

Constraints on the Development of Implicit Intergroup Attitudes

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ABSTRACT—*Implicit attitudes form in the 1st years of life and change little across development. By age 6, children's implicit intergroup attitudes are sensitive to the cultural standing of their group relative to other groups in their milieu, such that individuals prefer their own group less when the comparison group is of higher cultural standing. In this article, I consider the claim that the stability of the magnitude of implicit attitudes across development reflects the absence of meaningful developmental change. I also examine the extent to which the developmental stability for implicit intergroup attitudes describes similarly the ontogeny of other forms of implicit associations, including stereotypes, identity, and self-esteem. And I characterize the landscape of what may be changing across these formative years in children's implicit intergroup cognition.*

KEYWORDS—*intergroup cognition; implicit attitudes; implicit bias; prejudice; social cognitive development*

Establishing preferences for and beliefs about social groups may reflect a universal aspect of human cognition with roots in evolution. Across categories, cultures, and methods (e.g., toy choice, head turn, sucking rate, preferential looking), in the 1st months of life, infants begin to construct representations of social cate-

gories and prefer looking at and interacting with familiar groups relative to unfamiliar groups (1–7). Although social group preferences appear early in life and are initially likely to be exclusively implicit (unconscious) in nature, their developmental trajectory has traditionally been studied on an explicit (conscious) level of analysis starting in childhood (8).

The distinction between implicit and explicit intergroup cognition primarily concerns the nature of the representations being measured. If a representation (e.g., an attitude or belief) is implicit, it should reside outside of conscious awareness and be difficult to control (at least when time is insufficient to practice retraining efforts; 9–11). By contrast, explicit representations can be accessed through introspection and are more easily controlled. While implicit and explicit processes are unlikely to operate completely independently of one another, as is noted for automatic and controlled processes more generally (9), evidence for their dissociation in the domain of intergroup cognition is robust (for a review, see 12).

To decide whether a particular cognition (e.g., preference for the ingroup) is implicit or explicit, both the developmental age of the participant and the nature of the method used to assess that representation should be considered. While less debate exists over whether a young preverbal infant lacks conscious access to or control of representational states, the picture is cloudier when considering methods used to measure intergroup cognition in older children (8). Generally, a measure is thought to capture an explicit representation if responses rely on verbal responses that probe directly the constructs of interest (e.g., asking a child to report how much he or she likes an individual of a different ethnicity).

On measures of explicit bias, children prefer their ingroup over an outgroup by 3 years, and such preferences increase across early childhood (at least among majority populations). In many cases, when attitudes toward groups involve socially charged topics (e.g., race), children begin to report less intergroup bias around early adolescence and by adulthood, tend to report no preference for their ingroup relative to an outgroup (13). The transition to more egalitarian views occurs, in part, as

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I would like to thank the anonymous reviewers for their very constructive and thorough feedback on earlier drafts of this manuscript. I would also like to thank members of the Early Development Research Group at the University of British Columbia and the Living Lab at Science World for feedback on earlier drafts.

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Child Development Perspectives © 2015 The Society for Research in Child Development

DOI: 10.1111/cdep.12105



children internalize cultural norms surrounding the expression of social group bias (14). For cases in which social norms are not as strong for reporting bias (e.g., rooting for your favorite team during the FIFA (Fédération Internationale de Football Association) World Cup) or in which individual differences in the motivation to conceal bias are lower, ingroup bias often continues to increase across development and into adulthood. Indeed, such methods are influenced more by concerns related to social desirability than is observed among implicit measures (14).

A method is thought to capture an implicit representation if responses on that measure are difficult to control or fake. Although not necessary, most implicit measures do not rely on verbal reports of one's thoughts and feelings because verbal responses are more easily under one's control. Some measures gauge children's intergroup cognition indirectly by asking them to judge the behaviors of in- and outgroup members, and use these responses to infer children's attitudes and beliefs (e.g., 15). But the ontological status of children's representations as implicit or explicit remains unclear since such methods may still be subject to demand characteristics such as concerns related to social desirability (16). Moreover, when considering the developmental trajectory of implicit bias, relying on children to respond verbally to measures is problematic since children's skills in this area can differ dramatically from individual to individual, as well as by developmental change. This may make it more difficult to discern whether a particular verbal response is evidence of an implicit or an explicit representation for a given child and age.

As intergroup attitudes are often the subject of concerns about social desirability and because the earliest forms of intergroup bias begin in infancy and are likely implicit in nature, researchers have sought to understand more fully the developmental trajectory of *implicit* intergroup bias using measures that do not require children to respond verbally. In this article, I consider evidence for the properties that characterize the developmental trajectory of implicit intergroup preferences (attitudes). I also consider whether the properties that characterize the development of implicit intergroup attitudes similarly constrain the developmental trajectory of other forms of implicit intergroup associations such as stereotypes, identity, and self-esteem.

PROPERTIES OF IMPLICIT ATTITUDE DEVELOPMENT

Despite robust evidence that implicit preferences for social groups begin to form in the 1st year of life (2), most examinations of the developmental trajectory of such biases begin around age 6 (for a review, see 17). According to studies, implicit attitudes are present by age 6 in magnitudes generally indistinguishable from adults. That is, in cases where adults are reported to exhibit an implicit preference of a particular magnitude, children from those same social groups exhibit a similar magnitude of bias. Indeed, this pattern has been observed among majority/dominant populations and minority/

nondominant populations. For example, European American 6- and 10-year-olds exhibited greater implicit positivity toward their own racial group (White) relative to an outgroup (Black), and the magnitude of the association between White + Good and Black + Bad was indistinguishable from European American adults (18). This result (absence of developmental change in the magnitude of an implicit preference for White relative to Black) has been observed among a European sample (14) and replicated among other European American samples (16) and across several methods such as the Child Implicit Association Test (Child IAT; 18) and the Affect Misattribution Procedure (19, 20).

We see similar developmental invariance in the magnitude of implicit bias for other categories of race (16, 21, 22), as well as for other social categories such as gender, castes, and religion (23–25). More recently, age-related inflexibility has been seen in children as young as 3 (20), further underscoring the possibility that developmental invariance may represent a core property of an implicit associative system.

A second property of implicit intergroup preferences is sensitivity to the local cultural standing of social groups (21, 26, 27). Whereas children may exhibit an automatic implicit (and explicit) preference for the ingroup (28–30), this preference is attenuated when the ingroup occupies a low cultural standing. For example, whereas Hispanic American children and adults were more likely to think more positively about their racial ingroup relative to a lower-status outgroup (Black), they exhibited no such preference when the comparison group was of higher cultural status (White; 21). Studies of African American children (22, 26, 27), South African children (31), and Indian children (24) have yielded similar results, suggesting that children's intergroup attitudes are sensitive to the cultural standing of the ingroup relative to the comparison group on such measures.

Across these studies, regardless of the status of the comparison group, the magnitude of implicit bias was remarkably constant across age. Specifically, 5- to 6-year-olds' implicit positivity about their own group did not change across development for the same social comparisons. Thus, for implicit intergroup attitudes, sensitivity to the cultural standing of one's own group emerges early in development and the subsequent magnitude of implicit bias exhibited does not change substantively across development.

RETHINKING CLAIMS OF DEVELOPMENTAL INVARIANCE

The research reviewed thus far suggests that the magnitude of implicit intergroup attitudes remains unchanged at least from age 6 onward (and possibly from as young as age 3; 20). However, for several reasons, we should question the basic claim of developmental invariance in the magnitude of implicit intergroup bias across childhood and adolescence.

First, although implicit associations may form early and resist change after salient early life experiences (32, 33), the stability of these associations across development may reflect the stability of prevailing cultural messages about the relative status of those groups and not the rigidity of the implicit associative system (34). At least with respect to attitudes toward race, when children and adults from the same communities are studied, they likely have been exposed to similar cultural messages about those groups. Thus, even if such attitudes are formed early in development, adults and children may reflect similar magnitudes of bias because societal attitudes toward race have changed little. Therefore, the absence of developmental change does not rule out the possibility of meaningful developmental differences in the capacity for implicit associations to be changed (35).

Second, despite developmental invariance of implicit intergroup bias, no studies have examined directly whether the capacity to form or modify implicit associations changes with age. According to one view, implicit attitudes and stereotypes are acquired slowly, the result of accumulated experience over the lifespan (10, 11). Another view suggests that the ease of implicit change should coincide with development of the prefrontal cortex (36), with older children able to shift the context of evaluation (37) and control the activation or application of their associations (38). A third view suggests that implicit biases are particularly sensitive to early life experiences, supporting the hypothesis that the optimal period to effect change is early childhood, when these associations take root (32, 33). Clearly, research is needed to examine these possibilities.

Third, although implicit attitudes apparently remain stable across development, developmental change may occur with respect to what sources of input maintain these associations. For example, for younger children, implicit intergroup attitudes may reflect more strongly an internalized sense of membership in one's own group, whereas for older children, it may be influenced more strongly by an internalization of the superior cultural standing of their own group. Thus, even though the magnitude has not changed across development, there may still be interesting cases of developmental change—in this case, at a representational level and not at a processing level.

Fourth, meaningful developmental differences in implicit intergroup bias may exist with respect to the independent contributions of associations with the ingroup and associations with the outgroup. For example, in studies of infants, implicit intergroup bias may begin with a positive evaluation of the ingroup, and corresponding negative implicit evaluations of the outgroup may not form until sometime after age 3 (39). Thus, similar to the development of children's explicit attitudes (40), children's implicit attitudes may exhibit different trajectories for positive and negative attitudes toward the outgroup. Indeed, using recent analytic techniques, including process dissociation models, researchers have shown that between ages 6 and 12, children's

implicit positivity and negativity toward categories of gender unfolds differently (35). Researchers should use methods and statistical approaches that examine independently the contributions of positive and negative attitudes toward the ingroup and the outgroup.

A final reason to reconsider claims of invariance is that the methods frequently used in studies of implicit intergroup bias—the IAT (41) and its child-friendly variant, the Child IAT (18)—may mask meaningful changes at both the representational and processing levels of bias. Specifically, these tests compute a score indicating the strength of association between concepts by considering accuracy and response time (see 42, for a thorough discussion of the properties of this measure and analytic techniques). At issue is the extent to which a particular magnitude on these measures reflects individuals' level of social group bias versus their efficiency of cognitive control and processing speed. Thus, younger children and adults may differ in the amount of noise versus attitudinal bias that contributes to their magnitude score, with older children exhibiting more intergroup bias. Recent advances in applying modeling techniques (e.g., Quad models) to analyzing data produced by these measures give researchers an opportunity to understand more fully developmental differences in how factors such as guessing, cognitive control, and actual bias contribute to computing implicit bias on such methods (43, 44). Although it is beyond the scope of this article to adjudicate among these five claims, researchers should be aware of the theoretical and practical importance of examining directly the potential for developmental change in implicit association strength.

DEVELOPMENT OF OTHER FORMS OF IMPLICIT ASSOCIATIONS

How else might we consider evidence that the magnitude of implicit intergroup attitudes remains stable across development? Such stability may reflect core properties of an implicit associative system such that any form of implicit association, regardless of whether it contains evaluative content (e.g., attitudes), will be difficult to change once formed. As such, we might expect to observe similar evidence of developmental invariance among other forms of implicit associations (e.g., stereotypes, identity, self-esteem). However, a review of studies on intergroup stereotypes, identity, and self-esteem suggests that the developmental constraints on implicit associations differ from those observed for implicit attitudes.

By middle childhood, children have started to internalize implicit stereotypes and identity in the domain of gender (35, 45) and the magnitude of these implicit associations apparently strengthens with age. Conversely, implicit self-esteem decreases during adolescence (46). Thus, at least for nonattitudinal associations, implicit associations may change with development. While more studies are needed, such data point to the possibility that implicit intergroup attitudes may be governed by different con-

straints than the development of other kinds of implicit associations.

One likely constraint on the development of implicit associations is establishing balance among related implicit constructs. According to the Balanced Identity Model of implicit social cognition (47), adults' implicit associations are connected in sensible ways—for example, the more I identify with my own gender (male) and the more I associate my gender with a particular attribute (good), the more I implicitly associate the self with good (have positive self-esteem). Evidence for balance among implicit constructs (attitudes, identity, stereotypes, self-esteem) is documented across a variety of domains, underscoring the possibility that this is a universal feature of implicit social cognition (47). The few studies examining the developmental foundations of balanced identity (27, 48) reveal that balance among implicit constructs is greater among older children. These studies also suggest that balance is observed primarily in cases where it leads to greater positive self-esteem. That is, in cases where balance among these constructs would clearly lead to negative evaluations of the self (e.g., when the ingroup is stigmatized), these cognitions are not balanced. As such, developmentally, a primary aim of the implicit associative system may be to prevent the self from forming negative self-evaluations. Researchers should seek to understand when and how during development balance among implicit constructs begins to form; such information may shed light on how and when implicit associations can change.

CONCLUSION

Even though most studies point to developmental invariance in the strength of implicit attitudes, considerable change may exist at the level of our representations of social group preferences and the processes that support their formation and maintenance. Thus, it may be premature to conclude that developmental invariance is a key property of implicit intergroup attitudes, as others have suggested (17, 20). Moreover, research examining the development of other implicit representations (e.g., stereotypes, identity) suggests that even if developmental invariance is a core property of implicit attitudes, it is not a core property of implicit intergroup cognition more broadly.

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