

Stereotype threat in children: Past and present

Menace du stéréotype chez les enfants: passé et présent

*Isabelle Régner**

*Jennifer R. Steele***

*Pascal Huguet**

This special issue is dedicated to our late colleague, Nalini Ambady who passed away on October 28th, 2013 at the age of 54. She was among the first to offer evidence of stereotype threat in children (Ambady, Shih, Kim, & Pittinsky, 2001). Ambady et al. (2001) showed, among other things, that the subtle activation of the math-gender stereotype impaired girls' math performance as early as Kindergarten when children's gender identity was made salient. This paper generated a lot of interest and stimulated further research in children at a time that a vast amount of research examining stereotype threat was focusing on adults. Since 2001, research in children mostly addressed stereotype threat among school girls in the math domain (e.g., Bagès & Martinot, 2011; Galdi, Cadinu, & Tomasetto, 2014; Huguet & Régner, 2007, 2009; Muzzati & Agnoli, 2007; Neuville & Croizet, 2007; Smeding, Dumas, Loose, & Régner, 2013; Steele, 2003; Tomasetto, Alparone, & Cadinu, 2011, Wei, 2012). These initial findings suggest that stereotype threat can occur among children before the emergence of math-gender stereotype awareness, a paradox somewhat resolved by Galdi et al. (2014) who showed that among six-year old girls, implicit math-gender stereotyping mediated the relationship between a stereotype threat manipulation and performance. In addition, consistent with Steele's (2003) "stratification hypothesis", children may actually hold stereotypic views at the explicit level but about an age subgroup (female adults) to which they do not belong. They can also

* Aix Marseille Université, CNRS, LPC UMR 7290, 13331, Marseille, France.

E-mail : isabelle.regner@univ-amu.fr; pascal.huguet@univ-amu.fr

** Department of Psychology, York University, Toronto, ON M3J 1P3.

E-mail: steeleje@yorku.ca

display counter-stereotypic views about their own age group, which do not necessarily protect them against stereotype threat (Huguet & Régner, 2009).

Other research has demonstrated stereotype threat effects in school girls on tests of spatial skills (Neuburger, Jansen, Heil, & Quaiser-Pohl, 2012), low SES-students on fluid reasoning tests (Désert, Préaux, & Jund, 2009), as well as racial and ethnic minority students on verbal and math tests (Alter, Aronson, Darley, Rodriguez, & Ruble, 2010; McKown, & Weinstein, 2003). Some studies have also shown how to reduce these effects in girls (Bagès & Martinot, 2011; Huguet & Régner, 2007; Souchal, Toczek, Darnon, Smeding, Butera, & Martinot, 2014) and in ethnic minority students (Cohen, Garcia, Apfel, & Master, 2006, Cohen, Garcia, Purdie-Vaughns, Apfel, & Brzustoski, 2009).

The aim of this special issue is to highlight current research examining stereotype threat in children. The majority of research examining this type of socio-evaluative threat still remains centered on adults¹, however we believe that if we are to fully understand and ultimately overcome stereotypes threat, it is imperative that we know when during cognitive development and for whom these effects emerge. The special issue comprises 10 papers (involving 31 authors from 5 different countries) addressing stereotype threat effects among school girls, ethnic minority students, and students with learning disabilities.

Papers in the present issue

The present issue starts with a review of lab and field studies demonstrating stereotype threat effects in girls from early elementary school to middle school (Régner, Steele, Ambady, Thinus-Blanc, & Huguet, 2014). In this review, Régner et al. also raise and try to solve several paradoxes and highlight possible interventions to counteract stereotype threat effects. In the second paper, Shenouda and Danovitch (2014) show that stereotype threat affects girls' performance on a spatial task (LEGO

1. There is also a growing interest for stereotype threat in the elderly (e.g., Desrichard & Köpetz, 2005; Hess, Auman, Colcombe, & Rahhal, 2003; Mazerolles, Régner, Morisset, Rigalleau, & Huguet, 2012).

blocks) as early as age 4, and may be continuously affecting older girls' performance through their stereotypical attitudes towards LEGO blocks (e.g., whether their favorite toy was LEGO blocks and how frequently they played with blocks at home). In the third paper, Master, Cheryan, and Meltzoff (2014) present data suggesting that female teachers can help to reduce adolescent girls' concerns about being negatively stereotyped in computer science courses once stereotype threat has been activated. In the fourth paper, Chan and Rosenthal (2014) test working memory capacity as a moderator of stereotype threat in the math domain among Hong-Kong adolescents, extending previous research on young adults from STEM fields (Régner, Smeding, Gimmig, Thinus-Blanc, Monteil, & Huguet, 2010). Consistent with Schmader, Johns, and Forbes' (2008) suggestion that higher-working memory individuals are better equipped to resist stereotype threat, working memory positively predicted performance for adolescent girls, but only in a condition that induced stereotype threat.

In the fifth paper, Chalabaev, Dematte, Sarazin, and Fontayne (2014) investigate stereotype threat effects among girls in the relatively neglected area of physical abilities. They provide evidence that inducing an avoidance focus may alleviate these effects, which strengthens the growing literature on the role of regulatory focus in stereotype threat. In the sixth paper, Berjot, Amoura, Bensalah, and Herbay (2014) focus on children with learning disabilities, a largely overlooked stigmatized population in stereotype threat research. As expected, these children endorsed negative perceptions about their group, and also suffered from stereotype threat effects on a cognitive task.

The last four papers concentrate on racial and ethnic minority children. Steele, Bianchi, and Ambady (2014) examined the impact of a brief race salience manipulation on the test performance of African-American and European-American children. In their study, subtle racial primes led to stereotype-consistent test performance for both African-American and European-American children in the second and third grade (7-9 years). In our eighth paper, Shelvin, Rivadeneyra, and Zimmerman (2014) show that a stereotype threat manipulation can hamper the test performance

of Black children, aged 10-12 years, who express an awareness of a race-based intelligence stereotype (*Blacks are less intelligent than Whites*). Using a fine-grained analysis of black identity profiles, they also provide some preliminary evidence that only the performance of children with specific profiles (“High connected” and “Ethnically diffuse”) is affected by this manipulation. Based on a sample of German adolescents of Turkish origin, Martiny, Mok, Deaux, and Froehlich (2014) show that stereotype threat effects on performance can be associated with both increased ingroup identification and decreased positivity towards the outgroup. Finally, Southard, Morgan, and Ziegler-Hill (2014) exposed both African American and White children to books providing a positive, realistic, and non-stereotypical view of Black people. Rather than producing positive effects in African-American children, this exposure weakened their academic self-esteem, a result interpreted as another sign of stereotype threat.

In short, the papers presented in this special issue not only introduce readers to core concepts and results on stereotype threat in children, but also build on the initial intuition of Ambady and her colleagues (2001) by offering new insights and interesting new directions for future research in this area. Much more research is needed, however, to both provide a better understanding of the conditions and mechanisms underlying stereotype threat in children, and to determine how this threat might best be removed, particularly in classroom settings. We hope that the research provided in this special issue will help to inspire these future pursuits.

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