Where Is the Child's Environment? A Group Socialization Theory of Development

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Do parents have any important long-term effects on the development of their child's personality? This article examines the evidence and concludes that the answer is no. A new theory of development is proposed: that socialization is context-specific and that outside-the-home socialization takes place in the peer groups of childhood and adolescence. Intra- and intergroup processes, not dyadic relationships, are responsible for the transmission of culture and for environmental modification of children's personality characteristics. The universality of children's groups explains why development is not derailed by the wide variations in parental behavior found within and between societies.

In 1983, after many dozens of pages spent reviewing the literature on the effects parents have on children, Eleanor Maccoby and John Martin paused for a critical overview of the field of socialization research. They questioned the size and robustness of the effects they had just summarized; they wondered whether the number of significant correlations was greater than that expected by chance. They cited other research indicating that biological or adoptive siblings do not develop similar personalities as a result of being reared in the same household. This was their conclusion:

> These findings imply strongly that there is very little impact of the physical environment that parents provide for children and very little impact of parental characteristics that must be essentially the same for all children in a family . . . Indeed, the implications are either that parental behaviors have no effect, or that the only effective aspects of parenting must vary greatly from one child to another within the same family. (Maccoby & Martin, 1983, p. 82)

Since 1983, many developmental psychologists have focused on the second of Maccoby and Martin's two possible implications, "that the only effective aspects of parenting must vary greatly from one child to another." The other possibility, "that parental behaviors have no effect," has never been considered as a serious alternative.

This article examines both alternatives. I begin by showing why "must vary greatly from one child to another" cannot explain the results that puzzled Maccoby and Martin. Then I consider the possibility "that parental behaviors have no effect." The conclusion reached is that, within the range of families that have been studied, parental behaviors have no effect on the psychological characteristics their children will have as adults. To explain this outcome, I propose a theory of group socialization (GS theory), based on the findings of behavioral genetics, on sociological views of intra- and intergroup processes, on psychological research showing that learning is highly context-specific, and on evolutionary considerations.

Does the Family Environment Matter?

By the time they are adults, adoptive siblings who were reared in the same home will, on average, bear no resemblance to each other in personality. Biological siblings who were reared in the same home will be somewhat more alike, but still not very similar. Even identical (monozygotic) twins reared in the same home will not be identical in personality. They will not be noticeably more alike than identical twins reared in separate homes (Bouchard, Lykken, McGue, Segal, & Tellegen, 1990; Plomin & Daniels, 1987; Scarr, 1992).

These are some of the findings of the field of developmental behavioral genetics. The data on which they are based consist of correlations between pairs of people who share all, some, or none of their genes, and who did or did not grow up in the same home. Two conclusions—one surprising and the other not—emerged from the analysis of such data. The unsurprising conclusion was that about half of the variance in the measured psychological characteristics was due to differences in heredity. The surprising conclusion involved the other half of the variance: Very little of it could be attributed to differences in the home environments in which the participants in these studies were reared (Loehlin & Nichols, 1976; Plomin, Chipuer, & Neiderhiser, 1994; Plomin & Daniels, 1987; Scarr, 1992).

Behavioral Genetic Methods and Results

Behavioral genetic studies begin by collecting data—for example, scores on personality or intelligence tests—from pairs of people. Ideally, data from two or more types of subject pairs, such as twins and adoptive siblings, are combined in the data analysis. That makes it possible to test different mathematical models, based on slightly different assumptions, to see which provides the best fit for the data. The winning model is then used to divide up the variance calculated from the test scores—

the individual differences among the subjects—into three, or sometimes four, sectors.

The first sector consists of variance that can be attributed to shared genes; this is called *heritability*. Heritability generally accounts for 40% to 50% of the variance in personality characteristics, if the measurements are made in adulthood (McGue, Bouchard, Iacono, & Lykken, 1993; N. L. Pedersen, Plomin, Nesselroade, & McClearn, 1992; Plomin, Owen, & McGuffin, 1994).

The second sector consists of variance that can be attributed to *shared environmental influence*—the home in which a given pair of people were reared. This sector is very small if the measurements are made in adulthood: from 0 to 10% in most studies (Bouchard, 1994; Loehlin, 1992; Plomin & Daniels, 1987). The implication of this finding is that resemblances between siblings are due almost entirely to shared genes. Their shared environment has not made them more alike.

The third sector consists of measurement error, which is around 20% for personality tests (Plomin, 1990). Some analyses do not produce an estimate for this component of the variance, in which case it is included in the last sector, which consists of variance that can be attributed neither to shared genes nor to shared rearing environment (Goldsmith, 1993a). This sector of the variance is usually referred to as *nonshared environmental influence*, but a more accurate label for it is *unexplained environmental variance*. On the average, from 40% to 50% of the variance in adult personality characteristics falls into the unexplained or nonshared sector.

If heredity can account for only about half of the reliable variation among adults, then environmental influences must account for the rest. The challenge is to find the source of these influences. Behavioral genetic studies have demonstrated which aspects of the environment are *not* likely to be important. The aspects that are not likely to be important are all those that are shared by children who grow up in the same home: the parents' personalities and philosophies of child rearing, their presence or absence in the home, the number of books or TV sets or guns the home contains, and so on. In short, almost all of the factors previously associated with the term *environment*, and associated even more closely with the term *nurture*, appear to be ineffective in shaping children's personalities.

Within-Family Environmental Differences

This outcome went against the deeply held beliefs of many developmental psychologists. But, unlike the socialization research that was judged by Maccoby and Martin (1983) to be lacking in robustness, the findings of behavioral genetics are quite reliable. The results are consistent within and between studies and cannot readily be explained away (Scarr, 1993). Children reared in the same home by the same parents do not, on average, turn out to be similar unless they share genes, and even if they share all of their genes, they are not as similar as one might expect. For identical twins reared in the same home, correlations of personality characteristics are seldom above .50, which leaves at least 30% of the variance unexplained by shared genes plus a shared home environment.[1]

Faced with these results, most behavioral geneticists and many socialization theorists turned to Maccoby and Martin's

(1983) second alternative, "that the only effective aspects of parenting must vary greatly from one child to another within the same family" (p. 82). The unexplained variance was attributed to *within-family environmental differences* (Daniels & Plomin, 1985; Dunn, 1992; Hoffman, 1991). According to this concept, each child in a family inhabits his or her unique niche in the ecology of the family, and it is within these niches, or *microenvironments* (Braungart, Plomin, DeFries, & Fulker, 1992; Dunn & Plomin, 1990), that the formative aspects of development are presumed to occur.

In the past decade, much attention has been focused on these microenvironments. That they exist is unquestionable; the question is whether they can account for almost half the variance in personality characteristics. The next section summarizes the evidence that has led one behavioral geneticist to admit that the matter "remains largely a mystery" (Bouchard, 1994, p. 1701) and another to conclude that the family environment (macro- and micro-) may, in fact, "exert little influence on personality development over the life course" (Rowe, 1994, p. 1).

Can Within-Family Environmental Differences Explain the Unexplained Variance?

Why does growing up in the same home not make siblings alike? Perhaps because two children growing up in the same home might have very different experiences in that home. In particular, their parents might treat them differently. There are several possible reasons why parents might treat their children differently; McCartney and her colleagues (McCartney, Robeson, Jordan, & Mouradian, 1991) have divided them into *child-driven, relationship-driven, parent-driven*, and *family context* effects.

Child-driven effects. If parents do not treat their children alike, it may be because the children themselves are not alike. Perhaps one child has a more pleasing personality or is more physically attractive than the other. There is good evidence that adults do not behave in the same way to a beautiful child and a homely one (Burns & Farina, 1992; Ritter, Casey, & Langlois, 1991), or to an easy child and a difficult one (Lytton, 1990; Thomas & Chess, 1977), or to a healthy child and an ill one (Quittner & Opipari, 1994). The tendency for a child's behavior or appearance to evoke a particular reaction from parents or other interactive partners is called a *reactive* effect (also known as an *evocative* effect; Scarr & McCartney, 1983). A reactive effect is an example of a *gene–environment correlation* (Plomin, DeFries, & Loehlin, 1977)—a correlation between a genetically influenced characteristic, such as a pretty face or a pleasing disposition, and a particular environmental variable, such as doting parents.

Although gene–environment correlations are often found (Plomin & Bergeman, 1991), they contribute primarily to genetic variance rather than environmental, because their effects are predictable on the basis of the proportion of genes shared. Genetically

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[1] A correlation of .50 between twins means that .50 of the variance covaries between them; therefore the correlation accounts for 50% of the variance in that measure (for a detailed explanation, see Plomin, 1990). Allowing 20% for measurement error leaves 30% of the variance unaccounted for.

influenced characteristics tend to be most similar in identical twins, less similar in fraternal (dizygotic) twins and nontwin biological siblings, and uncorrelated in adoptive siblings. The effects of any environmental influences that are evoked by these characteristics should also be most similar for identical twins and least similar for adoptive siblings. This pattern of correlations, identical twins > fraternal twins > adoptive siblings, is identified by behavioral genetic models as genetic variance (McGuire, Neiderhiser, Reiss, Hetherington, & Plomin, 1994). Thus, it is unlikely that reactive effects could account for much of the unexplained environmental variance.

It is possible, however, that reactive effects might act in a way that turns small differences into larger ones, thereby adding a major environmental effect to a minor genetic one and increasing overall variance by making children less alike. For example, children who inherit a tendency to be sociable might elicit more interaction from their parents than introverted children, and this extra interaction might cause them to become still more sociable, producing a positive feedback loop, or what is commonly known as a vicious circle (J. R. Harris & Liebert, 1991).

There is evidence that positive feedback loops do occur in development (Anderson, Lytton, & Romney, 1986; Moffitt, 1993b). However, as Bell (1968; Bell & Chapman, 1986) pointed out, there are also negative feedback loops. A child who is very active is frequently admonished to sit still; a sluggish child may be tempted into games of catch or tag. Negative feedback loops would *reduce* variability and make children more alike. Furthermore, there are reactive effects that could loop in either direction: Timidity in a child, for example, might elicit either parental protectiveness or parental anger. Thus, different characteristics engender different feedback loops—positive, negative, or unpredictable. If these effects were responsible for an important part of the unexplained variance, we would expect that sector of the variance to vary in magnitude according to the characteristic that is being measured: It should be large for characteristics in which the feedback loop is likely to be positive and small for those in which it is likely to be negative. Instead, we find that the portion of the variance attributed to unexplained environmental influence is remarkably uniform for a wide variety of personality characteristics (Plomin & Daniels, 1987; Tellegen et al., 1988).

What about child-driven differences in experiences that are not due to differential treatment by the parents? For example, children tend to experience different illnesses or injuries. However, such differences are likely to average out over the course of childhood, unless there is a tendency for a particular child to suffer repeated illnesses or accidents. In this case, a genetically influenced characteristic is likely to be involved—a biological susceptibility that predisposes the child to illness, or an active and impulsive temperament that makes the child accident-prone (Jaquess & Finney, 1994). Again, identical twins are likely to be most similar and adopted children least similar in this respect, and if there are effects on personality they will fall mostly into the sector of variance attributed to heredity.

A final child-driven mechanism that has been proposed to account for the lack of similarity between reared-together siblings is that different children might experience or interpret environmental events in different ways (Hoffman, 1991; Kagan, 1984). For example, parents might treat two children exactly

alike but the children might interpret their parents' behavior differently. In fact, adolescent and adult fraternal twins often give differing descriptions of the emotional climate of their childhood home and of the warmth and expressiveness of their parents (Plomin, McClearn, Pedersen, Nesselroade, & Bergeman, 1988; Rowe, 1981). These conflicting reports, however, could represent either different interpretations of the same parental behavior or accurate reports of differential parental treatment. If it could be shown that they were indeed different interpretations of the same events, this would be evidence of a *gene-environment interaction*. Gene–environment interactions, if they occurred, would contribute to the unexplained variance; but attempts to measure such interactions have so far yielded unpromising results. The few interactions that have been found could account for only a negligible portion of variance (Loehlin, 1992).[2] Moreover, gene–environment interactions cannot explain the personality differences between identical twins.

Relationship-driven effects. These effects involve the fit or match between a parent's characteristics and a child's. For example, perhaps the child's temperament does not match the parent's preferences or expectations (Thomas & Chess, 1977). However, temperament is a genetically influenced trait (Braungart et al., 1992; Goldsmith, 1993b; Robinson, Kagan, Reznick, & Corley, 1992), and therefore the probability of a match or mismatch with parental preferences should be similar for identical twins, less similar for fraternal twins. The presumed effects would be equivalent to a gene–environment correlation—one that is specific to a particular parent. Differences between fraternal twins would be increased to a greater degree than differences between identical twins. To account for the unexplained variance, we need effects that are not correlated with the proportion of genes shared—effects that can explain the differences in personality between identical twins reared in the same home.

Parent-driven effects. Parents might treat their children differently for reasons of their own. A parent might have a particular reason for favoring or rejecting a particular child: for example, because the child was unwanted—its conception was unplanned (David, 1992). However, this hypothesis cannot explain the findings of behavioral genetic studies, which are based largely on data from twins and adopted children. The timing of conception is the same for twins, and adoption seldom occurs by accident.

Another possibility is that a child might be treated in a particular way by a parent, not because of that child's own characteristics, but because of the characteristics of his or her sibling. Schachter and Stone (1985) found that parents who consider their first child to be "difficult" tend to label their second-born

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[2] Two kinds of gene–environment interactions may prove to be reliable. In the first, the genotypic trait is biological sex: Males and females may respond differently to the same environmental stimuli. This kind of interaction is irrelevant to the present discussion because the subject pairs in behavioral genetic studies are almost always of the same sex. The second kind of interaction involves children who are biologically at risk (e.g., those with neurological impairments). Such children may be especially vulnerable to the effects of unfavorable environments (Moffitt, 1993b; Wachs, 1992).

"easy," and vice versa. Presumably, the parents would then act differently toward the two children, thereby widening any pre-existing differences between them. It is difficult to test this hypothesis directly, because when two siblings are found to have different personalities, and the differences are correlated with differences in parental treatment, there is usually no way of determining which is cause and which is effect (Rodgers, Rowe, & Li, 1994). As Dunn and Plomin (1990) admitted, the cause-or-effect problem "is a notoriously intractable issue" (p. 57).

Family context effects. There is one within-family variable that does provide a way to distinguish parent-driven causes from child-driven effects: birth order. Unlike twin studies, birth-order studies are easy to do; anyone who has a sibling of a different age is eligible to participate. Because there should be no systematic genetic differences between a firstborn and a second-born, any systematic differences found between them can be attributed to the order of their arrival and their different positions in the family constellation. There are clear and reliable differences in the experiences these two children will have. Every firstborn child has been the sole recipient of parental attention for at least a year and has then had to relinquish that position and compete with a rival who was in greater need of attention. Every second-born child has always had a sibling, and this older sibling was for a long time larger, stronger, and more knowledgeable. The firstborn is reared by inexperienced parents who may still be ill at ease in their new role, the second-born by parents who are usually more relaxed and more competent at the job (Kreppner, 1992).

Because the microenvironments of older and younger siblings differ in important and consistent ways, and because large amounts of birth-order data are available, any systematic effects of microenvironmental processes should be readily detectable. The results go against the expectations of professionals and nonprofessionals alike: Birth order has no consistent effects on adult personality (Dunn & Plomin, 1990; Ernst & Angst, 1983). Further evidence of the ineffectiveness of the family microenvironment is provided by comparisons between only children and children with siblings: Having a sibling or not having one also has no consistent effects on personality (Ernst & Angst, 1983; Falbo & Polit, 1986; Falbo & Poston, 1993). Ernst and Angst's conclusion, based on their own study of 7,582 young adults and on a survey of the world literature on birth-order and family-size effects, was that socialization within the family does not appear to play an important role in the formation of adult personality characteristics.[3]

The birth-order findings call into question two other hypotheses about differential within-family environments. The first is that adult personality is shaped in part by the relationship between the siblings themselves (Daniels & Plomin, 1985; Dunn & Plomin, 1990). The relationship between siblings, however, is determined partly by birth order: In most families, the older is the leader and model, the younger is the follower and imitator (Abramovitch, Corter, Pepler, & Stanhope, 1986; Brody, Stoneman, MacKinnon, & MacKinnon, 1985; Zukow, 1989). Sibling relationship effects should therefore be detectable in birth-order data, and they are not.

The final hypothesis is that, even if children are not aware of the absolute amount of attention or affection they get from their parents, they may be keenly aware of how much they get relative to their siblings (Dunn, 1992; Dunn & Plomin, 1990)—what might be called the "Mom always loved you best" syndrome. Here again, the effects of such differential treatment should be detectable in birth-order data. Although a mother behaves in a remarkably consistent fashion to her two children when they are the same age—that is, her behavior toward the second-born at 24 months is similar to her behavior toward the firstborn at 24 months (Dunn, Plomin, & Daniels, 1986)—her behavior does depend on the child's age: A younger child gets more attention than an older one (Brody & Stoneman, 1994; Dunn & McGuire, 1994). Thus, when a mother is taking care of both children at once, she will pay more attention to the younger one. Furthermore, there is evidence that, on average, she will also give more affection to the younger one. Dunn and Plomin (1990) reported that two thirds of the American and British mothers they studied were willing to admit that they loved one child more than the other. Of this group, 80% of American mothers and 86% of British mothers said they felt more affection for the younger child. The fact that a parent-driven birth-order difference of this magnitude has no consistent effects on the development of a child's personality is strong evidence against the efficacy of within-family environmental differences.

Conclusions. It is undoubtedly true that children who grow up in the same home have different experiences, and it is also true that they end up with different personalities, but current behavioral genetic methods do not enable us to distinguish causes from effects. However, data from birth-order studies and from studies of children with and without siblings cast serious doubt on the hypothesis that children's within-family microenvironments play a causal role in the shaping of their personalities. It is time to look elsewhere.

The theory presented in the remainder of this article, group socialization (GS) theory, explains the shaping of adult personality characteristics in terms of the child's experiences outside the parental home. It is important to note that this theory does not imply that children can get along without parents. Children are emotionally attached to their parents (and vice versa), are dependent on them for protection and care, and learn skills within the home that may prove useful outside of it; these facts are not questioned. What GS theory implies is that children would develop into the same sort of adults if we left them in their homes, their schools, their neighborhoods, and their cultural or subcultural groups, but switched all the parents around.

Context-Specific Socialization

One of the important roles of parents is presumed to be the socialization of the child. Socialization is the process by which an infant becomes an acceptable member of his or her society—

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[3] Ernst and Angst (1983) searched the literature for every study published between 1946 and 1980 in which birth-order data were reported. They found that many of the studies were flawed; due to the lack of proper controls, birth order was often confounded with other demographic variables, especially socioeconomic class. When the proper controls were used, no birth-order effects were found on personality. Whether there is a birth-order effect on intelligence is still unclear (see Retherford & Sewell, 1991); if there is one, it is very small.

one who behaves appropriately, knows the language, possesses the requisite skills, and holds the prevailing beliefs and attitudes.

It is generally assumed that an important method of socialization in all societies is imitation of the parents by the child. Verbal instruction is less likely to be important, because in many preindustrial societies children are given little or no explicit instruction—they are expected to learn the necessary skills and behaviors by observation (Rogoff, Mistry, Göncü, & Mosier, 1993). Young children do imitate their parents in all societies, but they imitate many other people as well: older siblings (Zukow, 1989), nonfamily adults and children (Maccoby & Jacklin, 1974; Perry & Bussey, 1984), and characters they see on television (deMarrais, Nelson, & Baker, 1994; Lasater & Johnson, 1994). Rowe (1994) has pointed out that it would not make evolutionary sense for children to learn only from their parents; it would mean, for example, that children might fail to pick up useful innovations unless the innovator happened to be their parent. Rowe postulated an innate adaptive mechanism that directs the child to learn from any source, not just parents—a learning mechanism that is "general with respect to informational source" (p. 194).

Within the Home and Outside of It

Children can learn from many sources; yet, at the same time, their learning can be highly context-specific. Much current research points to the context-specificity, situation-specificity, or domain-specificity of learned behavior (Ceci, 1993; Deaux & Major, 1987; Garner, 1990; Greer & Stewart, 1989; Tooby & Cosmides, 1992). Very early learning, in particular, appears to be highly context-specific. Rovee-Collier (1993) performed a series of experiments in which young babies learned to kick one foot in order to make a mobile move. If any detail of the experimental setup was changed—for example, if the liner draped around the playpen was changed from yellow with green squares to green with yellow squares—6-month-old infants would merely gape at the mobile as though they had never seen it before, only a day after training. With the original liner in place, they showed evidence of recall (by kicking a foot) as long as 2 weeks after training. It appears that the infant starts out life with a learning mechanism that can learn from any source but that comes with a warning: What you learn in one context will not necessarily work in another.

What children learn in the context of their home may not, in fact, work in the world outside the home. Western societies demand very different behaviors in the home and outside the home; for example, displays of emotion that are acceptable in the home are unacceptable outside of it (Dencik, 1989; Fine, 1981). A central assumption of GS theory is that socialization is a highly context-dependent form of learning. Children learn separately how to behave at home (or in the presence of their parents) and how to behave when they are not at home. The manner of learning, the reinforcement contingencies, may also be quite different: In the home they may be reprimanded for mistakes and praised when they behave appropriately; out of the home they may be ridiculed for mistakes and ignored when they behave appropriately.

Code Switching

The clearest illustration of context-specific socialization is offered by the child of immigrant parents. If the language[4] used in their home is different from the language of the community, the child will learn the local language in order to communicate with her peers (Baron, 1992). By the time she is in first or second grade she will be a competent speaker of both languages, using one language in her home and the other outside of it. She will switch back and forth between them with ease—a process known as *code switching*—as though her mind contained two separate language modules controlled by the flip of a toggle. Even when two languages are acquired simultaneously, from two different caregivers or in two different contexts, children seldom intermix them unless they hear others doing so (Genesee, 1989; Lanza, 1992).

Language is the most conspicuous marker of the bicultural child's context-dependent socialization, but the assumption made here is that other variations in learned behavior are also selectively associated with the two different contexts; this view is similar to the alternation model of biculturalism proposed by LaFromboise, Coleman, and Gerton (1993). In addition to behavior, patterns of cognitive and emotional responses may be "contextually linked" to each other (Rovee-Collier, 1993, p. 133) and triggered by contextual cues. According to Kolers (1968/1975), "Many bilingual people say that they think differently and respond with different emotions to the same experience in their two languages" (p. 190). Thus, for bilingual children who use one language at home and another outside the home, the home language will be contextually linked to behavioral, cognitive, and emotional responses that occurred at home, the other language to those that occurred outside the home.

Context and Personality

Although the differences between home and outside-the-home behaviors are not as obvious in a child who speaks only one language, this child too will develop contextually linked patterns of behavior, cognitions, and emotions. The observation that individuals adopt different personas, or selves,[5] in different social contexts is not new; William James stated it quite clearly in 1890 (p. 294) and it has been reiterated many times since (e.g., Deaux & Major, 1987; Mischel & Shoda, 1995). It has also been observed that an individual's alternate personalities bear more than a passing resemblance to each other (see Carson, 1989). This resemblance need not be taken as evidence for cross-situational generalization. The alternate personalities are,

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[4] Language is used here as a paradigmatic example of a socialized behavior. It is true that language acquisition may differ in some ways from other kinds of learning, because it is a specialized skill for which humans appear to be uniquely adapted (Pinker & Bloom, 1992). However, although language may be acquired in a specialized way, the social motivations that cause a child to use one language (or accent or vocabulary) rather than another are not specific to language.

[5] The term *selves* is often used by theorists who believe that behavior in various contexts is controlled or influenced by mediating variables such as self-esteem or self-concept. Variables of this kind play no special role in GS theory.

in effect, identical twins—they bear the same genes. Genetically determined characteristics such as aspects of temperament will be carried along from one context to another and will affect behavior in every context. Genetically determined characteristics, including physical appearance, will also affect the way others react to the child in every context. Children whose characteristics (e.g., a sociable temperament, an appealing smile) evoke positive responses from their parents are likely to evoke positive responses from other interactive partners as well. Thus, a child's experiences in separate social contexts may not be very different.

An individual's *personality*, as defined here, consists of an innate substratum that, during development, is built upon and modified by environmental influences. More precisely, the personality has two components: a genetic component that accompanies the individual wherever he or she goes, and an environmental component that is context-specific. The term *behavioral system* will be used to refer to the context-specific component of personality. It is defined as follows: a pattern of behavior, including language or accent, that is acquired in a particular social context, and the various cognitions and emotions (e.g., self-esteem) that were experienced in, and are associated with, that context.

Because there are alternate behavioral systems for different contexts, personality is, to some extent, context-specific. Because experiences in different contexts tend to have a certain degree of consistency, the alternate behavioral systems may not be very different and the personality is reasonably stable.

Code Switching in Traditional Societies

The bicultural child, who must learn the customs and languages of two different cultures, is not found exclusively in modern-day mobile societies; in fact, this child's task may be an ancient one. In forager (hunter-gatherer) societies, groups tend to be small and most of the people in them are related to each other. Mates are ordinarily obtained from outside the group, often through barter or warfare (Wilson & Daly, 1992). Because the majority of human societies are patrilocal, it is the woman who is more likely to be a newcomer to the group. She may speak a different dialect or even a different language; her customs may be different from those of the group. In order to survive, her children will have to interact successfully both with their mother and with the other members of their group.

Unlike the child in a contemporary Western society, however, the forager child does not have to learn how to behave in two entirely separate contexts. For forager children there is no clearcut distinction between the family environment and the outside-the-family environment; there is much overlap and no privacy (Draper & Cashdan, 1988). Privatization of the home is a recent innovation, no more than 400 years old (Hareven, 1985; Rybczynski, 1986). Children in contemporary urbanized societies go back and forth between their privatized homes and the world outside the home—two environments that seldom overlap. They must learn what is expected of them in each environment.

GS theory pertains chiefly to outside-the-home socialization. According to the theory, socialization outside the home is primarily a group process, rather than the result of dyadic interactions between individuals. In the next section I review relevant findings on intra- and intergroup behavior, discuss some theoretical approaches to these findings, and introduce the theory.

Group Processes

Two's company, three's a crowd. For the present purposes, two are a *dyad*. Three or more are a *group* if they are allied with each other in some way or similar to each other along some socially relevant dimension. That the behavior of groups differs in important ways from the behavior of individuals has long been recognized.

The Basic Phenomena of Group Behavior

The phenomena of intra- and intergroup behavior described in this section are robust; they can be observed in natural settings and are readily evoked under laboratory conditions.

In-group favoritism. Members of a group prefer their own group to other groups. This can be demonstrated with breathtaking ease. Tajfel (1970) brought a group of boys, who knew each other from school, into his laboratory. The boys were asked to estimate the number of dots flashed on a screen. Purportedly on the basis of their responses (but in fact randomly), the experimenter divided the boys into two groups: Half the boys were privately informed that they were "overestimators" and the other half that they were "underestimators." Then each boy was asked to specify how monetary rewards should be distributed to the other boys in the laboratory. Although their own reward was not in question, and although they did not know which boys belonged to their group, they gave more rewards to their own group than to the other group. A later experiment (Billig & Tajfel, 1973) showed that it is not necessary to create a fictitious criterion for dividing up the groups; participants can explicitly be told that the group assignments are random and they will still favor their own group.

Out-group hostility. Sometimes the tendency to favor the in-group is accompanied by hostility toward the out-group. Two classic experiments provide vivid demonstrations: the prisoners and guards study (Zimbardo, 1972) and the Robbers Cave study (Sherif, Harvey, White, Hood, & Sherif, 1961). Both studies began with about two dozen carefully screened young male participants, demographically homogeneous, who were randomly divided into two groups. The result was strong, even violent, intergroup hostility. In the case of the 11-year-old boys at the Robbers Cave summer camp, animosity between the "Rattlers" and the "Eagles" was evident even before the groups encountered each other: The first time the Rattlers heard the Eagles playing in the distance, they wanted to "run them off" (Sherif et al., 1961, p. 78).

Between-group contrast. According to Wilder (1986), "Assumptions of differences between groups arise even when there is no justification for those inferences other than the mere existence of those groups. More strikingly, persons act to increase the magnitude of assumed intergroup differences" (p. 50). The persons in question are the members of the groups themselves. In the Robbers Cave experiment, the Eagles decided not to do any more "cussing" because the other group, the Rattlers, "used cuss-words all the time" (Sherif et al., 1961, p. 106).

Within-group assimilation. The group norm adopted by the Rattlers involved being "tough"—not a sissy (Sherif et al., 1961). When a Rattler sustained a minor injury, he did not cry, though crying under such circumstances was permitted among the Eagles. In children's groups, group norms are often enforced by ridiculing nonconformists (Adler, Kless, & Adler, 1992). For older groups, overt "peer pressure" is not usually necessary. No pressure was applied to the college-age participants in Asch's (1952/1987) experiments on group conformity. From the point of view of the subject, all that happened was that the seven other "subjects" in the room—actually confederates of the experimenter—gave perceptual judgments that were unanimous and clearly incorrect. The urge to conform came from within the subject. "Most subjects," noted Asch, "see a disturbance created, not by the majority, but by themselves" (p. 462).

Within-group differentiation. The individuals who make up a group are not identical and interchangeable. Within every group there are differences in social status and dominance (Hartup, 1983). Among the Rattlers and the Eagles, one or two boys in each group were regarded by the others as leaders, though this position could be short-lived and statuses changed over time. The boys differentiated themselves in other ways as well: One Rattler adopted the role of group clown; another was dubbed "Nudie" for having been the first to swim in the nude (Sherif et al., 1961).

Social–Cognitive Theories of Group Processes

Theoretical explanations of group behavior must account for the phenomena described above, including the paradoxical finding that the members of a group become more similar to each other (assimilation) and, over the same period of time, more dissimilar (differentiation). One promising approach is the self-categorization theory proposed by Turner (1987). This theory postulates that people can categorize themselves in various ways and on various levels, ranging all the way from *a unique individual* to *a human being.* The part of this range that is of interest here begins at *a unique individual* and extends through various nested or overlapping group identities such as *a female, an Asian American,* and *a college student.*

According to Turner (1987), there is a continuum between self-categorization as an individual and self-categorization as a member of a group. What causes movement along this continuum, and determines which particular self-categorization is adopted at a given point in time, is the relative salience of the various social categories. The salience of social categories (and therefore a person's self-categorization) is highly situation-specific; it varies over time and in different contexts. It is heightened by a comparison, "where two or more categories appear simultaneously, either actually or symbolically" (p. 120). For example, the social category *adult* is made more salient by the presence of members of the category *child; female* is made more salient by *male.*

When individuals categorize themselves as members of a particular group, they identify with that group and take on its "rules, standards, and beliefs about appropriate conduct and attitudes" (Turner, 1987, p. 1). This is the source of within-group assimilation. Differentiation occurs when people catego-

rize themselves as individuals. But these two processes are not mutually exclusive. Individual identity and group identity are not dichotomous choices—"On the contrary, they will tend to operate simultaneously most of the time" (p. 50). Turner believes that people generally spend most of their time in the middle of the individual identity–group identity continuum, somewhere between "me" and "us."

What drives these processes, according to Turner, is the motive to improve or maintain one's self-esteem. People are motivated to evaluate themselves positively, so someone who has categorized herself as *a female college student* is motivated to evaluate that group in a positive way. Because group evaluations are relative, she is also motivated to compare her own group with another group and to evaluate her own group as different from, and better than, the other. The tendency to see her own group as favorably distinctive results in between-group contrast (which creates differences between two groups or causes preexisting differences to widen) and in-group favoritism (which can, under some circumstances, lead to hostility toward the outgroup). Thus, Turner's theory has something to say about all the major phenomena of inter- and intragroup behavior.

Two other social–cognitive theories that should be mentioned here are Tesser's self-evaluation maintenance theory and Brewer's optimal distinctiveness theory. Tesser's (1988) theory explains what Scarr and Grajek (1982) called "niche picking"— the way people in groups (especially small groups such as families) carve out identities of their own by differentiating themselves only in those areas that are important to them. Brewer's (1991; Brewer & Weber, 1994) theory is based on the idea that people must reconcile their opposing needs for assimilation and differentiation; the members of large, inclusive groups will be more motivated to differentiate themselves than the members of smaller groups.

Group Behavior of Other Primates

The three social–cognitive theories just described were designed to account for the behavioral phenomena of human groups. However, many of the same phenomena have also been observed in nonhuman primates. The experiment of dividing subjects randomly into two groups was approximated in a natural setting by chimpanzees (Goodall, 1986). A troop of chimpanzees that Goodall was observing split up, on their own, into two smaller groups. About a year later, a murderous war broke out between the two groups; eventually, one group succeeded in annihilating the other. As Russell (1993) concluded, "Chimpanzees, like humans, divide the world into 'us' versus 'them'" (p. 111).

Chimpanzees' hostility toward "them" may be related to a general tendency to show fear or aggression toward anything strange. A polio epidemic struck the chimpanzee troop that Goodall (1986) was observing, and a few of the animals became partially paralyzed. According to Goodall, "When the other chimpanzees saw these cripples for the first time, they reacted with extreme fear; as their fear decreased, their behavior [toward the cripples] became increasingly aggressive" (p. 330).

Like humans, chimpanzees inhabit social contexts that involve a delicate balance between "individual identity" and "group identity." Within most nonhuman primate groups there

are frequent struggles as individual animals attempt to defend or improve their position in the dominance hierarchy. Interestingly, these within-group struggles for dominance cease abruptly when aggression is redirected toward an outside target, such as the members of another troop (de Waal, 1989; Russell, 1993). In humans, this finding would be attributed to the increased salience of group identity.

Motivational Considerations

For Turner, the motivating force behind group processes is the desire to increase one's self-esteem; for Tesser, it is the need to maintain a positive self-evaluation; for Brewer, it is the search for optimal distinctiveness. Even if we consider only human groups, none of these motives seems adequate to account for the powerful emotions generated by intergroup relations. As Brewer (1991) pointed out, "People die for the sake of group distinctions" (p. 475). How can a desire for self-esteem—a motive that seems insufficient to make a preadolescent boy do his homework—account for the fierce emotions and warlike behavior of the preadolescent boys at the Robbers Cave summer camp?

Cognitive Considerations

A second problem with social–cognitive theories of group processes is that they demand a rather high level of cognitive sophistication. Turner (1987) described his theory as "a cognitive (or social–cognitive) elaboration of the nature of social identity as a higher order level of abstraction in the perception of self and other" (p. 42). There is no question that higher order cognitive processes do play a role in human group behavior; we are unlikely to evoke group affiliation in a chimpanzee by informing it that it is an overestimator. It is also clear that *some* form of cognition must be involved, because a group is a category, and a category is a kind of concept (Fiske & Taylor, 1991). However, a category is a very simple kind of concept. Categorization has been reported in brain-damaged patients with amnesia (Knowlton & Squire, 1993) and even in pigeons (Wasserman, 1993). Logically, for the basic "us versus them" phenomena of group behavior to occur, only two cognitive steps are necessary: (a) categorization that results in at least two categories, and (b) identification of one of the categories with the self. The other phenomena of group behavior—the emotional aspects—do not require cognitive explanations. In short, social–cognitive theories presuppose too much brain power and provide too little emotional power.

Evolutionary Considerations

The ambition of theorists is to account for the greatest possible amount of data with the smallest possible number of assumptions. To postulate only a few simple "laws" and to use them to explain all of human and nonhuman behavior, as Skinner (1938) did in *The Behavior of Organisms,* is an intellectual exercise of great elegance. Unfortunately, "There is scant empirical evidence that the world is actually simple or that simple accounts are more likely than complex ones to be true" (Oreskes, Shrader-Frechette, & Belitz, 1994, p. 645).

Evolutionary psychologists Buss (1991) and Cosmides and Tooby (1992) do not believe that human behavior can be explained in terms of a small number of jack-of-all-trades mechanisms (such as operant conditioning) that serve a wide variety of functions. The human body contains specialized organs to solve particular adaptive problems—the intestines digest food, the lungs oxygenate the blood, and so on. Similarly, there are specialized psychological mechanisms that have evolved to solve particular adaptive problems encountered by our ancestors, and which our ancestors had to solve in order to become our ancestors. Because accommodation to a group lifestyle was critical to their survival, many of these special-purpose mechanisms pertain to group behavior.

Buss (1991) has listed some problems that are likely to have special-purpose psychological mechanisms designed to solve them; included in his list are "participating in cooperating groups," "besting members of one's own sex to gain access to desirable members of the opposite sex," and "initiating dyadic relationships characterized by cooperation and reciprocity" (p. 465). What Buss is saying is that these three different jobs— affiliating with a group, achieving status within the group, and forming successful dyadic relationships—may be carried out by three separate mechanisms that operate independently and respond to different kinds of input. They may make use of different motivational sticks or carrots and follow different developmental trajectories. There is no reason to expect them to be mutually exclusive.

Evolutionary psychology can account for the emotional power of group processes (adaptations that evolved to solve survival or reproductive problems tend to be associated with strong emotions) and for the fact that higher mental processes do not appear to be required (special-purpose devices can carry out specific jobs with a minimum of equipment).

The Assumptions of Group Socialization Theory

Accepting the views of evolutionary psychologists does not mean rejecting social–cognitive theories of group processes. The theories of Turner (1987), Tesser (1988), and Brewer (1991) provide good descriptions of aspects of human group behavior that are not found in chimpanzee groups and that require social–cognitive explanations. Humans can belong simultaneously to many groups and can shift their allegiance from one to the other, without moving an inch, in response to changes in relative salience. They can identify with a group even if it never assembles in one place and even if they have never met all of its members[6]—or, for that matter, *any* of its members.

GS theory is based on a view of human group behavior that regards the phenomena described by Turner, Tesser, and Brewer as elaborations built on a much older and deeper foundation. The foundation consists of four built-in predispositions, or evolutionary adaptations, that humans share with other primates.

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[6] That humans do not necessarily have personal acquaintanceship with all the members of their group must have been true for a very long time. Before the battle of Jericho, which took place more than 3,000 years ago, Joshua met a stranger outside the walls of the town. The first question he asked the stranger was, "Are you for us or for our adversaries?" (Joshua 5:13).

The first is group affiliation, the basis of in-group favoritism. The second is fear of, or hostility to, strangers, which joins with in-group favoritism to produce out-group hostility. The third is within-group jockeying for status. Improving one's status within a group brings greater access to scarce resources. The fourth causes us to seek, and enables us to form, close dyadic relationships. I am not referring here to the strategic alliances that are common in primate groups and that tend to be short-lived; I am referring to love. Among nonhuman primates, relationships of this type are seen mainly between mother and offspring.

Table 1 summarizes the assumptions of GS theory. Some of these assumptions—notably the context-specificity of personality development—were discussed earlier. The others will be elucidated in the remainder of this article.

Children's Groups

The first step in human group affiliation is the categorization of people into groups. Although Piaget (1952) believed that the ability to categorize is an achievement of toddlerhood, more recent evidence suggests that it is present in infancy (Eimas & Quinn, 1994; Mandler, 1988, 1992). Indeed, if pigeons can categorize (Wasserman, 1993), it would seem unlikely that human infants are incapable of doing so.

For humans categorizing other humans, the top three cues are age, sex, and race (Fiske, 1992). Children do not appear to make racial distinctions before they are of preschool age (Hirschfeld, 1993; H. W. Stevenson & Stevenson, 1960), but age and sex discriminations are made very early. There is evidence that infants make categorical distinctions between men and women (Leinbach & Fagot, 1993; Walker-Andrews, Bahrick, Raglioni, & Diaz, 1991) and between adults and children (Brooks & Lewis, 1976) before they are a year old. Signs of a preferential attraction to others "like me" (Diamond, LeFurgy, & Blass, 1993) also appear at an early age. Year-old infants are interested in and attracted to other infants—including those they have never met before—at an age when they are wary of strange adults (Brooks & Lewis, 1976; Eckerman & Didow, 1988). By the age of 2, they are beginning to show a preference for children of their own sex (Fagot, 1985).

The young of all primates are strongly attracted to one another. As soon as they are able to move around on their own, infant monkeys leave their mothers in order to play with other young monkeys (Napier & Napier, 1985). Young baboons, rhesus macaques, langurs, and orangutans will leave their own troop in order to play with a young conspecific in another troop if no playmates are available in their own (Fagen, 1993).

In humans, customs of child rearing and patterns of parent–infant interaction vary widely from culture to culture (Leiderman, Tulkin, & Rosenfeld, 1977; Whiting, 1963), but the children's play group is universal. If the number of children in a given locality is small, the play group will consist of children of both sexes and a range of ages; if the number is larger, the children generally divide up into age- and sex-segregated groups (Edwards, 1992; Maccoby, 1990; Schlegel & Barry, 1991). Girls' groups tend to be fragmented—they split up into dyads and triads (Maccoby & Jacklin, 1987)—but these unstable dyads and triads are almost always composed of individuals who

belong to the same stable social category, as defined by age, sex, and other locally relevant factors (Hallinan, 1992). It is the social category, or psychological group (Turner, 1987), that is important here. Children can categorize themselves as members of a social category even if it does not assemble in one place.

The mixed-age groups in forager and small village societies generally consist of (or include) siblings, half-siblings, cousins, and younger aunts and uncles (Edwards, 1992). In societies where children are brought together in large numbers for schooling, the groups generally consist of unrelated individuals of the same age. School-age children in urbanized societies spend much of their time, when they are not at home, in groups that are segregated both by age and by sex (Hartup, 1983). The age segregation is sanctioned by the educational system, but the sex segregation is created and maintained by the children themselves, even in the face of adult disapproval. In the lunchroom and, if permitted, in the classroom, they will divide up into separate gender groups; there will be a girls' table and a boys' table, a girls' side of the room and a boys' side (Sadker & Sadker, 1994; Thorne, 1986). If the school is racially or ethnically mixed, the children might also split into separate racial or ethnic groups, but the gender distinction is primary (Schofield, 1981).

In adolescence, sex segregation breaks down; adolescents use different criteria to divide up into smaller groups. The peer groups of adolescence are based on athletic, social, or academic interests and abilities; on distinctions of race, ethnicity, and social class; and on proclivities such as drug use and delinquency (Brown, Mounts, Lamborn, & Steinberg, 1993; Eckert, 1989; Schofield, 1981).

According to GS theory, outside-the-home socialization in urbanized societies takes place in these peer groups—the sex-segregated groups of middle childhood and the cliques or crowds of adolescence. They are composed of individuals who categorize themselves in the same way, and they fit Turner's (1987) definition of a psychological group:

> A psychological group is defined as one that is psychologically significant for the members, to which they relate themselves subjectively for social comparison and the acquisition of norms and values . . . from which they take their rules, standards and beliefs about appropriate conduct and attitudes . . . and which influences their attitudes and behavior. (pp. 1–2)

That is also a good description of socialization.

Cultural Transmission

Plomin and Rende (1991) recommended that we think about environmental effects on development "on an individual-by-individual basis" (p. 180). Corsaro and Eder (1990), in contrast, believe that developmental psychology has been held back by its exclusive focus on the individual; they advocated approaches that "break free from this individualistic emphasis" (p. 217). Asch (1952/1987) made a similar recommendation almost 40 years earlier: "It is correct to urge that we should strive to see persons in their uniqueness. But it is wrong to assume that we can best achieve a correct view of a person by ignoring his group relations" (p. 238).

These two contrasting approaches are depicted in Figure 1. The top diagram (Figure 1A) summarizes Rowe's (1994) view

Table 1
The Assumptions of Group Socialization Theory

Component	Assumption
Context-specific socialization and personality development	1. Children learn separately how to behave at home and how to behave outside the home. 2. Personality consists of an innate core plus acquired, context-specific behavioral systems. 3. As children get older, the outside-the-home behavioral system takes precedence over the inside-the-home system and eventually becomes part of the adult personality.
Source of outside-the-home socialization	1. Primates are predisposed, for evolutionary reasons, to affiliate with and adapt to a group. 2. Humans have the ability to identify with more than one group; the group identification that is salient at any given moment depends on social context. 3. The group that children identify with when they are outside the home is the peer group—a group of others who share socially relevant characteristics such as age, gender, ethnicity, and (in adolescence) abilities and interests. 4. Identification with a group entails taking on the group's attitudes and norms of behavior. This is a within-group process that results in assimilation—the group members become more alike.
Transmission of culture via group processes	1. Parents do not transmit their culture directly to their children. Culture is transmitted from the parents' peer group (and from other cultural sources) to the children's peer group. 2. Children transfer behavior learned at home to the peer group only if it is shared by, and approved by, the majority of members of the peer group. Children who come from atypical homes do not transfer their atypical home behaviors to the peer group. 3. Children's peer groups create their own culture by selecting and rejecting various aspects of the adult culture and by making cultural innovations of their own. During childhood, children move through a series of these child-created cultures.
Between-group processes that widen differences between groups	1. In-group favoritism and out-group hostility derive from adaptive mechanisms acquired through evolution and found in humans and other primates. 2. In humans, in-group favoritism and out-group hostility produce group contrast effects, which widen differences between groups or create differences if there were none to begin with.
Within-group processes that widen differences among individuals	1. Status hierarchies within the group—differences in dominance or social power—exist in all primate groups. Differences in status tend to persist and, in humans, may have lasting effects on personality. 2. Social comparisons within the peer group give children information about their own strengths and weaknesses and result in typecasting of individuals by other members of the group.
Assimilation and differentiation	1. Within-group assimilation and between-group contrast are most likely to occur when group identity is salient. Group identity is most salient when other groups are present. 2. Within-group assimilation and within-group differentiation are not mutually exclusive. Children can become more similar to their peers in some ways (socialization) and, over the same period of time, less similar in other ways.

of cultural transmission. According to Rowe, children can acquire cultural knowledge from many sources—parents, teachers, other children—but the knowledge is transmitted on an individual-to-individual basis. GS theory (Figure 1B) generates a different model of transmission, group-to-group: from the parents' group to the children's group.

The Parents' Peer Group

According to the model shown in Figure 1B, it is not only children who influence each other: Adults influence each other as well. In particular, they influence each other's child-rearing methods. Although child rearing is often alleged to be something one learns from one's own parents, a group of women who are members of the same social class, ethnic group, or neighborhood may be more similar to each other in their child-rearing practices than they are to their parents. Child-rearing practices and values vary greatly from one generation to another (Alwin, 1988; Wolfenstein, 1953), and this is true not only in developed societies. In Kenya, Gusii infants are no longer force-fed by blocking their nostrils and forcing them to aspirate millet
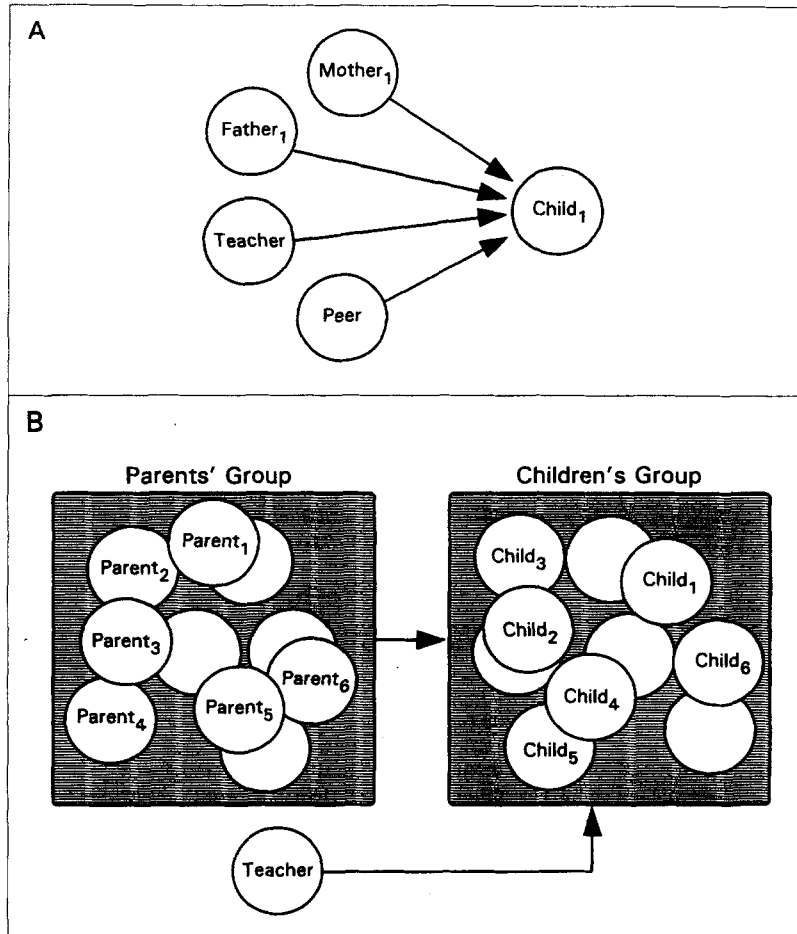
Figure 1. Two views of the transmission of culture from one generation to the next. Matching subscripts designate individuals who belong to the same family. A: The child can acquire cultural knowledge and behavior from many sources; transmission is from individual to individual (Rowe, 1994). B: Transmission is from group to group (group socialization theory).

gruel (LeVine & LeVine, 1988). In Mexico, Yucatec Mayan women who were themselves breast-fed are now bottle-feeding their infants, against the advice of their mothers (Howrigan, 1988). In the United States, the likelihood that a woman will breast-feed her child varies according to her ethnic group and whether or not she has gone to college (Bee, Baranowski, Rassin, Richardson, & Mikrut, 1991).

Peer groups of mothers, also known as maternal support networks, transmit information and social norms for the job of parenting (Salzinger, 1990; see also Riley, 1990). Mothers who do not belong to such networks find parenting more difficult and stressful and are more likely to violate societal norms by physically abusing their children (Melson, Ladd, & Hsu, 1993; Salzinger, 1990). The networks may include relatives and distant friends, but they consist in large part of parents of the same social class who live in the same neighborhoods and whose children go to the same schools or day-care centers. Thus, children of a given social class who live in the same neighborhood and go to the same school are likely to be reared by parents who share common child-rearing methods and values (Corsaro, 1994).

The neighborhood and community effects described by Bronfenbrenner (1986) are attributed here to class and local differences in the culture of parenting and to local differences in the peer groups of the children themselves.

The Children's Peer Group

The path of cultural transmission, as shown in Figure 1B, is from the parents' group to the children's group. Most of the children in a given peer group will have parents who also share a peer group; thus, most of the behaviors and attitudes that one child learns at home will also be learned by the other children in the group. According to GS theory, any behaviors or attitudes that are common to the majority of the children in the group are accessible to the group as a whole; the children are not compelled to retain them when they are not at home, but they probably will. For example, if the majority of the children learned to speak English and to eat with a spoon and fork at home, they will probably speak English and eat with a spoon and fork in the school cafeteria. Other social influences common to the group
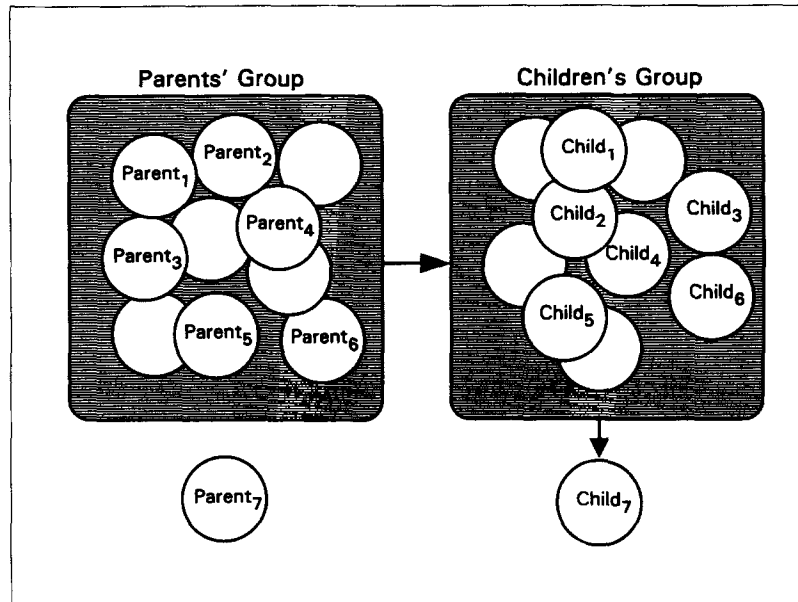
Figure 2. According to group socialization theory, the child whose parents are not members of the parents' group acquires the local language and customs from the children's group. (Matching subscripts designate individuals who belong to the same family.)

are transmitted in the same way: If the majority of children watch a particular television show, they may incorporate it into their play (deMarrais et al., 1994; Lasater & Johnson, 1994); an exceptional teacher can influence the attitudes of an entire classroom of children (E. Pedersen, Faucher, & Eaton, 1978). The results make it appear that culture is passed from the parent, the teacher, or the media to the individual child. However, according to GS theory, the transmission is not direct: Cultural transmission to individual children passes first through the filter of the children's group.

As long as all the children in the peer group come from families that share the same culture and watch the same TV shows, it is difficult to test this hypothesis; there is usually no way of telling whether the children learned their behaviors and attitudes at home or from each other. Consider, however, the child of immigrant parents, whose parents may not speak English, may not use spoons and forks at home, and are not part of the parents' peer group. Their child will pick up the local language and customs from her peers, as illustrated in Figure 2, and will use them when she is not at home. In effect, she has learned them from the parents of her peers.[7]

The most interesting case is when the children in a peer group have no common culture or language. In that case, they must create one. Bickerton (1983) has observed this process in the children of people who immigrated to Hawaii in the late 1800s. The parents' generation, brought to Hawaii to work on the sugar plantations, came from many different countries and had no language in common. To communicate with each other they used a *pidgin*—a rudimentary language that lacks prepositions, articles, verb forms, and standardized word order. Each speaker of a pidgin speaks it a little differently, depending on the native language of that speaker.

Between 1900 and 1920, a new language evolved in Hawaii: a *creole,* based on the pidgin. This was a fully developed language, capable of expressing complex ideas; it was spoken by the children of the immigrants. These children had not learned it from their parents—their parents spoke pidgin or the languages of their homelands. It was developed, according to Bickerton (1983), by the children themselves. The parents' pidgin varied according to their national origin, but the children of a given cohort all spoke the same version of creole. Their national origin was no longer detectable in their speech, even by a linguist. On the other hand, because the creole language evolved over time, there were variations from cohort to cohort. Bickerton was able to trace the development of this language by interviewing middle-aged and older adults, because each cohort continued to use the version they had spoken in their childhood and adolescent peer groups. They had "adopted the common language of their peers as a native language in spite of considerable efforts by their parents to maintain the ancestral tongue" (Bickerton, 1983, p. 119).

Peer Cultures

Though the achievement of the Hawaiian children is remarkable, it is not unique; according to Corsaro (1993), all childhood peer groups create their own culture. Consider a group of children who share a bicultural heritage, such as Native American and Anglo American. They can pick and choose from each

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[7] This account does not apply to the immigrant family that lives in an area where there are other families with the same national background. In such areas, children who share a national background often form their own group and maintain their home language and customs.

of their cultures, and the precise blend they settle on will vary from group to group (LaFromboise et al., 1993).

Corsaro (1993) has described childhood socialization as "the production of and movement through a series of peer cultures" (p. 361). Though this series of cultures is capable of adapting to changing times, it is also capable of remaining relatively unchanged while cohort after cohort of children pass through it. Thus, children's games get passed down from generation to generation; Opie and Opie (1969) found British children still playing games that date from Roman times. These traditions are passed on by groups that have a spread of ages; the younger children learn the traditions from the older ones, who forget them, according to Opie and Opie, as soon as they graduate out of the children's group. Nyansongo children in Africa have a private language for describing intimate parts of the body, using words that are forbidden in the presence of adults (LeVine & LeVine, 1963). The words are passed along from older children to younger ones. According to Levine, Resnick, and Higgins (1993), group norms (they are speaking here of adult groups) are "often maintained over several 'generations' during which old members gradually leave the group and new members join. . . . Groups are highly motivated to provide newcomers with the knowledge, ability, and motivation they will need to play the role of full member. . . . Newcomers are typically receptive to these influence attempts" (p. 600).

If the newcomers to a children's group are not particularly receptive, and if no adult intervenes, the influence attempts may be quite forceful. For many generations, upper-class British boys were sent away to boarding schools at the age of eight. Glynn (1970) described his experiences as a newcomer to Eton in the early 1900s:

> A boy's first week at his preparatory school is likely to be the most traumatic experience of his life, one for which he is, at the age of eight, totally unprepared. Until that moment, he has not realized that there are so many people in the world who wish to hit him and hurt him and that they will be given ample opportunity to do so, both by day and by night. (p. 129)

The boys who attended these schools saw very little of their fathers; their first 8 years were spent mainly in the company of nannies and governesses, and for the 10 years after that, paternal contact consisted chiefly of "a lecture each holiday on fortitude, fitness, and trying hard at games" (Glynn, 1970, p. 128). Yet the boys turned out very much like their fathers, including the same upper-class accent. The reason is that their fathers went to the same schools and participated in the same peer culture, which evidently changed very little as generation after generation of boys passed through it. The Duke of Wellington was alluding to this method of socialization when he said, in explanation of his victory at Waterloo, that the character of the British officer was formed "on the playing fields of Eton" (cited in Bartlett, 1955, p. 400).

Between-Group Contrasts

When widening differences are noted between children's groups that differ in gender, race, ethnicity, social class, or academic ability, the blame is usually put on putative socializing agents such as parents or teachers (e.g., Fagot & Hagan, 1991;

Minuchin & Shapiro, 1983; Parsons, Adler, & Kaczala, 1982; Sadker & Sadker, 1994; Siegal, 1987; Weinstein, 1991). However, in the Robbers Cave experiment, when the Eagles decided not to do any more "cussing" because the Rattlers "used cusswords all the time" (Sherif et al., 1961, p. 106), no adult was involved in their decision. It is the group members themselves who are responsible for group contrast effects (Wilder, 1986).

Social groups are categories and, like all categories, are based on the perception of within-group similarities and between-group differences (Krueger, 1992). Thus, when group identity is salient, group members perceive themselves to be more similar to each other, and more different from the members of other groups, than they really are. The result is the emergence of contrasting group stereotypes (Wilder, 1986; Williams & Best, 1986). According to Turner (1987), between-group differences are increased or created because "a positive social identity requires that one's own group be favourably different or positively distinctive from relevant comparison groups" (p. 30). An evolutionary view offers an alternative explanation for group contrast effects: They are not driven by a desire for self-esteem, but are a side effect of in-group favoritism and out-group hostility. If we feel favoritism toward our own group and hostility toward another group, for reasons that have more to do with our evolutionary history than with any real differences between the groups, then we are motivated to see the groups as different.

Gender Role Development

Gender is "the most fundamental of human categories" (Banaji & Prentice, 1994, p. 315). The fact that gender differences in behavior are observable in every human culture that has been studied, and that male and female stereotypes are similar across cultures (Williams & Best, 1986), strongly suggests that there is a biological component to these differences (Maccoby & Jacklin, 1974). However, like the sex differences in height and strength, the biologically based differences in behavior are differences between group means; the ranges of the two groups overlap considerably. During middle childhood, according to GS theory, the effects of self-categorization into two dichotomous groups causes these differences to widen and the overlap to decrease. Boys and girls develop contrasting group stereotypes and contrasting peer cultures. Maccoby (1990) has pointed out that behavioral differences between girls and boys are minimal when children are observed individually; the sex differences emerge most clearly when they are playing in sex-segregated groups.

The view that the sex-segregated peer groups of middle childhood play an important part in gender role development, and that parental influence plays no more than a minor part, has been suggested elsewhere (Archer, 1992; Edwards, 1992; Maccoby & Jacklin, 1987; Martin, 1993; Schlegel & Barry, 1991; Serbin, Powlishta, & Gulko, 1993; Tannen, 1990; Thorne, 1986). Indeed, parents in Western societies may be less concerned about gender distinctions than are the children themselves. A meta-analysis turned up no major differences between the ways parents treat their sons and daughters (Lytton & Romney, 1991). Recent efforts to rear children in an androgynous fashion have not reduced their sex-typed behavior or attitudes (Serbin et al., 1993). Children who grow up in homes headed by

single mothers (M. R. Stevenson & Black, 1988) or by lesbian or gay couples (Patterson, 1992) are not less sex-typed than children who have two parents of opposite sexes.

Attitudes toward gender roles are part of a culture and can be passed down from the parents' group to the children's group in the manner depicted in Figure 1B. However, in societies where children are able to divide up into sex-segregated groups, sex-typed behavior may appear even though the adults in that culture believe that boys and girls are basically alike. Conversely, in localities where population density is low and there are not enough children for girls and boys to form separate groups, GS theory predicts that sex-typed behavior will be minimized, because the salient social categories will not be *girl* versus *boy*, but rather *child* versus *adult*. Consider Morelli's (1994) description of life among the Efe, a forager people who live in small groups in the Ituri forest of Zaïre:

> Mau, an adolescent forager boy, sits in camp with his brother's 15-month-old daughter draped across his lap, lulled to sleep by the not-so-distant music of a finger piano. Mau reaches over to stir his pot of *sombe* as a group of young boys and girls play "shoot the fruit" using child-sized bows and arrows. The children come dangerously close to Mau's cooking fire, and he utters a disapproving "aa-ooh!". . . . As he scans the camp he notices a group of women preparing for a fishing trip, while others lounge, smoking tobacco along with the men. (p. 1)

In contrast, the neighboring Lese, whose farming lifestyle allows for a greater population density, have a highly sex-differentiated society (Morelli, 1994). A similar contrast between foragers and farmers was reported by Draper and Cashdan (1988). They observed that in !Kung nomadic foraging groups, where the number of potential playmates is limited, boys and girls play together and there are few sex differences in their behavior. Among !Kung who have adopted a farming and herding lifestyle and the number of potential playmates is greater, children are more likely to form sex-segregated groups and sex differences are much more pronounced.

Within our own society, GS theory predicts that sex-typed behavior will be minimized at times and in places where the social categories *male* and *female* are not salient because the opposite sex is not present, "either actually or symbolically" (Turner, 1987, p. 120). This prediction seems to hold true, at least for female behavior. Girls and young women who go to all-female high schools and colleges are more likely to retain an interest in, and to excel in, "masculine" subjects such as math and science (Alper, 1993; Sadker & Sadker, 1994). A striking demonstration of the effects of the presence of boys on girls' behavior was reported by C. C. Weisfeld, Weisfeld, and Callaghan (1982). Two groups of preadolescent girls participated in the study: Hopi Indians living on a reservation in Arizona and African Americans attending a middle-class private school in Chicago. The girls were observed as they played dodgeball, a game played by children of both sexes. When no boys were present, the girls played the game in a competitive manner; many of them were quite skillful at it. But when a group of boys was introduced into the game, the girls' behavior changed dramatically. The Hopi girls stood with their legs crossed and their arms folded; they appeared shy and noncompetitive. The African American girls chatted among themselves, nibbled on snacks,

and teased the other players. Both groups of girls were completely unaware of the change in their behavior—when they were asked why the boys always won, the girls claimed (erroneously) that the boys cheated. It should be noted that among these preadolescents, ages 11 to 13, the girls were taller and heavier than the boys (C. C. Weisfeld et al., 1982).

Adolescence

From the preschool period through early adolescence, gender-group affiliations are of central concern; age-group issues remain in the background. Although they identify with their own age group, children look up to the age group just ahead of them, both literally and figuratively. Older children are dominant in mixed-age playgroups and, where parents permit it, in mixed-age sibling groups (Edwards, 1992; Whiting & Edwards, 1988). In same-age groups, those who are more advanced in physical maturation tend to have higher status (Savin-Williams, 1979; G. E. Weisfeld & Billings, 1988).

Two changes occur between early and mid-adolescence: Gender ceases to be the primary indicator of group identity, and size ceases to be a useful indicator of age and status. The behavior of adolescents in complex societies (i.e., societies in which they are not able to classify themselves as *adults* as soon as their physical growth is complete) results, according to GS theory, from self-categorization into contrasting groups, *teenagers* versus *adults*.

In Western societies, delinquent acts during adolescence are extremely common, even among individuals who were well-behaved children and who will become law-abiding adults (Moffitt, 1993a). Moffitt concluded that adolescent delinquency "must be a social behavior that allows access to some desirable resource" and suggested "that the resource is mature status, with its consequent power and privilege" (p. 686). GS theory suggests a different explanation: Adolescents are not aspiring to adult status—they are *contrasting* themselves with adults. They adopt characteristic modes of clothing, hairstyles, speech, and behavior so that, even though they are now the same size as adults, no one will have any trouble telling them apart. If they truly aspired to adult status they would not be spraying graffiti on overpasses, going for joyrides in cars they do not own, or shoplifting nail polish from drug stores. They would be doing boring adult things, like figuring out their income tax or doing their laundry.

In-group favoritism is often accompanied by out-group hostility. Although hostility toward other age groups does not emerge in full force until adolescence, signs of it are detectable much earlier. Even for a child barely out of diapers, being called a "baby" is a deadly insult. A mild form of hostility to adults also emerges at an early age: Corsaro (1993) reported that children's resistance to adult rules "is a daily occurrence in the nursery school and is produced in a style that is easily recognizable to members of the peer culture. Such activity is often highly exaggerated (for instance, making faces behind the teacher's back. . .) or is prefaced by 'calls for the attention' of the other children" (p. 360). By late middle childhood, defiance of adult rules becomes more flagrant, especially in boys' groups (Fine, 1988). In their explanation of the children's game Truth or Dare, Opie and Opie (1969) described the dares that might be given to a player:

He is liable to be instructed to knock at a front door and run away, or to punch a passer-by on the back . . . or to engage in some other provocation of the adult world, for there is a curious feeling in this game of having to respond to the challenge "Are you one of *us*, or one of *them?*" (p. 264).

That, I believe, is the question adolescents are asking when they dare each other to take risks or to defy the rules of the adult world.

Within-Group Processes

Socialization tends to make individuals within a society—or within certain groups in the society, such as males and females—more similar to each other. Behavioral geneticists attempt to account for the ways in which individuals *differ* from each other. GS theory deals both with similarities and with differences; both are attributed to the effects of group processes that work chiefly within, rather than between, groups.

Assimilation

Cooperative interactions between peers begin in toddlerhood. Among the earliest cooperative acts noted by Eckerman and Didow (1988), the most frequent were "acts that imitated the actions of the peer" (p. 65). Imitation of peer models continues all through childhood and adolescence; when they are outside the home, young humans strive to dress, speak, and behave like their same-sex peers (Adler et al., 1992; Reich, 1986). Children's peer groups operate by a "majority rules" rule: If one or two individuals come to the group with behaviors that do not conform to the norms of the majority, they risk rejection by the group unless they modify those behaviors (Bierman, Smoot, & Aumiller, 1993; Coie, 1990).

For those who cannot or will not conform, group sanctions can be harsh. Maccoby and Jacklin (1987) quoted an 11-year-old girl who explained to them what would happen if she should violate one of her group's taboos by voluntarily sitting next to a boy in school: "People would not be my friends. They would scorn me." It would be as bad as "peeing in your pants," she said—"You would be teased for *months*" (p. 245). A psycholinguist (Reich, 1986) described a childhood experience at a Boy Scout Jamboree, where he was mocked by boys from other parts of the country for his Chicago accent: "They would double up with laughter at the appearance of the [ɹ] in the middle of the word. I can still remember practicing hard to change the pronunciation of this and other words that marked my dialect" (p. 306).

Temperament and group behavioral norms. During the course of middle childhood, any children whose behavior is out of step with the behavioral norms of their sex-segregated peer groups will be subjected to pressure to conform to these norms (Adler et al., 1992). Can such group-enforced conformity, practiced in childhood, have long-term effects on personality? Evidence from research on temperament suggests that the answer is yes.

Kagan and his colleagues (Kagan, Reznick, Snidman, Gibbons, & Johnson, 1988; Kagan & Snidman, 1991) have described children who vary along a dimension they call *inhibition*. Highly inhibited children are nervous and fearful of any-

thing new; highly uninhibited children are boisterous and bold. These temperamental differences are detectable early in development, have been linked to neurophysiological factors (Davidson, 1992; Fox, Bell, & Jones, 1992), and show significant heritability (Braungart et al., 1992; Goldsmith, 1993b; Robinson et al., 1992), but, like other heritable characteristics, they can be modified by the environment. A longitudinal study of Swedish children (Kerr, Lambert, Stattin, & Klackenberg-Larsson, 1994) tracked inhibited and uninhibited toddlers from age 18 months through 16 years. There was not much change from 18 months to 6 years, but from 6 to 16, two things happened: Uninhibited children of both sexes calmed down and became more moderate in their behavior, and inhibited males—but not females—became less shy and fearful.

To explain their results, the researchers (Kerr et al., 1994) pointed out that shy, inhibited behavior is acceptable for girls but not for boys; they attributed the gender-specific changes to "culturally shared notions of gender-appropriate behavior" (p. 138), remaining neutral on the question of which social forces were responsible for enforcing these notions. Kagan (1984; Kagan, Arcus, & Snidman, 1993) has hypothesized that parental influence is a major source of the longitudinal changes in inhibited boys. However, if parents were capable of modifying their children's temperaments to conform to their own ideals, the effects should show up in behavioral genetic analyses as shared environmental influence—the influence of the home environment on personality characteristics. The finding that the home environment has little or no effect on adult characteristics such as extraversion, impulsivity, and neuroticism (Bouchard, 1994; Loehlin, 1992) calls Kagan's hypothesis into question. GS theory offers a different interpretation: that timid, anxious behavior is not acceptable in the boys' peer group of middle childhood; that a boy who acts that way will be teased or bullied by his male peers until he learns to master his distress; that similar behavior in a girl is not considered objectionable by her female peers; and that children who are overly boisterous and uninhibited tend to be unpopular regardless of their sex.

"Peer pressure." Adolescent problem behavior is often blamed on "peer pressure," but by adolescence, overt pressure is not usually necessary. According to Lightfoot (1992), "Peer pressure is less a push to conform than a desire to participate in experiences that are seen as relevant, or potentially relevant, to group identity" (p. 235).

The peer groups of middle childhood are based on demographic categories such as sex, age, and social class. This changes in adolescence; most high schools in urbanized societies are large enough to enable adolescents to sort themselves out into groups of like-minded individuals—the "jocks," the "brains," the "burnouts," and so on (Brown & Lohr, 1987; Brown et al., 1993; Eckert, 1989). Because the members of these groups are so similar in behavior and attitudes, the adolescent peer group has been proposed as a possible source of unexplained environmental variance—of environmental influences that siblings do not necessarily share (Daniels & Plomin, 1985; Dunn & McGuire, 1994). However, the uniformity of behavior and attitudes seen among adolescents who belong to the same peer group cannot be attributed entirely to group influences. These adolescents were similar to begin with—the "birds of a feather flock together" phenomenon. Although it is also true

that the members of these groups become more similar over time because of mutual influence, most of the similarity predates the formation of the group (Rowe, Woulbroun, & Gulley, 1994). Thus, adolescent peer group influence cannot by itself account for much of the unexplained environmental variance; nor should we expect it to. Group influences on personality occur in childhood as well as adolescence and involve within-group differentiation as well as assimilation.

Differentiation

Assimilation and differentiation are not, according to GS theory, mutually exclusive processes; they are driven by separate adaptive mechanisms. Children can become more similar to their peers in some ways and, over the same period of months or years, less similar in other ways. However, at any given point in time, one or the other of these processes is likely to predominate. Assimilation to the group is most likely to occur when a social category is salient, which is the case when two or more social categories, such as *girls* and *boys,* are present at the same time. When only one group is present, that social category declines in salience (Turner, 1987). The consequence—at least in societies with an individualistic orientation (Miller, 1987)—is that its members become more likely to categorize themselves and each other as distinct individuals, rather than as interchangeable members of a group. Under such circumstances, differences among individuals tend to increase as a result of two phenomena that work on a within-group level: status hierarchies and social comparison.

Status hierarchies. Within every group of children or adolescents there are differences in social status, though they are not always as clear, stable, and transitive as the term *hierarchy* would suggest (Perry & Bussey, 1984). Differences in status involve both dominance (social power) and popularity; the two hierarchies are correlated but are not identical (Pettit, Bakshi, Dodge, & Coie, 1990; Rubin & Coplan, 1992). Of the factors that make children rise or fall in the social hierarchy, many, such as self-confidence and friendliness, have a vicious circle quality (J. R. Harris & Liebert, 1991)—they are both the causes and the effects of social success. Because success leads to more success, and failure to more failure, differences in social skills tend to widen over time; a child who is either at the high or the low end of the social hierarchy is likely to remain there (Coie, 1990; Kennedy, 1990; Rubin & Coplan, 1992).

High or low status in the peer group may leave permanent marks on the personality. Boys who are slow to mature physically tend to be smaller than their peers and to rank low on the dominance hierarchy (Savin-Williams, 1979; G. E. Weisfeld & Billings, 1988). They may eventually grow to above average height; yet, studies have shown that late-maturing boys tend to be less successful, less poised, and more anxious in adulthood than their early-maturing peers (Clausen, 1975; Jones, 1957). Although these effects are usually associated with early or late maturation during adolescence, most late-maturing adolescent boys had been slow to mature in childhood as well; such boys tend to be relatively low in social status all through childhood (G. E. Weisfeld & Billings, 1988).

Girls or boys who are rejected by their peers are, by definition, low on the popularity hierarchy; those who are victimized

by their peers are low on the dominance hierarchy (Schwartz, Dodge, & Coie, 1993). Often, these are the same children, and many of them continue to be rejected and victimized year after year (Rubin & Coplan, 1992). As adults, they are at greater risk for a variety of psychopathological problems (Olweus, 1993; Parker & Asher, 1987). There are three possible causal pathways, operating alone or in combination, that may be responsible for the correlation between rejection and later psychopathology: (a) Repeated experiences of rejection during childhood may cause later psychopathology; (b) the lack of normal peer interactions may cause later psychopathology; and (c) certain children may be rejected by their peers because they are already showing subtle signs of psychopathology (Hartup, 1983; Parker & Asher, 1987). These alternatives cannot at present be distinguished. Therefore, the connection between rejection and psychopathology, though consistent with GS theory, cannot be interpreted as supportive evidence.

Social comparison. Children find out what kind of people they are—quick or slow, pretty or plain, leader or follower—by comparing themselves to others. Statements of social comparison (Festinger, 1954) such as "I'm bigger than you!" are heard in the nursery school, but it is not until the elementary school years that children begin in earnest to compare themselves to others (Newman & Ruble, 1988; Stipek, 1992). The others in question are the members of the social group in which they categorize themselves—the group that is "psychologically significant for the members [and] to which they relate themselves subjectively for social comparison" (Turner, 1987, p. 1). Thus, if a child categorizes himself as *a fourth-grade boy,* he will compare himself to the other fourth-grade boys he knows. The comparisons are multidimensional and result in the child's developing an idea of his own capabilities in several different arenas—physical, social, and cognitive (Harter, 1983).

Social comparisons are also made by others, with the result that the members of groups tend to become typecast: "The gang is quick to seize on any idiosyncrasy of appearance, manner, skill, or whatever, and thereafter to treat the child in terms of this trait. The stereotype by which the gang identifies the child is often expressed in his nickname: 'Skinny,' 'Fatso,' 'Four-eyes,' 'Dopey,' 'Professor,' 'Limpy' " (Stone & Church, 1957, p. 207). Stigmatizing labels might also be applied by teachers or other adults: "learning disabled," "hyperactive." Once applied, such labels tend to stick. They become self-fulfilling prophecies—other children expect certain behaviors of the labeled child, their expectations are conveyed by the way they behave toward that child, and the way they behave tends to evoke the behavior they were expecting (M. J. Harris, Milich, Corbitt, Hoover, & Brady, 1992).[8]

When Does Group Influence End?

As adolescents become adults, the peer group declines in importance. They marry, perhaps, and have children; they now belong to a number of groups. Some of these groups—work

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[8] GS theory predicts that labeling will have a permanent effect on the personality of the labeled child only if the label is originated by, or known by, the child's peer group. If it is known only by a single individual, such as a teacher, GS theory predicts no long-term effect.

groups, for example—no longer consist solely of people "like me." Group norms of behavior are no longer enforced so stringently; the consequences of being different are not so serious for adults. Perhaps for these reasons, or perhaps because of maturational changes programmed into our genes, group influences seem to have far less impact on adults than on children. Although the ability to acquire new behavioral systems is not lost, adults' accommodations to social contexts seem to be shallow and short-lived, compared with those of children. Adults can learn a new language but they cannot learn to speak it without an accent (Reich, 1986). Personality does not change much during adulthood (McCrae, 1993). The language and personality acquired in childhood and adolescent peer groups persist, with little modification, for the remainder of the life span.

Who Socializes the Child?

In the days when psychoanalytic theory was an influential force in developmental psychology, a child learned how to behave by identifying with his father or her mother. Identification, around age 4 or 5, led to the formation of a superego; good behavior was then enforced by the superego. Fraiberg (1959) used this theory to account for the fact that most children learn family rules and become less likely to violate them as they get older. As an illustration she offered the story of Julia and the eggs:

> Thirty-month-old Julia finds herself alone in the kitchen while her mother is on the telephone. A bowl of eggs is on the table. An urge is experienced by Julia to make scrambled eggs. . . . When Julia's mother returns to the kitchen, she finds her daughter cheerfully plopping eggs on the linoleum and scolding herself sharply for each plop, "NoNoNo. Mustn't dood it. NoNoNo. *Mustn't* dood it!" (Fraiberg, 1959, p. 135)

Fraiberg attributed this lapse to the fact that Julia had not yet acquired a superego, presumably because she had not yet identified with her mother. But notice what Julia was doing: By making "scrambled eggs" and yelling "NoNoNo!" she was behaving exactly like her mother. What Julia must learn is that she is not allowed to behave like her mother. Children in our society spend their early years discovering that they cannot do most of the things they see their parents doing—making messes, telling other people how to behave, and engaging in many other activities that look like fun to those who are not allowed to do them.

Cross-Cultural Considerations

Julia's dilemma is not unique to our society; there are many societies in which the distinction between acceptable adult behavior and acceptable child behavior is greater than in our own. In the Marquesas Islands of Polynesia, children must learn two different sets of rules for social behavior: one for interacting with other children, the other for interacting with parents and other adults. The adult is expected to initiate and control interactions; the child is expected to be restrained and compliant (Martini, 1994). Polynesian children cannot learn the rules of social interaction by observing their parents' behavior. Furthermore, in most traditional societies, parents do not act either as

playmates or as teachers to their children. The kind of parental instruction we take for granted in the United States is by no means universal. The Kaluli of Papua, New Guinea do not help children learn language by rephrasing a toddler's poorly formed sentence into proper grammar; they believe it is the responsibility of the child to make the listener understand what she or he wants to say (Snow, 1991). In the Embu District of Kenya, parents and toddlers have few verbal interactions of any sort: "Almost all sustained social interactions and most verbal interchanges of toddlers in this culture involve other children" (McDonald, Sigman, Espinosa, & Neumann, 1994, p. 411).

Fortunately, children can learn things in a variety of ways; even a creature as simple as a honeybee has more than one mechanism for getting to a flower (Gould, 1992). Many kinds of learning do not require the presence of a model, and for those that do, such as language learning, every society provides some kind of a model. In most traditional societies, the models are older children, especially siblings (Zukow, 1989). A common pattern in such societies is that toddlers are given over to the care of an older sister or brother when they are 2 or 2½, and the older sibling—who may be no more than 4 or 5—carries the younger one along to the children's play group. There the toddler might be allowed to participate as a sort of living doll or be left to watch or to whine on the sidelines (Martini, 1994; Whiting & Edwards, 1988). Thus, siblings are a part—often a major part—of the young child's social group. Outside-the-home socialization begins, according to GS theory, in this mixed-age, mixed-sex group. By preadolescence, children in most present-day societies are able to form age- and sex-segregated groups (Edwards, 1992).

Is the Family a Group?

In urbanized societies, school-age children spend most of their time outside the home in age- and sex-segregated groups that do not ordinarily include a sibling. Most of their interactions with their siblings and parents occur within the home. Does the family function like a group? Does the child identify with this group?

In some societies—particularly Asian societies—the answer appears to be yes. Chinese, Japanese, and Indian cultures emphasize the importance of the family group or social group and deemphasize the importance of the individual; independence and autonomy are not considered virtues in a child (Cole, 1992; Guisinger & Blatt, 1994; Miller, 1987; H. W. Stevenson, Chen, & Lee, 1992). In precolonial China, if a man committed a serious crime, his siblings, parents, and children were executed along with him, the idea being that the whole family shared in the responsibility (Heckathorn, 1992).

In contrast, Western culture puts the emphasis on the individual rather than the group (Guisinger & Blatt, 1994; Miller, 1987). Only in certain situations—for example, when they are traveling together in an unfamiliar area—are the members of North American or European families likely to function as a group. When they are at home together, I believe that they function as individuals, each with her own agenda, his own patch of turf to defend. They are not a group because the social category *our family* is not salient. It is not salient because no other social

categories are present, either actually or symbolically (Turner, 1987), in the privacy of the contemporary Western home.

Within-Family Effects

When group identity is not salient, differentiation is likely to predominate over assimilation. If siblings see themselves as separate individuals rather than as part of the family group, status hierarchies and social comparisons may increase the differences among them. Dominance hierarchies would tend to make older siblings dominant over younger ones, which happens as a matter of course in most societies and which North American parents try very hard, and not very successfully, to prevent (Whiting & Edwards, 1988). However, there is little or no resemblance between children's relationships with their siblings and their relationships with their peers (Abramovitch et al., 1986; Stocker & Dunn, 1990), which is consistent with the finding that birth order has no reliable effects on personality (Ernst & Angst, 1983; Reiss et al., 1994).

Social comparisons between siblings may have more interesting consequences. Tesser's (1988) self-evaluation maintenance theory predicts that siblings should each develop specialties of their own—areas that they consider important to their self-definition and in which they are willing to compete. If one sibling is an excellent pianist, for example, the other sibling may avoid playing the piano for fear of being bested in the comparison. Note that this "niche-picking" process does not require any parental intervention or labeling; it involves only the two individuals in question. Nor is there need to postulate a special motivator; within-group jockeying for status, found in most human and nonhuman primate groups, is sufficient to do the job.

Within-family social comparisons should also widen personality differences between siblings—a within-family contrast effect. If this effect occurs, it must be small in magnitude. Schachter (1982) asked college students to judge how similar they were to their siblings and found a tendency toward polarization of personality attributes that was significant only between firstborns and secondborns. Loehlin (1992) investigated the possibility that a contrast effect might occur between twins who are reared together; he assumed that if such an effect existed, it would make twins reared together less similar in personality than twins reared apart. He found that twins reared together were somewhat *more* similar than those reared apart[9] and concluded that no contrast effect had occurred. However, twins reared together also share an environment outside the home; they go to the same school and often belong to the same peer group. According to GS theory, the shared outside-the-home environment should make twins reared together more alike than twins reared apart; thus, if they are not more alike, a within-family contrast effect may be reducing their similarity. Notice that this prediction—that inside-the-family effects will make twins more different and outside-the-family effects will make them more alike—is exactly the opposite of the assumption made by behavioral geneticists.

Parental Influence Versus Peer Influence

In a number of studies, researchers have asked children and adolescents questions of the form, "What would you do if your friends wanted you to do something that your parents told you not to do?" (e.g., Berndt, 1979; Bowerman & Kinch, 1969). Depending on the precise wording of the question, the results generally show that parents' influence is high during the early school years and then gradually declines, and that peers' influence is low at first and gradually increases, reaching a peak in early adolescence.

Such experiments are misleading or irrelevant for several reasons. First, the questions are asked by a researcher who is an adult. Given the context-sensitivity of social behavior, the replies might be different if the questioner were a child. Second, replies to questions of the type "What would you do if . . . ?" have low validity, as shown by the lack of correspondence between tests of moral judgment and tests of moral behavior (see Perry & Bussey, 1984). Third, the questions tend to focus on emotionally charged relationships, rather than on behavior; in effect, the child is being asked, "Whom do you love more, your parents or your friends?" Finally, children generally belong to peer groups that share their attitudes and, in many cases, their parents' attitudes. They may know that their friends would not ask them to do something dangerous or illegal.

When researchers observe, rather than ask questions, peer influence is found to be potent, even at ages and in circumstances where parental influence would be expected to have priority. For example, it is well known that preschoolers are loath to eat certain foods, despite much favorable propaganda or forceful urging from their parents. As Birch (1987) discovered, the best way to induce children of this age to eat a disliked food is to put them at a table with a group of children who like it.

Absence of Parents Versus Absence of Peers

No one can question the fact that, without parents, babies and young children are bitterly unhappy (Bowlby, 1969); in fact, an early attachment to a caregiver appears to be a requirement for normal social development (Rutter, 1979), just as early exposure to light and pattern is a requirement for normal development of the visual system (Mitchell, 1980). However, case studies involving deprivation of one kind or another suggest that the absence of peers may have more serious long-term consequences than the absence of parents. Rhesus monkeys reared without peers are more abnormal as adults than those reared without a mother (Harlow & Harlow, 1962/1975). The case of the Jewish children who spent their first 3 years together in a Nazi concentration camp (Freud & Dann, 1951) suggests that the same may be true for humans. The six children had been cared for in the concentration camp by an everchanging series of adults, none of whom survived. When the children arrived in England and came to the attention of Anna Freud, they were found to be completely indifferent—if not hostile—to all adults; they cared only about each other. According to Hartup (1983), these children grew up to become normal adults and at last report were leading "effective lives" (pp. 157–158).

Cases like Victor, the wild boy of Aveyron (Lane, 1976), and Genie, the locked-up girl of California (Curtiss, 1977), do not

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[9] Although Loehlin found that identical twins reared together were more similar in personality than those reared apart, other researchers (e.g., Bouchard et al., 1990) have found reared-apart and reared-together identical twins to be equally similar.

have happy endings. Note, though, that these children were deprived not only of normal parent–child relationships but of normal peer relationships as well. There is a case in which two children—twins—were isolated but were locked up together; these children were completely rehabilitated after a few years in which they lived with a foster family and attended school (Koluchová, 1972, 1976).

Dyadic Relationships Versus Group Processes

The view that early relationships with parents are of central importance in personality development is a legacy from psychoanalytic psychology. Among the modern adherents to this view are the attachment theorists (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969). According to attachment theory, infants whose mothers care for them in a sensitive, responsive way are likely to become securely attached to their mothers; secure attachments increase the chances of success in later undertakings, especially those that are social in nature. Security of attachment is assessed by observing a child's behavior, generally at age 12 or 13 months, when the mother leaves the child in an unfamiliar laboratory room and then returns a short time later. Children who greet their mothers with unalloyed joy are adjudged securely attached (Ainsworth et al., 1978; Belsky, Rovine & Taylor, 1984; Sroufe, 1985).

There are two major problems that make most socialization research, including the attachment literature, difficult to interpret. First is the nature-or-nurture problem. Behavioral geneticists have pointed out clearly and repeatedly (e.g., Plomin & Daniels, 1987; Scarr, 1993) that most socialization studies lack an essential control: If all the pairs of research participants share 50% of their genes, as do mothers and their biological children, there is no way of factoring out the effects of heredity from those of environment. There is no way of telling whether the observed resemblances between the mothers and their children (in friendliness, nervousness, competence, etc.) are due to heredity, environment, or both.

Second is the cause-or-effect problem. A mother–child relationship, like all dyadic relationships, involves two people who each play a role in the success of the relationship (Hartup & Laursen, 1991; Hinde & Stevenson-Hinde, 1986). Just as some adults are better than others at caring for infants, some infants are better than others at evoking sensitive, responsive parenting. Because infants who are particularly appealing to their mothers are also likely to be appealing to other people, a child who does well in one relationship is likely to do well in others (Jacobson & Wille, 1986).

Thus, it is surprising to discover that the correlations among a child's various relationships are actually quite low. A child who is securely attached to Mother is not necessarily securely attached to Father (Fox, Kimmerly, & Schafer, 1991; Main & Weston, 1981) or to other caregivers (Goossens & van Ijzendoorn, 1990). Efforts to link parent–child relationships with child–peer relationships have had inconsistent results; some studies (Pastor, 1981; Waters, Wippman, & Sroufe, 1979) find a correlation, others do not (Howes, Matheson, & Hamilton, 1994). Sometimes correlations are found that are "counterintuitive" (Youngblade, Park, & Belsky, 1993, p. 564). As mentioned previously, there is also little or no correlation between

the nature of children's sibling relationships and their relationships with their peers (Abramovitch et al., 1986; Stocker & Dunn, 1990). These findings are surprising because it is the same child, with the same genes, who participates in all of these relationships.

The most reasonable explanation of why these correlations are so low is that behaviors, emotions, and cognitions acquired in a dyadic relationship are specific to that relationship (Hinde & Stevenson-Hinde, 1986; MacKinnon-Lewis et al., 1994). There may be, as Bowlby (1969) proposed, a "working model" of the mother–child relationship in the child's mind, but if so, it is trotted out only when Mother is around. A child discovers very early in life that learning what to expect from Mother is of limited usefulness for dealing with Father or Sister. A child who has learned through hard experience to avoid the school bully does not avoid all of the other children on the playground (Asendorpf & van Aken, 1994).

Evolutionary considerations discussed earlier led to the view that dyadic relationships and group affiliation are driven by separate adaptive mechanisms. Consistent with this view is the finding that children's group relations are to a large extent independent of their dyadic relationships. Although there are children who get along poorly in every social context, many children who have low status in the group are able to form successful friendships (Bukowski & Hoza, 1989; Parker & Asher, 1993a, 1993b).

According to GS theory, identification with a group, not participation in dyadic relationships, is responsible for environmental modifications of personality characteristics. If two people are a dyad and three are a group, this distinction may appear to be splitting hairs. However, the difference between group processes and dyadic relationships is not just a matter of number. The important point about human groups is that they are social categories. When children categorize themselves as members of a group, they take on its norms of behavior (Turner, 1987). A child who says, "Oh Mom, I can't wear that, the kids will laugh at me," is not worrying about the reaction of her best friend—she is worried about the consequences of violating group norms.

In dyadic relationships, children learn how to behave with Person A, with Person B, and with Person C. In the peer group they learn how to behave in public.

The Transient Effects of the Home Environment

Behavioral genetic data indicate that any transient effect of the home environment on personality fades by adulthood—shared environment accounts for little or no variance in adult characteristics. According to GS theory, the reason the home environment has no lasting effects is that children are predisposed to favor the outside-the-home behavioral system over the one they acquired at home. Children who learn one language at home and a different one outside the home become increasingly reluctant to speak the home language, even at home (Baron, 1992). The language they speak with their peers will become their "native language" when they are adults (Bickerton, 1983).

Some researchers have claimed that the reason the immigrant child drops the home language is that it lacks economic and cultural prestige; it is not valued by the community (Umbel, Pearson, Fernández, & Oller, 1992). Evidence against this view

comes from deaf children born to hearing parents during the era when sign language was not valued by the community—in fact, the community tried hard to suppress it. This misguided effort failed. When these children went to schools where, for the first time, they met other deaf children, they picked up sign language in the dormitories. Sign language was brought into the schools by the deaf children of deaf parents, and all the children used it surreptitiously to converse among themselves (Meier, 1991; Newport, 1990). It became their "native language" despite earnest efforts by their teachers to give them a language that had greater economic and cultural prestige.[10]

There are good evolutionary reasons why children might be biologically predisposed to discard what they learned in their first few years of life. First, their parental home is not where they are likely to spend their future. As Erikson (1963) noted about the school-age child, "There is no workable future within the womb of his family" (p. 259). In order to survive and reproduce, children must be able to function successfully in the world outside their home. They must form alliances that go beyond the nuclear family.

Second, children are already similar to their parents for genetic reasons—the 40% or 50% of the variance that is attributable to heritability. If environmental influences added to and increased these similarities, children would be so much like their parents and siblings that the family might lack sufficient variability. This would decrease the number and variety of ecological niches the members of the family could fit into and reduce the likelihood that at least one child would survive.

There is a biological mechanism that reduces the chances of incest: In humans and other animals, the sex drive tends to be dampened by stimuli that are too familiar. Members of the opposite sex who are familiar from infancy and early childhood are generally not regarded as sexually stimulating (Tooby & Cosmides, 1990; Wilson & Daly, 1992). I suggest that a similar mechanism may operate in regard to socialization: When there is a choice, children do not choose what they learned in infancy and early childhood.

Three Views of Personality Development

Figure 3 shows three contrasting models of personality development: a traditional socialization model (Figure 3A, solid lines), a behavioral genetic model (Figure 3A, solid lines plus dashed lines), and the model generated by GS theory (Figure 3B). The arrows in these schematic diagrams represent causal links; all of the links are environmental except for the two marked *Heredity*.

The traditional socialization model is based on the view (no longer as prevalent as it once was) that heredity is important mainly in determining the outward physical characteristics of the child and that parental behavior is a cause and child behavior is an effect. Parent–child relationships are assumed to influence the child's peer relationships, but not vice versa. Mutual influence is acknowledged in peer–peer interactions. Cultural transmission is by way of the parents.

The behavioral genetic model adds a genetic link between parents' personalities and children's personalities. The existence of reactive effects in parent–child interactions is accepted, as is the possibility that children's peer relationships might

affect their behavior at home; however, the effect of parent–child relationships on peer relationships is presumed to be stronger than the reverse. The child's personality is still assumed to be influenced primarily by parent–child relationships and by the parents' behavior toward the child, though the possibility of peer effects is now admitted. Culture, which is not ordinarily mentioned in behavioral genetic writings, is presumably passed on by the parents. This figure represents what might be called a "traditional" behavioral genetic view; it does not include that of Rowe (1990, 1994), who at present is alone among behavioral geneticists in concluding that the home environment may not play an important role in development. Rowe's views were depicted earlier, in Figure 1A.

Figure 3B shows the model generated by GS theory. Note that there is no longer a link between the child's behavior inside the home and outside the home—these are two separate behavioral systems—and that parental behavior no longer affects the child's personality. Instead, the child's personality is affected by the behavior of peers toward the child and by the way the child behaves outside the home, which is influenced by peer group norms. Behaviors approved by the peer group (e.g., sex-typed behavior, language) are part of the outside-the-home behavioral system and become a permanent part of the adult personality. Culture is transmitted by way of its effects on peer group norms; there is no path from culture to personality via the parents.

Sources of the Belief in Parental Influence

That parents have important and lasting effects on their offspring is perhaps the least questioned notion in psychology. Why are most psychologists (and nonpsychologists) so convinced that it is true? This section reviews some of the confounding factors that can be mistaken for evidence of effects of the home environment.

Genetic Effects

A recent Cathy cartoon (Guisewite, 1994) shows tubby Cathy sitting between her tubby mother and her tubby father, looking at the family photo album. During the course of the strip, she discovers that it was her father—not, as she previously thought, her mother—who had taught her to reach for cookies or ice cream whenever she was unhappy. Cathy is still wrong: Her father is as innocent (or as guilty) as her mother. They can be blamed only for giving Cathy their DNA. Body weight is not affected by rearing environment; it is largely inherited (Grilo & Pogue-Geile, 1991). Adopted children do not resemble their adoptive parents in fatness or thinness (Stunkard et al., 1986). Yet, the idea that obesity is caused by eating habits learned during childhood is deeply ingrained.

Socialization researchers have typically looked for evidence of parental influence in families consisting of parents and their biological children. In such studies, genetic and environmental

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[10] Deaf children who learn sign language in middle childhood never become as proficient in its use as children who are exposed to it from infancy onward (Bebko & McKinnon, 1990; Newport, 1990). Thus, for language, as for vision and attachment, experience early in life appears to be necessary for optimal development.
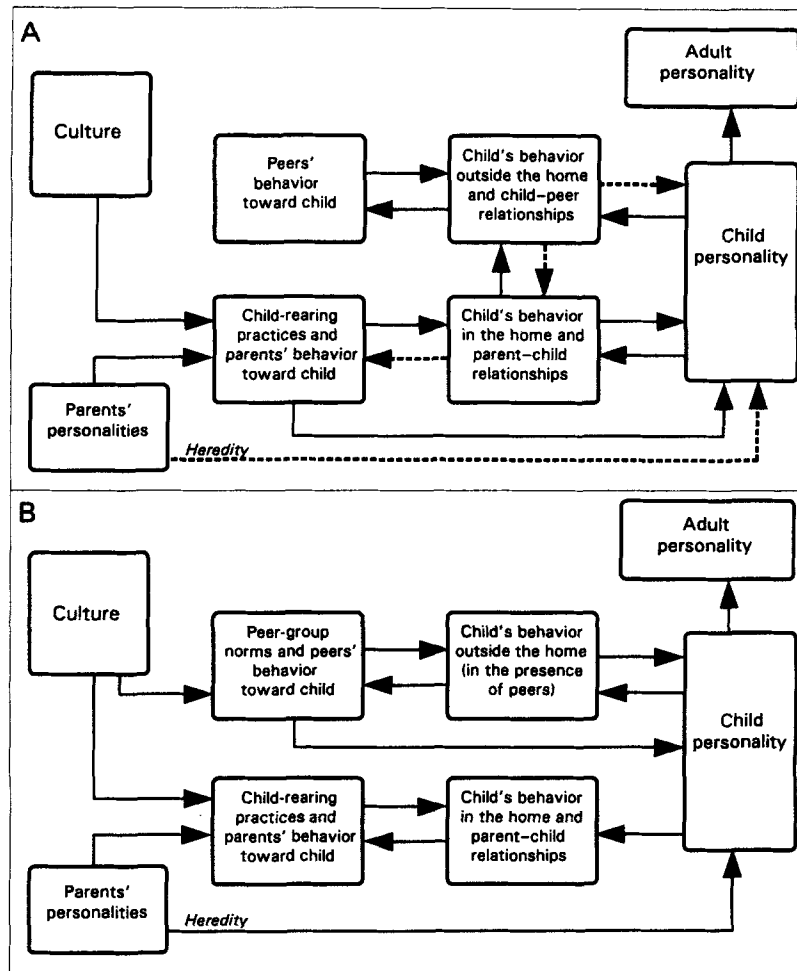
Figure 3. Three views of personality development. All of the arrows in this figure, except for the two labeled *Heredity,* represent environmental effects. A: The models generated by a traditional socialization approach (solid lines) and by a behavioral genetic approach (solid lines plus dashed lines). B: The model generated by group socialization theory.

effects are inevitably confounded (Plomin & Daniels, 1987; Scarr, 1993). Behavioral genetic studies, which include adoptive families and families with twins, have demonstrated that many characteristics thought to be completely environmental in origin have a significant genetic component. Plomin and his colleagues (Plomin, Corley, DeFries, & Fulker, 1990) found a genetic influence on how much television a child watches. Tesser (1993) reported that attitudes such as belief in the death penalty or a liking for jazz are heritable. McGuffin and Katz (1993) found that the number of stress-producing events people experience in their lives is partly determined by genetic factors: Individuals are more likely to experience such events if they have close biological relatives who are always having accidents, losing their jobs, or getting into marital difficulties. Note that the findings of behavioral genetics are not restricted to personality and IQ tests.

Whenever behaviors are "handed down" from one generation to another, the possibility of genetic influences must be considered. For example, the heritability of traits such as aggressive-

ness (Ghodsian-Carpey & Baker, 1987; van den Oord, Boomsma, & Verhulst, 1994) and impulsivity (Loehlin, 1992) might be partly responsible for the vertical transmission of child abuse (DiLalla & Gottesman, 1991).

Context Effects

When a child who is cooperative and self-confident in other contexts becomes belligerent or anxious in the presence of a parent, it is evident that the parent is influencing the child's behavior. A common, but unwarranted, conclusion drawn from such observations is that the parental influence must be pervasive and long-lasting. The change in behavior does not provide evidence of pervasive parental influence but of the context-specificity of social behavior.

Hoffman (1991) noted that estimates of shared environmental influence vary according to the measurements that are used: The home environment is found to be more important if the measurements are based on observations of behavior (usually

made in the participants' homes), less important if they are based on self-report personality inventories (usually administered in the laboratory or classroom). Again, this finding is consistent with the predictions of GS theory. As Council (1993) has pointed out, there is a serious problem with many personality studies: The results may be confounded by context effects, because a positive correlation may be "an artifact of assessing both variables in the same setting" (p. 31). Although Council was referring to two tests given in the same context, his point is equally valid when one measure is a presumed cause and the other a presumed effect. It is unquestionably true that children's behavior in the home will be affected by their experiences in that home. The question is whether these correlations tell us anything about behavior in other contexts. According to GS theory they do not, and behavioral genetic data support that conclusion by showing that the effects of the home environment vanish by adulthood.

Reactive Effects

Behavioral geneticists (e.g., Daniels & Plomin, 1985) have criticized socialization researchers for examining only one child per family. With this procedure, it is impossible to tell whether the parents' treatment of the child is a reaction to the way that particular child behaves or is a behavioral characteristic of the parents and the cause of the child's behavior. Unfortunately, the cause-or-effect problem cannot be solved by looking at two children in a family. If we find that the parents treat the two children differently and that the children behave differently, did the differential treatment cause the different behavior or is it a response to it?

The relationship between a parent and a child is transactional (Hartup & Laursen, 1991; Scarr & McCartney, 1983), which means that the parent's behavior is, in part, a reaction to the child's current and previous behavior and that the child's behavior is, in part, a reaction to the parent's current and previous behavior. Untangling the causes from the effects may be impossible. GS theory holds that dyadic relationships have no long-term effects on personality and thereby evades this particular cause-or-effect problem. However, a similar problem will crop up in testing the theory's predictions, which will be discussed shortly.

Age Effects

According to GS theory, the effects of the home environment are transient; children focus more and more on the world outside their home as they get older. Toddlers and preschoolers are likely to show some effects of home environment even when they are outside the home. By the end of middle childhood, however, it is predicted that children with normal exposure to an outside-the-home environment will have at least two separate behavioral systems—one for use at home, one or more for outside the home (Day, Borkowski, Dietmeyer, Howsepian, & Saenz, 1992; Deaux & Major, 1987; James, 1890, p. 294; Sansone & Berg, 1993).

Parents'-Group-to-Children's-Group Effects

When an Asian American adolescent spends 4 hours a night doing homework, or a Jewish adolescent decides to become a doctor, the usual assumption is that parental influences are at work. Because many Asian American and Jewish parents probably do encourage these attitudes, looking at a single family, or even at a number of families, would only reinforce the impression of parental potency. It is the unusual case—the adolescent whose parents have atypical ideas—that demonstrates the inaccuracy of the impression. GS theory predicts that the children of atypical parents are as likely as their peers to adopt the behaviors and attitudes approved by the majority of the parents. The parental attitudes are not transmitted directly, but by way of the peer group:

> Dr. Snyder's parents suggested that he go to a music conservatory after high school. "I didn't think being a musician was such a good job for a nice Jewish boy," he recalled. Many of his friends wanted to be doctors, and since, he said, "my major goal in life was to be like other boys," he decided to become a doctor too. (Kolata, 1993, p. C8)

Thus, within a particular peer group of adolescents, attitudes toward educational aspirations are likely to be similar; the attitudes of their parents (if they belong to the same social network) will also be similar; but correlations between individual parents and their children should be nonsignificant. Precisely this result was reported in a Mexican American community by Day and her colleagues (Day et al., 1992; see also Kindermann, 1993).

Miscellaneous Effects

Several other minor effects may contribute to the impression that the home environment has had an effect on the way children act outside the home. Children may be tested or observed in a neutral setting, but some aspect of the testing situation—an adult researcher, the nature of the questions, or the absence of peers—may evoke their at-home behavioral system. The questions may pertain to emotional relationships rather than behavior (most children probably do love their parents better than their friends) or to issues that do not come up while children are with their peers. School-age children may not talk about their future career plans with their friends; high school students may eschew discussions of religion and politics.

Finally, retrospective studies in which adults' personality problems are traced to experiences in their childhood home are frequently confounded by memory biases. Depression, for example, predisposes individuals to retrieve unhappy events from their memories (Mathews & MacLeod, 1994). The result is that depressed people report having had more unhappy experiences in childhood than do nondepressed people, which can lead to the unwarranted conclusion that the unhappy childhood experiences caused the depression.

Reinterpreting Previous Research

Two well-established areas of research, on styles of parenting and on the effects of divorce, will be briefly reexamined. Researchers in both areas interpret their findings as evidence for the importance of the home environment on child development.

Styles of Parenting

Baumrind (1971) defined three styles of parenting: authoritarian (bossy parents who do not consider their children's

opinions), permissive (wimpy parents who let their children do whatever they want), and authoritative (parents who are firm but warm and who take their children's opinions into account). The children of authoritative parents are found to be more competent, both socially and academically (Baumrind, 1989; Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Lamborn, Mounts, Steinberg, & Dornbusch, 1991).

Maccoby and Martin (1983) pointed out one problem with the style-of-parenting research: The parents could be reacting to their child's behavior, rather than causing it. Because only one child per family was studied, we do not know whether the parents used the observed child-rearing style with all of their children or just with that child. If they used it just with that child, then it would seem that parents tailor their child-rearing styles to the characteristics and behavior of the individual child. On the other hand, if parents use the same child-rearing style for all of their children, why are its effects not visible in behavioral genetic measures of shared environment?

A second problem comes to light when cultural differences in parenting styles are considered. Recent work has demonstrated that the effects of parenting style differ for different subcultural groups. Asian American parents, for example, have the least authoritative and most authoritarian child-rearing style of the subcultural groups that have been studied; yet their children have the highest school achievement (Dornbusch et al., 1987; Steinberg, Dornbusch, & Brown, 1992). These results call Baumrind's conclusions into question and are consistent with a new interpretation of this literature. Different cultural groups have different norms and customs for the job of child rearing, which are transmitted through the parents' peer group. In the United States, most parents' peer groups sanction the style of parenting that Baumrind calls authoritative. What Baumrind was measuring was the ability of middle-class Anglo American parents to rear their children in the style approved by their culture. She found that parents who are competent at this job have biological children who tend to be competent at the jobs children do. Although the precise characteristics that make up the quality called *competence* are difficult to specify, there is no reason to expect them to be less heritable than other personality and intellectual characteristics.

Subcultural groups such as Asian Americans have their own parents' peer groups, and these groups may have different culturally approved styles of child rearing (Chao, 1994). If parents belong to a group that sanctions an authoritarian style of child rearing, or a permissive style, then their ability to rear their children in that style will be a mark of competence. Thus, the correlations reported in the style-of-parenting literature may be due to heritable differences in competence *within* subcultural groups.

The differences *between* subcultural groups can be attributed to group processes. Young people who are members of different subcultural groups are likely to belong to different adolescent peer groups that have different group stereotypes, attitudes, and behavioral norms—differences that are sharpened by contrast effects. Adolescents who belong to a given peer group generally have parents who also share a peer group and who therefore have similar styles of child rearing. Thus, subcultural differences in adolescents' behaviors and attitudes may be associated with, but not caused by, subcultural differences in their parents' child-rearing styles.

The Effects of Divorce

Researchers in this area compare the children of divorced parents with those whose parents are (as yet) not divorced. The conclusion is always the same: On the whole, the children of divorced parents have more behavioral and emotional problems (Hetherington, Stanley-Hagan, & Anderson, 1989; Krantz, 1989). The fact that the adult children of divorced parents have a higher risk of marital failure (Glenn & Kramer, 1987) can be seen as evidence that these effects are long lasting. GS theory generates an explanation of these findings that is different from the traditional one.

Divorce may be inherited. McGue and Lykken (1992) have found that the likelihood that a person will get divorced is heritable. Estimated heritability in their study was around .50; shared environmental influence was not significantly different from zero. What is inherited is not divorce per se, of course, but characteristics such as impulsivity or disagreeableness (Loehlin, 1992) or a tendency toward alcoholism (McGue, 1993) that have a heritable component and that can make divorce more likely.

Children's behavior problems may precede divorce. Many of the behavior problems commonly reported in the children of divorced parents, particularly "acting out" in boys, are visible years before the parents divorce (Block, Block, & Gjerde, 1986; Cherlin et al., 1991). This has been interpreted as evidence that the problems are not caused by the divorce itself, but by the family conflict and "dysfunction" that precedes it. An equally plausible interpretation is that the children's problem behavior may result from personality characteristics that the children inherited from their conflict-prone parents (Frick & Jackson, 1993). Another possible confounding factor is a reactive effect: A child's problem behavior may increase family stress and thereby make divorce more probable.

Divorce often entails a change of residence. McLanahan and Booth (1989) reported that 38% of custodial mothers in one sample moved to a new residence within the first year after a divorce. A change of residence has important effects—usually negative—on children: They lose their peer group and their place in the status hierarchy; they must win acceptance by a new group and establish their status all over again. Vernberg (1990) found that boys whose families had relocated within the past year were at increased risk of being rejected by their peers (this was not true for girls). Another study of the effects of family relocation showed that children whose families had moved frequently were 77% more likely to have multiple behavior problems than children who had moved infrequently or not at all, after all other demographic differences were statistically controlled (Wood, Halfon, Scarlata, Newacheck, & Nessim, 1993).

Divorce often entails a lowering of family financial status. The new neighborhood that children find themselves in after a divorce and relocation may be quite different from the old one; half of all homes headed by single mothers are below the poverty level (McLanahan & Booth, 1989). The change in socioeconomic status means that there may be a change in the norms of the child's peer group. Even if no relocation takes place, the loss

of family income can affect children's group relationships by changing their position in the status hierarchy of their current group. Particularly for girls, family income and its consequences—access to luxuries such as expensive clothing, orthodontists, and dermatologists—are important determinants of social status in childhood and adolescent peer groups (Adler et al., 1992).

The children are observed or measured at home. The post-divorce home is different from the predivorce home, and children's at-home behavior will reflect the changes that have occurred there. The data used in the majority of studies of divorced children are collected in the children's home, or in the presence of the children's parents, or consist of replies to questionnaires filled out by the children's parents (who base their replies on the children's behavior at home). When data are collected from neutral, outside-the-home observers, such as the children's teachers, effects become smaller or disappear entirely (Hetherington & Clingempeel, 1992; Neighbors, Forehand, & Armistead, 1992).

The children are observed or measured in childhood. As data on the effects of divorce accumulate, researchers are coming to see parental divorce as something children recover from in time (Hetherington et al., 1989). This view is consistent with the predictions of GS theory. It is also consistent with behavioral genetic data that show little or no effect of shared home environment on adult personality. A parental divorce is, of course, part of the shared home environment.

Directions for Future Research

According to GS theory, experiences in childhood and adolescent peer groups, not experiences at home, account for environmental influences on personality development. The answer to the question "Why are children in the same family so different from one another?" (Plomin & Daniels, 1987) is, because they have different experiences outside the home and because their experiences inside the home do not make them more alike. Testing this assertion appears to be straightforward but it is not. Consider two siblings who have different statuses within their childhood peer groups, who are typecast by their peers in different ways, who belong to different adolescent crowds (one is a brain, the other a burnout), and who turn into adults with very different personalities. Did their peer group experiences cause the differences in personality, or did they have different peer group experiences because they were already different?

In order to test the theory, it is necessary to tease apart three possible influences on personality characteristics: home experiences, peer group experiences, and heredity. Two examples serve as models for the kind of research and analysis that would be useful. The first is an examination of cigarette smoking by adolescents. Rowe (1994) used behavioral genetic data collected by other researchers to show that heredity can account for the fact that parents who smoke tend to have children who smoke. He used data of his own (Rowe, Chassin, Presson, Edwards, & Sherman, 1992) to show that the environmental factor involved in smoking was exposure to peers who smoke. Peer group influences determine whether an adolescent will experiment with tobacco; heredity determines whether he or she will become addicted to nicotine.

The second example is a study by Kindermann (1993) that demonstrates peer group influences on children's motivation to do well in school. Kindermann studied cliques of children within fourth- and fifth-grade classrooms and found that they consisted of children who shared similar attitudes toward schoolwork; these groups are the grade-school equivalents of high school peer groups such as brains and burnouts. In grade school, such groups are unstable in membership—over the course of a school year, Kindermann found, many children changed groups. When they changed groups, their attitude toward schoolwork tended to change to match that of their new group. Neither their intelligence nor the attitudes of their parents would be likely to change over the course of a single school year; therefore, peer group influence is the most plausible explanation for the observed changes in the children's attitudes. Because individual children served as their own controls, the effects of peer group influence can be distinguished from those of other environmental influences and from heredity.

GS theory could also be tested by generating predictions from its specific assumptions. The assumption of the context-specificity of socialization predicts that researchers will be more likely to detect influences of the home environment if their tests or observations are carried out in the home. The corollary of this prediction is that efforts to account for differences in adult personality (measured outside the parental home) by looking for within-family environmental differences (measured within the home) are doomed to failure. Differences in the way a parent acts toward two siblings are likely to be good predictors of the relationships these siblings will have with their parent 20 years from now (Bedford, 1992), but they will not account for the unexplained variance in personality characteristics. Correlations will no doubt be found between adult personality characteristics and differential treatment, but they are uninterpretable: Did Mom love you best because you were nicer than your sibling, or are you nicer because Mom loved you best?

The assumption that children are predisposed to favor behaviors acquired in the peer group over behaviors acquired at home could be tested by looking at those relatively rare occasions when the two contexts overlap. For example, when children bring three or four friends home with them and are playing with them in their parents' house, whose rules of behavior do they follow—their parents' or their peers'? What happens when a 9-year-old boy skins a knee in the presence of both his mother and his peers—does he cry, as he might with his mother, or act "tough," as he would with his peers?

Perhaps the most important effect this article can have on future research is to make investigators more aware of the fact that events taking place outside the family can have a potent effect on children's lives. A recent article on the effects of divorce on siblings (Monahan, Buchanan, Maccoby, & Dornbusch, 1993) reported that siblings who lived in different households after a divorce (one with the mother, the other with the father) differed more in "psychosocial adjustment" than siblings who continued to live in the same household. Of the children who lived in different households, either one or both had shifted residence at least once since their parents' divorce. Moving to a new residence usually means that the child loses the familiar peer group and must adapt to a new one, perhaps with a sizable change in status. It would have been of interest to know

whether the psychosocial adjustment of the siblings who moved was worse or better than the siblings who stayed put, but the report does not distinguish between them.

Explaining the Unexplained Variance

The theory described in this article leads to a new interpretation of behavioral genetic data. The reinterpretation involves only the environmental portion of the variance.

Where Are the Shared and Nonshared Environments?

The terms *shared* and *nonshared environment* are defined by behavioral geneticists in terms of the child's postal address: Two children who live in the same home share an environment, two who live in different homes do not. This is not a useful distinction, according to GS theory, because the *effective* environment—the environment that will modify the child's genetic characteristics in ways that can be measured in adulthood—is not in the home, but outside of it. The effective environment may or may not be shared by two children who live in the same house. It is more likely to be shared by two unrelated children of the same age and sex who do not live in the same house but who live in the same neighborhood, go to the same school, and hold similar ranks in the social hierarchy of the same peer group.

Twins are the children who are most likely to share both a home environment and an effective environment. However, even twins who belong to the same peer group may have markedly different social ranks in the group or be typecast by their peers in different ways. With siblings of different ages, in addition to these possible differences in rank and typecasting, there will also be cohort differences, because they will move through the series of child cultures (Corsaro, 1993) at different times. The cohort effect can account for the finding that fraternal twins are generally found to be more alike than nontwin siblings (Plomin & Rende, 1991), even though both pairs share, on average, 50% of their genes.

GS theory predicts that in Western urbanized societies, where people live in privatized homes, within-family processes will tend to make siblings less alike, not more alike. Thus, if siblings show similarities not attributable to shared genes, they are more likely to have acquired those similarities in the environment they share outside the home.

Does the Nonshared Environment Make Siblings Different?

Behavioral geneticists often define the portion of the variance attributed to nonshared environment as environmental influences that make siblings different (e.g., McGuire et al., 1994; Plomin, Owen, & McGuffin, 1994). This is somewhat misleading, because what they are referring to is not a negative correlation, but no correlation at all—randomness. It is what remains of the variance after all the correlations are taken out.

If there is an environment that does make siblings different, it is more likely to be the one that behavioral geneticists call *shared*. The environment that they call *nonshared* does not make siblings different; it simply fails to make them alike—or,

to be precise, it fails to make them more alike than children who do not live in the same house.

Sources of Variance

GS theory postulates only one effect, within-group assimilation, that decreases individual differences in personality among children in Western societies. Within-group assimilation also leads to socialization—the transmission of cultural norms. However, socialization has little effect on the measured variance in behavioral genetic studies, because in most cases the participants were all reared in the same culture.

GS theory postulates three major effects and two minor ones (listed in parentheses) that increase individual differences in personality among children in Western societies:
1. Between-group contrasts
2. Within-group differences in status
3. Within-group social comparisons
4. (Within-family differences in status)
5. (Within-family social comparisons and contrasts).

These five effects, minus the effects of within-group assimilation, can account for all environmental variance. The concepts of shared and nonshared environmental influence, as usually defined, are irrelevant; whether a child resides at 42 Oak Street or at 56 Oak Street is a variable that has no long-term consequences.

Conclusions

The answer to the question asked by the title of this article is that children have many environments. Their mission is to learn how to get along in all of them. They are aided by adaptive mechanisms that do not automatically mix together what is learned in different contexts; what is learned in one is used in another only if it proves to be useful in both. Negotiating satisfactory relationships with parents and siblings is an important undertaking of early childhood, but what is learned in the course of it may be of little use outside the home. Outside the home, children may be judged more harshly or less harshly; they must use different strategies to achieve their goals.

According to the theory presented here, children learn how to behave outside the home by becoming members of, and identifying with, a social group. In the preagricultural societies of our ancestors, group socialization would have begun in mixed-age, mixed-sex play groups. In today's urbanized societies, socialization gets its start in the nursery school or day-care center, gathers momentum in the same-age, same-sex peer groups of school-age children, and approaches asymptote in the mixed-sex crowds of adolescents. It is within these groups, according to GS theory, that the psychological characteristics a child is born with become permanently modified by the environment. Two processes, assimilation and differentiation, are responsible for the modifications. Assimilation transmits cultural norms, smooths off rough edges of the personality, and makes children more like their peers. Differentiation exaggerates individual differences and increases variability. Which of these processes will dominate at a given moment depends on contextual variables that cause social categories to become more or less salient.

With these two central hypotheses—that children learn sep-

arately how to behave in the home and out of the home, and that out-of-the-home socialization takes place in the peer groups of childhood and adolescence—GS theory can account for a growing body of data showing that the home environment has no lasting effects on psychological characteristics. The shared environment that leaves permanent marks on children's personalities is the environment they share with their peers.

Many psychologists have marveled at the robustness of development; despite vast differences in the way their parents treat them, most children turn out all right. This ceases to be a mystery if we cease to believe that the way their parents treat them (assuming that they do not inflict grievous injury) has important and lasting effects. Children usually turn out all right because the environment that does have important and lasting effects is found with little variation in every society: the children's play group.

There is an African saying, "It takes a village to raise a child." In a village, there are always enough children to form a group.

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