The Intrapsychics of Gender: A Model of Self-Socialization

Desiree D. Tobin
Hillsdale College

Meenakshi Menon
University of Surrey

Madhavi Menon
Nova Southeastern University

Brooke C. Spatta
Presbyterian College

Ernest V. E. Hodges
St. John’s University and University of Turku

David G. Perry
Florida Atlantic University

This article outlines a model of the structure and the dynamics of gender cognition in childhood. The model incorporates 3 hypotheses featured in different contemporary theories of childhood gender cognition and unites them under a single theoretical framework. Adapted from Greenwald et al. (2002), the model distinguishes three constructs: gender identity, gender stereotypes, and attribute self-perceptions. The model specifies 3 causal processes among the constructs: Gender identity and stereotypes interactively influence attribute self-perceptions (stereotype emulation hypothesis); gender identity and attribute self-perceptions interactively influence gender stereotypes (stereotype construction hypothesis); and gender stereotypes and attribute self-perceptions interactively influence identity (identity construction hypothesis). The model resolves nagging ambiguities in terminology, organizes diverse hypotheses and empirical findings under a unifying conceptual umbrella, and stimulates many new research directions.

Keywords: gender development, gender differences, gender identity, gender stereotype, gender typing

By 3 or 4 years of age, most children are aware that their social worlds are divided into two categories—male and female—and that they belong to one of these categories; they also know that persons of each category often behave differently from persons of the other. How this knowledge affects children’s self-concepts, personalities, and social behavior has long intrigued developmental psychologists.

Several theories of how children cognitively operate on, and are affected by, gendered information have been proposed and have generated considerable research. However, each of these theories is limited in the cognitive processes described and the hypotheses advanced. Nonetheless, because the hypotheses of the theories are complementary rather than competing, all of the theories may be correct. Each may contribute one or more important pieces to the puzzle of childhood gender cognition.

This article outlines a model of gender cognition in childhood that integrates central hypotheses of several current theories into a single overarching theoretical framework. The model not only unites diverse hypotheses and empirical phenomena under a parsimonious umbrella structure but also spells out a logical basis for defining and distinguishing key gender constructs that are often confused in the literature. Although the model is an amalgam of hypotheses deriving from prior theories, it also features novel elements. Most significantly, a basic assumption of the model is that in order to understand how gender operates within the minds of children it is necessary to take into account each child’s unique perspective on what gender entails.

Three constructs are key in theory and research on gender cognition: gender identity, gender stereotypes, and self-perception of gender-typed attributes. Formal distinctions among these constructs are offered later. For now, we note that gender identity refers to the connections children make between themselves and a gender category (e.g., “I am a girl”), gender stereotypes are children’s beliefs about the attributes that characterize male and female persons as groups (e.g., “On the playground, boys do X and girls do Y”), and self-perceptions of gender-typed attributes are self-perceptions of attributes that characterize (or are perceived to characterize) male persons and female persons as groups (e.g., “I do Y”). Most developmental theories of gender cognition include the hypothesis that children’s gender identity motivates them to incorporate same-gender stereotypes into their self-concepts. However, one theory also specifies that children’s gender identity and self-perceptions influence their gender stereotypes. Yet another theory specifies that children’s gender stereotypes and self-perceptions influence their gender identity. The model we propose incorporates all three of these hypotheses. Each of the three key
constructs (gender identity, gender stereotypes, and attribute self-perception) is hypothesized to vary as a function of the interaction of the other two. Although each hypothesis addresses a different process, a common principle undergirds the predictions of all three hypotheses. Because the model focuses on causal processes occurring within the self-system and focuses on developmental phenomena, we call it the gender self-socialization model (GSSM).

In the following section, we summarize key contributions of several prior developmental theories that furnished the hypotheses of our model, and we summarize a model of adult social cognition that provided the basis for integrating these hypotheses into a single theoretical structure. In sections after that, we present key conceptual features of the GSSM, suggest ways of conceptualizing and measuring its central constructs, and elaborate each of its three interaction hypotheses.

Background

Predecessors of the GSSM: Three Theories of Childhood Gender Cognition

The GSSM incorporates into a single model three hypotheses that figure, to varying degrees, in three influential contemporary theories of childhood gender cognition. We summarize these theories, highlighting how each emphasizes one or more of the three hypotheses featured in the GSSM.

Cognitive–developmental theory. Kohlberg’s (1966, 1969) cognitive-developmental theory was the first purely cognitive theory to suggest that children’s gender identity—conceived by Kohlberg as children’s understanding of their membership in a gender category—motivates them to adopt same-sex-stereotyped attributes and to shun cross-sex ones. Kohlberg (1966, 1969) argued that children’s knowledge of their gender progresses through several stages, beginning with basic gender identity (answering correctly the question, “Are you a boy or a girl?”) at around ages 2–3 years, progressing to gender stability (understanding that basic gender identity does not change over time) at around ages 3–4 years, and culminating in gender constancy or gender conservation (knowing that one’s gender remains constant across changes in surface qualities such as hair length, clothing, and behavior) at around ages 5–7 years. Kohlberg (1966, 1969) believed that children are maximally motivated to emulate gender stereotypes after they attain the last stage. He viewed the motivation for matching-to-stereotype to be an intrinsic desire for cognitive consistency and the enhancement of self-esteem.

Research has confirmed the stage sequence suggested by Kohlberg (Ruble, Martin, & Berenbaum, 2006; Slaby & Frey, 1975). Research has also confirmed that the stage of gender identity development moderates children’s emulation of attributes they discern to be same-sex appropriate. Attainment of gender constancy strengthens children’s motivation to conform to stereotypes, though attainment of basic gender identity at the much earlier age also appears to spur considerable conformity to stereotypes (Ruble et al., 2006). We summarize this evidence later.

A limitation of Kohlberg’s (1966, 1969) theory is that it does not address individual differences (or developmental differences) in the cognitive processing of gender past the ages of 5–7 years, when all children presumably have mastered gender constancy. Nonetheless, Kohlberg’s (1966, 1969) basic hypothesis—gender identity motivates children to adopt the attributes they perceive as appropriate for their gender—lays the foundation for one of the three central interaction hypotheses of our model—the stereotype emulation hypothesis. This hypothesis, like Kohlberg’s (1966, 1969), specifies that identity and stereotypes conjointly affect attribute adoption in a way consistent with efforts to maintain cognitive consistency. However, the GSSM assumes that beyond the ages of 5-7 years there exist marked individual differences among children of each sex in both gender identity and gender stereotypes, and it proposes that gender identity governs children’s tendencies to emulate stereotypes well past early childhood.

Gender schema theory. Gender schema theory (Martin & Halverson, 1981; Martin, Ruble, & Szkyrbalo, 2002) also stresses that children’s gender identity motivates the learning and adoption of gender stereotypes. In this theory, the attainment of basic gender identity around ages 2–3 years spurs intergroup cognitions of the sort described by Tajfel and Turner (1979)—cognitive exaggeration of differences between the sexes, attraction to the ingroup, and derogation and homogenization of the outgroup. Preschoolers rapidly acquire gender stereotypes, and they use them to guide their own behavior and to process information about others (e.g., they distort and misremember stereotype-inconsistent information so as to be consistent with their stereotypes). As with Kohlberg (1966, 1969), the motivation for conforming to stereotypes is primarily cognitive consistency. The theory emphasizes commonalities among children in the structure of stereotypes (e.g., all children are believed to learn both ingroup and outgroup stereotypes but also to develop more detailed plans for carrying out own-sex stereotypes).

Individual differences among children in gender stereotypes and gender identity are acknowledged too, however. For example, it is proposed that children develop their own personal views of gender (e.g., develop different hierarchies of desirable same-gender attributes) and differ in their self-appraisals of gender typicality (an aspect of gender identity reflecting perceived similarity to the same-gender collective). Furthermore, children’s appraisals of gender typicality are expected to moderate their efforts to emulate stereotypes. For example, children who feel gender atypical may assume that same-sex stereotypes do not apply to them (Martin, 2000). This hypothesis serves as one variant of the GSSM’s stereotype emulation hypothesis. The hypothesis has received preliminary support that we summarize later. However, in the GSSM, felt gender typicality is only one of several dimensions of gender identity that participate in stereotype emulation.

Gender schema theory makes another prediction, one adopted by the GSSM as its second major hypothesis. This hypothesis is that gender identity governs children’s tendencies to project their own attributes onto their same-sex collective. Martin, Eisenbud, and Rose (1995) proposed that children’s desire to maintain cognitive consistency leads them to project their own attributes onto a gender collective in a way consistent with their identity, that is, to assume that whatever attributes they possess are shared by other children of their sex (but not necessarily by children of the other sex). In a test of this hypothesis, Martin et al. (1995) showed that children’s personal preferences for a set of novel toys (i.e., unfamiliar nongender-typed toys) predicted the degree to which the children stereotyped the toys as preferred by other children of their sex (versus by children of the other sex). Martin (2000) further suggested that children who feel they are typical members
of their sex are the most likely to engage in this projection process. Thus, this hypothesis specifies a way in which gender identity interacts with self-perceived attributes to predict gender stereotypes. To our knowledge, this hypothesis has yet to be tested. This hypothesis—gender identity moderates the tendency to project one’s attributes onto the same-sex collective—is the second major hypothesis of the GSSM, one we call the stereotype construction hypothesis. However, in the GSSM, felt gender typicality is only one of several dimensions of gender identity that affect projection of one’s attributes onto a gender group.

Another version of gender schema theory (dual pathway gender schema theory) was proposed by Liben and Bigler (2002). Like Martin (e.g., 2000), Liben and Bigler proposed that children not only incorporate same-gender stereotypes into their self-concepts but also project their own attributes onto the same-sex collective. They presented longitudinal evidence for both pathways. Liben and Bigler further proposed that children differ in their tendencies to engage in each of these processes depending on the degree to which they possess a gender salience filter or are gender schematic. This construct was conceptualized as reflecting, in part, the degree to which children have internalized societal pressure to regulate themselves according to gender standards (another component of gender identity). Liben and Bigler did not suggest a way to measure this proposed moderator and hence did not test their notion that gender schematicity moderates the pathways. Subsequent research by others, summarized later, has confirmed that felt pressure for gender conformity moderates stereotype emulation efforts, but to our knowledge, no study has addressed the question of whether felt pressure moderates stereotype construction (projection).

Liben and Bigler’s (2002) hypotheses are similar to those of Martin (2000), but the two formulations differ in the quality of the gender identity construct believed to moderate the two pathways (felt gender typicality for Martin, 2002, felt pressure for Liben and Bigler). In the GSSM, both felt gender typicality and felt pressure for gender conformity (as well as other dimensions of gender identity) moderate stereotype emulation and stereotype construction.

Multifactorial gender theory. A few decades ago, it was believed that individual differences in gender typing are distributed along a single bipolar personality dimension ranging from very masculine to very feminine. A child’s location on this dimension was sometimes attributed to the strength of the child’s identification with the same-sex parent versus the other-sex parent (Brown, 1956; Hetherington, 1967; Kagan, 1964; Lynn, 1969; Mussen & Distler, 1959). This unidimensional model assumed that all male-typed attributes are positively intercorrelated, that all female-typed attributes are positively intercorrelated, and that all male-typed attributes are negatively correlated with all female-typed attributes. Bem (1981) challenged this view, arguing that male-typed attributes intercorrelate into one factor and that female-typed attributes intercorrelate into a second, orthogonal factor. Thus, masculinity and femininity became independent dimensions rather than opposite ends of a single continuum.

Spence (1985, 1993; Spence & Buckner, 1995; Spence & Hall, 1996) challenged both the unidimensional and bidimensional models of gender typing, arguing that the sets of male-typed attributes and female-typed attributes are each multifactorial and heterogeneous (i.e., not reducible to one or two dimensions). Spence, along with cognitive-developmental and gender schema theorists, proposed that in early childhood, basic gender identity prompts children to adopt the conspicuous badges of their sex (i.e., salient same-sex stereotypes) and to shun other-sex attributes. However, she argued that over the ensuing years a myriad of social-learning, biological, and cognitive factors interact to determine which specific same-gender-typed attributes each child adopts. The data accord with Spence’s view that there is considerable variability among children of each sex as to the particular constellation of gender-congruent attributes they display (Constantinople, 1973; Maccoby, 1998; Spence, 1985).

However, Spence (1985, 1993) was concerned less with stereotype emulation (or with stereotype construction) than with a third process—the child’s construction of gender identity, especially a sense of gender typicality. She suggested that on occasion children review their sex-typed attributes and reach summary judgments of their overall gender typicality. These self-appraisals are influenced by a complex set of factors, including not merely the number of gender-congruent attributes the child possesses but also their salience and perceived importance. The gender standards against which children compare their attributes include commonly shared stereotypes for the child’s age and sex but also some idiosyncratic elements. Because different children of a given sex will have developed different gender-typed attributes, as well as somewhat different stereotypes, they will reach different conclusions about their gender typicality. Cognitive consistency is again the guiding principle: Children generate an identity consistent with the degree of match between their stereotypes and their self-perceptions.

Spence’s analysis thus offers an explanation for the development of the component of gender identity that Martin (2000) suggested moderates both the adoption of same-sex-stereotyped attributes and the projection of one’s own attributes onto the same-gender collective—self-perceived gender typicality. Spence did not develop a measure of felt gender typicality, and to date, a full test of her formulation has not been carried out. Spence’s hypothesis forms the basis for the third central hypothesis of the GSSM—the identity construction hypothesis. However, in the GSSM, identity construction processes are expected to apply to other dimensions of gender identity as well as to felt typicality.

Inspiration for the GSSM: Greenwald et al. (2002)

The GSSM was inspired by an elegant model of social cognition advanced by Greenwald et al. (2002) to predict relations among cognitions relevant to collective identity. Greenwald et al.’s (2002) model not only offers a basis for differentiating among the three key cognitive constructs of central concern to researchers of gender differentiation during childhood (gender identity, gender stereotypes, and attribute self-perceptions) but also provides a conceptual framework for incorporating the three hypotheses that we have introduced—stereotype emulation, stereotype construction, and identity construction—under a single theoretical roof. Two features of the Greenwald et al. (2002) model form the twin cornerstones of our GSSM. We describe these features and then present our adaptation of Greenwald et al.’s (2002) model—the GSSM.

First, Greenwald et al. (2002) distinguished three kinds of cognitive associations that people form: group-self, group-attribute, and self-attribute. That is, people make mental associa-
tions (a) between a salient social group, such as a gender or race, and the self (e.g., “I am a boy”), (b) between a social group and various attributes (e.g., “Boys are strong”), and (c) between the self and the attributes (e.g., “I am strong”). Each association can vary in strength. Thus, the model distinguishes three concepts (group, self, and attribute) and assumes that people differ in the stores of associations they form among them. Moreover, group-attribute associations constitute a person’s group identity, group-attribute associations define the person’s stereotypes about the group, and self-attribute associations capture the person’s self-perceptions of the attributes in question. Figure 1, adapted from Greenwald et al. but tailored to gender, depicts the three building-block concepts of gender, self, and attribute and the associations that exist among them.

Second, Greenwald et al. (2002) proposed that each type of cognitive association is a multiplicative function of the other two associations, that is, each association is influenced by the interaction of the other two. Thus, three interaction hypotheses were specified. The hypotheses were conceptually unified by virtue of the fact that the interaction patterns predicted by the hypotheses were all expected to reflect a single psychological principle—cognitive balance (Heider, 1958). For example, a child who believes both that “I am a boy” and “Boys are strong” will experience cognitive press to conclude, “I am strong.” Studies of adults with the Implicit Association Test (IAT) used to measure the cognitive associations have yielded support for the model (e.g., Nosek, Banaji, & Greenwald, 2002; Greenwald et al., 2002).

Overview of the Gender Self-Socialization Model

The GSSM exploits the two foregoing insights of Greenwald et al. (2002). When applied to the field of childhood gender cognition, the insights bring clarity to key constructs and terminology as well as coherence to a set of causal processes not previously considered by developmental researchers to reflect the operation of a common principle. Here we provide an overview of the GSSM.

We summarize how the GSSM builds on each of Greenwald et al.’s (2002) insights and applies them to the developmental literature. We also highlight an important way in which the GSSM differs from the Greenwald et al. analysis.

Distinguishing Three Central Constructs

The GSSM adopts the basis proposed by Greenwald et al. (2002) and depicted in Figure 1 for distinguishing among the three major constructs of concern to gender cognition researchers—gender stereotypes, attribute self-perceptions, and gender identity. These constructs are often confused in the developmental literature. For example, although many investigators have recognized the importance of distinguishing gender-attribute associations from self-attribute associations, sometimes a single term (e.g., gender typing) is used to encompass both types of associations (e.g., Liben & Bigler, 2002). We use the term gender stereotype to refer to the gender-attribute association and the term attribute self-perception to refer to the self-attribute association. When the attributes under consideration have been determined to be gender-differentiated (i.e., judged or observed to vary with gender), the attribute self-perceptions are also a measure of self-perceived gender typing.

A second, more pervasive and more serious, source of confusion is that investigators sometimes infer one type of association from another. For example, Bem (1974, 1981) believed that the strength of people’s identity with a gender category (the gender-self association) could be inferred from people’s self-perception of specific gender-typed attributes (self-attribute associations): A person was assumed to have strongly identified with the female role, for instance, if she (or he) perceived many female-typed expressive traits and few male-typed instrumental traits in the self. There are many problems with this common practice that we review later. We use the term gender identity to refer to assessments that explicitly capture people’s thoughts (and associated feelings) about their membership in a gender category. Thus, to assess gender identity requires that research participants make judgments about their membership in a gender category. Thus, to assess gender identity requires that research participants make judgments about themselves in relation to a category label (e.g., “Do you like being a boy?”; “Do you feel you are a typical girl?”). Inferring gender identity from self-attribute associations (e.g., self-perception of expressive and instrumental traits) violates the model, as attribute self-perceptions are conceived as a construct distinct from gender identity. We believe the field of childhood gender cognition would benefit from defining and labeling its central constructs in the ways depicted in Figure 1.

The tripartite classification of key cognitions (into identity, stereotypes, and attribute self-perceptions) imposes order on an otherwise heterogeneous and confusing array of gender variables that have not proven amenable to meaningful organization through empirical means alone. Numerous investigations of childhood gender differentiation have included measures that sample from two, or even all three, of the three key types of cognitions distinguished by the GSSM (e.g., Egan & Perry, 2001; Katz & Ksansnak, 1994; Liben & Bigler, 2002; Signorella & Frieze, 2008; Spence & Hall, 1996). When correlations among the measures are examined (sometimes with factor analysis), the measures rarely cohere in meaningful, replicable ways. Although it is clear that gender phenomena are multifactorial (Spence, 1985, 1993), and taxonomies of gender variables have been advanced to reflect this...
fact (Eckes & Trautner, 2000; Huston, 1983; Ruble & Martin, 1998), the taxonomies have been largely atheoretical and have not been guided by any particular conceptual model. The GSSM provides a basis for organizing gender cognitions. The model suggests that gender constructs first be grouped, on logical and theoretical grounds, into the three key types of associations; there- after, distinctions and relations among measures within a given category (e.g., gender identity) can be further explored based on additional conceptual, practical, and empirical considerations relevant to that category of association.

Although we adopt Greenwald et al.’s (2002) basis for distinguishing the three key constructs, the GSSM’s conceptualization of these constructs differs from Greenwald et al.’s in a crucial way. The focus of the Greenwald et al. model (and its research paradigm) is on implicit (unconscious) cognition. That is, in the Greenwald et al. paradigm, the focal assessment of any given construct is a single score (of associative strength) derived from the IAT procedure. In practice, an explicit (self-report) measure of each association is often collected as well, but the explicit measures are often limited in scope (i.e., a single explicit measure per association is used, and the measure may be crafted primarily to mimic a feature of the corresponding implicit association rather than to capture a meaningful dimension of conscious representation). In research with adults, Greenwald and colleagues have found that cognitive consistency predictions are confirmed when implicit measures of the constructs are used but not when explicit measures are used (2002; Nosek et al., 2002). They suggested that when an association is inaccessible to consciousness or is subject to a social desirability response bias, as is probably often the case for adults, the validity of explicit measures is compromised. It is perhaps for this reason that Greenwald et al. have devoted little attention to the conceptualization and assessment of explicit representations of central constructs.

We believe that implicit assessment of the three central constructs will prove fruitful with children as it has been with adults. However, we also believe that an adequate model of gender cognition in childhood (and very likely at later ages as well) requires a complementary focus on explicit representation. To rely on implicit IAT assessments (or their limited explicit counterparts) severely constrains the questions that can be asked and, in fact, precludes testing certain hypotheses featured in the developmental theories we reviewed. For example, gender identity is more than the simple associative strength between self words (e.g., me, I) and same-gender words (e.g., men, he) and comprises several dimensions, such as contentment with one’s gender, self-appraised gender typicality, and felt pressure for adhering to gender roles. As we pointed out, different dimensions of gender identity have been suggested by different gender schema theorists to play a role in stereotype emulation and stereotype construction processes. To evaluate these models requires having different measures for qualitatively distinct aspects of gender identity; it is unclear how all the various dimensions of gender identity could be captured with implicit measures. In the GSSM, it is recognized that there exist multiple, qualitatively distinct ways of conceptualizing not only gender identity but also gender stereotypes and attribute self-perceptions, and explicit assessments are viewed as essential for capturing significant dimensions of each of these constructs.

Given that cognitive consistency effects have been obtained with adults primarily when implicit measure have been used, one might wonder whether it is realistic to expect predictions to be confirmed with children when explicit measures are used. We expect hypotheses of the GSSM to be confirmed with children even when explicit measures are used, for three reasons.

First, although children are unlikely to be entirely free of social desirability response biases, they are probably less encumbered than adults by such biases. For example, most preadolescents unapologetically express strongly held stereotypes, including a marked same-sex favoritism (Glick & Hilt, 2000; Powlishta, 1995; Zemore, Fiske, & Kim, 2000).

Second, many studies with children that represent partial tests of a GSSM hypothesis have yielded the predicted effects with explicit measures. These studies are only partial tests of a hypothesis because each study predicted a construct from only one of the other two constructs (rather than from the interaction of the other two). Nonetheless, they attest to the promise of explicit measures for use with children. Studies have shown (a) that explicit self-perceptions of gender-typed attributes are predictable from explicit measures of gender identity (Fagot, Rodgers, & Leinbach, 2000; Martin & Little, 1990; Martin et al., 2002; Martin, Fabes, Hanish, Leonard, & Dinella, 2006; Ruble et al., 2007) and from explicit measures of gender stereotypes (Aubry, Ruble, & Silverman, 1999; Liben & Bigler, 2002; Martin, Fabes, Evans, & Wyman, 1999; Miller, Trautner, & Ruble, 2006; Serbin, Powlishta, & Gulko, 1993), (b) that explicit gender stereotypes are predictable from explicit self-perceptions (Liben & Bigler, 2002; Martin et al., 1995), and (c) that explicit gender identity is predictable from explicit self-perceptions (Egan & Perry, 2001). All of these effects reflected the operation of cognitive consistency or balance (i.e., gender identity and gender stereotypes predicted children’s adoption of same-gender attributes, children projected their own attributes onto the same-sex gender collective, and children used their perceptions of same-gender attributes to estimate their gender typicality).

Third, several studies with children that we describe later have furnished full tests of the GSSM’s stereotype emulation hypothesis (i.e., these studies predicted self-perception from the interaction of identity and stereotype) and found the predicted effects. In several of these studies, all three focal constructs were assessed with explicit measures. In other studies, one of the two predictor constructs was experimentally manipulated and the other two variables were assessed with explicit measures. Considered together, the evidence is compelling that children (from the preschool period through early adolescence) use implicit theories of categorization (Martin, 2000) to guide their thinking about gender in ways predicted by consistency principles and moreover that these effects are detectable with explicit measures.

The GSSM’s emphasis on, and elaboration of, explicit representation is the main point of difference between our model and Greenwald et al.’s (2002). However, the GSSM’s conceptualization of certain constructs also differs in a critical way from the typical way that developmental researchers construe and assess them. The difference lies in whether gender is defined from the standpoint of the individual child (the GSSM’s stance) or from the standpoint of the researcher (the traditional approach). In the traditional approach to researching gender representations, researchers examine how many of a standard set of normatively derived (and presumably interchangeable) signs of gender are detectable in a child’s mind. In this approach, researchers begin by
identifying attributes that differentiate the sexes either empirically or by consensus judgments. These attributes are then taken as standards against which to assess the degree to which gender permeates the psyche of an individual child. In contrast, in the GSSM, it is assumed that in order to understand how gender operates within the minds of children, it is essential to view gender from the perspective of the individual child. This involves respecting and assessing the unique meaning(s) that each child ascribes to gender. This tack, which was originally suggested by Edelbrock and Sugawara (1978) and is part of Martin’s (2000) gender schema theory, is fundamental to the GSSM.

Three Hypotheses United by a Cognitive Consistency Principle

The GSSM also adopts the second insight of Greenwald et al. (2002): Each type of association is a function of the interaction of the other two in a way that reflects cognitive consistency. The more that children identify with a particular gender, the more they incorporate attributes they perceive as consistent with that gender into their self-concepts (stereotype emulation hypothesis); the more that children identify with a particular gender, the more they project attributes they perceive in themselves onto that gender collective (stereotype construction hypothesis); and the more that children perceive their own attributes to match their stereotypes for a particular gender, the more they identify with that gender (identity construction hypothesis).

The pattern of all three hypothesized interactions is expected to conform to a simple mathematical rule of cognitive balance (Greenwald et al., 2002; Heider, 1958). Each of the three central constructs (cognitive associations) may be conceptualized as varying in strength, from very positive to very negative. For ease of explication, gender identity may be considered positive when children perceive their own attributes to match their stereotypes for their own gender than for the other (positive when children perceive an attribute to be more common or with the other gender (negative when children disavow the attribute). Self-perception of an attribute is positive when children incorporate the attribute into their self-concept (positive when children perceive attributes they perceive in themselves onto that gender collective), neutral when children identify equally with both genders (neutral), and negative when children identify more strongly with the other gender (negative). Gender stereotype is then construed as positive when children perceive an attribute to be more common or suitable for their own gender than for the other (positive), as neutral when children do not view the attribute as varying with gender (neutral), and as negative when children view the attribute as cross-gender-typed (negative). This same rule generally is expected to apply across different operationalizations of the constructs. For example, high gender identity can take several forms, such as feeling more similar to same-sex peers than to other-sex peers or feeling pressure to adopt same-sex attributes and to shun other-sex ones, but we generally expect these (and other) forms of gender identity to operate similarly (though some exceptions are noted later). Also, depending on the particular way a construct is operationalized, the full range of conceptually possible scores on the construct (i.e., scores ranging from strongly positive to strongly negative, as conceptualized above) may not be measured or observed. For example, one might assess gender identity simply as strength of identity with one’s own gender (e.g., felt similarity to same-sex peers), ignoring whether this identity is stronger or weaker than identity with the other gender. Nonetheless, the general interaction prediction is the same: Each construct should reflect the product of the other two.

We do not suggest that the achievement of cognitive consistency always reflects simple affect-free logical reasoning. From an early age, children often express considerable dismay at the thought of violating consistency rules (e.g., when they discover they have been playing with a toy intended for the other sex; Bradbard & Endsley, 1983; Bussey & Bandura, 1992; Martin et al., 1995). Conformity to consistency principles may thus be buttressed by anticipated or experienced negative affective self-reactions for violations (and by positive affective reactions for conformity). Some of these anticipated self-reactions may represent internalizations of social sanctions that were initially externally imposed (e.g., by parents and peers); some likely originate with the child. Thus, although the GSSM’s predictions conform to a cognitive consistency principle, there are several routes via which consistency effects are achievable.

The use of explicit measures to test the model’s hypotheses does not require the assumption that consistency effects are the product of a deliberate, conscious cognitive process. An adolescent boy who reports on explicit measures that “Boys are supposed to boss their girlfriends around” and that “I am a typical boy” may, as a consequence, report (again, explicitly) that “I boss my girlfriend around.” However, the boy may not be aware of any effort to square his self-perception with his identity and stereotype. It is likely that sometimes children are aware of their gendered reasoning (e.g., a boy’s “Yuck—that's a girls’ toy!”; Bradbard & Endsley, 1983) and sometimes not (Eisenberg, Murray, & Hite, 1982).

Placing the GSSM in Developmental Context

The GSSM is intended to describe processes that begin during the preschool period and thereafter operate throughout life. However, in this article the model is fleshed out mainly with a focus on the periods of middle childhood and adolescence. This is for two reasons.

First, these ages are a time when children consolidate a set of gender cognitions (especially, combinations of gender identity and gender stereotypes) that can affect them, for better or for worse, as they make the transition into early adolescence and confront new gender-related challenges, such as the management of sexual interests and the planning of an academic future. A boy who believes that men should make decisions for women is likely to face difficulties when dating girls, and a girl who believes that it is futile for girls to compete with boys in math and science courses may avoid such courses, especially if these children possess forms of gender identity that encourage them to act on these stereotypes.

Second, middle childhood and adolescence have been relatively neglected in the study of childhood gender differentiation, especially insofar as the role of gender identity is concerned. Gender identity has been extensively studied in children younger than 6–7
years of age because the dominant theoretical perspective on
gender identity—Kohlberg’s (1966, 1969) cognitive-
developmental theory—focuses on stagelike changes in gender
identity that occur in early childhood and end around age 6 years.
Although other theorists, especially gender schema theorists
(Liben & Bigler, 2002; Martin, 2000), have speculated that indi-
vidual differences in gender identity affect cognitive processing of
gender at later ages, strategies for assessing the dimensions of
gender identity thought to be influential have lagged behind.
Recently, however, methods for assessing dimensions of gender
identity in older children have been developed (e.g., Egan & Perry,
2001). Thus, the time is ripe for theory-driven investigation of
cognitive processes implicating gender identity beyond early
childhood.

The focus of the GSSM is on intrapsychic processes, but this
focus is not meant to imply that environmental and biological
factors are unimportant in gender differentiation. It is likely that
environmental and biological factors contribute to each of the three
kinds of associations emphasized by the model. Attribute adoption
and self-perception are influenced by a host of social and biological
factors in addition to interactive influences of identity and
stereotypes (Bussey & Bandura, 1999; Ruble et al., 2006; Spence
& Hall, 1996). Gender identity is affected by biology (e.g., Reiner
& Gearhart, 2004) as well as by environmental factors, such as the
quality of the parent–child relationship (Tobin, Menon, Menon,
Perle, & Perry, 2007). Gender stereotypes are affected by chil-
dren’s observations of the divergent behaviors of men and women
(Eagly, Wood, & Diekmann, 2000; Martin, 2000; Perry & Bussey,
1979) and possibly also by biological preparedness (Ruble et al.,
2006). The purpose of the GSSM is to describe how individual
differences in any two of these constructs, no matter how they
originated, conspire to push the third in a predictable way.

In the following section, we consider ways of conceptualizing
and assessing each of the model’s three central constructs. In the
section after that, we elaborate each of the model’s three hypoth-
eses and suggest ways of testing them.

Three Key Constructs

Here we summarize how the GSSM’s three central constructs
(types of associations) have been construed in previous research,
and we suggest new ways of conceptualizing and assessing the
constructs to enable tests of the model. We focus on explicit
measures of the constructs, but the model may also be tested with
implicit measures (e.g., Cvencek, 2008). The measures we propose
for testing the model are intended simply as illustrations of pos-
sible ways to operationalize the constructs; they are not elements
of the model itself.

Gender Identity (Gender-Self Associations)

In the GSSM, gender identity refers to the quality and strength
of the cognitive connections (often affectively tagged) that a
person makes between the self and a gender category. Here, we
summarize prior conceptualizations of gender identity, propose
that it is fruitful to adopt a multidimensional perspective on gender
identity, and describe several dimensions of gender identity that
appear especially promising for testing the GSSM.

Prior conceptualizations of gender identity. Gender identity
has been conceptualized in diverse ways. A traditional approach
has been to view gender identity as a fundamental sense of accep-
tance of, and belonging to, one’s gender (e.g., Green, 1974;
Spence, 1985; Zucker et al., 1993). Kohlberg (1966) viewed gen-
der identity as understanding that one belongs to one sex rather
than the other. Kagan (1964) saw gender identity as perceiving the
self to conform to cultural stereotypes for one’s gender (i.e.,
as being gender typical); Martin (2000) and Spence (1985) have also
conceptualized gender identity in this way. Bem (1981) saw gen-
der identity as internalized societal pressure for gender conform-
ity; this view of gender identity was incorporated by Liben and Bigler
(2002) into their notion of gender schematicity. Ruble and col-
leagues (2004) proposed that gender identity can be construed as
the degree to which gender figures as a central feature of one’s
identity (relative to other identities, such as ethnic or racial iden-
tity). Despite these varying definitions, most theorists have
stressed that gender identity carries motivational properties (e.g.,
promotes the desire to behave in gender-consistent ways).

Considerable confusion surrounds prior research on gender
identity owing to the fact that many investigators have sought to
infer one or another aspect of gender identity from people’s
self-ratings on a specific class of normatively determined gender-
typed attributes, such as toy preferences or personality traits (e.g.,
Bem, 1981; Boldizar, 1991; Brown, 1956; Hall & Halberstadt,
1980; Kagan, 1964; Nadelman, 1974; Perry & Perry, 1975). This
strategy is sometimes used to assess felt gender typicality, some-
times used to assess internalized societal pressure for gender
conformity, and sometimes used to infer gender identity without a
clear statement of which of its various definitions is intended. Most
commonly, self-perception of instrumental traits has been used to
infer male-typical gender identity, and self-perception of expres-
sive traits has been used to infer female-typical gender identity
(e.g., Bem, 1981; Boldizar, 1991; Hall & Halberstadt, 1980). This
practice is problematic for several reasons.

First, when respondents rate themselves on any specific set of
normatively determined sex-typed attributes, they may be doing so
without perceiving the attributes to be relevant to gender (Edelbrock
& Sugawara, 1978; Martin, 2000; Paley, 2000). People’s self-
ratings of instrumental and expressive traits, for example, tell the
degree to which people believe they possess these two specific
clusters of traits, but they do not necessarily indicate how people
feel about themselves in relation to gender categories (e.g., they do
not indicate how masculine or feminine a person feels; Spence,
1993; Spence & Buckner, 1995). Indeed, people’s self-perceptions
of instrumental and expressive traits relate minimally to their
self-ratings of how masculine or feminine they are (Pedhazur &
Tetenbaum, 1979). Different children possess different gender
stereotypes (Edelbrock & Sugawara, 1973; Martin, 2000; Powl-
ishta, 1995) and thus are likely to rely on self-perception of
different attributes when estimating their maleness or femaleness
(Egan & Perry, 2001; Spence, 1985). Many children (and adults)
may pay no attention to instrumental and expressive traits but
place great weight on sexual orientation, physical appearance,
activity preferences, stylistic qualities (e.g., deepness of voice),
adherence to a gender ideology, or yet some other, perhaps idio-
syncratic, quality. Thus, self-ratings on a set of normatively deter-
mined gender-typed attributes yield ambiguous information when
the goal is to infer individual children’s gender identity.
Second, for most theories, inferring gender identity from self-perceived gender typing is tautological. Most theories (including those that inspired the GSSM) specify that gender identity is a cause of gender typing (i.e., that gender identity affects the adoption of gender-typed attributes). One cannot test such a hypothesis without distinguishing the two constructs conceptually and empirically.

Third, although gender identity can be conceptualized in several ways, this customary practice captures only one of them, namely, self-perception of conformity to gender stereotypes. The practice does not, for example, allow inferences about the degree to which individuals have internalized societal pressure for gender conformity.

The GSSM eschews the practice of inferring gender identity from gender typing and instead requires measures of gender identity that directly tap children’s thoughts about their membership in a gender category (e.g., “Are you similar to other girls?”; “Are you glad that you are a boy?”). Children are free to apply their own personal, sometimes idiosyncratic, criteria for what it means to be male or female.

A multidimensional perspective on gender identity. The GSSM regards several of the ways that gender has previously been defined as valid conceptualizations of the gender-self association. Thus, the GSSM is compatible with a multidimensional perspective on gender identity, a position that accords with other recent arguments that collective identity is best considered to comprise several components (Ashmore, Deaux, & McLaughlin-Volpe, 2004; Egan & Perry, 2001; Leach et al., 2008). We briefly describe five dimensions of gender identity for which there exist validated measures for use with children and early adolescents and that may be useful for testing the model’s hypotheses. These dimensions are (a) membership knowledge (knowledge of one’s membership in a gender category); (b) gender contentedness (satisfaction with one’s gender); (c) felt pressure for gender conformity (felt pressure from self and others for adhering to gender stereotypes); (d) gender typicality (perceived similarity to the same-gender collective); and (e) gender centrality (the importance of gender relative to one’s other identities, e.g., ethnic or racial identity).

Each of these dimensions of gender identity captures a different way in which children can identify with (i.e., associate the self with) a gender category. We assume that children vary on each dimension from being strongly identified with their gender to being not at all identified with it. More strongly identified children are those who, compared with their peers, have a developmentally more sophisticated grasp of their membership in a gender category (e.g., have attained gender constancy), express greater contentment with their gender; report stronger pressure for gender conformity, feel more gender typical, and see gender as more central to their identity. Even though these dimensions are not strongly correlated with one another, they are generally expected to operate in similar ways in the model’s processes. We briefly describe each dimension.

Membership knowledge. The most researched aspect of gender identity is children’s understanding of their membership in a gender category. We noted that Kohlberg’s (1966, 1969) cognitive-developmental theory, which holds that children’s understanding of their gender progresses through a series of age-related stages, has received support. However, tests of the GSSM’s hypotheses that use stage of membership knowledge as the index of gender identity will necessarily be limited to children of 7 years of age or younger because beyond this age there are no longer individual differences in this aspect of gender identity.

Gender contentedness. Three dimensions of gender identity—gender contentedness, felt pressure for gender conformity, and gender typicality—have been extensively studied in elementary and middle school children by Egan, Perry, and their colleagues (Carver, Egan, & Perry, 2004; Carver, Yunger, & Perry, 2003; Corby, Hodges, & Perry, 2007; Egan & Perry, 2001; Yunger, Carver, & Perry, 2004). Self-report scales developed by Egan and Perry (2001) have been used in this work, which has been aimed primarily at identifying the adjustment correlates of these dimensions of gender identity. Gender contentedness is assessed with items capturing satisfaction with one’s gender (e.g., children rate how much they like being a boy or a girl).

Once children attain basic gender identity and intergroup cognitions (e.g., in-group favoritism) take hold, most children voice pride in their gender and express repugnance at the thought of being a member of the other gender. For most children, contentment with one’s gender remains high at least through middle school and is a source of self-esteem (Carver et al., 2003; Corby et al., 2007; Egan & Perry, 2001; Yunger et al., 2004). Nonetheless, individual differences in gender contentedness are evident throughout these years. Gender contentedness is uncorrelated with felt pressure for gender conformity and only modestly correlated (about .30) with felt gender typicality.

Felt pressure for gender conformity. Internalized pressure for gender conformity—the importance children place on being similar to same-gender others (or different from other-sex people)—can be assessed by asking children to indicate the personal and social consequences (e.g., shame, criticism) they would incur for exhibiting gender-congruent or gender-incongruent attributes (Egan & Perry, 2001). Felt pressure is similar to the gender schematicity construct proposed by Bern (1981) and suggested by Liben and Bigler (2002) to motivate emulation of stereotypes as well as projection of one’s own attributes onto the same-sex collective. Like gender contentedness, felt pressure begins in early childhood, soon after children attain basic gender identity and develop intergroup cognitions. The pressures children feel from parents, peers, and the self for gender conformity intercorrelate into a single factor (Egan & Perry, 2001), suggesting that children formulate a simplified rule about the permissibility of gendered conduct.

For most children, felt pressure wanes across the elementary school years (Carver et al., 2003; Egan & Perry, 2001). However, many children continue to view cross-gender conduct as strongly proscribed for many years. Even in adulthood, a fair number of people say it is important to be similar to the ideal man (woman) and to be different from the other sex (Sanchez & Crocker, 2005; Wood, Christensen, Hebl, & Rothergerber, 1997).

Felt pressure for gender conformity is uncorrelated with gender contentedness and felt gender typicality, substantiating that one cannot infer one form of gender identity from another. Unlike gender contentedness and gender typicality, felt pressure is associated with adjustment difficulties, especially for girls (e.g., internalizing problems and low self-esteem; Carver et al., 2003; Corby et al., 2007; Egan & Perry, 2001; Yunger et al., 2004).

Gender typicality. Self-perceived gender typicality refers to the degree to which children feel similar to versus different from
others of their own gender (Egan & Perry, 2001). This aspect of gender identity has been suggested by Martin (2000; Martin et al., 2002) to foster both the adoption of stereotypes and the projection of one's own attributes onto same-sex others.

It is unclear whether preoperational children (3–5 year-olds) are capable of estimating their overall gender typicality. If they are, it is likely that their estimates are based on limited cognitive processing (e.g., based on self-perception of a single salient gender-typed characteristic at a time, owing to preoperational centration). With the advent of concrete operations, the bases for children's appraisals of gender typicality become more sophisticated. Presumably, children formulate a same-gender prototype (e.g., a hierarchy of attributes ordered according to their perceived importance for their gender) and compare their own attributes to it (Egan & Perry, 2001; Spence & Buckner, 1995). Although some attributes will figure high in nearly every child's prototype (e.g., having a sexual orientation typical of one's gender, for early adolescents), there will also be individual differences in children's prototypes. Therefore, different children will feel gender typical for different reasons. One boy may derive a sense of typicality from athletic prowess, another from competence in math and science, and still another from perpetrating violence or dominating women. Children's appraisals of gender typicality are influenced not only by comparing their attributes with a prototype but also by their tendencies to engage in social comparison, to infer and conserve stable dispositions in themselves, and to internalize messages communicated by significant others. Thus, gender typicality represents a summary judgment reached by integrating several different kinds of information.

Numerous theorists have suggested that children derive comfort from seeing themselves to be similar to same-sex others because doing so makes them feel safe and secure in the same-sex peer group. Indeed, perceptions of dissimilarity are alarming to preadolescents, who are prone to experience feeling different as pertaining last gender inadequacy, possible rejection or victimization by peers, and uncertain social and personal futures (Bugental & Goodnow, 1998; Carver et al., 2004; Egan & Perry, 2001; Kagan, 1964; Kohlberg, 1966, 1969; Savin-Williams & Diamond, 1998; Spence & Buckner, 1995; Zucker et al., 1993). Nonetheless, attaining and maintaining a confident sense of typicality is challenging for some children. There is ample opportunity for children to observe that they do not necessarily possess all or most of the attributes they regard as important elements of their same-sex prototype (e.g., not all boys can be baseball pitchers). Indeed, across childhood and early adolescence, there exist considerable individual differences in felt gender typicality.

Gender centrality. Gender centrality refers to the importance a person attaches to gender as a component of self-concept. Luhtanen and Crocker (1992) developed a self-report scale to assess gender centrality among adults (e.g., "Being a woman is an important part of my self-image"), and Ruble et al. (2004) described procedures to assess the importance children attach to gender relative to other identities (e.g., student, athlete, son/daughter, ethnicity/race). Gender is an especially central component of preschoolers' self-concept and declines as children age, but individual differences are still evident in later years. The associations of gender centrality with other dimensions of gender identity have yet to be determined.

**Additional dimensions of gender identity.** The foregoing components of gender identity were highlighted because validated measures of these constructs exist for use with children. However, subsequent research may reveal additional aspects of gender identity relevant to gender self-socialization processes. For example, gender identity might be construed as quality of attachment to the same-gender collective (i.e., as a preoccupied, avoidant, or secure stance; Smith, Murphy, & Coats, 1999), as allegiance to or solidarity with the same-gender collective (Leach et al., 2008), or as the prestige and status one believes other people accord one's gender (public gender identity; Luhtanen & Crocker, 1992).

The GSSM emphasizes dimensions of gender identity that presumably reflect fairly enduring (albeit changeable) aspects of personality. Several of the gender identity dimensions we have discussed—gender typicality, gender contentedness, and felt pressure for gender conformity—indeed are moderately stable over a 1-year period (Yunger et al., 2004). However, gender identity can also be conceptualized as a fluctuating entity subject to contextual influences. For example, children become more conscious of their gender when they interact with an other-sex child, when they are the minority sex in a group, or when a teacher pits girls against boys in a contest (Bigler, 1995; Bigler, Jones, & Loblinier, 1997; Deschamps & Doise, 1978). Temporary consciousness of one's gender, or gender salience (Ruble et al., 2004), can also figure in GSSM processes. For example, situational cues that make children more aware of their gender probably help activate the more enduring aspects of gender identity as well as make the children's gender stereotypes more salient, thereby possibly encouraging stereotype emulation (Deaux & Major, 1987).

**Experimental manipulation of gender identity.** Experimental manipulation of gender identity may also be used in tests of the GSSM. For example, the salience of one's identity as male or female may be manipulated by a priming task (e.g., Grace, David, & Ryan, 2008) or by arranging the social context in a way that influences gender salience. Felt gender typicality might be manipulated by providing children with feedback indicating that they are similar to or different from persons of a particular gender. Felt pressure might be manipulated by making it clear to the child that an experimenter does or does not expect gender conformity.

**Gender Stereotypes (Gender-Attribute Associations)**

Gender stereotypes are people's beliefs about how the sexes differ (descriptive stereotypes) or should differ (prescriptive stereotypes). By age 3 years, most children are aware of sex differences in toy and activity preferences, clothing, parental roles (e.g., fathers work outside the home), some more obvious sex-typed occupations, and salient social behaviors (e.g., aggression; Huston, 1983). When children first acquire gender stereotypes, they tend to view them as rigid moral imperatives (i.e., their stereotypes are prescriptive as well as descriptive; Huston, 1983; Ruble et al., 2006). Once children attain gender constancy at around age 6 years or 7 years, many (but not all) show decreased rigidity and increased flexibility in their stereotypes (i.e., come to believe that even if an activity is performed more frequently by persons of one sex, it is nonetheless permissible for persons of both sexes; Miller et al., 2006; Signorella, Bigler, & Liben, 1993; Ruble et al., 2007; Trautner et al., 2005). Children's knowledge of descriptive stereotypes continues to expand into adolescence, as children notice...
additional sex differences in personality traits, scholastic abilities, occupations, social motives, and more subtle social behaviors (Huston, 1983; Ruble et al., 2006).

The usual ways of assessing individual differences in children’s gender stereotypes, however, are ill-suited to testing hypotheses of the GSSM. We briefly describe these traditional strategies and then consider some assessment strategies more suitable for tests of the GSSM.

**Traditional stereotype assessments.** In the traditional approach to assessing individual differences in children’s gender stereotypes, researchers begin by compiling lists of male-typed and female-typed attributes; the lists are based either on empirically observed differences between the sexes or, more commonly, on judges’ ratings of the degree to which each attribute is more typical of (or desirable for) one sex than the other. Sometimes more specialized lists are constructed. For example, the male-typed and female-typed lists might each be subdivided into occupations, activities, and traits (e.g., Aubry et al., 1999; Liben & Bigler, 2002; Miller et al., 2006; Serbin et al., 1993); sometimes the domain of personality traits is subdivided into desirable attributes versus undesirable attributes (e.g., Aubry et al., 1999). The lists (or sublists) are then presented to new participants, for whom stereotype knowledge and flexibility scores are calculated (for each list or sublist). Stereotype knowledge is the number of descriptive stereotypes known; participants are asked to indicate whether each attribute is more common to boys or girls (or to men or women), and the number of “correct” responses is the index of knowledge. Stereotype flexibility versus rigidity is assessed by asking participants to indicate whether each attribute is appropriate for only one sex or is acceptable for both sexes; the number of “both” responses is the index of flexibility.

Such composite measures of stereotype knowledge and flexibility are valuable for many purposes (e.g., for investigating factors that influence children’s knowledge of commonly held cultural stereotypes). For example, children’s basic awareness of their membership in a gender category (i.e., correctly answering the question, “Are you a boy or a girl?”) is associated with a surge in stereotype knowledge at around ages 3–4 years, and children’s attainment of gender constancy at around age 6 years is associated with increased stereotype flexibility (Ruble et al., 2007).

However, the traditional approach to stereotype assessment is ill suited to testing hypotheses of the GSSM. The main problem is that knowledge and flexibility scores indicate only the number of stereotypes a child knows or endorses and ignore which stereotypes the child holds. Two children may endorse a similar number of same-gender stereotypes yet not overlap at all in which specific attributes these are: One boy may believe that boys should inhibit expression of tender emotions, use aggression to attain goals, and do so interactively affect a component of gender identity (e.g., Nosek et al., 2002).

**Focusing on specific attributes.** A first strategy is to select a specific focal attribute for study and to assess both stereotype and self-perception with respect to that attribute. For example, a man may feel that gender identity affects his way (“I want to be like girls; girls let boys have their way, so I should let this boy have his way”). Thus, asking children to rank the importance of each of a set of attributes, both for persons of their own sex and for persons of the other sex, is informative. It might also be fruitful to devise measures that capture the relative certainty, clarity, extremity, and accessibility of a focal stereotype (Martin, Ruble, & Szrybalo, 2004).

Another advantage to focusing on one attribute at a time is that doing so facilitates the study of contextual qualifiers. Gender-attribute associations (stereotypes) are frequently, but not always, mentally represented as context-dependent (e.g., “Boys do X more than girls in Situation A but not in Situation B”). Similarly, self-attribute associations (e.g., self-guides) are also often context-dependent (e.g., “I should do X in Situation A but not in Situation B”). Sex differences in social behavior often depend on contextual factors (e.g., group size, familiarity of interaction partner, private or public setting, mixed-sex vs. single-sex group, male vs. female interaction partner; Becker & Eagly, 2004; Deaux & LaFrance, 1998; Deaux & Major, 1987; Eagly et al., 2000; Hyde, 2005; Leaper & Smith, 2004; Maccoby, 1998; McHale, Kim, Whiteman, & Crouter, 2004; Zakriski, Wright, & Underwood, 2005). For example, a sex difference in assertion is larger in mixed-sex groups of children than in same-sex groups of children (Leaper & Smith, 2004). In the GSSM, contextual influences on gendered behavior become cognitively represented (to varying degrees for different children). For example, some girls may feel it is appropriate for girls to be obsequious primarily with men, and some boys may feel it is appropriate for boys to be controlling and demanding mainly with women. Gender identity should combine with these contextually tagged stereotypes to promote self-guides mainly (or only) when interacting with a person of the other sex (e.g., “I want to be like girls; girls let boys have their way, so I should let this boy have his way”). Thus, context-specific stereotypes translate into context-specific self-guides, contributing to situational specificity in social behavior. To study such context effects, it is necessary to
hold an attribute constant while varying contextual tags; this is true when assessing both stereotype and self-perception. For practical reasons, studying how gender-stereotyped expectations vary with context can be undertaken with only a limited number of attributes at a time.

The range of psychological attributes from which a researcher can pick a focal attribute for study is virtually unlimited. Investigators need not limit their focal attributes to those that are gender-differentiated at the group level, though investigators often will be interested in such attributes. Investigators should consider expanding their choices of focal attributes beyond the usual domains of activities, traits, and occupations. Table 1 provides a partial listing of domains of gender-differentiated attributes along with one or two examples of male-typed and female-typed attributes for each domain. The table includes the traditional domains but also some domains for which stereotypes are rarely (if ever) assessed. Researchers generally should resist the temptation to aggregate stereotype knowledge or endorsement scores across domains. One cannot assume, for example, that children who believe that boys should excel in sports necessarily believe that boys should also be competent in science or aggression.

**Gender ideologies.** Although many stereotypes studied in research on the GSSM will focus on discrete behaviors or characteristics, such as those illustrated by the exemplars in Table 1, clusters of intercorrelated stereotypes capturing a gender ideology or philosophy can also be used in tests of the model. In such cases, the ideology is the attribute under study. Several examples of gender ideologies that might fruitfully be studied with respect to GSSM processes are worth mention. First is the belief that traditional gender roles (e.g., homemaker for women, wage earner for men) should be perpetuated (Spence & Helmreich, 1972). This philosophy is associated with reduced self-esteem, at least for girls (Antill, Goodnow, & Cotton, 1993; McHale, Crouter, & Tucker, 1999). Second is intergroup bias, or the tendency to see one’s own gender as superior (e.g., to assign more favorable traits and fewer unfavorable traits to one’s own gender than to the other). This bias is common among younger children, but even some preadolescents exhibit it (Bigler, 1995; Egan & Perry, 2001; Powl-...

<table>
<thead>
<tr>
<th>Domain</th>
<th>Male-typed</th>
<th>Female-typed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreational activities</td>
<td>Sports, chess</td>
<td>Dolls, hopscotch</td>
</tr>
<tr>
<td>Platonic partners</td>
<td>Male groups and friends</td>
<td>Female groups and friends</td>
</tr>
<tr>
<td>Academic interests</td>
<td>Math, science</td>
<td>English, language</td>
</tr>
<tr>
<td>Occupations</td>
<td>Scientist, firefighter</td>
<td>Nurse, secretary</td>
</tr>
<tr>
<td>Household tasks</td>
<td>Garbage, yard work</td>
<td>Dishes, babysitting</td>
</tr>
<tr>
<td>Psychopathology</td>
<td>Aggression, compulsive body building</td>
<td>Depression, eating disorders</td>
</tr>
<tr>
<td>Personality traits</td>
<td>Bravery, assertion</td>
<td>Empathy, gentleness</td>
</tr>
<tr>
<td>Stylistics</td>
<td>Short hair, pants</td>
<td>Dresses, make-up</td>
</tr>
<tr>
<td>Fantasy life</td>
<td>Heroics</td>
<td>Romance</td>
</tr>
<tr>
<td>Sexual orientation</td>
<td>Female partners</td>
<td>Male partners</td>
</tr>
<tr>
<td>Relationship styles</td>
<td>Avoidant</td>
<td>Preoccupied</td>
</tr>
<tr>
<td>Social cognition</td>
<td>Hostile attributions, instrumental goals</td>
<td>Internal attributions, relational goals</td>
</tr>
</tbody>
</table>
attitudes toward the groups varying from very positive to very negative. For example, they might view girls who display rigidly hyperfeminine behavior, or pink frilly dress syndrome (Halim & Ruble, in press), as nice but helpless. These subgroups provide concrete examples to children of alternate routes to being male-like or female-like, and they can help shape children’s ideas of the type of boy or girl that they would like to be (Ruble & Martin, 2002). Moreover, gender identity should propel children to gravitate primarily toward the same-gender subgroups they evaluate favorably. Thus, subgroup stereotypes and attitudes work in conjunction with gender identity to contribute to within-gender differentiation in social behavior, interests, competencies, personality, and adjustment.

In addition, children’s gender identity (e.g., their sense of gender typicality or contentedness) may be influenced by the degree to which they perceive themselves to possess salient and valued attributes of a favored same-gender subgroup. Thus, subgroup identities are likely to figure in both stereotype emulation and identity construction processes.

Experimental manipulation of stereotypes. Experimentally manipulated gender stereotypes may also be used in tests of the GSSM. Two powerful situational factors that can induce a new stereotype are labeling and modeling. When adults label a novel toy as being for girls or for boys, children adopt the new stereotype as a guide for their own behavior (Bradbard & Endsley, 1983; Bradbard, Martin, Endsley, & Halverson, 1986; Martin, 2000; Martin et al., 1995). Similarly, when children see men and women diverge in the attributes they display, children gender-stereotype the attributes and imitate the ones they have encoded as same-sex typed (Perry & Bussey, 1979; Ruble, Balaban, & Cooper, 1981). Children with stronger gender identity should be especially inclined to emulate attributes labeled or modeled to be same-gender appropriate.

Attribute Self-Perceptions (Self-Attribute Associations)

Dimensions of self-perception. There exist several dimensions on which children’s self-perception of an attribute can be assessed for purposes of testing the GSSM. A basic dimension is the child’s perception that an attribute characterizes the self (e.g., “I am X” or “I do X”). However, it may be appropriate to assess self-perception on other dimensions, such as interest (e.g., “I like X”), self-efficacy (e.g., “I am good at X”), salience or importance (e.g., “Being X is important to me”), self-guides (e.g., “I ought to do X” or “I would like to be X”), behavioral intentions (e.g., “I will do X”), outcome expectancies (e.g., “If I do X, then Y will happen”), and possible future selves (e.g., “Some day I might do X”). Many of these types of self-perceptions are influential mediators of overt behavior.

We noted that gender stereotypes can carry contextual qualifiers indicating that a particular behavior is especially expected of persons of a given sex in a certain situation (e.g., “After dinner, women clean up”; “On a date, the boy pays for the girl”). Self-perceptions can also carry contextual tags (e.g., “When I am with my girlfriend, I am the boss”). When investigating the role of context in GSSM processes, it is important to assess stereotypes and self-perceptions with respect to the same contextual cues.

Problems with global, composite indexes of gender typing.

Predictions of the GSSM are expected to be met to the extent that a stereotype and a self-perception match in attribute content. In testing the stereotype emulation hypothesis, this is most easily achieved when a specific attribute (e.g., math interest, deference toward men) or a cluster of intercorrelated attributes (e.g., exemplars of masculine ideology) is predicted from children’s stereotypes for the same attributes. The GSSM eschews the use of composite gender-typing indexes formed by aggregating across children’s self-perceptions of diverse gender-typed attributes that are related only by virtue of the fact that they are gender-differentiated at the group level. This represents a significant departure from traditional practice in research on gender typing and warrants further comment.

A traditional objective of research on gender differentiation has been to identify influences on broad composite indexes of children’s gender typing (e.g., aggregated measures of children’s self-perceptions of a wide range of normatively gender-typed attributes). This work was usually guided by a view of gender typing as a personality variable, one perhaps originating in identification with the same-sex parent. As we noted, Spence (1985) challenged the traditional unidimensional model (of masculinity and femininity as opposite ends of a single continuum) as well as Bem’s (1981) bidimensional model (of masculinity and femininity as orthogonal dimensions), arguing that it is more realistic to construe gender typing as multifactorial. Her conclusion accords with data indicating that neither male-typed nor female-typed attributes are highly intercorrelated across domains and that different children of the same sex adopt different subsets of same-gender-typed attributes (Constantinople, 1973; Harris, 1995; Huston, 1983; Maccoby, 1998). Indeed, some of the exemplar entries within a given column of Table 1 are even negatively correlated (e.g., boys’ math competence and time spent in sports; McHale et al., 2004). Even the entries within certain cells of the matrix in Table 1 (e.g., male-typed recreational activities) may be multifactorial. Such evidence calls into question the validity of broad, composite gender typing measures that aggregate over multiple attributes that the researcher has determined to differentiate the sexes at the group level.

Although there is no basis within the GSSM for aggregating self-perceptions across diverse attributes that distinguish the two sexes as groups, for certain tests of the model’s hypotheses, it is permissible to aggregate across attributes so long as the aggregating is based on each child’s unique perspective on gender. As we describe in the following section, it will sometimes be informative to conduct omnibus tests of the model’s hypotheses in which such a strategy is used. For example, an omnibus test of the stereotype emulation hypothesis would involve seeing whether gender identity motivates children to emulate a set of attributes that the individual child personally perceives to be appropriate for his or her sex.

Three Key Hypotheses

The three constructs just discussed are the building blocks of the GSSM. The variables exemplifying each construct are no doubt influenced by numerous factors extraneous to the GSSM (e.g., culture, interactions with parents and peers, hormones, genes), but the GSSM holds that each type of variable is also a product of a cognitive interplay between the other two types of variables. In this section, the hypothesized causal pathways among the three constructs are elaborated. More space is devoted to the stereotype
emulation hypothesis—the notion that gender identity and gender stereotypes interactively affect attribute self-perception—than to the other two hypotheses because considerably more theory and research have been devoted to the stereotype emulation hypothesis, owing to the presumed central role of stereotype emulation in gender differentiation.

The Stereotype Emulation Hypothesis

The stereotype emulation hypothesis specifies that the more that children identify with a gender collective, the more they will perceive in themselves the attributes they personally view as more typical of, or desirable for, persons of that collective. Stereotype emulation begins quite early, soon after children attain basic gender identity around age 3 years (Carter & Levy, 1988; Fagot, Rodgers, & Leinbach, 2000; Lobel & Menashri, 1993; Martin & Halverson, 1981; Martin et al., 2002, 2004; Powlisha, 1995; Ruble et al., 2006; Spence & Hall, 1996 Weinraub, Clements, Socklof, Ethridge, & Myers, 1984; Zosuls et al., 2009). Indeed, by age 3 years, a child’s self-concept contains almost exclusively gender-congruent information (Hannover, 2000).

As children age, however, two crucial developments occur. First, individual differences on the various dimensions of gender identity (other than the membership knowledge component) emerge and stabilize; different children begin to show different profiles of gender contentment, felt pressure, felt gender typicality, and gender centrality. Second, individual differences in gender stereotypes, especially in prescriptive stereotypes and ideologies, develop. At some point, these two sets of cognitions come together to form interlocking cornerstones of a causal cognitive system that guides children's self-perceptions of specific attributes. The primary role of gender identity is to motivate children to emulate whatever stereotypes they have internalized, but owing to individual differences in children’s stereotypes, the specific attributes influenced by gender identity will vary among children of each sex. For example, gender contentedness might encourage one boy to adopt aggressive, macho, risk-taking behaviors but lead another to pursue science, math, or sports; felt pressure might cause one girl to avoid math and science but another to avoid assertive behavior, perhaps especially when with boys or men. These ideas are consistent with the data indicating that different children of the same sex adopt different sex-typed behaviors (Harris, 1995; Macoby, 1998; Spence, 1985).

In this section, we outline ways to test the stereotype emulation hypothesis, summarize evidence consistent with the hypothesis, and identify several issues worth examining in tests of the hypothesis. Particular attention is given to potential moderators of stereotype emulation.

Testing the stereotype emulation hypothesis. There is no single definitive test of the stereotype emulation hypothesis. The key requirement in any test of the hypothesis is that gender identity, gender stereotype, and self-perception all be assessed and the interactive influence of the first two on the third be evaluated. It is particularly crucial that longitudinal or experimental designs be used to rule out alternative causal pathways. In a longitudinal test, the interactive effect of Time-1 identity and Time-1 stereotype on Time-2 attribute adoption (with the Time-1 level of all three variables controlled) is evaluated. Pure experimental tests of the hypothesis are limited to instances in which both identity and stereotype are experimentally manipulated (e.g., identity is made salient by contextual cues, and stereotype is created by labeling or modeling), and their interactive effect on attribute adoption is evaluated. Hybrid tests in which either identity or stereotype is manipulated and the other is assessed at naturally occurring levels are also possible. For example, one might see whether children with naturally higher levels of gender identity are more susceptible to experimenter-supplied gender labels for novel toys (e.g., “This toy is for boys/girls”) or more likely to imitate acts experimentally created to be same-gender-typed (e.g., acts shown to be performed more often by same-sex models than by other-sex models).

Tests of the stereotype emulation hypothesis will vary in breadth of the attributes under study. A researcher may begin with an interest in predicting a particular target attribute (e.g., math interest) or cluster of attributes (e.g., intercorrelated signs of masculine ideology), but the attribute(s) need not be gender typed at the group-differences level. Omnibus tests of the stereotype emulation hypothesis—tests of the hypothesis that involve assessing and aggregating stereotypes and self-perceptions across multiple attributes—can also be undertaken so long as any aggregating is carried out in a way that respects the core principles of the model. Omnibus tests are appropriate when researchers wish to make more general statements about how GSSM processes work, statements that transcend how the processes work with respect to a particular attribute. For example, one might wish to see whether, at a particular age, gender identity influences the self-perception of attributes of one domain (e.g., recreational interests) more than attributes of another domain (e.g., personality traits). The researcher could block, for each child and for each domain, the exemplars perceived by the child as same-sex appropriate, other-sex appropriate, or neither. This procedure essentially sorts the attributes into three ideographically determined equivalence classes based on each child’s personal beliefs about how the attributes are gender-typed. The researcher could then see whether gender identity especially motivates emulation of attributes categorized by the child as same-sex appropriate and whether such a tendency differs across domains and ages.

Stereotype emulation is often context specific. Presumably, in every day life, aspects of situations combine with gender identity and contextually tagged stereotypes to contribute to the context-specificity of self-perceptions and behavioral intentions. To examine this process, it is important that stereotype and self-perception assessments be matched on contextual cues. Systematically varying the contextual cues is desirable as well. For example, if one wants to predict a context-specific self-perception or behavioral intention (e.g., a girl’s intention to be submissive around boys) from gender identity and gender stereotype, it would be informative to assess contextually tagged stereotypes (e.g., the degree to which the child feels girls should be submissive specifically when with boys vs. when with other girls) and contextually tagged self-perceptions (e.g., the girl’s self-perception of submission both around boys and around girls).

Evidence for the stereotype emulation hypothesis. Only in a handful of studies with children has children’s self-perception or adoption of attributes as a function of the interaction of gender identity and stereotype been examined. In some studies, the dependent variable has been behavioral adoption (rather than self-perception) of an attribute, but results are nonetheless consistent with the stereotype emulation mechanism in that the effects are
probably cognitively mediated by the types of self-perceptions emphasized in the model (e.g., perceptions of self-efficacy, behavioral intentions; Bandura, 1986). Three such studies have examined stereotype emulation with an experimental manipulation of either the identity variable or the stereotype variable. In two of these studies, children who had attained gender conservation were more likely than other children to display toy preferences in accordance with gender stereotypes that had been experimentally created via modeling (Frey & Ruble, 1992; Ruble et al., 1981). In a third study, when children’s gender identity was made salient (via a priming task), children’s tendencies to adhere to gender stereotypes (again created via modeling) increased (Grace et al., 2008). These studies offer supportive evidence for the interaction hypothesis, but the kinds of gender identity and stereotypes examined have been limited.

Three studies have found support for stereotype emulation with self-report measures of all three central constructs. Cvencek (2008) used three pictorial scales to measure the association of (a) self with male versus female (gender identity), (b) math with male versus female (gender stereotype), and (c) self with math versus reading (i.e., math self-perception). Fifth graders with stronger associations of self with male and of male with math also demonstrated a stronger association of self with math. Similar effects were obtained with implicit (IAT) measures of the constructs.

Two studies of stereotype emulation have been conducted by Menon et al. (2009). The first, with 305 third through eighth graders, was an omnibus test of the hypothesis. Children were administered three measures of gender identity (gender contentedness, felt pressure, and gender typicality). Their stereotypes for 62 school behaviors (e.g., “Make a new boy at school feel welcome by talking with him at lunch,” “Learn a new kind of math problem quickly,” “Act tough on the outside when afraid on the inside”) were assessed by asking them to sort the behaviors (written on index cards) into seven piles depending on the degree to which they viewed each behavior as more typical of boys or of girls. Children’s self-perceived efficacy for each behavior was assessed. Gender identity (felt typicality and contentedness but not felt pressure) moderated the degree to which children’s stereotypes predicted their self-efficacy (in ways reflecting cognitive balance).

In the second study, with 236 fourth through eighth graders, the researchers investigated whether gender identity interacts with four specific gender ideologies to affect self-perception, adjustment, and peer-reported behavior. The ideologies were machismo (beliefs that it is important for members of one’s sex to be tough, etc.), work sexism (beliefs that men should be the boss, be paid more than women, etc.), parenting sexism (beliefs that fathers should make family decisions, that mothers should clean and cook, etc.), and dating sexism (beliefs that boys should ask the girl out, that girls should not argue with their boyfriend, etc.). Evidence for stereotype emulation varied with sex of child, dimension of gender identity, ideology, and dependent measure. Felt pressure for gender conformity was a particularly consistent moderator of an ideology’s effects. For boys, felt pressure (and also gender contentedness) promoted an association between machismo ideology and self-efficacy for machismo behaviors, and felt pressure and work sexism synergistically contributed to self-reported narcissism. For girls, felt pressure interacted with both parenting sexism and dating sexism to predict internalizing problems (peer reports of submissiveness, fearfulness, victimization by peers, etc.), and felt gender typicality interacted with dating sexism to predict self-reports of self-sacrificing behavior. All of these interaction effects conformed to the expected pattern (e.g., girls who viewed the female role as subservient and reported strong pressure for gender conformity were perceived by peers as submissive and victimized). Although both of the Menon et al. (2009) studies were concurrent–correlational, and thus results are ambiguous with respect to direction of causality, they nonetheless offer promising support for the stereotype emulation hypothesis.

Complete tests of the stereotype emulation hypothesis require examining interactions of gender identity and gender stereotypes. However, two large literatures with children provide partial tests of the hypothesis. One literature comprises studies that examine the impact of gender identity on attribute self-perception but do not measure (or manipulate) stereotype(s). The second literature comprises studies that examine the impact of gender stereotypes on self-perception but do not assess (or manipulate) gender identity. Although each set of studies includes only one-half of the predictive formula (i.e., either identity or stereotype, but not both), the studies strongly suggest that identity and stereotypes act in concert.

In studies examining whether gender identity affects self-perception, children’s gender stereotypes have not been assessed; it is simply assumed that most children possess commonly shared stereotypes and that gender identity motivates adoption of these stereotypes. For example, basic gender identity spurs early gendered conduct (Ruble et al., 2006), and preschoolers who have mastered gender stability (i.e., know that gender remains stable over time) or who view gender as a central feature of their identity are more likely than other children to display rigid gender typing (e.g., among girls, to insist on wearing pink frilly dresses; Halim, Ruble, Murphy, Greulich, & Zosuls, 2009); it is likely that children’s knowledge of gender stereotypes contributes to these effects. Several of Egan and Perry’s (2001) dimensions of gender identity also relate to gender typing in ways that suggest the operation of (unmeasured) stereotypes (Carver et al., 2003; Corby et al., 2007; Egan & Perry, 2001; Martin & Little, 1990; Perry & Sharif, 2002). Gender typicality is associated with instrumental traits for boys but not for girls, and for both sexes, gender typicality is linked with stronger preferences for gender-typed toys and same-sex playmates. Gender contentedness is associated with low self-efficacy for female-typed activities for boys but not for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instrumental behavior for girls but not for boys and is tied to low aggression and low instrumental behavior for girls. Felt pressure is associated with reduced instru-
and stereotype rigidity (number of stereotyped attributes perceived as permissible for only a single sex). It is expected that children with greater stereotype knowledge or rigidity will be more likely than other children to adopt same-gender attributes and to shun other-gender ones. Several studies have found the expected associations (e.g., Aubry et al., 1999; Liben & Bigler, 2002; Miller et al., 2006; Serbin et al., 1993). However, the associations are weak and inconsistent, most likely because this approach fails to satisfy the content match criterion. Indeed, when content match is achieved, fairly strong associations are found between (a) the degree to which children achieve in math, want to learn a particular musical instrument, or prefer playmates of a particular sex, and a particular occupation, self-report a particular personality trait, or play with a particular toy and (b) the degree to which children believe the behavior is more common or desirable for persons of their own sex than for the other (Crabb, 1978; Eccles, Wigfield, & Schiefele, 1998; Edelbrock & Sugawara, 1978; Harrison & O’Neill, 2003; Liben & Bigler, 2002; Martin et al., 1995; Martin et al., 1999; Ruble & Martin, 2002). Additional evidence attesting to the power of specific stereotypes on specific behaviors comes from studies in which a stereotype is created experimentally, either through labeling (e.g., telling children that a novel toy is for girls or for boys; Bradbard & Endsley, 1983; Bradbard et al., 1986; Martin, 2000) or modeling (Perry & Bussey, 1979; Ruble et al., 1981).

Finally, clinical evidence supports the stereotype emulation hypothesis. Children diagnosed with gender identity disorder experience gender as a central feature of their identity but ardently desire to be the other sex. They exhibit strong interests in cross-sex attributes, and they sometimes verbalize reasoning reflecting conscious efforts to bring their attributes into line with cross-sex stereotypes (e.g., ask for cross-sex toys and clothing, ask to be given a name appropriate for the other sex; Bradley & Zucker, 1990; Green, 1987; Rekers, 1985; Zucker, 1992). It is difficult to escape the conclusion that their cross-sex identity motivates them to adopt attributes they associate with the other gender.

Additional issues concerning stereotype emulation. It may be worthwhile to explore several additional questions when investigating stereotype emulation. First, although different varieties of gender identity are generally expected to press for cognitive consistency in a similar direction, different forms of gender identity may affect certain kinds of self-perceptions to different degrees. For example, felt pressure for gender conformity may reflect anticipated shame for gender failures or transgression. If so, felt pressure may especially lead children to adopt self-guides specifying that they should or ought to adhere to a same-sex stereotype or shun a cross-sex one. A risk of such self-guides is that they can promote agitation, poorly regulated efforts, frustration, and aggression (Crocker & Park, 2004; Higgins, 1991; Ryan & Deci, 2004). In contrast, when stereotype emulation is fueled by gender contentedness or gender typicality, the resulting self-perceptions are more likely to take the form of perceptions of self-efficacy (“I can do that too”) and a simple, low-key desire to be like same-sex others (“I would like to do that too”).

Second, conflicts between gender-congruent and gender-incongruent response options may be especially likely to activate stereotype emulation (Ruble et al., 2006). For example, a child may face a choice between an intriguing cross-sex activity and a relatively boring same-sex one. Such conflicts may have effects similar to those of encountering an other-sex person—increasing the salience of both gender identity and gender stereotype and thereby tilting the child’s choice in the direction of gender consistency. Similar phenomena occur among adults. For example, many women who find a career in math and science appealing (and within their capabilities) forgo it if they view it as conflicting with the homemaker role (Holland & Eisenhart, 1988).

Third, threats to one’s sense of gender adequacy may especially stimulate stereotype emulation. Spence (1985) suggested that when a child’s gender identity is threatened (e.g., a girl is teased for playing with boys), the child is motivated to restore (or conserve) it by focusing attention onto an alternative, compensating same-sex attribute (e.g., the girl might remind herself of her babysitting skills). Experimental paradigms for investigating adults’ reactions to threats to their gender identity (e.g., Vandello, Bosson, Cohen, Burnaford, & Weaver, 2008) might be adapted for use with children.

Fourth, the fit of the child with the social context can scaffold or undermine stereotype emulation. Stereotype emulation should be especially robust when children share the stereotypes and, therefore, the expectations of interaction partners. For example, in a classroom of many like-minded peer stereotypers, stereotype emulation is likely to be stronger than when at home with egalitarian parents (Ruble & Martin, 2002). The degree to which a child’s stereotypes overlap with the peer group’s can be estimated by correlating the child’s personal template of stereotypes for a set of attributes with a consensus template or prototype based on averages of peers’ stereotypes for the attributes (see Horowitz & Turan, 2008).

Finally, some children believe that gender differences are biologically rooted and immutable (i.e., espouse an entity, or essentialist, theory of gender), whereas others believe that gender differences are socialized and changeable (i.e., adopt an incremental theory; Carter & Patterson, 1982; Taylor, 1996). Adults who believe that differences in personality between their ethnic group and another are fixed are especially likely to adopt salient attributes of their group (Hong, Veach, & Lawrenz, 2003). Children who espouse an entity theory of gender may likewise be the most likely to emulate gender stereotypes.

The Stereotype Construction Hypothesis

The GSSM’s stereotype construction hypothesis is that children project their own attributes onto a gender collective to the extent that they identify with the collective (e.g., “I am kind and I am a typical boy, so boys are kind”). To test this hypothesis requires evaluating interactive influences of gender identity and attribute self-perception on gender stereotype. The hypothesis can be tested with a single focal attribute (e.g., math interest, musical ability) or with an omnibus design (i.e., a design with multiple attributes). For example, one might wish to see whether children project self-perceived attributes of a particular domain onto the same-gender collective (to the extent their gender identity is strong). Thus, in an omnibus test, the researcher could block each child’s self-perceptions of the attributes into those strongly perceived in the self, those somewhat perceived in the self, and those not perceived in the self and then see whether gender identity interacts in the expected manner with the blocking variable to predict stereotyping.
of the attributes. Experimental tests (e.g., in which identity or self-perceptions are manipulated) are also possible.

The stereotype construction hypothesis is consistent with findings indicating that adults project their own attributes (both socially desirable and socially undesirable ones) onto groups to which they belong (Cadieu & Rothbart, 1996; Greenwald et al., 2002; Krueger & Stanke, 2001; Ross, 1977). Children also sometimes use their own behaviors and preferences to form stereotypes. When children are shown novel objects, asked how much they like each one, and then asked how much other boys and girls would like them, they attribute their own preferences to same-sex others (Martin et al., 1995). Children's patterns of gender typing may also influence their gender ideologies. For example, children with cross-sex personality traits and interests hold more egalitarian attitudes toward sex roles (Liben & Bigler, 2002; McHale et al., 2004; Signorella, 1999; Spence & Hall, 1996). Thus, attributes perceived in the self may form the basis of both descriptive and prescriptive gender stereotypes.

A crucial factor that putatively influences projection of a self-perceived attribute onto others is the cognitive accessibility of the attribute (Markus, Smith, & Moreland, 1985; Newman, Duff, & Baumeister, 1997). Presumably, attributes acknowledged in the self are more accessible than are attributes not seen in the self and thus are more likely to come to mind when making inferences about others (e.g., more likely to be incorporated into one's group stereotypes or to be used as a basis for explaining another person's actions). If this is so, then one might expect attributes perceived in the self to be as easily projected onto the other-sex collective as onto the same-sex collective. However, people generally are biased to project their attributes (including negative ones) onto people whom they like or perceive as similar to themselves (Bramel, 1962; Edlow & Kiesler, 1966). Given that gender identity encompasses feelings of liking for and similarity to a gender category, gender identity should influence the direction and strength of people's tendencies to project their qualities onto gender groups. Indeed, women who do not associate math with the self dissociate math from the female gender to the extent that they identify with being female (Nosek et al., 2002). Thus, although most people can be expected to project mainly onto their same-sex collective, people with weak gender identity should not exhibit this bias, and people who are strongly cross-gender-identified should be inclined to project their attributes onto the other-gender collective. Other developmental theorists have also suggested that children's projection of their qualities onto their gender group is magnified by strong gender identity (Liben & Bigler, 2002; Martin, 2000), but the predicted interaction has yet to be tested directly with children.

That children's gender identity might combine with their self-perceived gender typing to foster gender stereotypes may help explain why children whose parents hold egalitarian attitudes about gender roles sometimes develop gender ideologies that are foreign and dismaying to the parents. Biology may sometimes be an instigator. For example, a boy born with an inclination toward antisocial conduct is likely to gravitate toward and befriend other antisocial boys. He may fulfill his sense of same-gender typicality by perceiving himself to be similar to an antisocial male subgroup. Thereafter, his sense of gender typicality may combine with his self-observation of antisocial conduct to cause him to perceive antisocial behavior as a same-sex typical and desirable attribute.

It is interesting that people generally are biased to project even their negative attributes onto liked, similar, and same-collective others (rather than onto disliked, dissimilar, and other-collective persons). Presumably, the stigma of possessing a negative attribute can be diluted if it is shared with other positively evaluated people.

The GSSM's stereotype construction hypothesis specifies that strong same-gender identity encourages people to project an attribute perceived in the self onto the same-gender collective. However, when people perceive a negative quality in a group to which they belong, they tend to project that negative attribute onto another group. Mechanisms controlling the projection of a negative same-gender stereotype onto the other gender are beyond the GSSM, but it is easy to imagine ways that gender identity might moderate this process.

The Identity Construction Hypothesis

The identity construction hypothesis specifies that the more that children's self-perceived attributes match their stereotypes for a gender, the more they identify with that gender. For example, the more that children view themselves as exemplifying salient and valued same-gender stereotypes, the more gender typical they should feel. However, gender typicality is not the only aspect of gender identity affected by interactions of stereotypes and self-perceptions. We consider how stereotypes and attribute self-perceptions might interact to influence each of the gender identity components that we discussed earlier.

Membership knowledge. It is likely that progression through Kohlberg's (1966, 1969) stages of gender identity development is primarily a function of general cognitive growth rather than a product of reflecting on how well one's attributes match one's stereotypes. However, it is conceivable that the attainment of basic membership knowledge (answering correctly, "Are you a boy or a girl?") is influenced, in part, by perceiving a match between one's own attributes and same-gender stereotypes (Mischel, 1966). That is, children might divide other people into males and females, cognitively associate each gender with certain attributes, and then assign themselves to a gender category depending on how much of a match they notice between their own attributes and the stereotype qualities of the genders (e.g., "Boys do A, B, and C, and girls do X, Y, and Z; I do A, B, and C and not X, Y, and Z; therefore, I am a boy"). However, recent data suggest that children's ability to assign themselves to a gender category may precede rather than follow many gender-typed preferences (Zosuls et al., 2009). Perhaps it is more likely that children's attainment of the later stages of membership knowledge development—gender stability and gender conservation—are assisted if children observe over time that their sex remains constant even when they occasionally engage in a cross-sex activity (e.g., play with other-sex children or other-sex toys).

Gender typicality. Spence (1985, 1993) argued that people base their sense of gender typicality on self-perception of multiple attributes, weighting each according to its place in a personal hierarchy of same-gender stereotypes. Because the content and weightings of the attributes in these hierarchies vary from person to person, each person uses a unique calculus to estimate his or her gender typicality.

An omnibus test of Spence's (1985, 1993) hypothesis might begin with an assessment of (a) the degree to which children
perceive each of a set of attributes as important for their sex and (b) the children’s self-perceptions of the attributes. For each child, a correlation would be computed between the stereotype importance ratings and the self-perception ratings. The size of this correlation should forecast the children’s sense of gender typicality over time. The process could be repeated for different domains of attributes and different ages.

The available evidence accords with the view that preadolescents’ estimates of their gender typicality are based on self-perception of multiple sex-typed attributes. Egan and Perry (2001) found that early adolescents’ self-perceptions on seven dimensions of gender typing (same-sex activities, other-sex activities, same-sex traits, other-sex traits, liking for same-sex peers, liking for other-sex peers, and heterosexual interest) cumulatively accounted for about one-third of the variance in feelings of same-gender typicality for both boys and girls. Children’s stereotypes were not assessed, however, and presumably the percentages of variance accounted for would have been even greater had each child’s self-perceptions been weighted by the child’s personal ratings of the typicality or importance of each attribute for his or her sex. Also, additional potentially influential domains of self-perceived gender typing were not assessed (e.g., nonverbal stylistic attributes, felt attractiveness to the other sex). The Egan and Perry data were concurrent–correlational and therefore open to the alternative interpretation that gender identity influences gender typing. However, Carver et al. (2004) showed that at least one aspect of self-perceived gender typing—heterosexual interest—forecasts increases in preadolescents’ sense of gender typicality over time.

Future research should expand the range of attributes studied as potential contributors to felt typicality in children of different ages. For young children, self-observation of concrete, easily observable aspects of gender typing, such as activity choices and playmate preferences, may be paramount. It was suggested earlier that with age, children perceive their peers as belonging to various subgroups (e.g., jocks, brains, girly girls, tomboys), form stereotypes and attitudes about each subgroup, and strive to emulate the attributes of a desired subgroup. The degree to which children see themselves as matching the stereotypes of a valued subgroup may be especially important to children’s construction of an overall sense of same-gender typicality.

In the preceding discussion of the stereotype construction hypothesis, it was suggested that people tend to project their own attributes onto same-sex others and that gender identity encourages this process. It seems likely that one product of projection of one’s attributes onto the same-gender collective is an enhanced sense of gender typicality. Indeed, expectation of stronger felt gender typicality may be a major motive underlying the projection mechanism. Thus, felt gender typicality not only contributes to but results from the projection process, in the manner of a self-sustaining system.

There remain a number of additional questions about the development of felt gender typicality that can be addressed in future research: What combinations of stereotype variables with self-perception variables affect gender typicality, and do the influential combinations depend on age? Is a sense of gender typicality developed or restored more easily for children who understand compensation (i.e., who appreciate that there exist alternate routes to feeling gender typical) or who do not possess an overly narrow, restricted conception of what is required to be gender typical? Spence (1985; Spence & Buckner, 1995) suggested that felt gender typicality is based mainly on self-perception of same-gender attributes and not undermined much by possession of cross-gender attributes (except perhaps when a cross-sex attribute is negatively correlated with an important same-sex one). This hypothesis also warrants test.

**Gender contentedness.** Contentment with one’s gender is likely to rest on some of the same factors that felt gender typicality does (e.g., perceiving the self to match same-gender stereotypes). Mischel (1966, 1970) suggested that perceiving the self to be rewarded for same-sex behavior promoted gender contentment (e.g., “I am rewarded for doing boy things; therefore, I like being a boy”).

It is likely that perceiving the self to possess, attributes that are cross-gender typed is an especially important source of gender discontentment. Indeed, self-perception of cross-sex personality traits, activity interests, and sexual orientation is associated with low gender contentedness (Carver et al., 2003, 2004; Egan & Perry, 2001). Perceiving the self to possess a stable, immutable desire to display a cross-sex attribute that is strongly stigmatized when displayed by persons of one’s own sex is especially likely to make children dissatisfied with their gender. This is likely to be true regardless of whether the child adopts or inhibits the attribute in question—a wish to adopt the attribute is key. The particular cross-sex attributes that undermine children’s sense of gender contentment are likely to vary from child to child, depending on each child’s personally held stereotypes and ideologies, but strongly stigmatized attributes are likely to carry the most weight. For preadolescents, failure to expect a heterosexual future predicts over-time deterioration not only in gender typicality but also in gender contentedness (Egan & Perry, 2001).

**Felt pressure.** Matching versus failing to match gender stereotypes may also affect felt pressure for gender conformity, though the prediction is less clear-cut than for gender typicality and contentedness. A seemingly straightforward hypothesis is that when children see themselves as falling short of salient and valued gender stereotypes, they apply more pressure to themselves to conform. On the other hand, it is possible that children who fall short of gender standards reduce their dissonance by alleviating rather than intensifying the pressure they place on themselves for gender conformity (e.g., “It’s not important to be gender typical after all”). Thus, the GSSM does not offer an unambiguous prediction about how self-perceived attributes and stereotypes interact to affect felt pressure. Perhaps falling short of standards is more likely to create than to lessen pressure when children are younger rather than older, when the stereotypes are prescriptive rather than descriptive, when children experience peer rejection or victimization rather than feel socially accepted, and when children have low rather than high self-esteem.

**Gender centrality.** It is also unclear whether stereotypes and self-perceptions can be expected to interact to affect gender centrality. However, children who possess salient gender stereotypes and perceive themselves as matching them may be more likely than other children to embrace gender as an important dimension of their personality and identity.
Conclusion

Research on how children process information about gender has been characterized by confusion in terminology, by problematic assumptions (e.g., that group sex differences are an adequate basis for establishing the meanings that individual children ascribe to gender, that it is possible to infer internalized societal pressure for gender conformity from children’s self-perception of instrumental and expressive traits), and by an overwhelming array of disparate research findings that have been difficult to assimilate to a coherent conceptual model.

The GSSM offers a model for distinguishing among key constructs relevant to children’s cognitive processing of information pertaining to gender and self and for organizing previous theoretical suggestions and research findings within a parsimonious conceptual framework. The model can serve as a heuristic blueprint for future investigation into how children process information about gender in ways that affect their development and welfare, as well as the welfare of others around them.

Research on the stereotype emulation hypothesis should contribute to an understanding of how gender colors personality by identifying crucial combinations of gender and stereotype variables, or gender cognition signatures, which influence children’s self-perceptions, behavior, and adjustment. Identifying the more common gender cognition signatures is one reply to personality theorists’ call to identify patterns of cognitive-affecting processing units that organize social behavior and its context specificity (Cervone, 2004; Mischel & Shoda, 1995).

Investigating the GSSM may lead to a better understanding of how environmental and biological variables implicated in gender differentiation achieve their effects. It is likely that environments (e.g., cultures, parents, peers, media) as well as biology (e.g., hormones, genes, temperament, physical attributes) contribute, in varying degrees, to the development of each of the three focal constructs. Gender self-socialization processes may be the proximal cognitive mediators of many environmental, and even biological, influences on gender differentiation.

The GSSM elaborates the interactive influence of two types of associations on the third. However, theory also needs to be formulated to address how children react to certain combinations of all three kinds of associations. Liben and Bigler (2002) point out that as children get older they are likely to become increasingly sensitive to logical inconsistencies in their cognitions (e.g., “I am not a typical girl; I am doing X; girls do X”; “I am a typical boy; boys should do X; I am not doing X”). Children can resolve such discrepancies in more than one way, and theory needs to be developed to address how children cope with, and choose a resolution to, the incongruity.

Although the GSSM addresses issues of gender, its structure and premises may also be applied to self-socialization processes concerning other collectives, such as ethnicity or race. Children vary in three kinds of associations they can form about race, for example, and again, each type of association is likely to be affected by the interaction of the other two. For example, children’s ethnic and racial identity may interact with the stereotypes they hold (about their own and other groups) to affect their self-perceptions. It has been suggested that one dimension of racial identity (among others) is oppositionality, or the motivation to eschew attributes perceived to characterize the outgroup (Cross, 1995); this quality is analogous to felt pressure to avoid other-gender behavior. If a minority child embraces this attitude and at the same time views certain adaptive qualities (e.g., academic conscientiousness) to characterize the majority outgroup, less than optimal adjustment may ensue. Understanding the generality of self-socialization processes across various social collectives is thus another challenge for the future.

References


Eckes, T., & Trautner, H. M. (2000). The developmental social psychology of
evelopment: The influence of gender schemas on preschoolers’ mem-
ories and preferences for sex-typed toys and activities. Child Develop-
ment, 59, 782–792.
Carter, D. B., & Patterson, C. J. (1982). Sex roles as social conventions:
The development of children’s conceptions of sex-role stereotypes.
Developmental Psychology, 18, 812–824.
Carver, P. R., Egan, S. K., & Perry, D. G. (2004). Children who question
their heterosexuality. Developmental Psychology, 40, 43–53.
Carver, P. R., Junger, J. L., & Perry, D. G. (2003). Gender identity and
111, 183–204.
Corby, B. C., Hodges, E. V. E., & Perry, D. G. (2007). Gender identity and
adjustment in Black, Hispanic, and White preadolescents. Developmen-
tal Psychology, 43, 261–266.
Crandall, V. C. (1978, September). Expecting sex differences and sex
differences in expectancies. Paper presented at the meeting of the Amer-
ican Psychological Association, Toronto, Ontario, Canada.
Psychological Bulletin, 130, 392–414.
Cross, W. E., Jr. (1995). In search of Blackness and Afrocentricity: The
psychology of Black identity change. In H. W. Harris, H. C. Blue, &
E. E. H. Griffith (Eds.), Racial and ethnic identity: Psychological
development and creative expression (pp. 53–72). Florence, KY: Taylor
& Frances.
stereotypes, and identification with math in children (Unpublished doc-
& G. Lindzey (Eds.), The handbook of social psychology. (Vols. 1 & 2,
immigrants in the Genevan educational context. In D. Canter, J. C.
Jesuino, L. Soczka, & G. M. Stephenson (Eds.), Environmental social
psychology: NATO ASI series, series D, behavioral and social sciences
sex differences and similarities: A current appraisal. In T. Eccles & H. M.
Trautner (Eds.), The developmental social psychology of gender (pp.
educational, occupational, and recreational choices: Applying the Eccles
et al. model of achievement-related choices. In W. B. Swann Jr., J. H.
Langlois, & L. A. Gilbert (Eds.), Sexism and stereotypes in modern
analysis with implications for psychosocial adjustment. Developmental
Psychology, 37, 451–463.
Eisenberg, N., Murray, E., & Hite, T. (1982). Children’s reasoning regard-
Fagot, B. L., Rodgers, C. S., & Leinbach, M. D. (2000). Theories of gender
socialization. In T. Eccles & H. M. Trautner (Eds.), The developmental
social psychology of gender (pp. 65–89). Mahwah, NJ: Erlbaum.
Frey, K. S., & Ruble, D. N. (1992). Gender constancy and the “cost” of
sex-typed behavior: A test of the conflict hypothesis. Developmental
Psychology, 28, 714–721.
development of gender prejudice. In T. Eccles & H. M. Trautner (Eds.),
The developmental social psychology of gender (pp. 243–272). Mahwah,
NJ: Erlbaum.
ers’ categorical thinking about gender through imitation, attention, and
Green, R. (1987). Gender identity in childhood and later sexual orientation:
Follow-up of 78 males. In S. Chess & A. Thomas (Eds.), Annual progress in child psychiatry and child development (pp. 214–220).
Greenwald, A. G., Banaji, M. R., Rudman, L. A., Farnham, S. D., Nosek,
stereotypes, self-esteem, and self-concept. Psychological Review, 109,
3–25.
Halim, M. L., & Ruble, D. N. (in press). Gender identity and stereotyping
in early and middle childhood. In J. Chirsler & D. McCready (Eds.),
Halim, M. L., Ruble, D. N., Murphy, L. L., Greulich, F. K., & Zosuls,
Manuscript submitted for publication.
children: Development of the children’s Personal Attributes Question-
Ecces & H. M. Trautner (Eds.), The developmental social psychology of
Harris, J. R. (1995). Where is the child’s environment? A group socializa-
gender-stereotypes knowledge about musical instruments: Making judg-
ments about other children’s preferences. Sex Roles, 49, 389–400.
Heider, F. (1958). The psychology of interpersonal relations. New York,
NY: Wiley.
Hetherington, E. M. (1967). The effects of familial variables on sex typing,
on parent-child similarity, and on imitation in children. In J. P. Hill (Ed),
Minnesota symposium on child psychology (Vol. 1, pp. 82–107). Min-
neapolis, MN: University of Minnesota Press.
processes: Costs, benefits, and tradeoffs. In M. R. Gunnar & L. A.
Sroufe (Eds.), The handbook of child psychology: Vol. 1 & 2,
women and the gender status quo. Anthropology and Educa-
gender stereotyped thinking of Taiwanese secondary school boys and
girls. Sex Roles, 48, 495–504.
Collective wisdom and individual differences. Psychological Review,
115, 1054–1068.
child psychology: Socialization, personality, and social development


Zosuls, K. M., Ruble, D. N., Tamis-LeMonda, C. S., Shrut, P. E.,...


Received February 27, 2008
Revision received November 3, 2009
Accepted December 23, 2009

---

Members of Underrepresented Groups: Reviewers for Journal Manuscripts Wanted

If you are interested in reviewing manuscripts for APA journals, the APA Publications and Communications Board would like to invite your participation. Manuscript reviewers are vital to the publications process. As a reviewer, you would gain valuable experience in publishing. The P&C Board is particularly interested in encouraging members of underrepresented groups to participate more in this process.

If you are interested in reviewing manuscripts, please write to APA Journals at Reviewers@apa.org. Please note the following important points:

- To be selected as a reviewer, you must have published articles in peer-reviewed journals. The experience of publishing provides a reviewer with the basis for preparing a thorough, objective review.

- To be selected, it is critical to be a regular reader of the five to six empirical journals that are most central to the area or journal for which you would like to review. Current knowledge of recently published research provides a reviewer with the knowledge base to evaluate a new submission within the context of existing research.

- To select the appropriate reviewers for each manuscript, the editor needs detailed information. Please include with your letter your vita. In the letter, please identify which APA journal(s) you are interested in, and describe your area of expertise. Be as specific as possible. For example, “social psychology” is not sufficient—you would need to specify “social cognition” or “attitude change” as well.

- Reviewing a manuscript takes time (1–4 hours per manuscript reviewed). If you are selected to review a manuscript, be prepared to invest the necessary time to evaluate the manuscript thoroughly.