ABSTRACT  Previous studies try to account for variance in adolescent sexual precociousness, sexual mobility, and childbearing by reference either to sociological risk factors (e.g., poverty, social class, opportunities for sexual activity, or the absence of constraints on sexual activity) or to an evolved, domain-specific cognitive mechanism. However, these forms of behavioral variation may reflect an evolved mental mechanism that creates behavioral plasticity and adaptability by assigning emotional weights to choice alternatives in all behavioral domains. Because it should act as a selective mechanism for choice alternatives, this emotional mechanism should create enhanced ability to avoid predation (social exploitation) and to obtain access to resources, given the properties of specific environments. Sexual precociousness, sexual mobility, and childbearing thus should be determined by ecological contingencies that bear on how girls may best empower themselves. The findings of the present study show no effect for sociological and evolutionary psychology predictors. Instead, they reveal that Antiguan girls who experienced exploitative childhood environments bore more children during adolescence than other girls, if they grew up when childbearing optimized their adult material well being. However, they went further in school than other girls, when educational attainment optimized their adult material well being. What we now characterize as stress-induced morbidity thus may consist of adaptive responses to environments in which children find themselves subject to predation and denial of access to resources.
This article reports a test of the hypothesis that adolescent sexual precociousness, sexual mobility, and childbearing are functions of ecological contingencies that bear on how girls may best empower themselves. Sociologists try to account for variance in sexual precociousness, sexual mobility, and childbearing by reference to poverty, social class, opportunities for sexual activity, the absence of constraints on sexual activity, and drug use (e.g., DeLameter 1987, Jessar, Costa, Jessar, and Donovan 1983, Michael, Gagnon, Laumann, and Kolata 1994, Laumann and Gagnon 1995). Evolutionary psychologists, by contrast, try to account for variance in sexual precociousness, sexual mobility, and childbearing by reference to one or another evolved domain-specific cognitive mechanism. The explanations of evolutionary psychologists focus on two configurations of sexual behavior, which correspond to the popular distinction between good girls and bad (i.e., promiscuous) ones (e.g., Thiessen 1994). Good girls start sexual activity relatively late, have few sexual partners, and bear relatively few children. Bad girls start sexual activity relatively early, have many sexual partners, and bear many children. Gangestad and Simpson (1990) offer evidence consistent with a frequency-dependent model that postulates two genotypes for restrictive and unrestrictive sexual variants. Draper and Harpending (1982, 1988) propose a mechanism which relies on either responses to father-absent rearing during an early sensitive learning period (ages 1-5 years), or perceptions of father-absent rearing through messages sent by the mother. In the Conclusion of this paper, I discuss how well Gangestad and Simpson’s model fits the findings reported here. Tests reported below control for measures of social class, poverty, opportunities for sexual activities, constraints on sexual activity, father absence in early childhood, and perceptions of father absence as mediated by the mother.

A THEORY OF CULTURAL DYNAMICS

The hypothesis tested here comes from a theory of cultural dynamics (e.g., Handwerker 1989a,b, 1993b; 2001, 2002) which lies at the intersection of behavioral ecology and evolutionary psychology. Whereas evolutionary psychology’s research agenda focuses on domain-specific, pan-human cognitive mechanisms that evolved in a remote past, human behavioral ecology’s research agenda focuses on behavioral plasticity and adaptability in the contemporary world, and takes for granted the evolved mental mechanism or mechanisms which make that plasticity possible (Smith 2000; Smith, Borgerhoff Mulder, and Hill 2001a,b). In contrast to both these approaches, the theory of cultural dynamics posits developmentally plastic (see Belsky, Steinberg and Draper 1991; Perry 1997; Kolb and Whishaw 1998; Kolb et al. 1998; Spear 2000), domain-independent mental mechanisms that bear on all behavioral and cognitive domains and thus produce plasticity and adaptability across all aspects of culture.

The ways in which our brains store and process sensory entail that individually unique life trajectories yield individually unique people whose choices exert control over their lives. Critically important sensory input comes to us in the form of other people’s behavior, however. Our cognitive and behavioral response to that input thus reflects our prior life history and the personal configuration of culture (cognition and behavior) that our brains constructed from that history of experience. Our behavioral responses elicit complementary cognitive, emotional, and behavioral responses from others, which we call social interaction. Other people influence us, and so constrain what we think and do, by means of their behavior – by what they do or don’t do, by the circumstances of their life, as well as by their immediate responses to our responses; we influence others likewise. By virtue of the sensory input it generates, social interaction thus reciprocally produces evolution in the personal cultures we use to live our lives.
The recurrent, patterned behavior that characterizes a culture exhibits the properties of a thing because recurrent behavior constitutes an environment in which we carry out daily activities, which elicits cognitive, emotional, and behavioral responses. In eliciting these responses, recurrent, patterned behavior thus elicits evolution in the personal configuration of culture (cognition and behavior) that our mind uses to produce personal cognitive, emotional, and behavioral responses to future sensory input. Certain forms of recurrent, patterned behavior (e.g., those that produce childhood traumatic stress) may induce specific, lifelong changes in how our minds work and thus in the behavioral trajectory of our lives.

Recurrent, patterned behavior entails that people with whom we interact make patterned choices from among the alternatives they see. Patterned choices come from the application of specific criteria to the choice alternatives provided by sensory input. Our minds rationalize recurrent, patterned responses in the form of domain-specific theories, models, or schemas, which consist of assumptions about the nature, components, and organization of the world of sensory experience.

These processes reflect the operation of two developmentally plastic and domain-independent, evolved mechanisms. One, a dimension of intelligence, generates random (i.e., unexpected) conceptual and behavioral variation or novelty and, thus, produces choice alternatives. The other, a dimension of our stress response, assigns emotional weights to choice alternatives. These emotional weights, which in consciousness appear rationalized as costs and benefits, determine the probability that specific alternatives will be chosen. Hence, they constitute a selective mechanism responsible for the production of new or the maintenance or modification of preexisting patterns of behavior, within the constraints of historically and regionally specific cultural environments. Recurrent, patterned behavior and shared schemas (cultures) thus should emerge around ideas or ways of acting that optimize or improve resource access in historically and regionally specific cultural environments. This implies that cultures may not correspond with ethnicity and raises the possibility, as Sapir (1932) claimed, that we all embody multiple cultures. In this framework, alternative ideas and ways of acting that place one in danger constitute "errors." Selection eliminates errors (including ideas and behavior that conflict) and supports ideas and behavior that support each other. Thus, behavioral patterns that optimize or improve resource access should generate cultural norms that rationalize and justify them. Similarly, new ideas that optimize or improve resource access should generate consistent behavioral patterns. Selection applied to choice alternatives with equivalent consequences yields cultural variation; as the consequences of choice become subject to increasingly sharp selective pressures, cultures exhibit increasing levels of uniformity.

Power is the ability to influence or control the behavior and beliefs of others even without their consent. Power accrues to any individual or organization that one must go through to in order to access resources, insofar as the importance of the resources grows or the number of resource seekers increases. As power inequalities grow, gatekeepers can optimize or improve their own resource access by exploiting resource seekers. Resource seekers, by contrast, can optimize or improve resource access by searching for alternative channels. Power inequalities decrease as the number of alternative resource access channels grows.

Power relationships thus dictate resource accessibility and reliability. Because the effect of the selection mechanism enhances an organism’s ability to avoid predation (social exploitation) and to obtain access to resources, power equalities should elicit good treatment for both parties; power inequalities, by contrast, should elicit exploitative and coercive behavior on the part of those who hold the balance of power. People who grow up in such traumatic/violent (exploitative) cultural environments should learn to be highly sensitive to power relations, respond quickly and strongly when others attempt to take advantage of them and, to minimize the chance of further exploitation, search harder than others for ways to avoid dependency. In such environments, women can use
Stress, Ecological Contingency, and Sexual Behavior

their sexuality and childbearing capacity as resources and, thus, as a means to protect if not also to
empower themselves. Moving from partner to partner minimizes a woman’s dependency on men.
In the absence of alternatives, high birth rates may provide her material support, and independence
from men, from middle age on.

Earlier publications tested four theoretical implications. First, if everyone embodies many
cultures, we should find that many cultures cross-cut ethnic identity labels (e.g. Puerto Rican).
Although some shared ways of thinking and acting (cultures) are captured by such social identity
labels (e.g., Gannotti and Handwerker 2002), Handwerker (2001, 2002), Handwerker and Wozniak
(1997), Wozniak (2001), and Fuentes (2001) document cultures of violence, affection, motherhood,
and parent-teacher cooperation which do not correspond to conventional class, race, or ethnic labels.

Second, if (as envisioned in the pioneering work on stress carried out by Cannon [1929,
1942] and Selye [1956]) an evolved domain-independent mechanism regulates human behavior
independently of historical and regional contexts (and produces cultural variation in response to
historical and regional variation), we should find that people of different ethnicities who live in
contrasting historical or regional contexts agree about what constitutes traumatic/violent and
supportive/affectionate events. Handwerker (1997, 1999b) and Fuentes (2001) show that White,
West Indian, Latino, and Native Americans, as well as natives living as hunters and gatherers in the
Russian and American Arctic and people making a living on tourist islands in the West Indies,
concur on the properties of social interactions that constitute traumatic/violent and
supportive/affectionate events, irrespective of age and class.

Third, if this evolved domain-independent mechanism regulates behavioral responses to
variation in the balance of power in social relationships, we should find, as demonstrated in a
number of studies (Handwerker 1993a, 1996, 1998, 2001), that power inequalities between partners
(for example where women have little income, no significant income generating skills, and few or no
relatives or friends to help them) elicit violence toward women and their children; conversely, power
equalities between partners elicit affectionate and supportive behavior for women and their children,
irrespective of class, education, or the presence of stepfathers in the home.

Fourth, because women can use their sexuality and childbearing capacity as a means to
empower themselves in childhood environments marked by exploitation and trauma, we should find
also that variation in sexual cultures corresponds with variation in a woman’s experience with
traumatic/violent and supportive/affectionate cultural environments. For example, as documented
previously by the author (Handwerker 1993a), women in Barbados who grew up in households
marked by affection and support began sexual activity relatively late, had relatively few partners and
few or no sexually transmitted diseases (STDs), experienced good relationships with their current
partner, and were subject to little sexual or gender-based harassment later in life. Barbadian women
who grew up in households marked by gender inequalities, by contrast, experienced sexual, physical,
and emotional violence towards women and children. This exploitative childhood environment
corresponded with an early start to sexual activity with much older first partners and, in adolescence,
high levels of childbearing as well as a pattern of high sexual mobility which continued through their
early 30s. These women’s activities corresponded with a self-perception of "promiscuity," high levels
of emotional and physical abuse by their partners and sexual harassment by others, a view of
sexuality that declared some activities as respectable and some not, men who demanded specialized
sexual services and women who chose to meet this demand, and men who did not use condoms and
who spread STDs.

The present paper tests a fifth implication: If this evolved, selective mechanism produces
changes in behavior in the presence of significant changes in the resource access opportunities
available in a specific cultural environment, we should find that (1) the behavioral changes optimize
or improve resource access in that new environment, and (2) women who grew up in exploitative
environments should make more dramatic behavioral changes. In the present case, a shift from an economy based on agriculture to one based on tourism created a natural experiment in which women should change their behavior in response to historical changes in their resource access opportunities. Findings reported below show that, between 1950 and the mid 1960s, Antiguan women had few job opportunities. In that historical context, it did not pay to go far in school; it did pay to have many babies early in life. Nevertheless, Antiguan women who grew up in affectionate and supportive environments initiated sexual activity at relatively late ages, had relatively few sexual partners during adolescence, averaged 11 (working class) or 12 (middle or upper class) years of schooling, and bore one child by age 20. By contrast, Antiguan women who grew up in violent and traumatic environments initiated (or were forced into) sexual activity at early ages, had relatively large numbers of sexual partners during adolescence, averaged six (working class) or ten (middle or upper class home) years of schooling, and bore two children by age 20.

After the mid 1960s, women experienced a dramatic increase in job opportunities, but these were available only to those who completed a secondary or college education. It now paid to stay in school and have few or no babies early in life. Once significant job opportunities for women became available, Antiguan women who grew up in affectionate and supportive environments experienced sexual histories equivalent to those of the generation that preceded them. But in this new environment, they averaged 12 (working class) or 13 (middle or upper class) years of schooling, and no births by age 20. Antiguan women who grew up in violent and traumatic environments, like the generation that preceded them, initiated (or were forced into) sexual activity at early ages, and had relatively large numbers of sexual partners during adolescence. In sharp contrast to the preceding generation, however, they averaged 15 years of schooling (no class differences) and they bore no children by age 20.

I organize this paper into four further sections. Environmental components and configurations vary regionally and change historically. The following section thus consists of descriptive ethnography to make clear how, why, and in which historical period specific components and configurations contributed or did not contribute to exploitative childhood environments. Next, the Methods section describes the study population, the means by which I collected and analyzed data, and the research constructs themselves. The Findings section presents the results of tests that explore how, over the course of adolescent development, girls responded to their experiences in non-exploitative and exploitative environments, controlling for sociological and evolutionary psychology predictors. I conclude with a discussion about the implications of these findings for conceptualizations of child development.

HISTORICAL CHANGE IN THE CULTURAL ENVIRONMENT

The present study focused on profound generational changes documented elsewhere (Handwerker 1993b) to examine patterns of gender inequality, family violence, and sexuality in two adjacent generations: (1) the current younger generation of men and women who grew to maturity after 1965 as tourism came to dominate the national economy, and (2) the older generation of their parents who grew to maturity and lived most of their lives prior to 1965 when agriculture dominated the economy. Prior to this structural change in Antigua’s economy, gender relations were predicated on women’s dependence on men and their children for access to resources (see Handwerker 1993b for greater historical and ethnographic detail). A small number of employers controlled the private sector, so they were not subject to significant levels of competition. Consistent employment and advancement opportunities, especially prestigious civil service or bank positions, were conditional on personal contacts and personal recommendations. These, in turn, were conditional on sex, class, and color. In this sharply stratified and largely lower class society, women constituted an underclass.
Men's choices during this period dictated the opportunities available for their partners and daughters. Women's job opportunities consisted almost solely of menial employment at wages much lower than men's. Some women became teachers, nurses, or clerks. Most worked as domestic servants, seamstresses, petty traders, road gang workers, or laborers in the sugar or cotton fields. Parents expected sons to support themselves by the time they were in their late teens or early 20s. Lower class families, especially, expected sons to contribute to the family income. By contrast, parents hoped that someone would marry their daughter so they no longer had to feed, house, and clothe her.

Women looked for a good man who would marry them legally. Women from middle and upper middle class homes almost always married, as did many women from lower class homes. Even stable relationships required a woman's subservience, however, for men controlled women's opportunities. For example, legal marriage was a particularly important means to improve women's material welfare and that of their children. It legitimized the inheritance rights of a woman and her children, made it possible for her children to take advantage of educational and occupational opportunities that were closed to children born to couples who were not married, and enabled her to pursue middle class career ladders (nursing, teaching) that were unavailable to unmarried women who became pregnant. Marriage gave men rewards, too. But it was their choice to marry, not women's. Also, marriage rarely constrained men's freedom. Women often traded one form of servitude for another when they married.

As adults, men of all classes spent little time at home. They rose early, left for work, returned in the evening to wash and clean up, eat dinner, discipline the children if it was appropriate, and left again to spend time with friends. It would be a mistake, however, to believe that men did not exert sweeping control over household affairs merely because they were not active, daily participants in those affairs. Women catered to men and their preferences. It was a man's prerogative to mete out physical or emotional violence when his partner did not meet his wishes---for example, if a woman had had a long, difficult day and was late getting dinner ready, or if the wind wasn't blowing in the right direction and the coal pot was slow to cook, or if she asked where he had been all night. One woman commented: "Some men acted as if they wanted a slave or something." Wives and girlfriends had little recourse, other than to find shelter in the home of a female friend or relative. Women without sexual partners did not have these constraints, of course. But they were also likely to be poor. One of two principal exceptions was women from the middle and upper middle classes who had not found suitable partners from among the men of their own social class and who had independent employment---and support from their families. The other was middle-aged and older women who had sons to support them (see Handwerker 1989b, Jones 1994). Women actively worked to escape the dependence on men they experienced during their youth by drilling into their children not only how much they sacrificed and how hard they worked to raise them properly, but also that their labors were that much worse because they had no companion to help them (cf. Sangrestano 1992). It was easy to explain family hardships. Men were irresponsible and abusive. Understandably, grown children usually interpreted their obligations to help their parents as obligations to help their mother. Antiguan women thus found that childbearing was a singularly effective way to secure their future material welfare and to establish the relatively permanent ties to men that improved their immediate material welfare (see Ehlers 1991, Browner and Lewin 1982). Bearing children was essential for receiving help from men during a woman's youth. In middle age, grown children who supported their mother provided a means to escape dependence on unsatisfying relationships with men. Later, remittances from children made the difference between abject poverty and a reasonable, or even a comfortable old age. Because men could expect support from their children primarily if they had maintained a relationship with the children's mother, the women dependent on men in their youth often found men dependent on them as they grew older.
In Antigua, boys grew into men who could respond to exploitative relationships with violence, or by establishing independent households. Women rarely found violence an effective way to respond to the exercise of power by men, unless the men were small, disabled, or very old. Beginning sexual activity early, however, may have created a means to escape exploitative relationships with men within households, and it provided access to resources not otherwise available. High sexual mobility created alternative channels to resources -- money and gifts from men (including help with homework, better grades) -- whether a woman took multiple sexual partners sequentially or, as some women did, simultaneously (see Prior 1993, Moses 1991).

Young women were rarely able to establish independent households, a pattern that has become common on Antigua only within the last decade or two. Opportunities for women to escape dependence on men and on childbearing increased dramatically after the mid 1960s as the Antiguan economy shifted from an emphasis on agriculture to an emphasis on tourism. However, most new job opportunities required high levels of educational and technical skills. The expansion of employment opportunities drew women into school and pushed them further than they would have gone otherwise (Handwerker 1993b). Women used their education to take advantage of the new employment opportunities in increasing numbers.

Since the mid 1960s, increasing numbers of Antiguan women have looked at childbearing as a consumption rather than an investment activity. Women who grew up in the 1950s spoke about children as "insurance policies" or "pension plans." They made comments about childbearing alternatives like: "There were no opportunities back then." A woman aged 48 pointed out that when she was young, women did not think of having a career. Women thought about children. Women found a man, stopped going to school, and bore children. Before about 1965, Antiguan women did not choose a large family over education or a career: the choice could not be made because it did not exist. Women who grew up in the 1970s, by contrast, spoke about their children with a great deal of love. But as a young woman pointed out, women now feel they have a contribution to make beyond being mothers. They may have children. But they don’t have many. And they rarely sacrifice their careers to do so.

METHODS

Study Population

This study employs data from a 1989 sample of 97 women who lived in Antigua, West Indies. Study participants ranged in age from 20 to 42 years, with a mean and median of 29 years; 50 percent of the sample were aged 25-33. The characteristics of the women in this sample differ inconsequentially from the characteristics of women in a far larger island-wide random sample selected in 1988 (Handwerker 1991). Antigua, a small island in the Eastern Caribbean which lies about 425 kilometers southeast of Puerto Rico, was settled in the 17th century by English colonists, who created a monocropped sugar cane plantation economy with slave labor. In 1990, Antigua’s population totalled about 80,000, about a third of whom lived in the capital, St. John’s. Nearly all trace their primary descent from Africa, although a small minority are of European or Middle Eastern ancestry.

Procedures

Data come from a self-administered questionnaire. All research participants were free to refuse to be interviewed, to stop an interview, or to say that certain information they provided should not be subsequently reported. Because this research sought information on private topics, I
collected data by questionnaire rather than question schedules administered by interviewers. Antiguan women research assistants explained the nature of the research but, to assure anonymity, respondents filled out questionnaires privately. Respondents sealed their completed questionnaires in unmarked envelopes and mixed them with other unmarked envelopes, some of which contained blank questionnaires and some of which contained completed questionnaires. Research participants returned approximately 80% of 120 questionnaires distributed.

Research Constructs

Data analyzed below consist of a three sets of variables. The first set of six variables measures sociological predictors of adolescent sexual precociousness, sexual mobility, and childbearing. The second set of two variables measures evolutionary psychology predictors of adolescent sexual precociousness, sexual mobility, and childbearing. The final set, which consists mainly of interaction terms, measures the ecological contingencies that may bear on how girls may best empower themselves. The latter vary with historical cultural context.

Sociological Predictors. Five variables measure Antiguan women’s opportunities for sexual activity or constraints on sexual activity. Antiguans widely believe that girls begin sexual activity much younger than they used to, which they commonly ascribe to coeducational schools in which boys and girls interact without parental supervision. Younger women thus may have experienced greater opportunities or fewer constraints on sexual activity than older women. The location of mother’s employment outside the household and growing up in a one-parent household may measure opportunities for sexual activity. Fifty-six percent of the sample grew up in households in which their mother’s employment took her out of the home. Thirteen percent were raised by a mother who had no partner. By contrast, growing up in a two-parent household in which both are the girl’s biological parents, and marriage duration, measure potential constraints on sexual activity. Sixty-six percent were raised by both biological parents to age 16. Finally, married women may have fewer sexual partners than unmarried women. Sampled women spent up to 4 years in a legal or common-law marriage before age 20, but the mean duration of such unions was less than two months.

One variable measures both social class and poverty. We measure social class with information on the educational and job status of the adults who raised survey participants. The presence of domestic service workers provided an additional basis for identifying homes in the upper class or the highest levels of the middle class. Detailed descriptions of the work undertaken by adults, together with background ethnographic data, provided the grounds for assigning women to a social class background category. Consistent with criteria used in Antigua, women were assigned the social class of the child’s male parental caregiver, if he was present. In his absence, daughters were coded as having been raised in the social class indicated by the education and occupational status of their mother. Fifty-three percent of the sample reported that their mother either did not work for wages or salaries (21%) or worked as a domestic, as field labor, or as a seamstress (32%). Women from lower class homes had mothers and fathers with little or no education who worked as field laborers, road gang workers, farmers, cooks, guards, petty traders, seamstresses, or maids. Middle class occupations included foreman, supervisor, real estate agent, accountant, newswriter, bookkeeper, secretary, clerk, nurse, teacher, and receptionist. Upper middle class and upper class status was represented by men’s occupations like headmaster, physician, and overseer, and women’s occupations like bank supervisor, government officer, and restaurant owner. In this sample, working class membership is synonymous with poverty. Forty-eight percent of the women interviewed grew up in working class homes; 43% grew up in middle class homes, and nine percent came from upper
or upper middle class homes.

**Evolutionary Psychology Predictors.** Draper and Harpending have argued that "Females who perceive early that male parental effort is important to their reproduction will be more careful and reticent at adolescence in forming sexual relationships and will form more stable pair bonds" and "Father-absent females will perceive that male parental effort is not crucial to reproduction and will be less coy and reticent, will engage in sexual activity earlier and with less discrimination, and will form less stable pair bonds" (1982:259). "Father-present rearing," they say, "is one in which mother and father jointly and simultaneously provision and educate (in the broader sense of the term) the young. Father-absent rearing is one in which the mother, in the absence of regular assistance from the father, carries the major responsibility for provisioning and educating them." (1982:255). Approximately 31% of the Antiguan sample experienced father-absent rearing of this kind.

Draper and Harpending point out that their use of the word "perceive" does not imply conscious recognition, however. Indeed, they make the point that it is not at all clear just what the child perceives. The physical presence or absence of a father or stepfather may not be important at all. They note that "the effects of father absence appear to be reversed in the children of widows as contrasted with the children of divorcees" and that "This suggests that children perceive the relevant cues from their mothers" (1982:260). A five item scale that measured father-absent rearing's indirect effects as messages passed along by a woman's mother loaded on a single factor (Cronbach's alpha of .91 shows excellent reliability). The scale ranges from 0 to 4; the mean of 1.845 indicates that mothers generally spoke about husbands and fathers as only marginally helpful. However, the large standard deviation (SD = 1.516) points to considerable diversity in opinion. Antiguan women of all ages commonly recognized only two kinds of men: good ones and bad ones (Handwerker 1993b). Women generally agreed that all too often men were deceitful, unfaithful, unreliable, and unhelpful. They could be brutal. You had to be lucky to find a good one. The mother's evaluation variable, however, exhibited a tri-modal distribution, weighted heavily at both extremes (0, 4) but also in the middle (2).

**Ecological Contingencies: Exploitative Childhood Environments.** Five variables measure exploitative childhood environments: childhood sexual predation experiences, childhood incest experiences, the degree to which girl's home environment was marked by violence to the girl's mother, whether or not the girl experienced significant physical or emotional forms of traumatic stress, and growing up with a stepfather. I measured childhood sexual predation with a series of questions that asked about sexual contact between a child and his or her parent, stepparent, or parental partner that included breast or genital touching or sexual intercourse, any equivalent sexual activity which occurred prior to age 16 with a partner older by 5 or more years, and rape (defined as unwanted sexual activity) at any age, in accordance with Antiguan usage. This study thus identifies any sexual activity between unequal partners as sexual predation. The power differential given by significant differences in size, experience, and/or positions of authority means that one partner cannot freely choose to participate in activity controlled by the more powerful partner. Because we expect that incest experiences produce more profound effects than other forms of sexual predation, we differentiate incest from non-incestuous predation experiences. Following Antiguan conceptions of "family," "incest" refers specifically to sexual predation by biological fathers, brothers, uncles, or close cousins.

The age at which Antiguan women initiated sexual activity ranged widely, from 10 to 25. At the time of interview, 8 of the 97 women had not become sexually active. These women ranged in age from 20 to 34 (mean = 23.5, SD = 4.9). However, in Antigua, sexual activity normally begins in adolescence. The mean age at sexual initiation among women who had become sexually active by
time of interview was 18 years (SD = 2.9). About 50% of women reported beginning sexual activity by age 18, and 80% began by age 20. Women who had initiated sexual activity during their adolescent years reported a range of 1-21 sexual partners by age 20 (mean=1.6 partners; SD=2.6). Most early sexual activity did not constitute sexual predation because it occurred between children, approximately co-equals in both age and experience. Approximately 11% of the sample reported sexual predation before age 20. Women experienced sexual predation as early as age 10 and as late as age 18; these events initiated the sexual experience of all women to whom it occurred.

Scales reported elsewhere (e.g., Handwerker 1993a, 1996, 1997, 1998, 1999a,b, 2001) measured the degree to which girls and their mothers were subject to physical and emotional violence. Fifty-one percent of the sample reported that their mother was subject to an abusive spousal relationship; a quarter of the sample reported that their mother was subject to an intensely abusive relationship. Following the recommendation of Antiguan judges, I classified a child as having experienced physical and emotional violence if she reported that any form of violence occurred "regularly" or "all the time." By these criteria, one woman in four experienced childhood physical and emotional violence.

Antiguan girls who grew up in homes with stepfathers (9.3% of the sample) may be susceptible to subtle forms of exploitation by virtue of the structure of Antiguan families. Antiguan fathers usually tried to develop a good relationship with their children even if they did not have a good relationship with their children's mother. This did not apply to stepfathers, whom Antiguans do not consider true "family." Stepfathers can't expect to receive the material support from stepchildren that even an abusive biological father might eventually receive. Stepdaughters cannot expect to receive the material support they might get even from an abusive biological father. Such stepfathers also may not encourage or support stepdaughters' school careers. Girls who grow up in homes with stepfathers thus may be more likely than others to look for support outside the home, and to start sexual activity earlier than they might otherwise.

Historical Change in Ecological Contingencies. Three variables measured women's opportunities for escaping exploitative environments: the degree to which women viewed childbearing as an investment activity; educational attainment; and job opportunities. Women's view of the moral economy of childbearing – the degree to which they viewed childbearing as an investment or a consumption activity—was measured in ways reported earlier (see Handwerker 1989a, 1993b). Although only 11% of the sample bore children during their teens, women who see childbearing as an investment activity may begin sexual activity earlier than women who see childbearing as a consumption activity; and women who grow up in lower class homes, and who were thus subject to significant historical constraints on access to education, may be more likely than others to view childbearing as an investment activity. On average, the sample women scored low on this index (mean = .92, sd=.90), but individual women scored as low as 0 and as high as 4.

Sample women averaged approximately 12 years of school (a completed secondary education, or O-level passes) by age 20 (mean=11.9 years of school, SD=1.8 years), and 88% reported 12 years of schooling or better. However, educational attainment by age 20 ranged from 6 years (completed primary school) to 15 (junior in college). Sexual relationships with men create resource access opportunities for women who cannot (for reasons just mentioned) pursue or who see little point in pursuing an educational career (Jagdeo 1984).

Women’s employment opportunities (or their absence) were assessed by integrating measures of current income, the realism of high employment expectations, and the interaction of social class and realized opportunities (Handwerker 1993b). This standardized variable (mean=0, SD=1) ranges from −1.018 (poor employment opportunities for women) to 3.231 (very good employment opportunities for women).
Analysis

SYSTAT software generated the Ordinary Least Squares regression output reported here. Table 1 will contain unstandardized regression coefficients. Tests were conducted by entering all variables simultaneously. T-statistics test the null hypothesis that individual independent variables have no influence on the dependent variable. Analysis of variance F-ratios test the null hypothesis that all or particular sets of independent variables explain none of the variability in the dependent variable. The usual F-ratio applies to all independent variables and, thus, is superfluous when one or more t-statistics are high. It goes unreported in the following tables. Models presented in Table 1 contain all pertinent and no extraneous independent variables, based on initial two-tailed t-test results (alpha=0.05). However, I report F-ratios for post-hoc tests which evaluate the null hypothesis that Main Effects variables and the predictors judged to be extraneous actually contribute no added effect. These control variables include: age, growing up in lower class home, growing up with a stepfather, growing up in a stable nuclear family with both biological parents, growing up with only a mother, growing up with a mother who worked outside the home, father absent rearing, father absent rearing messages from mother, and adolescent childbearing. The post-hoc test of the null hypothesis that no alternative explanations (like poverty, opportunities for sexual activity, or father-absent rearing) account for sexual precociousness produced an F-ratio of 0.443 (p = 0.921). The test for adolescent sexual mobility produced an F-ratio of 0.723 (p = .671). Post-hoc test results for women’s view of the moral economy of childbearing, educational attainment by age 20, and adolescent childbearing produced respective F-ratios and probabilities of 1.091 (p = .379), 0.739 (p = .719), and 0.841 (p=.557). All tests were conducted with the full set of 97 study participants. All models exhibit approximately normal, homoskedastic residuals. Three models use logarithm transformations to achieve homoskedasticity. All models exhibit condition indexes under 30, which reveals the absence of multicollinearity disturbances.

The design employed in this research possesses high power to detect real effects, if they exist. The following analyses test for effects of a primary set of 3 to 5 independent variables, depending on the dependent variable, and around 10 Main Effects variables, plus sociological and evolutionary psychology predictors. An R² effect size of at least 0.05 for each environmental variable plausibly constitutes the smallest effect that would be important to detect. Prior research suggests that it is reasonable to anticipate an effect of this magnitude, and smaller effects would not likely be of substantive significance. An appropriate power analysis assumes Model 2 error, which means that variables entered into the regression subsequent to the set of interest will serve to reduce the error term in the significance test, and therefore are included in the power analysis. With around 100 cases, alpha set at .05 for a 2-tailed test, multiple scenarios analyzed with SamplePower software reveal that the study has a power of approximately 1.00 to detect real effects of the environmental variables, and a power of between .79 to 1.00 to detect real effects of both sociological and evolutionary psychology predictors, even if they exert R² effects that average only 0.03.

FINDINGS

Sexual Precociousness

Approximately 38% of the variance in sexual precociousness is explained by indicators of exploitative childhood environments -- sexual predation, the degree of violence that a stepfather directed at a woman’s mother, and the degree to which women looked on childbearing as an
investment activity (see Table 1). Model estimates show that women subject to sexual predation began sexual activity about 2 years earlier, on average, than women who were not. Women who regarded childbearing as an investment activity (moral economy score of 3-4) began sexual activity 3-4 years earlier than other women. Women who grew up with stepfathers began sexual activity neither earlier nor later than other women---if their mother was well-treated. Women who grew up with abusive stepfathers began sexual activity earlier than other women. Women from openly abusive homes (violence score of 8) began sexual activity about 1 year earlier than other women. Women from extremely abusive homes (violence score of 16) began sexual activity about 3 years earlier than other women.

**Sexual Mobility**

Approximately 87% of variability in adolescent sexual mobility can be explained primarily by exploitative childhood environments (see Table 1). The coefficient for the first variable tells us that proportional increases in the number of years of sexual activity before age 20 -- itself largely a function of exploitative childhood environments -- produce proportional increases in the number of sexual partners. The coefficient for the second tells us that participation in legal or consensual unions slightly reduced the number of sexual partners. Unmolested Antiguan women who began sexual activity at 18 had 1-2 sexual partner by age 20, on average. Unmolested Antiguan women who began sexual activity as early as age 12 only had about 4 partners by age 20, on average. The coefficients for the remaining variables tell us that a history of sexual predation/exploitation predicts dramatic increases in sexual mobility, particularly if the woman experienced incest. Thus, an Antiguan woman who experienced sexual predation at age 12 could be expected to have 7 partners by age 20, not the 4 partners of her unmolested peer. She could be expected to have 17 partners, if she experienced incest.

**Moral Economy of Childbearing**

Approximately 30% of the variability in Antiguan women's view of the moral economy of childbearing is explained by a combination of exploitative childhood environments and the opening of new employment opportunities (see Table 1). The coefficient for the first variable tells us that girls who grew up with stepfathers, who could not expect the material support available to biological children, looked more favorably on the investment opportunities childbearing offered than peers not subject to these experiences, if household resources were particularly constrained by poverty. The coefficient for the second tells us that intensely exploitative home environments powerfully influences moral economy scores. It tells us, moreover, that the investment opportunities of childbearing grow with the intensity of physical and emotional abuse to the mothers of girls who experienced sexual predation before age 16. The coefficient for the third variable tells us that proportional increases in women's employment opportunities reduced the perceived investment value of childbearing. Model estimates thus suggest that Antiguan girls who experienced an exploitation-free childhood saw only limited investment opportunities in childbearing. Their moral economy of childbearing scores averaged only 1.2 when women's employment opportunities were low and fell to 0.6 once employment opportunities grew. By contrast, girls who experienced intense exploitation -- sexual predation before age 16 and mothers who experienced physical and emotional abuse at level 8 (or higher) -- came to view the investment opportunities of childbearing highly favorably. Their moral economy of childbearing scores averaged 3.3 when job opportunities were
low, and fell to only 2.7 when job opportunities rose.

Educational Attainment

Approximately 57% of the variability in educational attainment by age 20 is explained by the availability of women’s employment opportunities and indicators and responses to gender and intergenerational exploitation. The coefficient for the first variable tells us that girls who grew up in lower class homes -- who historically had restricted access to schooling (Handwerker 1993b) -- dropped out of school earlier the more attractive they saw the investment opportunities of childbearing. The coefficient for the second constitutes an added effect. Girls who grew up in working class homes dropped out of school earlier the more attractive they saw the investment opportunities of childbearing -- to the extent that the Antiguan economy provided no employment opportunities for women. The coefficient for the third, however, tells us that to the extent that women enjoyed employment opportunities, girls who experienced the more exploitative childhood environments -- girls who experienced sexual predation before age 16 and mothers who experienced openly abusive partnerships -- used their sexual mobility to invest in education, not childbearing.

The coefficients for these variables lead to the following concrete conclusions. When employment opportunities were low, girls who grew up in an exploitation-free home averaged about 11 years of schooling, just under a completed secondary education, if they grew up in a lower class home; they averaged 12 years of schooling (a pass on O-level exams) if they grew up in a middle or upper class home. When employment opportunities rose, girls from lower class homes averaged a pass on O-level exams (12 years of schooling) and girls from middle or upper class homes averaged a pass on A-level exams (13 years of schooling). By contrast, girls who grew up in an intensely exploitative environment -- who experienced sexual predation before age 15 and whose mother experienced an openly abusive partnership -- averaged only 6 years of schooling when job opportunities were low, if they grew up in a working class home. Girls who experienced intense exploitation averaged 10 years of schooling if they grew up in a middle or upper class home. After women’s employment opportunities arose and it paid to invest in education rather than childbearing, however, the same girls averaged around 15 years of schooling -- passes on A-level exams and a year or two of university. Although the moral economy scores of intensely exploited girls make clear that they took seriously the investment opportunities of childbearing, Table 1 thus confirms that they invested in education rather than childbearing after structural change in the national economy made it possible for educational attainment to lead to good jobs and high incomes.

Antiguan women who experienced sexual predation thus used a pattern of sexual mobility not only to reduce their dependence on any one partner; they used sexual mobility as a means to supercede the limitations on their educational achievements imposed by their history of exploitation. The finding that the number of sexual partners neither increases nor decreases the educational achievements of *unmolested* women confirms that a history of exploitation alters gender relationships in fundamental ways. High sexual mobility is a means that *exploited* women use to empower themselves.

Adolescent Childbearing

Approximately 83% of the variability in adolescent childbearing can be explained by birth trajectories that reflect a woman’s view of the moral economy of childbearing unconstrained by biological constraints on fecundability but constrained by form of sexual union; educational attainment by age 20; and a measure of an exploitative childhood environment. The coefficients for
Stress, Ecological Contingency, and Sexual Behavior

the first two sets of variables replicate the findings of previous studies (Handwerker 1989b, 1993b). These studies developed the argument that cross-sectional and time-series variation in fertility is a function of four sets of variables. Certain biological variables (like a history of sexually-transmitted diseases) influence the ability to conceive and carry a pregnancy to term. Certain social variables (like the proportion of women who are married) influence the probability of conception. Resource availability variables (like nutrition, land scarcities, or real wage rates) influence the ability to conceive and the probability of live births (fertility goes up when resources are abundant and down when they aren’t). The degree to which women can pursue goals independently of childbearing (and the moral economy of childbearing that it elicits) should offset or intensify effects of the previous three sets of variables. The single difference between the last model in Table 1 and the models published in 1989 and 1993 consists of the last variable, the importance of which I did not recognize earlier. The coefficient for the last variable tells us that adolescent childbearing increases for girls who experience sexual predation prior to 16 in the absence of real job opportunities. In the presence of real job opportunities, sexual predation does not increase adolescent childbearing.

Summary

The set of empirical models in Table 1 jointly constitute a system of equations which allows us to express concretely the contrasting effects of exploitative or non-exploitative childhood environments. Table 2 shows these effects for two hypothetical sets of girls. Both sets initiated sexual activity at age 12, and both engaged only in visiting relationships with men through age 20. The model predictions summarized in Table 2 reveal that exploited Antiguan women invested in childbearing both more and less than women who grew up in exploitation-free homes, depending on ecological contingencies. Girls who grew up in exploitation free homes acquired 4 different sexual partners, achieved O-level passes (or close to it) and averaged about 1 child by age 20 when job opportunities were low, and O-level or A-level passes, and about 1 child, once job opportunities rose. Girls who experienced intense exploitation (including non-incestuous sexual predation at age 12), by contrast, acquired 7 different partners by age 20, averaged 6-10 years of schooling and 2 children by age 20 when job opportunities were low. Girls with the same experiences achieved A-level passes and a year or two of college (15 years of schooling) and no children, once job opportunities rose.

CONCLUSIONS

A large and growing literature shows that social support lengthens life; conversely, stressors induce early morbidity and premature death. Childhood sexual predation constitutes one form of childhood traumatic stress. We should not be surprised, therefore, to find that childhood predation serves as a precursor to an extraordinarily diverse syndrome that includes depression, post traumatic stress disorder (PTSD), borderline personality disorder, substance abuse, delinquency, suicide, partnership and parenting problems, and a pattern of sexuality marked by adolescent pregnancy and various forms of high risk behavior associated with sexually-transmitted diseases and their sequelae, including HIV/AIDS. and, thus, the birth of infants with fetal alcohol syndrome, drug dependency, and HIV+ diagnoses (e.g., Beitchman et al. 1992, Dembo et al. 1992, Finkelhor and Browne 1986, Rivera and Widom 1990, Zierler et al. 1991, Widom and Khuns 1996). One might infer (e.g., Sapolsky 1998) that today’s world, filled with chronic stressors (many as holdovers from

INSERT TABLE 2 ABOUT HERE
childhood experiences), makes the stress response maladaptive, since it makes you sick if it doesn’t kill you.

However, reproduction usually ends long before stress-related death. Evolved mechanisms come into being because they contribute to an organism’s ability to avoid predation and exploitation, eat, and reproduce. Thus, it makes no sense to characterize something as maladaptive unless it contributes to relative reproductive failure either directly or through impaired abilities to avoid predation and exploitation or to obtain access to resources.

Evolved mechanisms contribute to an organism’s ability to avoid predation/exploitation, eat, and reproduce, when they respond sensitively to environmental changes. Stress thus should not consist of a homeostatic response to environmental demands – or our interpretation of environmental stimuli – that tax or exceed the adaptive capacity of an organism (e.g., Cohen, Kessler and Gordon 1997). Stress should signal both danger and opportunity and induce specific choices that reflect different (environmentally-induced) allostatic set points.

Moreover, selection cannot create a mechanism that changes behavior in highly stressful childhood environments in ways that lead to marked disadvantages in minimally stressful adult environments. What we now characterize as stress-induced morbidity thus may consist of adaptive responses to environments in which children find themselves subject to predation and denial of access to resources. If so, those responses should contribute to a person’s ability to avoid predation/exploitation, eat, and reproduce. Sexual and other forms of predation experienced in childhood thus may lead to a terribly painful aftermath and much behavior, long into adulthood, that can be characterized as "self-destructive." But this medicalized view may be short-sighted. It pathologizes the individual as "victim" or "survivor." It constructs an aftermath that consists solely of individual pathologies -- high rates of sexual mobility become "promiscuity," low rates of secondary school completion become "school failures," and adolescent childbearing becomes an "increased risk of conception" (e.g., Boyer and Fine 1992, Stevens-Simon and Reichert 1994). We thus see "behavior problems" when a clearer view might reveal, as the Antiguan data suggest, young women who make choices that empower themselves.

In short, what social and medical authorities may construe as problematical may, in the circumstances in which they find themselves, be highly advantageous for the adolescents who engage in these activities. Emotional pain, like physical pain, may direct attention to circumstances that threaten an organism’s viability (e.g., Nesse 1990). One outcome, as Liem, O’Toole and James (1992) suggest, may be that women who experience sexual predation exhibit both a greater fear of power and a higher need for power than do women who never experience sexual predation. These emotional and cognitive states may constitute proximate determinants of the search for effective empowerment predicted by the theory of cultural dynamics laid out above and apparent in the Antiguan data.

The Antiguan women who empowered themselves by taking advantage of the growth in job opportunities ushered in a revolution in gender relations (see Handwerker 1998). Women freed from dependency on childbearing had fewer children. Women simultaneously freed from dependency on men enjoyed markedly better relationships with their partners. Empowered women experienced far more domestic help, emotional support, and affectionate behavior from their partners than women who were not empowered -- and they experienced little or no violence. The incidence of violent relationships between domestic partners fell dramatically in just one generation. Whereas 51% of women reported mothers who experienced at least minimally violent relationships with partners, only 32% reported experiencing equivalent violence themselves. Whereas 30% reported that their mothers experienced openly violent relationships with partners, only 12% reported experiencing equivalent violence themselves.
These findings call into question the construct of one "normal" course of psychosocial development (e.g., Cicchetti and Toth 1998). Unless pertinent environmental features remain constant over the course of development, evolutionary processes produce development that is contingent on events in an organism’s life history, as Belsky, Steinberg, and Draper (1991) point out. Whether for purposes of prevention or therapy, we cannot effectively evaluate behavioral, cognitive, emotional, and biological states without reference to the pertinent developmental processes and the ecological contingencies that shaped them.

These findings also call into question explanations of sexual behavior that appeal only to sexual selection mechanisms that enhance reproductive success directly. The findings that Gangestad and Simpson offer (1990) as evidence of the frequency-dependent appearance of two genotypes are equally consistent with a model that postulates traumatic stress-induced developmental change in brain structure and function. More important, the genetic morphs they postulate cannot account for reproductive behavior changes that respond to historical change in the means by which an individual may best avoid predation/exploitation and optimize access to resources. By contrast, we can do so parsimoniously with a model that links behavioral choices to a domain-independent mental mechanism which assigns emotional weights to choice alternatives and thus functions as a behavioral selective mechanism.

A person’s ability to survive, reproduce, and raise young to adulthood must be a function of their ability to secure access to the resources that make those events possible. Power relationships dictate resource accessibility and reliability. We should not be surprised that our species evolved a mechanism that allows exploitative and empowering childhood environments to teach the children raised in them very different ways to express and respond to power relationships. People who grow up in exploitative childhood environments engage in behavior that, for others but not for them, would be fairly characterized as “risky” and “dangerous.” Some people end up dead. More might have died had they not responded to that environment by actively searching for ways to escape it.
NOTE

Acknowledgements. I carried out the research reported here with the support of NSF grant BNS 8804719. This paper also draws on research funded by NSF grants BNS 8507604 and 8520445, and an American Republics Senior Scholar Research Grant from the Fulbright-Hayes program. I am most grateful. I thank Hyacinth Bailey, Rose Jones, Lisa Madden, and Elma Robinson for their companionship and help during my stay on Antigua. I particularly thank the women who spoke with me directly or indirectly (through the questionnaire) both for their interest in this project and their openness in helping me collect information on highly sensitive topics. Special thanks go to the woman who returned a short note in lieu of the questionnaire. I share her concerns and wish her well. I thank Tim McMillan, Llyn Smith, and Ethos referees for very helpful, detailed comments on earlier drafts. Danielle Wozniak goaded and proded without mercy – but gave only gems. However, the opinions, findings, and conclusions expressed in this study remain those of the author and do not necessarily reflect the view of either funding agency or any friend.

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TABLE 1. Test of Hypotheses that Antiguan Girls’ Sexual & Reproductive Behavior in Adolescence is a Function of Contingencies in Childhood Environments

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>Independent Variables</th>
<th>Beta</th>
<th>t</th>
<th>P(2-tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual Precociousness (Adjusted R-squared=.382)</td>
<td>Experienced Sexual Predation in Childhood</td>
<td>2.136</td>
<td>4.357</td>
<td>.004</td>
</tr>
<tr>
<td></td>
<td>Moral Economy of Childbearing Score</td>
<td>.754</td>
<td>3.612</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Intensity of Violence to Mother by Stepfather</td>
<td>.194</td>
<td>2.655</td>
<td>.009</td>
</tr>
<tr>
<td>Sexual Mobility (Adjusted R-squared=.871)</td>
<td>Ln(Years Sexually Active)</td>
<td>.590</td>
<td>17.639</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Years in Legal or Commonlaw Union</td>
<td>-.096</td>
<td>-2.328</td>
<td>.022</td>
</tr>
<tr>
<td></td>
<td>Years Sexually Active since Experience of Any Form of Sexual Predation</td>
<td>.084</td>
<td>4.693</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Years Sexually Active since Experience of Incest</td>
<td>.106</td>
<td>4.343</td>
<td>.000</td>
</tr>
<tr>
<td>Moral Economy of Childbearing (Adjusted R-squared=.295)</td>
<td>Grew up in Poverty with a Stepfather</td>
<td>.923</td>
<td>3.296</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Intensity of Emotional &amp; Physical Violence to Mother for Girls Who Experience Sexual Predation</td>
<td>.131</td>
<td>4.880</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Ln(Women’s Job Opportunities Index)</td>
<td>-.121</td>
<td>-2.041</td>
<td>.044</td>
</tr>
<tr>
<td>Educational Attainment (Adjusted R-squared=.567)</td>
<td>Moral Economy Score for Girls Who Grew Up in Poverty</td>
<td>-.081</td>
<td>-3.616</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Moral Economy Score for Girls Who Grew Up in Poverty During the Historical Period Without Job Opportunities for Women</td>
<td>-.070</td>
<td>-2.770</td>
<td>.007</td>
</tr>
<tr>
<td></td>
<td>Interaction of Sexual Mobility &amp; Job Opportunities for Intensely Exploited Girls</td>
<td>.115</td>
<td>3.135</td>
<td>.002</td>
</tr>
<tr>
<td>Childbearing (Adjusted R-squared=.828)</td>
<td>Trajectory Set by Moral Economy*Years in Legal Unions</td>
<td>.688</td>
<td>7.634</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Trajectory Set by Moral Economy*Years in Commonlaw Unions</td>
<td>.117</td>
<td>6.641</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Trajectory Set by Moral Economy*Years in Visiting Unions</td>
<td>.194</td>
<td>6.070</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Educational Attainment by Age 20</td>
<td>-.064</td>
<td>-3.482</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>No Job Opportunities for Girls Who Experience Sexual Predation Prior to Age 16</td>
<td>.602</td>
<td>3.103</td>
<td>.003</td>
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</tbody>
</table>
TABLE 2. Contrasting Effects of Exploitative or Exploitation-Free Childhood Environments for Girls Who Initiate Sexual Activity at Age 12 and Engage in Visiting Relationships through Age 20.

<table>
<thead>
<tr>
<th>Girls Who Experienced an Exploitative Childhood Environment</th>
<th>Girls Who Experienced an Exploitation-Free Childhood Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Job Opportunities</strong></td>
<td><strong>Low Job Opportunities</strong></td>
</tr>
<tr>
<td>Sexual Partners</td>
<td>Moral Economy Score</td>
</tr>
<tr>
<td>7.000</td>
<td>3.3: childbearing as investment activity</td>
</tr>
<tr>
<td><strong>High Job Opportunities</strong></td>
<td><strong>High Job Opportunities</strong></td>
</tr>
<tr>
<td>Sexual Partners</td>
<td>Moral Economy Score</td>
</tr>
<tr>
<td>7.000</td>
<td>2.7: childbearing as possible investment activity</td>
</tr>
<tr>
<td><strong>Girls Who Experienced an Exploitation-Free Childhood Environment</strong></td>
<td><strong>Girls Who Experienced an Exploitation-Free Childhood Environment</strong></td>
</tr>
<tr>
<td><strong>Low Job Opportunities</strong></td>
<td><strong>Low Job Opportunities</strong></td>
</tr>
<tr>
<td>Sexual Partners</td>
<td>Moral Economy Score</td>
</tr>
<tr>
<td>4.000</td>
<td>1.2: childbearing as consumption activity</td>
</tr>
<tr>
<td><strong>High Job Opportunities</strong></td>
<td><strong>High Job Opportunities</strong></td>
</tr>
<tr>
<td>Sexual Partners</td>
<td>Moral Economy Score</td>
</tr>
<tr>
<td>4.000</td>
<td>0.6: childbearing as consumption activity</td>
</tr>
</tbody>
</table>