization, in the sense that they may punish, and ruthlessly (often with sarcasm and ridicule), any behavior that deviates from the peer-culture norm. Failures of impulse control and delay of gratification on the part of an adolescent are likely to be punished remorselessly by friends *if* it leads to behavior that causes them annoyance or discomfort. Also, friends who have no personality- based inclination toward reckless behavior may support each other in this disinclination, thus acting as mutual influences toward narrow socializa- tion.

On the other hand, friends may act as an influence toward broad so- cialization in the sense that they may support and encourage each other in their reckless behavior. It seems likely that most types of reckless be- havior almost never take place alone; almost always—and especially for behavior such as vandalism and drug use (Erickson & Jensen, 1977; Hin- delang, 1976)—reckless behavior takes place in a friendship group of two or more, and adolescents' collective participation in it may act to fortify the friendship bonds between them (Richards, Berk, & Forster, 1979). In this sense, friends may act as an *antisocialization* influence in that they conspire to engage in behavior together that most of the other socializa- tion influences in their environment—parents, school, community, legal system—are trying to socialize out of them and would like to prevent, behavior that few of the adolescents would participate in if they were by themselves.

Peer influences are often mentioned in discussions of adolescent reck- less behavior (including Jessor, 1987a; Jessor & Jessor, 1977). Peer pres- sure and peer models, it is suggested, are partly responsible for adoles- cent drug use, vandalism, and so on. But much of this discussion has been oversimplified, not only in people's everyday conversation but also in the social science literature. Typically, the studies in this area have found a *correlation* between adolescent's reckless behavior in a given area and the reckless behavior of their friends and then made the *causal* interpre- tation that having friends who participate in reckless behavior *influences* or *contributes* to an adolescent's participation in reckless behavior. But

adolescents are not sorted randomly into friendship groups. Adolescents choose their friends on the basis of characteristics they have in common. In particular, for the purposes of this model, adolescents who have similar levels of sensation seeking are likely to be attracted to each other as friends. A group of high-sensation seeking friends are likely to have the same kind of ideas for what to do on a Saturday night—possibly involving some variety of reckless behavior. A group of low-sensation seeking friends are also likely to share similar ideas for what to do with their time together.

So, where correlations exist between friends in their reckless behavior, it is more likely that they have become friends *because* they had a certain high or low propensity for sensation seeking and (by extension) reckless behavior in common than that they *cause* each other to behave recklessly or not. This has been verified in longitudinal studies of drug use (Kandel, 1985) and delinquency (Glueck & Glueck, 1950). Once a group of high-sensation seeking friends are together, it is true that the group dynamics may lead them into reckless behavior that none of them would commit on their own; but it is not by accident that they have sought each other out as friends.

School

Schools can also be characterized as tending toward broad or narrow socialization. A school tending toward narrow socialization would be characterized by strict rules for conduct, perhaps including a dress code, and punishments for violations of these rules. Attendance and performance would be closely monitored. Expectations would be high (conformity to a high standard of achievement would be urged), and the curriculum a standard one that everyone would be expected to follow. Schools such as this are often founded on the basis of a cultural or sub-cultural belief system, for example schools in the United States founded on the Catholic, Jewish, or Muslim religion. Schools founded on the Communist ideology, in China, Cuba, and North Korea for example, are also likely to tend toward narrow socialization.

In contrast, a school tending toward broad socialization would have a minimum of rules, no dress code, and light punishments for violating the rules. Attendance and punctuality would be fairly lenient; a student could skip a class or even a day of school and not be punished. There would be a great deal of flexibility in what classes students could take, and students who would be high achievers would have to be self- or parent-motivated; the teachers would not consider it part of their role to hold up a high standard of performance and urge students to meet it.

Studies examining school characteristics in relation to adolescent reck-

less or problem behavior have tended to support the hypothesis that narrow socialization lessens the likelihood that adolescents will participate in reckless behavior. Probably the most thorough and exemplary of these studies was conducted by Michael Rutter and his colleagues (Rutter, Maughan, Morrimer, & Ouston, 1979). Controlling for verbal intelligence and socioeconomic status, they found that boys were less likely to become delinquent if they attended schools characterized by a particular "ethos," i.e., social organization of the school and classroom. In particular, the teaching style in these schools emphasized fair and firm disciplinary procedures and held high expectations for students in conduct and in academic performance. In contrast, schools in which boys were more likely to become delinquent were less demanding academically and less insistent on enforcing the rules.

Similar results for older adolescents have been reported in two large scale studies in the United States. A study of 30,000 students in 600 schools concluded that the key to minimizing criminal victimization in the schools was the "firm, clear, persistent, and even-handed application of rules" (Gottfredson, 1983; Gottfredson & Gottfredson, 1982). A comparison of 60,000 students attending over a thousand public, private, and parochial schools in 1980 reached similar conclusions (Coleman, Hoffer, & Kilgore, 1982). The private and parochial schools were reported to have lower rates of fighting, vandalism, truancy, drug and alcohol abuse, and verbal abuse of teachers than the public schools, even after taking into account the aptitudes of the students. This difference was attributed to the ability of the private and parochial schools to maintain a stricter disciplinary environment. The interaction between the socialization influence of the school and that of the cultural belief system is evident here, as the environment of the private and parochial schools typically was rooted in the belief system on which the school was founded.

Community

Studies of adolescent reckless/problem/risk behavior have rarely taken community variables into account, but there is a vast literature in the sociology of crime comparing rates of crime in different communities and neighborhoods and proposing reasons for those differences (see Wilson & Herrnstein, 1985, for a review). At least with regard to crime rates, important community factors include the degree of population turnover (Sampson, Castellano, & Laub, 1981) and attachment to the community (compare Whyte, 1943, and Hippler, 1974). Whether these factors are also important predictors of adolescent reckless/problem/risk behavior has yet to be examined.

It could be expected that large urban settings, with their diversity and

the way things are, without much questioning them (Myers, 1980). These beliefs typically include standards of right and wrong, what is acceptable behavior and what is not, and how unacceptable behavior should be punished. Within a community characterized by narrow socialization, there is likely to be a consensus about these things; within a community characterized by broad socialization, there is not. Rates of reckless behavior are likely to be higher where there is no consensus because adolescents are less likely to receive a clear message about what is acceptable behavior and what is not, and less likely to fear that they would be punished severely for engaging in behavior that is discouraged or prohibited.

Legal System

An aspect of adolescent socialization often overlooked in the social science literature is the legal system. A legal system tending toward narrow socialization would be highly punitive, with swift and severe punishments for reckless behavior. In addition, certain areas not considered subject to legal regulation in societies characterized by broad socialization, for example sexual behavior, would also be subject to strict laws and severe punishments in societies with a highly narrow socialization. Adultery and premarital sex are crimes punishable by the legal system in some Islamic countries. Societies characterized by broad socialization, in contrast, would have a legal system that was not nearly as strict or as certain in its punishments and would leave a greater proportion of behavior outside of the scope of legal regulation.

One example of the socializing influence of the legal system on adolescent reckless behavior can be found in the area of automobile driving. A high proportion of automobile fatalities in the general population involve alcohol use, about 40% of such fatalities (NHTSA, 1991). In 1982, the U.S. Government began requiring states to raise their legal age for purchasing alcohol to 21 years old if the states wished to continue to receive the millions of dollars per year dispensed by the Federal government for highway construction and repair. All 50 states soon complied. The result of this narrowing of socialization in the legal system was that between 1982 and 1989, alcohol-related traffic fatalities among adolescents aged 15 to 20 years old declined dramatically, a 47% drop for 15- to 17-year-olds, and a 33% decline for 18- to 20-year-olds (NHTSA, 1991). (Similar results have been obtained in communities that have imposed driving curfew laws for young people (Levy, 1988) or raised the minimum age of licensure (Levy, 1988; Williams, Karpf, & Zador, 1983).) This is an excellent example of how the restrictions a culture places on adolescents influence rates of reckless behavior among adolescents *and* influence the extent of the social consequences that result. It should be added that virtually all of

the countries of Western Europe have a minimum automobile driving age of 18 years of age rather than 16. Obviously, this law would and does seriously diminish the number of automobile-related fatalities among adolescents in these countries, relative to the U.S. where the driving age is 16 years of age in most states.

Cultural Belief Systems and the Media

Finally, the two remaining elements of the model will be considered, cultural belief systems and media. Cultural belief systems are often religious, but they may also take philosophical (e.g., Confucianism), political (e.g., communism), or other forms. In this section religion will be used to illustrate the role of cultural belief systems in adolescent socialization because the focus is on American society, where the preeminent belief system is religious. But it should be understood that many of the statements made here about religion could be applied to other types of belief systems as well.

It is useful to discuss religion and the media together because of the way the relative influence of the two has changed over the last 40 years in American (and other Western) society. The role of religion in the life of people in Western societies has declined dramatically, while the role of the media has expanded and become pervasive, so that the media are part of virtually every day of the lives of the people who live in these societies. While reported attendance at religious services and church membership in the U.S. have remained quite stable over the past 40 years, the proportion of Americans who say religion is "very important" in their lives declined from 75% in 1952 to 54% in 1987; also, in 1957 69% of Americans stated that they believed the influence of religion in American life was increasing, while 14% saw it as decreasing; by 1988, only 36% saw the influence of religion as increasing, while 48% believed it was decreasing (Gallup & Castelli, 1989). In other Western countries, the decline of the perceived importance and influence of religion has been even steeper.

While religion has been declining, the media have been ascending. The media pervade American life today to an extent unparalleled in history. Forty years ago television was still a novelty. In 1950, 9% of American households had a television; by 1960 the figure was 87%, and today in the U.S. virtually every home (98%) has at least one, while 59% have two or more (Lichty, 1989). Forty years ago radio and popular music existed, but were nowhere near as popular or pervasive as they are today; particularly since the mid 1960s, sales of musical recordings have increased astronomically (Sanjek, 1988). With greater exposure to TV and radio comes also greater exposure to advertising; advertising expenditures in these

media increased 20-fold between 1957 and 1983 (Meyers, 1984). Recently developed media include Walkman-type portable music recordings, and music videos. MTV, begun in 1981, was reaching 22 million American homes by 1984 (Starker, 1989). Today the media to which American adolescents are exposed include television, music, movies, magazines, and advertising (which by itself includes billboards, advertisements in newspapers and magazines, and television and radio commercials).

This change is important in relation to reckless behavior because of the way religion and media differ as socialization influences. The influence of religion tends toward narrow socialization, the influence of media toward broad socialization. To put it concisely, the message of religion as a socialization influence is self-restraint, self-control, self-sacrifice. The message of the media, to the extent that it can be capsulized, is quite the opposite: self-indulgence, self-satisfaction, immediate gratification. The media are, overall, subversive to the goals of socialization: an *anti*-socialization influence.

It seems likely, then, that if the influence of religion declines and the influence of the media increases, the result for socialization will be in the direction of the message that the media promote. And this message of self-indulgence and immediate gratification is likely to lead to higher rates of reckless behavior. As noted in the preceding paper in the discussion of the role of sensation seeking in reckless behavior, reckless behavior is pleasurable in many ways; one of the reasons adolescents engage in it is for its high-sensation excitement. When adolescents are exposed daily to messages advocating the unrestrained pursuit of pleasure, it is not implausible that at least some adolescents heed this message and that it contributes to their participation in reckless behavior.

This could help explain why reckless behavior has increased dramatically among adolescents during the past 40 years, concomitant with the rise of the media. In the preceding paper the examples of reckless behavior that were given were driving at high speeds and while drunk, having sex without using contraception, using illegal drugs, and engaging in minor criminality. In the past 40 years there have been dramatic increases in reckless behavior in every one of these areas. The rate of automobile fatalities among adolescents has nearly doubled since 1950, while declining in most other age groups (Whitfield & Fife, 1987). (This is true even taking into account the decline in alcohol-related automobile fatalities that occurred in the 1980s (described above), because during this time the rate of non-alcohol-related fatalities continued to increase (NHTSA, 1991).) The increases in unintentional pregnancy, drug use, and criminality among adolescents during this time are well known and were detailed in

THE TRADE-OFFS OF BROAD AND NARROW SOCIALIZATION

As indicated in the preceding paper, it would be easy but mistaken to conclude from the presentation of this theory that a highly restrictive narrow socialization environment for adolescents is being promoted as preferable because at every level it has been stated that narrow socialization results in lower rates of reckless behavior among adolescents than broad socialization. It is true that the theory suggests that a socialization environment characterized by narrow socialization leads to lower rates of reckless behavior among the adolescents in that environment, but that does not mean that narrow socialization is being advocated. Something is lost with narrow socialization, a great deal is lost, in the way of creativity, originality, individuality, and self-expression. Narrow socialization does not encourage original, innovative thinking; such thinking is likely to challenge the traditional order and ultimately to challenge and subvert the cultural belief system on which narrow socialization typically is based (Myers, 1980).

However, broad socialization also has its costs, and one of these costs is a higher rate of reckless behavior among adolescents. If a culture allows adolescents a more or less free rein and encourages individuality and independence, some of the adolescents will thrive in that environment and express themselves in creative and original ways, ways that promote the development and vitality of the culture as the adolescents become adults and gain adult skills and expertise. However, not all adolescents will thrive in such an environment, and not in all ways. Individuality and independence may also manifest themselves as reckless behavior, behavior that is socially disruptive and has serious social costs for the population of the culture and for many of the adolescents themselves.

So, it is not being argued that either narrow or broad socialization is "best." Ideally, perhaps, a culture would have a healthy tension between allowing and encouraging individuality, on the one hand, and restraining and prohibiting certain kinds of behavior that are seriously destructive to the well-being of the people living in the culture. But this is a difficult balance to strike.

THE DEVELOPMENTAL BASIS OF RECKLESS BEHAVIOR

Like the theory proposed here, Jessor's Problem Behavior Theory seeks to explain certain kinds of adolescent behavior in terms of the interaction between the characteristics of the individual and the characteristics of the social environment. In both models the social environment is construed as consisting of influences beyond just parents and peers. Jessor includes factors such as schools and neighborhood. The present

theory includes these as well as the media, the legal system, and the cultural belief system.

Where the theories seem most to differ is in the developmental explanation for adolescent reckless/problem/risk behavior. How are we to explain why this behavior rises dramatically at the beginning of adolescence, remains high statistically until the late teens and early 20's (depending on the specific type of behavior), and finally declines in the 20's and early 30's? Jessor emphasizes that "the most salient function of problem behavior in adolescence is as a transition marker, a way of placing a claim on a more mature status" (1987a, p. 335). This is an intriguing idea, but it is vulnerable for all the reasons I detailed in the preceding paper. It is made more vulnerable by the fact that no evidence has yet been presented by Jessor or others to support it. Perhaps it would be useful to interview adolescents about their reasons for engaging in reckless/problem/risk behavior. Do they state or imply the desire for a more mature status as one of their motivations?

The alternative theory I have presented here and in the preceding paper (Arnett, 1992) suggests that developmental changes in sensation seeking and egocentrism underlie increased rates of reckless behavior during the adolescent age period. The *interaction* between these developmental predispositions and the socialization environment determines the extent to which the predispositions will be expressed as reckless behavior. The socialization environment also determines the specific forms of reckless behavior that adolescents engage in, by restricting and punishing some forms more than others.

In this theory it is stressed that an understanding of adolescent behavior can be enhanced by comparing adolescents across cultures and across historical periods and by looking at the entire ecology of the adolescent socialization environment. Why do adolescents in Western Europe have very low rates of automobile accidents and fatalities, relative to those in the U.S.? The answer lies less in differences in family environments or peer influences than in the fact that adolescents in Western Europe cannot drive legally until they reach the age of 18, and even well beyond that age they are unlikely to own or have access to an automobile. Why do girls in Saudi Arabia have virtually no conceptions of children before marriage, while 1 out of 10 unmarried girls in the U.S. aged 15 to 19 years old becomes pregnant every year (Guttmacher Institute, 1986)? The answer lies partly in the extremely high restrictions on girls in Saudi Arabia, enforced in the family environment but arising from the Islamic belief system of the culture. Why do adolescents in the U.S. have higher rates of reckless behavior now in virtually every area than they did 40 years ago? The answer may lie partly in changes in family practices and family

structure, but changes in schools, the rise of the media, and the decline of a guiding and narrowing cultural belief system have also contributed.

Although Jessor (1992) currently dismisses the suggestion that sensation seeking could be an important motivation for adolescent reckless/problem/risk behavior, his own research on the particular reckless behavior of risk taking in automobiles has indicated that "risk taking while driving is part of a larger pattern of behavior involving deliberate and intentional engaging in risk-taking for fun or thrills" (Jessor, 1987b, p. 8), which clearly suggests a sensation seeking motive. Other research based on the model of Problem Behavior Theory has found sensation seeking not only to be significantly related to problem behavior, but also to have a *stronger* relation to problem behavior than any of the many other components of the theory tested simultaneously (Wilson & Jonah, 1988). It is quite obviously true, as Jessor (1992) states, that "Few adolescents continue cigarette smoking for the thrill of seeing whether they can avoid pulmonary disease; few engage in unprotected sexual intercourse for the thrill of beating the odds of contracting an STD or becoming pregnant." This analysis ignores, however, that adolescents may smoke cigarettes partly for the novelty of sensation that accompanies the experience, while their egocentrism protects them from worrying about the potential long-term effects on their health; and that adolescents may be motivated to have sex by the powerful and (for adolescents) novel sensations that accompany sexual activity, while their egocentrism assures them that no adverse consequences are likely to result.

However, Jessor's point (1992) that not all adolescent reckless behavior is pursued out of the desire for the sensation or risk-taking thrill involved is not disputed. The theory I have presented does not attempt to explain all possible motivations for adolescent reckless behavior. It is a *developmental* theory; the goal of the theory is to explain why many people engage in behavior *during adolescence* that they engage in neither prior to nor following adolescence, behavior that is reckless by the above definition. The question of interest is, what is it about adolescence, developmentally, that makes such behavior more likely during this developmental period? And further, how do these developmental tendencies interact with socialization influences? Certainly there are people who participate in reckless behavior in adolescence and in other age periods for reasons that are not developmental, reasons rooted in psychopathology, self-destructiveness, or extremes of deprivation of the kind that Jessor (1992) describes. The present theory is not intended to apply comprehensively to these extreme cases.

A RESEARCH AGENDA

Considerable research attention was focused on adolescent reckless/problem/risk behavior in the 1980s, compared to the 1970s, providing

an important foundation of evidence and information. A summary of suggestions for research in the 1990s:

(1) It is sometimes asserted that adolescents may follow their friends in superficial areas such as dress and music, but they follow their parents in more important decisions such as religion, politics, and occupational choice (Kandel & Lesser, 1969; Lerner & Shea, 1982). What is left out of this formulation is that many adolescents engage in reckless behavior involving automobile driving, sex, drug use, etc. with their friends that their parents would very likely *not* approve of (Glynn, 1981; Huba & Bentler, 1980; Shah & Zelnick, 1981). What do adolescents say about what their parents know concerning their reckless behavior? If their parents do not know about this behavior, how do the adolescents manage to keep it concealed from them?

(2) The social circumstances of adolescent reckless behavior should be examined. Whom are they with when engaging in reckless behavior? What is the nature of the group psychology involved in those situations? Are reckless activities such as vandalism and drug use typically led by a high-sensation seeking leader? Adolescents should be interviewed to describe these circumstances.

(3) Adolescents in schools with distinctly different socialization practices (broad/narrow) should be compared to see if these differences are reflected in rates of reckless behavior among adolescents in the compared schools, *independent of differences in parental restraint and monitoring*.

(4) Research on adolescents' experiences with media should be conducted, especially in neglected areas such as music, advertising, and movies. How do adolescents view media figures? To what extent do they see themselves as influenced by them? To what extent do they model themselves after media figures, and in what aspects of their lives? More directly, adolescents should be asked about whom they admire, and why, and this should be studied in relation to their participation in reckless behavior. Also, studies could be conducted in which adolescents keep daily logs of their exposure to media in order to obtain a sense of the degree to which media are part of their socialization environment.

(5) Research on cultural belief systems as the foundation of adolescent socialization and their influence on adolescent participation in reckless behavior should be conducted. This can be done in subcultures in the U.S., in other cultures characterized distinctively by narrow socialization, and using existing anthropological data.

CONCLUSION

The developmental theory presented here and in the preceding paper (Arnett, 1992) is intended to suggest a multidimensional approach to the

study of adolescent reckless behavior. Our understanding of the role of socialization in this area may be enhanced by considering not only the family as a socialization influence, but a wide range of other potential socialization influences as well. In addition, the voluminous sociological literature on crime and delinquency may offer hints concerning the related but more normative and pervasive kinds of behavior that form the rubric of adolescent recklessness. The many ethnographies in the anthropological literature can also be tapped and interpreted from a developmental and cross-cultural point of view, to provide insight on the factors involved in the consistency and variations in adolescent reckless behavior across cultures. Historical documents can be useful in tracing and pondering these consistencies and variations across time within cultures. Perhaps it is inevitable that there will always be "more things in heaven and earth than are dreamt of" in our social science, but our understanding of adolescence can be enriched by such a comprehensive effort.

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