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THE ENVIRONMENTAL PSYCHOLOGY OF CHILD SEXUAL ABUSE

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Abstract

This paper offers an environmental psychological analysis of child sexual abuse, a pervasive and disruptive societal problem. Earlier analyses of child sexual abuse have emphasized clinical, social, and developmental concepts and methodologies, while neglecting the environmental context of the problem. The proposed conceptualization of child sexual abuse suggests that a broader understanding of the etiology and psychosocial consequences of this problem can be achieved by integrating theoretical constructs drawn from clinical, social, developmental, and environmental psychology. First, some of the key findings and analytical perspectives from earlier studies of child sexual abuse are reviewed and then those findings are linked to a broader analysis of people–environment transactions. This transactional approach emphasizes contextual influences on the etiology and psychosocial outcomes of child sexual abuse, and suggests both clinical and environmental design strategies to reduce the prevalence and disruptive impacts of this problem.

Introduction

It is estimated that 15–35% of all American women, and 6–10% of all American males are sexually abused as children (Finkelhor, 1979; Russell, 1986; Hartman & Burgess, 1989). Nearly one half (47%) of these children experience this abuse at the hands of a family member, and another 40% are abused by an acquaintance (Hartman & Burgess, 1989; Dare & McKurdy, 1992). Comparative data documenting prevalence rates for child sexual abuse in 20 different countries suggest that international rates of abuse are similar to those reported in the United States—7–36% for women, 3–29% for men (see Finkelhor, 1994).

In recent years, sexual abuse has been associated with a variety of psychological and interpersonal adjustment problems (Russell, 1986; Cole & Putnam, 1992; see Kendall-Tackett *et al.*, 1993 for a review) and, consequently, this topic has received a great deal of public and professional attention. Yet, despite the increasing volume of research on the adverse impacts of child sexual abuse (CSA), little is known about the mechanisms facilitating individual adaptation and the reasons underlying successful adjustment in some individuals. For example, why is it that as many as 68% of incest survivors, compared with 38% of non-abused women, report being sexually assaulted as adults (Russell, 1986)?

In order to understand and prevent such negative consequences as revictimization, we must identify the contextual circumstances, as well as the cognitive, emotional, and behavioral processes, that contribute to their development.

Several conceptual models have been proposed to explain the development of various long-term effects of CSA (Finkelhor & Browne, 1985; Hartman & Burgess, 1989; Starr *et al.*, 1991; Briere, 1992; Cole & Putnam, 1992; Trickett & Putnam, 1993). What is noticeably missing from these models, however, is an awareness of how the sociophysical environment influences the etiology, experience, and developmental consequences of sexual abuse. For example, how do the temporal patterns of household activities and the environmental design of family residences increase or decrease opportunities for the perpetration of CSA? How might sexual abuse influence the development of a child's interactions with her physical surroundings? In what ways might sociocultural and demographic forces moderate the incidence and consequences of CSA for the individual, her family, and the community? These questions can only be addressed by expanding the conceptual and methodological scope of current research on CSA.

The major goal of this paper is to develop an environmental psychological analysis of CSA that highlights the role of sociocultural and physical

environmental factors in moderating the occurrence and long-term consequences of this problem. While the ecological context of child maltreatment has been examined in earlier analyses (e.g. Garbarino, 1977; Belsky, 1980), the role of the physical environment as it influences the occurrence and consequences of CSA has not been addressed in prior theoretical and empirical research. Hence, we aim to integrate clinical, social, developmental, and environmental psychological perspectives in order to achieve a broader understanding of the deleterious long-term effects of CSA, with special attention given to the unusually high rates of sexual revictimization among sexually abused individuals (see Gorcey *et al.*, 1986; Russell, 1986).

Our analysis focuses on theoretical concepts and research findings from environmental psychology that are relevant to an understanding of sexually abusive experiences and the long-term difficulties encountered by some abuse survivors. Constructs from environmental psychology pertaining to personal space (e.g. Hall, 1966; Sommer, 1969; Aiello, 1987), territoriality (e.g. Altman, 1975; Brown, 1987; Taylor, 1988), and place identity (Proshansky *et al.*, 1983; Korpela, 1989), for example, suggest processes by which sexually abusive acts can engender patterns of relating to the physical environment that render abused individuals vulnerable to future danger. Moreover, these personal and interpersonal processes are embedded within a broader social, spatial, and cultural context that can either encourage or constrain opportunities for the perpetration of, and recovery from, CSA.

We recognize the similarities in response to various forms of childhood victimization, such as psychological, physical, and sexual abuse (Garbarino, 1977; Emery, 1989; cf. Briere, 1992). The experience of sexual abuse, however, has the unique characteristic of violating a most intimate aspect of a child's body boundary—sexuality. Hence, although the concepts outlined in this paper may be broadly applicable to situations in which a child's body boundaries are generally violated, we focus here on developing the analysis as it applies to the CSA experience.¹

Because our analysis builds on earlier research concerning the long-term impacts of CSA, we begin with an overview of the patterns of psychological and social adjustment identified in sexually abused individuals. The contributions and limitations of earlier models developed to explain these findings are examined, and an environmental psychological analysis of CSA is proposed as a framework for future research. Finally, we discuss the clinical and environmental design implications of our analysis.

Clinical, Social and Developmental Research on Child Sexual Abuse

A variety of psychological, somatic, and interpersonal symptoms have been associated with sexual abuse. These symptoms include cognitive and emotional difficulties such as low self-esteem (Finkelhor, 1979; Morrow & Sorell, 1989), rumination and flashbacks (Silver *et al.*, 1983; Courtois, 1988), dissociative processes (Chu & Dill, 1990; Meiselman, 1990), depression (Bagley & Ramsey, 1986; Briere & Runtz, 1988) and anxiety (Murphy *et al.*, 1988; Greenwald *et al.*, 1990); interpersonal problems such as inability to trust (Herman, 1981; Meiselman, 1990), and difficulties in establishing and maintaining interpersonal relationships (Russell, 1986; Alexander & Lupfer, 1987); behavioral problems such as highly sexualized, aggressive, and/or self-destructive behaviors (Sedney & Brooks, 1984; Briere, 1988; Friedrich, 1988); and high risk revictimization (Gorcey *et al.*, 1986; Russell, 1986). Because subsequent victimization may exacerbate other negative effects identified among abused individuals (Murphy *et al.*, 1988), preventing revictimization is a crucial first step in promoting positive adaptation. To do this, however, we must understand the processes underlying the development of long-term adjustment problems, especially, how sexual abuse survivors become vulnerable to revictimization.

Various theoretical perspectives have been used to explain the development of long-term effects among sexually abused individuals. In a recent review of studies on the effects of sexual abuse on children, these perspectives were described as either core-symptom theories or multifaceted models of trauma (Kendall-Tackett *et al.*, 1993). The focus of core-symptom theories is on identifying specific symptomatology that distinguishes sexual abuse survivors from non-abused and/or clinical populations. For example, post-traumatic stress disorder is an organized framework that accounts for intrapsychic cognitive (e.g. rumination, flashbacks), physiological (autonomic hyperarousal), and behavioral (avoidant, phobic) responses to the traumatic stress of sexual abuse (Deblinger *et al.*, 1989). Another core-symptom approach suggests that the abuse damages the child's developing sense of self which, in turn, gives rise to subsequent psychosocial difficulties (Cole & Putnam, 1992; cf. McCann & Pearlman, 1990). Finally, some researchers have suggested that premature stimulation of the child's sexuality may initiate patterns of inappropriate sexual behavior that adversely influence subsequent development (Friedrich, 1988).

Multifaceted explanations for the long-term effects of sexual abuse have drawn from clinical research findings to develop an overarching theoretical model of adjustment to sexual abuse. For example, Finkelhor and Browne (1985) suggest that the dysfunctions manifested in abused individuals' lives stem from four traumagenic dynamics surrounding the abuse: traumatic sexualization, betrayal, stigmatization, and powerlessness. They further suggest that the co-occurrence of these experiences characterizes response to sexual abuse, but that any one alone may indicate many different forms of childhood trauma.

In Finkelhor and Browne's model, traumatic sexualization is a process in which a child's sexuality is shaped in a developmentally inappropriate and interpersonally dysfunctional manner. As a child is taught to exchange sexual favors for the love, affection, and attention s/he needs, s/he learns sexually inappropriate behavior and develops a distorted view of his/her own sexual self. Betrayal results when the child becomes aware that a person s/he is dependent on has harmed him/her and violated his/her trust—hence, feelings of betrayal would be expected in cases of parental incest or sexual abuse by a known trusted adult. Powerlessness refers to a process in which the child's sense of personal will, desire, and self-efficacy are constantly undermined. Finally, stigmatization refers to the negative implications about the child (i.e. being bad, shameful, or guilty for the abuse) that may become part of the child's self-image. These four dynamic processes are used as an organizing scheme for explaining the various effects of sexual abuse, and specific symptoms commonly described by survivors are grouped according to this framework (Finkelhor & Browne, 1985).

Another model of post-abuse adjustment organizes the characteristic psychological symptoms of sexual abuse into six broad categories: (a) negative self-evaluation, (b) chronic perception of danger or injustice, (c) powerlessness or preoccupation with control, (d) dissociative control over awareness, (e) impaired self-reference, and (f) reduction of painful internal states (Briere, 1992). These themes represent the underlying cognitive, emotional, and behavioral mechanisms that explain abused individuals' symptomatology.

A third model specifies phases of abuse and recovery, as well as conceptual processes to explain adjustment (Hartman & Burgess, 1989). Unlike the other models, this approach considers the abuse in relation to pre-abuse and post-abuse experiences that may influence the long-term consequences of CSA. This stage model of CSA includes pre-trauma

conditions, a trauma encapsulation phase that involves processing the experience, disclosure of the abuse, and post-trauma responses to the abuse. The authors propose a set of information processing steps that highlights important aspects of adjustment. First, encapsulation of the event involves maintaining defensive silence while currently experiencing conscious memories of the abuse. Second, dissociation from the event is described as a self-preservation strategy that shifts attention away from the abuse experience, even though the abuse may be ongoing. Finally, dissociation may precipitate 'splitting' in which the child's ego fragments resulting in self-blame and justification of the abuse using self-deprecatory explanations. At a behavioral level, splitting is thought to result in unusual patterns of stimulation and inhibition of sexual behavior.

There are at least two limitations inherent in each of these analyses of the consequences of CSA. First, they focus almost entirely on the damage done to the abused individual as the source of subsequent adjustment problems. Thus, the 'problem' ultimately resides within the abused individual. Even though this may not be intended, reducing the long-term effects of CSA to the individual's dysfunction may inadvertently pathologize abused individuals. Second, the exclusive focus on negative outcomes such as persistent distress or dysfunction reflects an assumption that incest necessarily engenders long-term emotional distress and behavioral dysfunction. This approach neglects the possibility that negative consequences of abusive events may be short-lived and that individuals are often able to cope effectively with those events. Given that 40–65% of non-clinical samples of abused individuals do not manifest chronic symptomatology (Russell, 1986; Stein *et al.*, 1988), the explanatory power of these models is limited. Ideally, theoretical models of child sexual abuse should explore the full range of potential responses, look beyond individual dysfunction, and encompass those contextual factors that may influence the occurrence of abuse and its impact on psychosocial adaptation.

Several authors have discussed the sociocultural and/or developmental contexts that may affect post-abuse adjustment. For example, Summit (1988) argues that the social rejection, denial, and blame that often accompany disclosure of abuse may perpetuate sexual victimization of children by encouraging social complacency and indifference to their plight. This explanation for the negative consequences of sexual abuse focuses on the role of the social environment that surrounds the abuse

and its disclosure rather than specific characteristics of the abuse, or the child's personal response to the abuse.

More recently, however, a call has been made for the application of life span developmental theory in studies of adaptation to abuse (Friedrich, 1988; Starr *et al.*, 1991; Cole & Putnam, 1992; Kendall-Tackett *et al.*, 1993; Finkelhor & Dzuiba-Leatherman, 1994). For example, Cole and Putnam (1992) adopted the perspective of developmental psychopathology to articulate specific processes underlying the adjustment problems identified among incest survivors. This model traces adjustment problems to the potentially disruptive effects incest may have on one's sense of self and interpersonal relations across developmental transitions. Starr *et al.* (1991) extend this model by suggesting that development occurs within a larger social ecological context:

. . . in order to explore these connections (between child maltreatment and adult functioning) it will be necessary to employ a conceptual model that recognizes the organizational properties of the self-system, . . . the social organization of the ecological setting . . . the critical nature of developmental timing as key features. (Starr *et al.*, 1991, p. 21)

One of the crucial features that distinguishes this model from the others is its attention to the ongoing social environment which surrounds the abuse experience. Thus, these authors provide one of the few contextually based approaches to understanding long-term adaptation to CSA.

Another developmentally-oriented analysis attributes psychosocial adjustment problems to parent-child transactions that give rise to insecure and disorganized patterns of attachment behavior in the child (Alexander, 1992). Attachment theorists have proposed that internal working models of interpersonal relationships develop from early parent-child interactions and may influence subsequent social development (Bowlby, 1988; see also Main *et al.*, 1985). Accordingly, an abused individual's functioning in the social environment may be powerfully influenced by his/her experiences of parental abuse. This application of attachment theory helps to explain, at least in part, the internal and interpersonal processes that mediate a child's subsequent adjustment to sexually abusive experiences.

Finally, Trickett and Putnam (1993) have proposed a psychobiological/developmental model for explaining long-term adjustment to CSA. Their model offers a unique integration of the psychological and physiological responses to sexual abuse by conceptualizing CSA as a stressor that may directly affect the quality and timing of pubertal experiences.

These authors suggest that the stress associated with CSA alters the child's hormonal environment which induces behavioral, emotional, and biological changes in the child's social, familial, and physiological experience. This model is focused within the individual child, with family and peer support modifying the relationship between psychological distress and the child's developing competencies. In sum, this model specifically posits that sexual abuse has negative effects on female development because it intensifies the pubertal experience by: (a) creating painful and/or uncomfortable feelings about sexuality that complicate the onset of sexual maturation; (b) threatening the interpersonal relationships that are normally used to deal with the changes brought about by puberty; and (c) hormonally initiating an early onset of puberty. Most relevant to our analysis, however, is the impact of CSA on a child's body-image while coping with the rapid, uncontrollable biological changes brought on by puberty. As we discuss later, the child's developing relationship with his/her physical body is central to learning to negotiate safely in the sociophysical environment.

To summarize, several models have been offered to account for the range of psychosocial symptoms found among sexual abuse survivors. With a few exceptions, these models have focused on psychological symptoms of the abused individual, rather than on either the underlying developmental processes giving rise to these symptoms, or the socio-cultural and physical-environmental factors that may encourage sexually abusive behavior and influence the duration and severity of an individual's response to such events. Thus, we turn now to an analysis of CSA that addresses these previously neglected aspects of the problem.

Integrating Clinical, Social, Developmental, and Environmental Psychological Perspectives on Child Sexual Abuse

A great deal of our knowledge about the processes affecting long-term adjustment to child sexual abuse has come from clinically based studies of abused individuals (Herman, 1981; Meiselman, 1990; Putnam, 1990; Briere, 1992) and socially-oriented studies of students or community members (Finkelhor, 1979; Silver *et al.*, 1983; Russell, 1986; Alexander & Lupfer, 1987; Stein *et al.*, 1988). Our interest lies in integrating clinical, social, and developmental approaches to CSA with the conceptual and methodological perspectives of environmental psychology to gain a broader understanding of the processes underlying long-term adaptation.

Environmental Psychological Perspectives

A major assumption of our analysis is that the physical environment influences the etiology, expression, and consequences of CSA. Our examination of these environmental influences on CSA begins with a discussion of certain core themes or meta-theoretical principles of environmental psychology (Stokols & Altman, 1987; Saegert & Winkel, 1990). We then discuss the relevance of more specific constructs drawn from several research paradigms of environmental psychology, including personal space, territoriality, place identity, and environmental stress.

One theme of environmental psychology is the dynamic and reciprocal quality of people-environment transactions. The *transactional perspective* (Altman & Rogoff, 1987; Wohlwill & Heft, 1987) assumes that people's interactions with their environments sometimes involve reactive adjustments to existing environmental conditions and, at other times, more active and goal-directed efforts to modify the environment in accord with specified preferences and plans. Typically, people shift back and forth between active and reactive orientations toward the environment. In uncontrollable or inflexible environments, however, opportunities for changing one's surroundings are restricted and the individual's stance toward the environment thus becomes predominantly passive or reactive.

A second theme of environmental psychology is *human-environment optimization* (Stokols, 1978). The optimization concept posits that people ideally strive to achieve 'optimal environments', i.e. those that maximize the fulfillment of their goals and plans. In many instances, though, people are constrained by situational factors to accept undesirable environmental conditions or, at best, to 'satisfice' (Simon, 1957; Dubios, 1965). Whereas the concept of optimization refers to ideal conditions, it is useful at a heuristic level in emphasizing the goal-directed and reciprocal nature of people-environment transactions.

A third theme of environmental psychology relates to the tension between equilibrium vs transformational processes in people-environment transactions. Non-transformational research emphasizes the conditions under which people's interactions with their environments are essentially stable and unchanging. Transformational studies, on the other hand, emphasize the power of certain life events (e.g. relocation to a novel environment or sudden change in an existing one) to dramatically restructure the pre-existing pattern of a person's social relationships and the quality of his or her experiences with the

physical environment (Saegert, 1987; Stokols, 1988). Theories of transformational change suggest that opportunities for both growth and deviance are created by these pivotal events and experiences, through a process of deviation amplification (Maruyama, 1963). According to deviation amplification theory, any event (either planned or fortuitous) can initiate a chain of events that takes adaptation in an increasingly positive or negative direction (Aldwin & Stokols, 1988). For example, Rutter's (1987) analysis of psychological resilience suggests that stressful childhood events may guide development toward deviance or adaptation, depending on the socio-cultural context in which the event occurs.

Considering these themes of human-environment transaction, optimization, and transformation, CSA can be construed as a life event or series of life experiences that has enormous potential to transform the quality of a child's transactions with his/her environment. Specifically, the potentially coercive and emotionally distressing nature of CSA may diminish a child's active efforts to optimize his/her environment, and to promote a predominantly passive stance toward the environment. Thus, one form of transformational change triggered by CSA would be reflected in the child's shift from active modes of dealing with the sociophysical environment to a more passive and reactive stance toward her surroundings.

A fourth theme of environmental psychology is that the etiology, intensity, and consequences of one's experiences with the environment can be best understood by considering the spatial, temporal, and sociocultural contexts in which those experiences and events occur. In the following section we apply these themes in an analysis of the etiology, experience, and aftermath of CSA.

Transformational Processes Within the Temporal, Spatial and Sociocultural Contexts of CSA

The temporal context of CSA can be viewed in relation to at least three major phases of abusive experiences: the pre-abuse phase, the abuse phase from the onset of CSA to its termination, and the post-abuse phase. The child's sociophysical environment plays an important role in each of these phases of CSA.

The pre-abuse phase

We cannot expect to understand all the fortuitous events that initiate CSA, but we can identify periods of time and characteristics of sociophysical environ-

ments that may encourage it. Toward this end, researchers have outlined four preconditions associated with the onset of CSA: motivation to commit CSA, lack of internal inhibiting factors, lack of external inhibitors, and lack of resistance from the child (Finkelhor, 1986). Sociocultural factors thought to be associated with higher rates of CSA include high rates of social change, immigration, geographic mobility (Tierney & Corwin, 1983), overcrowded or disorganized conditions (Bagley, 1969), a diminished sense of belonging to a group, household density levels, and social or physical isolation (Finkelhor, 1979; see also Tierney & Corwin, 1983; Haugaard & Repucci, 1988).

While these characteristics of the broader, macro-level sociophysical environment have been linked theoretically to sexually abusive behavior, little attention has been given to micro-level sociospatial factors that may increase the opportunity or motivation to commit CSA. In accord with earlier ecological analyses of crime occurrence and distribution within urban communities (e.g. Cohen & Felson, 1979; Archea, 1985; Fisher & Nasar, 1992), it seems reasonable to assume that some physical environments may 'afford' sexually abusive behavior through their spatial layout and design features. For example, just as family isolation may increase a child's vulnerability to CSA (Finkelhor, 1979), so might the physical isolation of a child within a home (see e.g. Tierney & Corwin, 1983). Conversely, the degree to which the layout of a home incorporates 'defensible space' may also affect the etiology of CSA by influencing patterns of territorial and self-protective behavior (e.g. Holahan & Wandersman, 1987; Newman, 1972; Taylor, 1987). A home that allows individual control over personal space without promoting extreme physical, visual, or auditory isolation may reduce opportunities for a motivated perpetrator to commit CSA. In sum, to understand fully the etiology of CSA, it is important to consider opportunities for CSA that are afforded by aspects of the physical environment (Gibson, 1977).

Characteristics of the sociocultural environment may also influence the onset of CSA by shaping people's attitudes and beliefs about sexual behavior. Researchers studying the effects of pornographic violence on sexual attitudes have provided convincing evidence that sexual violence in movies and television enhances both aggressive behavior toward women (Donnerstein, 1980) and acceptance of sexually aggressive behavior in males (Malamuth, 1983; 1986). Little is known, however, about the relationship between characteristics of the sociophysical environment and the expression of sexually abusive

behavior. For example, it is conceivable that the presence of adult book stores or displays of pornography may foster the development of cognitive schema for sexually exploitative interpersonal relationships and undermine internal sanctions against abusive behavior. It would be useful to explore the nature and prevalence of sexually abusive behavior in sociophysical environments that condone sexual exploitation.

The abuse phase

In order to understand an individual's interpretation of, and response to CSA we must consider the sociocultural context surrounding the abuse. Both the immediate social environment and the prevailing sociocultural norms are likely to influence what the CSA experience means to the child. Over the last few decades, sociocultural norms for sexual behavior have varied greatly, with the recent AIDS epidemic serving as a catalyst for intense public debate about sexual mores. Moreover, the last decade has seen a great increase in the public awareness about CSA. Hence, we would expect the sociocultural and moral landscape of different periods in history to affect both the nature of the CSA experience and the individual's response to it. That is, CSA that occurs in the 1990s may have very different meaning and impact for the child than abuse that took place 20, 30, 40, or 50 years ago. With this in mind, we now turn to a discussion of the transformational processes that may occur during the CSA experience.

CSA commonly involves an opportunistic violation of personal space that occurs when the child's vulnerability converges with an offender's motivation to abuse. The experience can be thought of as a deviation amplifying process that transforms a child's relationship with the sociophysical environment through its undermining effects on perceived control. The coercive force that commonly accompanies CSA (Finkelhor, 1979; Russell, 1986) violates a most fundamental form of control learned in early life—control over one's own body and bodily sensations. As the offender asserts power over the child, he creates a passive or withdrawn role for the child. The child's transactions within his/her sociophysical space become limited when his/her attempts to control the environment are overpowered by an offending adult. Control theorists suggest that when individuals are unable to exert active, primary control in a situation, they may resort to secondary methods of control such as lowering expectations to prevent disappointment and affiliating with powerful others (Rothbaum *et al.*, 1982). On the surface, these tech-

niques look like passive acquiescence, however, the individual is thought to experience greater perceived control despite his/her inability to influence external forces directly (Rothbaum *et al.*, 1982).

Applying this theory to CSA, it is hypothesized that CSA decreases the child's primary control over interpersonal relationships and forces the child to become disproportionately more passive than active in his or her encounters with the environment. This transformation is likely to be exacerbated when the child is physically or emotionally dependent on the offending person. Under these circumstances, the child may experience feelings of helplessness, powerlessness, and confusion (Finkelhor & Browne, 1985). Such dependency may pressure the child to modify his/her natural responses (e.g. fight or flight) in order to survive (Summit, 1983). For example, many abuse survivors become hypervigilant, learning to assess the needs and desires of others around them. This hypervigilance includes a tendency to be so 'other-directed' (Briere, 1992) that the individual becomes preoccupied with accommodating his/herself to others while neglecting her own personal safety and dignity. These behaviors, however, may in fact, be attempts to gain secondary control by accommodating the abusive, dangerous situation.

An adult's abuse of power over a child can also lead to traumatic bonding (deYoung & Lowry, 1992; Dutton & Painter, 1981), which involves a powerful emotional dependency between two people that develops when one person intermittently mistreats the other (Dutton & Painter, 1981). Individuals involved in these relationships tend to be socially isolated, with the aggressor of the pair exerting tremendous control over the social activities of the 'victim' (Dutton & Painter, 1981). The frequent use of force or intimidation to maintain secrecy about the abuse may encourage social withdrawal, isolation, and alienation by creating a barrier between the abused individual and others (see Silver *et al.*, 1983). Thus, by interfering with a child's ability to control his/her body, CSA sets a standard for control beliefs and behavior that may be generalized to the child's transactions within the broader sociophysical environment. Initially, this transformation may manifest itself as a difficulty in establishing and protecting appropriate interpersonal spatial boundaries. Ultimately, this transformation may lead a child to unwittingly accommodate his/herself to dangerous social and physical environments.

At the most intimate level, CSA is a transgression of privacy and personal space that violates physical and psychosexual body boundaries. Privacy has been defined as 'selective control of access to self or

to one's group' and serves to help people protect themselves from the undue external influence of others (Altman, 1975). Regulation of personal space and territorial behavior are two means by which individuals maintain privacy boundaries (Hall, 1966; Altman, 1975). The 'primary' territories we inhabit help shape and reinforce our identities, and provide a sense of security and freedom to express our 'true selves'. Therefore, violations of primary territorial boundaries are likely to be experienced as personal affronts that would normally provoke a defensive response (Altman, 1975).

Empirical evidence regarding boundary regulating processes indicates that humans normally flee situations in which privacy boundaries are transgressed (Felipe & Sommers, 1966; Dosey & Meisels, 1969; McDowell, 1972; Aiello, 1987). However, children are often physically or emotionally coerced into complying with CSA, making it difficult to flee the situation (Russell, 1986; Silver *et al.*, 1983). Thus, instead of fleeing from the situation physically,² the child may cope with the violation of personal space and body by mentally leaving—dissociating from the physical self (Briere & Runtz, 1988; Chu & Dill, 1990; Putnam, 1993). In essence, the person retreats from conscious, active participation in the sociophysical world.

These dissociative processes are thought to protect the individual from overwhelming feelings and other sensory input that accompany abuse (Briere & Runtz, 1988; Spiegel, 1988, 1989). However, the need to mentally dissociate from his/her physical body to flee from invasive, abusive contact may have negative consequences if it encourages the child to view the body as something separate from the 'self' (Young, 1992). Objectification of the physical form may render the child out of touch with the physical sensations associated with unwanted, uncomfortable touching, the very experiences s/he should learn to avoid. To the extent that dissociation removes conscious awareness of the internal physical sensations triggered by external environmental stimuli, it may weaken an individual's ability to identify danger in the physical environment. This is the Achilles heel for revictimization, leaving the individual at greater risk for subsequent sexual assault.³

The post-abuse phase

Having identified some of the general themes of environmental psychology that apply to the etiology and experience of CSA, we now focus on specific areas of research in environmental psychology that may help to explain the long-term negative consequences of sexual abuse. As a violation of

interpersonal spatial boundaries, CSA disrupts boundary-regulating abilities by denying children the right to control their interactions with others, thereby undermining their developing self-respect and identity formation (see e.g. Goffman, 1961). As a violation of primary territory, CSA disrupts the development of attachments to physical places, starting with the physical body, the smallest space a child can occupy. The tendency to dissociate in response to these violations may, over time, generalize beyond the physical body to other uncomfortable settings, making it difficult for the child to stay mentally present and fully aware in non-abuse related sociophysical settings as well. Moreover, as a form of interpersonal violence that takes place within traditionally 'safe' environments, CSA may undermine a child's developing assumptions about 'safety' and 'safe' places. Instead of learning that home and community are 'safe', s/he may internalize a view of these places as dangerous, unsafe places in general (see Garbarino *et al.*, 1992). Thus, in response to CSA, the child may develop a generalized alienation from many places in his/her immediate sociophysical world.

Dissociation can also be thought of as a deviation-amplifying process that initiates a negative (or positive) chain of events, and affects a child's ability to develop an optimal relationship with the sociophysical environment. Specifically, CSA may disrupt a survivor's attachments to primary territories that provide a sense of belonging in the physical world (Proshansky *et al.*, 1983). Through violations of the child's primary territory, such as the perpetrator's unwanted entry into his/her room, bed, or body, the child learns s/he doesn't have the right to own or control private space. Instead, the child learns that private personal spaces are where intimate people hurt one another, hence generating feelings of mistrust about these places. Aversion to the physical space associated with the abuse creates alienation from primary territories, such as a bedroom or home environment, that undermines the ongoing development of place attachments (Proshansky *et al.*, 1983). Moreover, since identification with a primary territory is thought to impart feelings of security, the need to dissociate from the physical environment may undermine the child's ability to establish physical anchor points that strengthen one's sense of personal security (Wapner, 1981). If a sense of 'rootedness' or attachment to personal places strengthens a child's ability to interpret and control physical surroundings, then experiences that weaken these attachments undermine the child's ability to navigate safely through the physical environment (Proshansky *et al.*, 1983).

CSA can also disrupt a child's relationship with the physical environment by creating memories that later evoke feelings of place aversion (Proshansky *et al.*, 1983; Rubinstein, 1993). Aspects of the physical environment may become permanent, painful reminders of the abuse through classical conditioning of psychological responses to the trauma (van der Kolk, 1993). As mentioned earlier, the Trickett and Putnam (1993) model emphasizes the role of CSA in altering the child's hormonal processes especially as they influence the onset of puberty. Another area of psychobiological research has identified the important role played by stress-related hormones in intensifying learning and memory processes, in that memories of highly stressful events become more enduring and vivid than those associated with lower levels of psychophysiological arousal (McGaugh, 1989). Hence, the physiologic response associated with CSA may precipitate the formation of memories that hinder the individual's subsequent ability to form positive attachments to people and specific places. The more arousing the event, the more enduring this effect is likely to be.

The powerful influence of sexually traumatic events in the formation of painful and persistent memories is evidenced by the frequently observed tendency of abused individuals to 'flashback' to some aspect of the CSA experience (Silver *et al.*, 1983; van der Kolk, 1993). Flashbacks are commonly described by clinicians as sensory stimuli classically conditioned at the time of the abuse that subsequently remind the survivor of the feelings associated with abusive events (Meiselman, 1990; van der Kolk, 1993). The stimuli may include any smells, sounds, sights, touches, or tastes that were experienced during the abuse. Re-experiencing these sensations triggers feelings of distress that are seemingly unwarranted to the individual. That is, the distress has no clear basis in present circumstances. If the child originally responded to the abuse by dissociating, then re-experiencing certain environmental sensory cues associated with the abusive setting may unknowingly trigger dissociation at a later time. Thus, dissociation, a once successful coping strategy for adjusting to the uncontrollable abuse (Putnam, 1993), may transform the child's way-of-being in the physical world and render the child more vulnerable than others being targeted by perpetrators. The net result is unusually high rates of revictimization among sexually abused individuals.

Finally, the dissociative process and the implied disrespect of the body that is encouraged by the abuse serves as the basis for self-destructive behavior.

commonly seen among survivors in clinical settings (Meiselman, 1990; Young, 1992). Such behavior may represent an attempt to either destroy the source of uncomfortable feelings (one's body or sexuality) or numb the sensations arising from within the body (Briere, 1992; Young, 1992). For example, self-mutilation has been described as a way to allow the pain to come out of the body as it bleeds (anonymous incest group member, personal communication, November, 1987). This description is consistent with previous assertions that the physical body becomes a separate object, an encapsulated source of pain for the individual, that cannot be comfortably 'reoccupied' until the pain is let out. For some individuals, this pain leads to suicidal behavior, making sexual abuse one of the risk factors for adolescent suicide (Deykin *et al.*, 1985; Garland & Zigler, 1993).

Toward an Environmental Psychological Theory of Child Sexual Abuse

The preceding discussion outlined three temporal phases of child sexual abuse and identified environmental factors that are associated with CSA within each of these phases. In this section, we discuss some of the next steps that need to be taken toward developing an environmental psychological theory of CSA. We begin by examining the proposed environmental antecedents of CSA and the intervening processes that link these factors to the occurrence of CSA. Working hypotheses regarding the direct and interactive influence of these environmental factors on CSA are proposed. Next, we present additional hypotheses about the person-environment transactions that are most closely associated with the psychological experience and consequences of CSA, and strategies for altering these processes through both clinical and environmental design interventions. The preliminary hypotheses offered in this section remain to be tested empirically and organized into a more coherent theoretical framework in future research.

Physical and social environmental antecedents of CSA

Several physical and social environmental factors, and a series of intervening processes that link these factors with sexually abusive events, are summarized in Table 1. Some of the environmental factors and intervening processes listed in Table 1 have been mentioned in earlier sections of the paper

whereas others are suggested by prior studies of child physical abuse and neglect (Garbarino, 1977; Belsky, 1980, 1993). The physical and social environmental antecedents of CSA are grouped in Table 1 within three contextual levels: the immediate residential environment of the child; the child's neighborhood; and conditions within the broader community. These environmental contexts correspond to the microsystem, mesosystem, and macrosystem levels within Bronfenbrenner's (1979) ecology of human development model.

Within the child's residential environment, a number of physical and social factors are hypothesized to increase the likelihood of CSA. First, according to the routine activities perspective on crime (Cohen & Felson, 1979; Brantingham & Brantingham, 1993), the spatial layout and interior design features of the home can create opportunities for sexual abuse, provided that a motivated offender is present in the household. Specifically, physical isolation of the child's bedroom from other shared areas of the home, and auditory and visual separation of the child's room from these areas, can constrain family surveillance processes and render the child more vulnerable to victimization.

The temporal patterning of family activities and the number of individuals present in the household can similarly influence the child's physical isolation and vulnerability, while the geographic separation of the residence from other homes and neighbors can further weaken informal social controls over potential perpetrators of CSA. Also, physical stressors in the home such as high noise and density levels, as well as financial strains, may provoke stress and negative affect among family members, making potential offenders more likely to engage in deviant and abusive behavior (Burgess & Conger, 1978; Pelton, 1978).

At the neighborhood level, several environmental factors have been found to be closely associated with child physical abuse and neglect, although the direct links among these factors and sexual abuse remain to be empirically established (Belsky, 1993). For example, high rates of residential mobility and neighborhood transience can undermine social cohesion and supportive social contacts among neighbors, rendering potential perpetrators more isolated and likely to abuse their children (Garbarino & Sherman, 1980; Creighton, 1985; Garbarino & Kostelny, 1992). Similarly, the presence of social and physical 'incivilities' in the neighborhood (e.g. public drunkenness, gangs, prostitution, graffiti, vandalism, dilapidated buildings) reflect community disorganization and non-supportive social climates that are con-

TABLE 1
Physical and social environmental factors and intervening process hypothesized to increase the likelihood of child sexual abuse

Environmental contexts of child sexual abuse	Physical and social environmental antecedents of child sexual abuse	Intervening processes linking environmental factor and child sexual abuse
Residential environment	<ul style="list-style-type: none"> spatial layout and interior design of the home temporal patterning of household activities family size and residential density geographic isolation of the home 	<ul style="list-style-type: none"> environmental design features afford opportunities for CSA by constraining children's privacy and defensible space household activity patterns may influence surveillance processes family size and household density may increase stress and negative affect isolation may reduce informal social controls over potential perpetrators
Neighborhood level	<ul style="list-style-type: none"> average length of residence among families in the neighborhood social and physical incivilities such as public drunkenness, gangs, prostitution, graffiti, vandalism, dilapidated buildings presence of pornographic stores high volume of vehicular traffic 	<ul style="list-style-type: none"> high levels of transience, and the presence of physical and social incivilities, can undermine supportive social networks among neighborhood residents the presence of pornographic stores may symbolize sexual mores that are conducive to CSA high traffic volume can further undermine neighborhood cohesion
Community context	<ul style="list-style-type: none"> societal tolerance of violence and aggressive sexual behaviour societal norms regarding corporal punishment, authoritarianism, and family privacy high rates of economic and social change within the community 	<ul style="list-style-type: none"> societal tolerance of violence, aggressive sexuality, and corporal punishment of children may weaken constraints against CSA; privacy norms may further delimit societal interventions among families at risk high levels of economic and social change in in the broader community may provoke psychological strains that foster deviant sexual behavior

ducive to deviant behavior (Nasar & Fisher, 1993; Perkins *et al.*, 1993). The presence of pornographic businesses in the neighborhood also are symbolic of norms and values associated with various forms of sexual deviance. Moreover, certain environmental conditions such as a high volume of vehicular traffic have been found to reduce informal contacts among neighbors (Appleyard, 1981) and may, thereby, weaken social controls over potential child abusers.

Within the broader community, societal tolerance of violence and aggressive sexual behavior, social norms regarding individual and family rights to privacy, corporal punishment of children, and authoritarian values are hypothesized to weaken social constraints against CSA and other forms of sexual deviance (Ziegert, 1983; Belsky, 1993). For example, the individual's right to privacy has been extended to the family so that events taking place within the family are viewed as private family business, not subject to any forms of social scrutiny. When coupled with a tendency to view children as

private property, these norms may create a potentially dangerous precedent of social reticence to intervene in these 'private' affairs of a family—even when a child is being hurt. Furthermore, high rates of economic and social change within the community have been found to provoke psychological distress and social strains at both family and community levels (Dooley & Catalano, 1984). These strains can further increase the likelihood of child abuse among those individuals who are already predisposed toward sexual deviance (e.g. by negative emotional states, neuroticism, or personal experiences of abuse during their own childhoods; Belsky, 1993).

The working hypotheses outlined above pertain to the direct and separate links between specific physical and social environmental factors and the perpetration of sexual abuse. Considering that 'child physical abuse and neglect are multiply determined by factors operating at multiple levels of analysis' (Belsky, 1993, p. 427), efforts to develop an environmental psychological theory of CSA will

need to address the interactive relationships between multiple environmental predictors and moderators of CSA, along with a host of intrapersonal predisposing factors including personality dispositions and parental histories of childhood abuse. For example, we would expect that the likelihood of CSA incidents increases additively to the extent that environmental conditions within residential, neighborhood, and community settings (1) maximize opportunities for predatory behavior among motivated offenders; (2) promote psychological stress and negative affect among family members; (3) isolate the family from other neighborhood residents; (4) undermine community cohesion; and (5) convey norms and values that are conducive to sexual deviance and abusive behavior. On the other hand, the strength of association between any one of these factors and CSA is expected to decrease to the extent that other environmental and intrapersonal predictors of CSA are absent.

Person × environment transactional processes associated with the experience and consequences of CSA

The preceding hypotheses pertain to the pre-abuse phase of CSA. The development of a more integrated, environmental psychological theory of CSA also requires an understanding of the person–environment transactions that are activated during the abuse and post-abuse phases of CSA. Moreover, an environmental psychological theory of CSA must not only be able to identify these core transactional processes, but also specify how they can be moderated (e.g. through clinical and environmental design interventions) so as to hasten recovery and minimize the adverse emotional and physical health impacts of childhood sexual abuse.

Some of the major categories of person–environment transaction associated with the abuse and post-abuse phases of CSA are listed in Table 2. These include (1) traumatic violations of the body

boundary and personal space; (2) mental dissociation from one's body; (3) disruption of territorial control and privacy regulation; (4) the development of traumatic memories of particular places; (5) a stigmatized sense of place identity and an aversion rather than attachment to places; and (6) a generalized alienation from one's sociophysical world.

In order to fully understand how CSA transforms a child's relationship within the sociophysical environment, it is important to consider these and other mechanisms mediating children's transactions with the environment. In an extension of previous work (see Garbarino *et al.*, 1992), we would suggest that CSA carries the potential for seriously damaging a child's developing core assumptions about self and the world (see Cole & Putnam, 1992; Janoff-Bulman, 1992). We suggest that CSA places affected children at risk for developing views of the world that are organized around assumptions of persistent danger, interpersonal deviance, and self-deprecating thoughts (see Garbarino *et al.*, 1992; Janoff-Bulman, 1992). In so doing, CSA may potentially alter a child's 'way-of-being' in the sociophysical world by tainting his/her perceptions and assumptions about the world around his/her.

It is hypothesized that the adverse psychological and health impacts of these traumatic transactions between the abused child and his/her immediate surroundings will be more severe and persistent to the extent that CSA experiences (1) occur over a prolonged period; (2) are perpetrated by a family member on whom the child is highly dependent (Russell, 1986; Kendall-Tackett *et al.*, 1993); and (3) occur across a number of developmental stages in the child's life. An important task for future research is to develop methods to assess the relationship between CSA and an individual's use of personal space, privacy-regulating abilities, and sense of alienation within varying sociophysical spaces. Moreover, research that addresses the role of traumatic events in altering world views, with specific attention paid to how these views influence the individual's transactions within the sociophysical environment, would be useful in furthering our understanding of the long-term consequences of CSA. For example, one methodology that has proven useful in identifying adults' traumatic memories associated with childhood places is the use of environmental autobiographies (Rubinstein, 1993), although these retrospective accounts of earlier experiences are subject to potential recall biases and questions about the authenticity of traumatic memories (Loftus, 1993). Multi-method strategies for documenting CSA experiences during childhood,

TABLE 2

Person–environment transaction associated with the abuse and post-abuse phases of child sexual abuse

Violation of body boundary and personal space
Mental dissociation from one's physical body
Disruption of territorial control and privacy regulation
Development of traumatic environmental memories
Experiences of place aversion rather than attachment
Stigmatized sense of place identity
Generalized alienation from one's sociophysical world

and for cross-validating adults' recollections of these traumatic experiences, remain to be developed in future research.

Our analysis suggests that the disruptive emotional and health impacts of CSA can be reduced through clinical and environmental design interventions that alter or, in effect, 'repair' the traumatic transactional processes instigated by sexual abuse. In the remaining portions of the paper, we propose a number of clinical and environmental design strategies that may counteract the long-term negative consequences of CSA. An important direction for future research is to empirically test the effectiveness of these strategies in facilitating recovery from sexually abusive experiences during childhood.

Clinical implications

In the preceding discussion, we described a deviation-amplifying process of increasingly negative consequences, triggered by the abuse experience and eventuating in revictimization and self-destructive behaviors. Deviation amplification theory, however, posits that these processes can be redirected toward more positive outcomes given the right set of circumstances (Maruyama, 1963). A very similar point has been made by Rutter (1989) who states that:

... the impact of some factor in childhood may lie less in the immediate behavioural change it brings about than in the fact that it sets in motion a chain reaction in which one 'bad' thing leads to another or, conversely, that a good experience makes it more likely that another one will be encountered (page 27).

To promote the health and well-being of abused individuals, it is important to identify and strengthen the positive deviation-countering experiences that can optimize the person's relationships with the sociophysical environment. Restoring personal control and reciprocity in these relationships may be a crucial ingredient for countering the negative effects initiated by CSA. Specifically, experiences that (1) help the individual unlearn the helpless, passive/reactive mode of relating with the environment; (2) weaken the traumatic interpersonal bond with the perpetrator (Dutton & Painter, 1981); and (3) teach self-protective privacy-regulating skills are most likely to transform the person-environment relationship in a positive direction.

For example, socially supportive relationships, including professional therapy, may create opportunities for establishing healthy emotional attachments to people and places, thereby interrupting a nega-

tive spiral of traumatic bonding (Bowlby, 1988; Garmezy, 1991). As these positive interpersonal experiences occur, the perceived threat of interpersonal violation diminishes, thereby minimizing the need to mentally flee from one's own body. In the context of a trusting relationship with another person, an abused individual can begin to feel a sense of belonging and learn how to regulate privacy needs through individuation and separation from an attachment figure (see Korpela, 1989; Proshansky *et al.*, 1983).

The re-establishment of personal control over privacy needs is, perhaps, the most important clinical application of our analysis. Privacy regulation can be strengthened through the development of skills to manage primary territory and personal space. For the sexual abuse survivor, this process will often need to begin with developing a sense of belonging and identity in the physical body. Toward this end, clinicians can encourage self-awareness of bodily sensations, while simultaneously respecting and advocating the abused individual's right to control this awareness.

Having established a modicum of safety and self-awareness of one's body, individuals can then be encouraged to identify cognitive and affective cues in the sociophysical environment that seem to trigger dissociation from the body. Once these triggers are recognized, the individual can consider alternative choices for responding to threatening cues besides dissociation. Encouraging the individual to consciously attend to such cues has a dual function: (1) to become aware of the threatening stimuli that initiate dissociation; and (2) to heighten the person's tendency to consciously scan both the inner and outer environment. These functions may enable the individual to identify danger by attending to and linking internal signals of threat with external environmental cues. In sum, as individuals begin to establish a sense of belonging in the physical world, their heightened awareness of bodily and environmental cues in the context of a safe interpersonal relationship can encourage the development of self-protective behavior. Self-protective behavior then becomes the abused individual's source of power to prevent future revictimization and promote adaptation. We now consider certain environmental design approaches that may enhance adaptation among sexually abused individuals.

Environmental design implications

Environmental psychologists have identified the potentially restorative effects of the physical

environment on mental and emotional well-being (Kaplan, 1983; Ulrich, 1983; Hartig *et al.*, 1991; Parsons, 1991). They propose that the natural environment promotes cognitive and affective restoration by capturing one's involuntary attention and blocking the experience of unpleasant thoughts. This process is thought to restore mental concentration (Kaplan, 1983) and combat the deleterious effects of stress (Ulrich, 1983). These models focus almost exclusively on the restorative effects of the *natural* environment, ignoring the restorative potential of human-made or built environments (Parsons, 1991). Preliminary evidence suggests, however, that certain aspects of one's primary territory may produce a restorative effect on the individual when it is associated with positive relaxing experiences (Korpela, 1989). For an abused person, it would be important to identify aspects of primary territory that have positive meanings to counter the negative, abuse-related emotions associated with home environments. To the extent that the physical environment can be structured to reinforce positive associations and minimize distressing ones, it becomes a coping resource for the individual.

Environmental design strategies also can be used to enhance the perceived safety and comfort of a setting. For example, shelters, clinical settings, and homes can be built and decorated so that they: (1) enable individuals to have high visual access without excessive exposure to others (Archea, 1977); (2) permit flexibility in establishing and removing privacy-regulating boundaries (e.g. in bathrooms, bedrooms, etc.); (3) incorporate aspects of the natural environment into building designs; and (4) encourage individuals to personalize their space so that it reflects positive aspects of their self and social identities (Proshansky *et al.*, 1983; Deaux, 1993). These positive symbols of one's self can directly counter the depersonalizing effects of dissociative processes (see Putnam, 1985) and strengthen personal identity.

Also, to the extent that therapeutic settings can be spatially configured and decorated to match clients' needs, the capacity of those settings to support the development of interpersonal security will be greater. The psychobiological model of adaptation to CSA (Trickett & Putnam, 1993) suggests yet another strategy for personalizing the therapeutic environment. It may be worthwhile to design therapeutic environments so that they accommodate the client's stimulatory needs. For an individual whose emotional distress involves physiologic hyperarousal, an environment that presents low levels of stimulation may be most appropriate. Conversely,

for an individual who experiences low levels of physiological arousal, environmental stimulation that enables the individual to learn competence in negotiating the physical environment may be useful. Thus, to the extent that the environment is designed to afford low levels of vulnerability, match the stimulatory needs of the individual, and promote high levels of individual control over privacy regulation, it can facilitate effective coping in sexually abused individuals.

Conclusion

CSA has been conceptualized as a transactional process in which a child's natural tendency to mentally and/or physically flee the violation of abusive events subsequently inhibits his or her development of positive self identity and attachment to the physical environment. Over time, this once useful coping strategy predisposes the individual to revictimization and perhaps self-destructive behavior. By applying principles of privacy regulation and place attachment to the study of the long-term effects of abuse, researchers may be better able to understand revictimization. Moreover, the application of these principles in clinical therapy with abuse survivors may provide techniques that can prevent further victimization of survivors and, hopefully, increase the rate of recovery. Finally, by considering the role of the physical environment in sexual abuse recovery, guidelines for environmental designs that promote the optimal outcomes for survivors can be developed.

In this paper, we have attempted to explain patterns of long-term adjustment to sexual abuse using the conceptual and methodological perspectives of environmental psychology. This integration offers a broader theoretical view of adaptation to abuse that can enhance efforts to prevent revictimization and self-destructive behaviors. Most importantly, by examining the sociocultural and physical-environmental contexts of CSA, we can reframe the abuse experience so that future scientific research can contribute toward improved outcomes for survivors of sexual abuse.

Notes

(1) Given empirical evidence linking abuse by a father-figure and the use of force to greater long-term distress (Russell, 1986; Kendall-Tackett *et al.* 1993), we suggest that the quality of adaptation will vary depending on the degree to which the experience violates both the child's

parental expectations and psychosexual body boundaries. Accordingly, we expect that only some individuals who experience CSA will develop severely negative symptomatology, and that children who experience forceful father-daughter incest will be at greatest risk for developing the long-term difficulties described here.

(2) Studies of runaway children have indicated that many incestuously abused children choose to flee from the home when they are old enough to survive on their own (Russell, 1986; Meiselman, 1990). Thus, as children develop greater independence from their parents, they may be more likely to run away rather than put up with recurring violations of sexual privacy.

(3) Our analysis focuses primarily on two forms of dissociation experience that commonly co-occur. Depersonalization often results in disturbed perceptions of the physical body such as feeling unusually small, or feeling outside of one's own body. Derealization involves detaching from the environment and feeling as though one's surroundings are not real (Putnam, 1985).

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