

## Commentary on Special Section: Deficit or Difference? Interpreting Diverse Developmental Paths

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In this special section, 6 articles address the provocative question of how to determine the boundary between difference and deficiency, for children who differ from the mainstream in some way—language, hearing, cultural background, socioeconomic status, or social understanding. Our commentary considers these articles in light of current models of cultural diversity, raising 4 warning signals about the danger of assuming deficits. Whereas children’s school success is understandably a concern, we must be cautious about the known harmful effects of negative labeling and deficit assumptions.

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This special section, focused on populations who have been characterized as either different or deficient, offers provocative insights into issues at the very core of our discipline. At its broadest level, the goal of developmental psychology is to understand human development in all its diversity and to identify how to most effectively promote positive developmental outcomes. Over the years, we have made significant advances in the power and precision of the tools of our trade and the theories we entertain. Yet at its core, our challenge has remained constant: to consider the intricate interaction between the endowments of the child and the shaping role of the environment. This dynamic balance between nature and nurture, which runs through all of the social and biological sciences, has consequences for the policies—both educational and political—that we promote. It also influences our understanding and treatment of others whose behaviors, values, or capacities appear to differ from what we perceive to be the norm.

The articles in this special section illuminate this tug-of-war, raising provocative questions about how to best characterize natural endowments, environmental influences, and the relation between these twin engines of development across the life span and across cultures. More specifically, they challenge us to really see the diversity that is inherent in human development and to consider when, if ever, diversity should be considered deficit. The articles also underscore the difficulty of this challenge on theoretical, empirical, educational, clinical, and political grounds.

Central to this challenge is when, if ever, a difference should be considered a deficit. A recent article in the *New York Times Sunday Magazine* (Smits, 2012) provides a cautionary tale. Taking a historical perspective, the article focuses on a group of children who, in addition to exhibiting a readily identifiable observable difference, were also perceived in the 1930s as harboring a con-

stellation of latent negative characteristics, including “rebellious stubbornness, secretive superstition, parsimony, obsessive cleanliness and other unpleasant traits” (Smits, 2012, p. SR9). As is so often the case with negative stereotypes, interventions were designed by the “normative majority” to stamp out this perceived deficit, which “became an act of mercy and the duty of every responsible parent and teacher.” The observable difference under discussion was left-handedness. What we know now is that these beliefs about left-handedness were untrue. But all the same, the assumptions of the times had a powerful impact on people’s lives, options, and conceptions of them held by themselves and by others.

One key issue, then, is to decide whether a difference is a difference of any consequence, and if it is, whether that difference is in fact a deficit. The authors in this special section offer several alternatives. On the one hand, perhaps differences should be seen to be deficits only if they have negative consequences on the child and her or his developmental trajectory (Hoff, 2013). Hoff advances this view for our interpretation of differences in language ability, including bilingualism. On the other hand, what constitutes a negative consequence crucially depends on the cultural and historical values and assumptions that we bring with us (Norbury & Sparks, 2013). In considering this issue, perhaps the left-handedness case from the 1930s is illustrative only, easily dismissed as an anomaly from decades past. But in our view, that case brings fresh insight to the present. Before we make claims about differences or deficits, it is important to have sufficient evidence that a difference of any consequence exists. Moreover, it is still true that the values and assumptions of the “normative majority” (parents, educators, medical professionals, policymakers) not only carry considerable weight but also are often at odds with the values and assumptions of the individuals or groups they seek to educate or treat (Kapp, Gillespie-Lynch, Sherman, & Hutman, 2013). Finally, as we identify differences and deficits, it is crucial that we consider the impact—both positive and negative—of these labels (Pearson, Conner, & Jackson, 2013).

Another issue also surfaces when negotiating the deficit-difference divide: Conceptualizing a particular individual, particular behavior, or particular constellation of capacities as defi-

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cient—or even as different—has major implications for identifying research questions, for discovering etiology, and for designing interventions. We commend the editors for bringing together phenomena as diverse as racial, ethnic, and cultural differences, language differences, and differences along the autism spectrum, all within the same special section. This juxtaposition opens a welcome breadth and depth of discussion. For example, although there is broad agreement that some kinds of diversity (especially cultural diversity) are certainly not deficits, there is considerably less consensus regarding other kinds of diversity treated in this volume (e.g., autism, deafness, poverty, language differences). The controversies that emerge here, rarely emphasized in more standard research outlets, illustrate the complexity and the costs of complex decisions along the deficit–difference continuum.

In this commentary, we bring these issues and controversies into closer alignment with insights from the cross-cultural literature. In particular, we consider three complementary models of cultural diversity, asking whether the models of diversity proposed by Gutiérrez and Rogoff (2003); Medin, Bennis, and Chandler (2010); and Steele (1997) serve as an apt foundation for the deficit–difference issues raised here. From these models, four warnings emerge. Because these warnings are relevant for the issues in this special section, after a brief description of the models, we organize our discussion around these warnings.

### Models of Cultural Diversity

In their discussion of culture, diversity, and cognition, Medin et al. (2010) highlighted the powerful but subtle “home field disadvantage” that so perniciously seeps into our interpretations of cultural groups other than our own. Two of their cautionary points are particularly relevant to this special section. First, there is an imbalance in the way that we view heterogeneity (in behaviors, motivations, values, capacities, etc.) in our own cultural groups as compared with others. We tend to assume strong heterogeneity within our own cultural group, but all too often tacitly assume that that there is considerable homogeneity along these same dimensions in other cultural groups. Second, we tend to consider our own cultural group as the “unmarked,” or normative case, leaving other groups as the “marked” case. Consider, for example, the widespread assumption that assessments that were developed by and for members of White middle-class majority Western cultural groups can be handily applied to members of different groups.

Similarly, Gutiérrez and Rogoff (2003) focused on potential pitfalls of characterizing diversity in educational settings. They argued against viewing culture itself as a “trait” or entity harbored within all members of a given group. Instead, they take a cultural-historical perspective on culture as a dynamic analysis of repertoires of practices. Like Medin et al. (2010), Gutiérrez and Rogoff caution against the assumption of homogeneity (e.g., that particular learning styles are true of all children from a given culture) and propose instead that educators consider particular children’s school performance within the context of the cultural practices that they actually engage in with their families.

Finally, Claude Steele’s work (e.g., Steele, 1997) on stereotype threat paints a vivid depiction of how detrimental the expectations we hold of others can be. Through a rich series of studies, Steele

has clarified how deficit interpretations of students’ performance cause more problems than they solve.

All three models argue against settling for simple models in which culture is considered a cause, particularly because multifaceted clusters of factors tend to correlate with one another in determining complex outcomes such as academic performance or language development. Taken together, these three cultural models raise four warning signals, and these serve as the basis for our discussion of the articles at hand.

### Four Warning Signals

**1. Avoid assumptions of homogeneity.** Each of the articles in the special section provides detailed evidence regarding heterogeneity within the groups studied. Fryberg et al.’s (2013) article, the one most clearly focused on cultural diversity, shows that high school students from the Naskapi community in Quebec varied in the extent to which they identified with Aboriginal and White culture. Moreover, this variation among students was related to two key factors: teachers’ assessments of the student (e.g., their assertiveness) and students’ educational attainment (e.g., their grades). Stepping outside the domain of cultural variation, broad within-group variation was also noted among individuals on the autism spectrum (Kapp et al., 2013) and in the communities of deaf and hard-of-hearing children (Lederberg, Schick, & Spencer, 2013). In every case, a consensus emerges: With so much within-group diversity, it is unclear whether it makes sense to include all individuals under a single label. If children on the autism spectrum, for example, are so diverse in their developmental profiles, then does it make sense to lump them into a single group to which we apply a single name? Instead, the lesson that emerges from each of these cases is clear: Drawing conclusions about individuals within any of these groups blurs the important diversity represented within each.

A more specific focus on heterogeneity appears in Gutiérrez and Rogoff’s (2003) recommendation to avoid traitlike assumptions about the learning styles of members of cultural groups and to instead recognize individual repertoires of practices and skills. This recommendation also applies to the notions of diversity discussed within these articles. For groups including children on the autism spectrum or children with specific language impairment, Norbury and Sparks (2013) make a compelling case for considering the particular profile of each child’s abilities and skills. Hoff (2013) points out the variation in patterns of skills among children who are bilingual or from lower socioeconomic status (SES) families. In an ideal world, developmentalists will consider both groups and individuals. However, even in this ideal world, it is important to bear in mind that the grain size we choose in our research or practice crucially impacts our conclusions.

**2. Design assessments from within the culture being studied rather than transplanting assessments from other groups.** This caution comes from Medin et al.’s (2010) observation that in research and in practice, we tend to “mark” other cultures, leaving our own culture as “unmarked.” This leads to the twin assumptions that (a) the mainstream culture is the standard and (b) other nonmajority cultures are the ones that are different or deficient. These assumptions are relevant and consequential in the phenomena considered in this special section. For example, as Norbury and Sparks (2013) discuss, when children’s direct eye contact is

part of the diagnosis for autism spectrum disorder, it is crucial to consider cultural variations in direct eye contact. In some communities, children who make direct eye contact with adults, especially strangers, are considered rude; in others, they are considered respectful.

Following along this line, Hoff's (2013) discussion of difficulties for lower SES children raises important questions about the contexts in which measurements were taken. For example, how familiar were the children with the testing setting, how comfortable were they with the assessors, are there different cultural norms about the types of behavior that signify respect for an adult? Rogoff and her colleagues' work (e.g., Rogoff, Paradise, Mejía Arauz, Correa-Chávez, & Angelillo, 2003) suggests that in some cultural communities, where learning through verbalization is not as central a form of communication as in Western middle-class communities, children learn through keen observation of others and by pitching in when ready. Other examples from our own work suggest that standard school assessments often miss the strong competencies of children from nonmajority groups. For example, on standard assessments, Native American and Latino children fall far behind their majority-culture peers in science (Bang, Medin, & Atran, 2007; National Research Council, 2007). Yet, a careful analysis of Native American students' knowledge of the natural world reveals strong competencies that surpass those of their majority-culture peers (Bang & Medin, 2010; Medin, Waxman, Woodring, & Washinawatok, 2010). And, despite statistics showing slow progress in school science for Latino children, parents' diary reports of their preschool children's spontaneous "why" questions revealed that Mexican immigrant children's questions about the natural world were as sophisticated and complex as those of middle-class children (Callanan & Jipson, 2001; Callanan, Perez-Granados, Solis, Barajas, & Goldberg, 2012). Examples like these illustrate that assessments, normed on majority-culture middle-class U.S. students, may not "fit" students from nondominant groups. Continuing to impose such assessments will continue to mask the capacities that children from diverse communities bring with them to our classrooms, playgrounds, and clinics.

**3. Avoid overly simple causal models given the complex clusters of factors involved.** Returning to the left-handedness example reminds us that our understanding of etiology or cause can be only as good as our current understanding (or misunderstanding) of a phenomenon, that our understanding is colored not only by the breadth (or restrictedness) of the individuals or groups we have considered but also by the assumptions of the majority culture community.

If renowned child psychologists of the 1930s described left-handers as ne'er-do-wells who "squint" and "stammer" and "flounder about like seals out of water" (Burt, 1937, p. 287), it is not difficult to understand how educators and parents alike were easily enlisted to root left-handedness out. But the description and the proposed mechanism were both faulty—left-handedness is not a source of the unwanted behaviors. Too simple a model led to too simple a treatment and thwarted both open questioning about mechanisms and development of a valid causal model. The advice to avoid simple causal models seems very relevant to the articles in this special section. Some of the authors have an explicit goal of looking for causal factors (e.g., Hoff, 2013), whereas others consider whether or not finding causes is the most productive goal (e.g., Kapp et al., 2013). Although Hoff mentions the strong recent

evidence that bilingual children do better on school-relevant tasks such as executive function (Bialystok, 2011), this point was not emphasized. In the work of Pearson et al. (2013) and Lederberg et al. (2013), we see strong evidence of areas where children using African American English (AAE) and American Sign Language (ASL) do as well, or better, than their standard-English-speaking peers. This is not to deny the very real challenges that children using AAE and ASL face. We must acknowledge both that these are fully fledged linguistic systems and that there are potential challenges these minority languages pose for their young speakers—both obstacles to print-based literacy and misjudgments by teachers and others.

In our view, this work underscores two key points. First, it is important that we begin to draw a more nuanced picture of children's developmental profiles, rather than settling for the more black-and-white pictures of the past. Second, it is important to bear in mind that words like *influence* and *impact* can lead to oversimplified causal models, especially when the evidence is correlational.

**4. Consider carefully the impact of labels, expectations, and stereotype threat.** The research on stereotype threat has had a profound impact on psychologists' thinking about assessment, intergroup relations, and culture. In considering the deficit versus diversity distinction, these notions are particularly relevant. How can we appropriately factor in the impact of perceptions (both by self and others) of a deficit label or deficit interpretation? Several of the articles in this section point out why it is crucial to consider the potentially negative impact of deficit notions on the people about whom the deficit is being assumed. In our view, it is better to err on the side of avoiding deficit interpretations. Particularly provocative on this point is Kapp et al.'s (2013) consideration of the insider perspective in neurodiversity approaches, Norbury and Sparks's (2013) discussion of the impact of pathologizing children, and Pearson et al.'s (2013) demonstration that teachers' perceptions about AAE influence their students' learning. Particularly inspiring are documentations of better educational outcomes in academic support programs that focus on challenge, rather than remediation. As with other stereotype threat work, it is reassuring to note the elegant simplicity of this variation in how the situation is framed, and to see how modest changes in interpretation bring about such dramatic advances in outcomes.

## Conclusion

In closing, then, let us return to the question of whether insights from cultural diversity can serve as an analogy for the types of diversity addressed in this special section. In our view, the analogy is apt, and the comparison raises questions that should be considered as we move forward. At the same time, we acknowledge that a key continuing challenge for researchers and practitioners is to strike a balance between idealism and realism. If we strike the balance in favor of idealism, favoring a difference-not-deficit view, do we overlook the insights of practitioners and parents devoted to helping children overcome the diverse range of challenges they face? Alternatively, we cannot ignore the striking evidence that global deficit labels often result in negative impacts that could be easily avoided. In our view, the most fundamental question raised in this special section is this: How can we best hold on to the inherent and inalienable value of diversity while at the

same time acknowledging that success in the United States depends on children's success in U.S. classrooms, playgrounds, and clinics? Although this set of articles does not provide a definitive answer to this question, the findings presented here will help to shape new questions for future research. Perhaps least well understood is how to decide when remediation is appropriate or helpful. This challenging and multifaceted question is faced everyday by caring parents who must make a decision that is intensely personal and yet often political. To support parents facing these difficult decisions, understanding the line between helpful remediation versus harmful labeling needs to be a high priority for future research, theory, and practice, as well as for attempts to integrate the three.

### References

- Bang, M., & Medin, D. (2010). Cultural processes in science education: Supporting the navigation of multiple epistemologies. *Science Education, 94*, 1008–1026. doi:10.1002/sce.20392
- Bang, M., Medin, D., & Atran, S. (2007). Cultural mosaics and mental models of nature. *Proceedings of the National Academy of Sciences, 104*, 13868–13874. doi:10.1073/pnas.0706627104
- Bialystok, E. (2011). Reshaping the mind: The benefits of bilingualism. *Canadian Journal of Experimental Psychology, 65*, 229–235. doi:10.1037/a0025406
- Burt, C. (1937). *The backward child*. New York, NY: Appleton Century.
- Callanan, M. A., & Jipson, J. (2001). Explanatory conversations and young children's developing scientific literacy. In K. S. Crowley, C. Schunn, & T. Okada (Eds.), *Designing for science: Implications from everyday, classroom, and professional settings* (pp. 21–49). Mahwah, NJ: Erlbaum.
- Callanan, M. A., Perez-Granados, D., Solis, G., Barajas, N., & Goldberg, J. (2012). "Why" questions in Mexican-descent children's conversations with parents. Manuscript submitted for publication.
- Fryberg, S. A., Troop-Gordon, W., D'Arrioso, A., Flores, H., Ponizovskiy, V., Ranney, J. D., . . . Burack, J. A. (2013). Cultural mismatch and the education of Aboriginal youths: The interplay of cultural identities and teacher ratings. *Developmental Psychology, 49*, 72–79. doi:10.1037/a0029056
- Gutiérrez, K. D., & Rogoff, B. (2003). Cultural ways of learning: Individual traits or repertoires of practice. *Educational Researcher, 32*, 19–25. doi:10.3102/0013189X032005019
- Hoff, E. (2013). Interpreting the early language trajectories of children from low-SES and language minority homes: Implications for closing achievement gaps. *Developmental Psychology, 49*, 4–14. doi:10.1037/a0027238
- Kapp, S. K., Gillespie-Lynch, K., Sherman, L. E., & Hutman, T. (2013). Deficit, difference, or both? Autism and neurodiversity. *Developmental Psychology, 49*, 59–71. doi:10.1037/a0028353
- Lederberg, A. R., Schick, B., & Spencer, P. E. (2013). Language and literacy development of deaf and hard-of-hearing children: Successes and challenges. *Developmental Psychology, 49*, 15–30. doi:10.1037/a0029558
- Medin, D., Bennis, W., & Chandler, M. (2010). Culture and the home-field disadvantage. *Perspectives on Psychological Science, 5*, 708–713. doi:10.1177/1745691610388772
- Medin, D., Waxman, S., Woodring, J., & Washinawatok, K. (2010). Human-centeredness is not a universal feature of young children's reasoning: Culture and experience matter when reasoning about biological entities. *Cognitive Development, 25*, 197–207. doi:10.1016/j.cogdev.2010.02.001
- National Research Council. (2007). *Taking science to school: Learning and teaching science in Grades K–8*. Washington, DC: National Academies Press.
- Norbury, C. F., & Sparks, A. (2013). Difference or disorder? Cultural issues in understanding neurodevelopmental disorders. *Developmental Psychology, 49*, 45–58. doi:10.1037/a0027446
- Pearson, B. Z., Conner, T., & Jackson, J. E. (2013). Removing obstacles for African American English-speaking children through greater understanding of language difference. *Developmental Psychology, 49*, 31–44. doi:10.1037/a0028248
- Rogoff, B., Paradise, R., Mejía Arauz, R., Correa-Chávez, M., & Angelillo, C. (2003). Firsthand learning through intent participation. *Annual Review of Psychology, 54*, 175–203. doi:10.1146/annurev.psych.54.101601.145118
- Smits, R. (2012, April 15). Lefties aren't special after all. *New York Times*, p. SR8.
- Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist, 52*, 613–629. doi:10.1037/0003-066X.52.6.613

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