

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository:<https://orca.cardiff.ac.uk/id/eprint/123909/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Manstead, Antony S. R. , Easterbrook, Matthew and Kuppens, Toon 2020. The socioecology of social class. *Current Opinion in Psychology* 32 , pp. 95-99. 10.1016/j.copsyc.2019.06.037

Publishers page: <https://doi.org/10.1016/j.copsyc.2019.06.037>

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See <http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



The socioecology of social class

Antony S. R. Manstead¹
Cardiff University, UK

Matthew J. Easterbrook
University of Sussex, UK

Toon Kuppens
University of Groningen, Netherlands

Highlights

- Influence of social class on thought and behavior depends on specifics of social context
- This is because people compare themselves with others on locally relevant dimensions
- Context shapes the relevance of social comparison dimensions (e.g., education, income, ethnicity) and also the outcomes of such comparisons
- Differences in income are more predictive of social and political attitudes in countries with high economic inequality
- Differences in education are more predictive of social and political attitudes in countries with higher proportions of higher educated people
- Interventions that reduce educational inequalities among certain groups in one socioecological context may operate differently in other contexts.

Keywords: Socioecology, social class, social comparison, inequality, education

¹ Antony Manstead, School of Psychology, Cardiff University, Tower Building, Park Place, Cardiff CF10 3AT, UK.
MansteadA@Cardiff.ac.uk (Corresponding author)

Abstract

Despite the increasing attention paid by psychologists to social class, we argue here that insufficient attention has been paid to the ways in which socioecological factors shape both which dimensions of social class are used by individuals to compare themselves with others, and the outcomes of these comparisons. We illustrate our argument by reviewing recent research on the ways in which different facets of socioeconomic status shape social and political attitudes, and on the ways in which inequalities in educational outcomes stem from comparisons made in specific social contexts. We conclude that by studying the psychological impact of social class differences through the lens of a socioecological approach, it becomes more evident that this impact varies as a function of both the dimension of social class involved, and local social ecologies.

Introduction

The past decade has witnessed an upsurge in psychological research on social class, a topic classically regarded as more appropriate for sociologists and political scientists. One reason for the historical lack of interest in social class on the part of psychologists was the difficulty in defining and operationalizing social class. To overcome this, psychologists have defined class in terms of socio-economic status (SES), usually operationalized as a combination of income and educational attainment.

There is a wealth of evidence that SES differences influence psychological processes and real-world outcomes (for recent reviews, see [1, 2, 3]). Our aim here is to view the psychology of social class through the lens of a socio-ecological approach [4]. Most social psychological research on social class examines inequality *in general*, rather than taking account of the social ecology of class differences. We argue that there is a good case for focusing more specifically on *what kinds of inequality* (e.g., power, status, education, income, wealth) matter in *which kinds of social context* (e.g., local, regional, national).

Our approach is informed by social comparison theory, the concept of relative deprivation, and social identity theory. Social comparison theory [5] argues that humans are motivated to evaluate themselves and do this by comparing themselves with others. However, people do not compare themselves with others in general; rather, they prefer to compare themselves with *similar* others. One type of similarity is local (versus distant). Local information is more highly weighted than distant information in making self-evaluations [6]. This accounts for seemingly counterintuitive research findings implying that students who achieve high grades can have lower academic self-esteem than those who achieve lower grades, if they are surrounded by high achievers [7, 8].

The importance of local comparisons is also clear in relative deprivation theory. To account for apparent anomalies in his findings in *The American Soldier*, Stouffer and colleagues [9] used the concept of relative deprivation, arguing that Black soldiers in the southern army camps compared themselves with their southern civilian counterparts rather than their northern soldier counterparts. As a result, those in southern camps did not feel deprived, despite the objectively better circumstances experienced by their northern army counterparts, because they were still better off than their southern civilian counterparts.

A final strand of theorizing that informs our approach is social identity theory (SIT; [10]) and its close relative, self-categorization theory (SCT; [11]). Here, too, social comparisons play a key role: The core argument in SIT is that people are motivated to achieve or maintain a positive social identity and that this positive identity derives largely from favorable comparisons that can be made between the ingroup and relevant outgroups. SCT helps to explain which comparisons will be made: People are likely to categorize themselves and others into groups on the basis of perceived similarities and differences, the important point being that how these categorizations are made will be shaped by the comparative context. These categorizations, in turn, feed into group members' experiences, ambitions, motivations, and life trajectories.

We now turn to our main argument. Given that people have multiple identities, they can compare themselves with others on several dimensions. As we shall see, the importance and valence of any given comparison dimension varies systematically as a function of the comparative context. Depending on socioecological features of the context, comparisons may be made based on class rather than ethnicity, or on different facets of social class – such as education rather than income – which alter the salience, meaning, and value of different social identities. Socioecological features of the context also influence the

outcomes of comparisons, such that, for example, differences in educational outcomes affect attitudes differently in societies where there is a relatively high proportion of persons who have been highly educated.

Below we focus primarily on the dimension of education. There are three main reasons for doing so. First, education has become a key predictor of life chances (e.g., [12]), making social inequalities in educational outcomes especially important. Second, education is highly valued in societies and often perceived to be a countervailing force against class-based inequalities, yet evidence demonstrates that educational institutions channel and reinforce inequalities [3, 13, 14, 15, 16, 17]. Third, differences in education are fueling contemporary political rifts. Low educational attainment is the key predictor of prejudice [18], interest and trust in politics [19, 20, 21], radical-right voting [22], and support for Trump [23] and Brexit [24]. Although income also plays a role (e.g., [25]) in predicting such outcomes, when income and education are jointly investigated in representative samples, education is the only reliable predictor (e.g., [26]).

Given these key roles of education, it is important to understand which features of the socioecological context strengthen the associations between education and social and political attitudes, and shape social inequalities in educational outcomes. We now discuss these in turn.

Social class as a predictor of social and political attitudes

Analysis of political attitudes over time shows that distinguishing between different dimensions of class can be important. Thus the classic left-right political dimension is associated with income, such that those with lower incomes are more in favor of redistribution and government intervention than are those with higher incomes. However, since the 1990s a new political dimension has taken center stage, and this is associated with education rather than income (e.g., [27]): Lower educated people tend to support nationalist and anti-immigration parties, whereas higher educated people tend to support parties that emphasize ethnic tolerance and protection of the environment [18, 22]. Why are these two political dimensions related to different aspects of social class? As yet there is no definitive answer to this question, but we argue that changes in the socioecological context must have occurred in order for education to become more central to this second attitudinal dimension, and that this possibility would be overlooked by treating class as a unidimensional construct.

The relative roles of education versus income depend not only on the nature of the outcome variable but also on the societal context. Income and education independently predict subjective social status: Higher educated people and those with higher incomes place themselves higher on the social ladder. However, the relation between education and subjective social status is more independent of the relation with income in countries with a larger proportion of higher educated people [28]. Similarly, education has a stronger (negative) relation with feelings of exclusion from society and trust in institutions in countries with a larger proportion of higher educated [29]. A potential explanation for these findings is that people are more likely to use education as a dimension of comparison in societies where education has greater institutional importance [30]. Although the US (where much of the published social psychological research on social class has been conducted) has a relatively large proportion of highly educated people, it has a relatively weak education-status relation and this relation is confounded with other demographic variables, such as income. The US therefore seems to be atypical, and generalizations from US research on social class to other countries should be made with caution.

In (European) societies with a larger proportion of higher educated people, there is also a stronger association between education and satisfaction with society, compared to societies with a lower proportion of higher educated people [31]. Satisfaction with society is strongly related to positive attitudes towards minorities and immigrants and negatively related to radical-right voting [32, 33]. Based on these findings, we suggest that in countries where education has become a dominant institution, lower educated people are more likely to be dissatisfied and to react with political extremism. Although more evidence is needed to confirm this, focusing on socioeconomic status in general would not have generated this idea.

The effects of income also depend on the societal context. For example, one's income relative to one's neighbors is more strongly related to life satisfaction in US counties with higher rather than lower inequality [34]. Similarly, at the country level, income is more strongly related to subjective social class (whether one identifies with upper, middle, or working class) in more unequal countries [35]. Thus, whether education or income are used as comparison dimensions, and the consequences of these comparisons, varies according to social ecology.

Inequalities in education

The outcomes of comparisons that are made in more specific contexts – such as educational institutions – are also likely to be fueled by the local socioecology. As argued below, socioecological features of educational institutions are likely to fuel educational inequalities by altering the focus and meaning of comparisons. In the US, for example, the socioecological context promotes comparisons between ethnic groups, whereas in the UK, the context promotes comparisons between those who come from different social classes.

Class-based educational inequalities are prominent in the UK, and more so than inequalities between the major ethnic groups. Students from working class or poor backgrounds in the UK feel that they are not valued in education; that their background is incompatible with educational success and progressing to higher education [36, 37, 38]; and perform poorly because of fears of confirming negative stereotypes about their group's academic performance [39] (see also [40, 41, 42]). These factors are negatively associated with motivation, achievement, and wellbeing, and help to explain class-based educational inequalities.

We argue that these feelings and perceptions result from the comparisons that are made within particular social ecologies. Consider the following: Lower class students are grossly underrepresented in high status educational institutions. For example, despite more than 50% of the British population identifying as working class [43], only 10% of Oxford or Cambridge graduates identify as working class [44], and only 6% of medical doctors say they are from working-class backgrounds [45]. Hence, there are few examples of lower-class students who have reaped benefits from education. This lack of role models fuels perceptions that educational success is not something worth pursuing and may encourage disidentification from education. It is therefore unsurprising that economically disadvantaged English school pupils perform worse than their peers throughout education [46].

We argue that the absence of working-class role models, the underrepresentation of group members in high status domains, and the group's historical underperformance feed into the meaning of that group's social identity within that domain, igniting a sense of threat and misfit among lower-class students. It also often leads to members of other groups becoming biased towards them in ways that make it difficult for them to counter these

negative expectations [14, 15, 47]. Indeed, increasing the salience of role models within the local context – particularly those with whom underperforming group members can identify – leads to positive outcomes for Latino students studying STEM subjects in the US [48]. We argue that similar processes are likely to operate for social class groups in the UK [36].

Direct evidence for the role of socioecological factors comes from research on interventions that have been found to reduce educational inequalities. There is compelling evidence that self-affirmation interventions – brief writing exercises encouraging participants to reflect on their important life values – improve the academic performance of negatively stereotyped students within education. For example, in US schools, self-affirmation has been shown to reduce the ethnic achievement gap [49, 50, 51], arguably because it reduces the negative effects of stereotype threat. However, the effectiveness of self-affirmation varies depending on the local context. Self-affirmation is more beneficial for ethnic minority students who are in a smaller numerical minority and have lower historical performance [52]. This suggests that the meaning of social identities and the associated sense of stereotype threat varies according to the socioecological context. Extending this to social class variation in England – where inequalities between ethnic groups are small relative to those between social classes – research has found that although self-affirmation does not improve the performance of ethnic minority students, it *does* enhance the performance of school pupils eligible for free school meals (a proxy for economic disadvantage) [39]. This, we argue, reflects the different meanings of ethnic and social class identities within these different socioecological contexts.

Conclusions

Studying the psychological impact of social class differences through the lens of a socioecological approach reveals that effects vary as a function of (a) the specific dimension of social class (i.e., education versus income), and (b) contextual factors (i.e., proportion of higher educated people or level of economic inequality in a given setting). This enhances our understanding of social class effects and generates new research questions, including ones that could be studied using experiments, which are arguably well suited to studying the moderating effects of context that we have focused on here, many of which have been identified in high-quality data derived from representative probability samples. This lends confidence that the issues are ones that are societally relevant (see [4]).

Acknowledgments

The writing of this paper was facilitated by grant ES/K003534/1 from the Economic and Social Research Council, UK.

References

- [1] Manstead ASR: The psychology of social class: How socioeconomic status impacts thought, feelings, and behaviour. *Br J Soc Psychol* 2018, **57**: 267-291. <http://dx.doi.org/10.1111/bjso.12251>
A review paper that seeks to summarize and integrate research on the ways in which social class influences the ways in which people think, feel, and act.
- [2] Markus H, Stephens N: Editorial overview: Inequality and social class: The psychological and behavioral consequences of inequality and social class: A theoretical integration. *Curr Opin Psychol* 2017, **18**: iv-xii. <https://doi.org/10.1016/j.copsyc.2017.11.001>
- [3] Stephens NM, Markus H, & Phillips, LT: Social class culture cycles: How three gateway contexts shape selves and fuel inequality. *Ann Rev Psychol* 2014, **65**: 611-634. <http://dx.doi.org/10.1146/annurev-psych-010213-115143>
- [4] Oishi S: Socioecological psychology. *Ann Rev Psychol* 2014, **65**: 581-609. <http://doi.org/10.1146/annurev-psych-030413-152156>
- [5] Festinger L: A theory of social comparison processes. *Human Relations* 1954, **7**: 117–140. <http://doi.org/10.1177/001872675400700202>
- [6] Zell E, Alicke MD: The local dominance effect in self-evaluation: Evidence and explanations. *Pers Soc Psychol Rev* 2010, **14**: 368–384. <http://dx.doi.org/10.1177/1088868310366144>
- [7] Huguet P, Dumas F, Marsh H, Regner I, Wheeler L, Suls J, Seaton, M, Nezlek JB: (2009). Clarifying the relationships between the big-fish-little-pond effect (BFLPE) and social comparison: An integrative study. *J Pers Soc Psychol* 2009, **97**: 156-170. <http://dx.doi.org/10.1037/a0015558>
- [8] Hoferichter F, Lätsch A, Lazarides R, Raufelder D: The big-fish-little-pond effect on the four facets of academic self-concept. *Front Psychol* 2018, **9**: 1247. doi: 10.3389/fpsyg.2018.01247
- [9] Stouffer SA, Suchman EA, DeVinney LC, Starr SA, Williams, RM: *The American Soldier: Adjustment to Army Life, Vol. 1*. Princeton University Press; 1949.
- [10] Tajfel H, Turner JC: The social identity theory of intergroup behaviour. In *Psychology of intergroup relations* (2nd ed). Edited by Worchel S, Austin W. Nelson-Hall; 1986: 7-24.
- [11] Turner, JC: A self-categorization theory. In *Rediscovering the social group: A self-categorization theory*. Edited by Turner J, Hogg M, Oakes P, Reicher S, Wetherell M. Blackwell; 1987: 42-67.
- [12] Hout M, DiPrete TA: What we have learned: RC28's contributions to knowledge about social stratification. *Res Soc Strat Mobil* 2006, **24**: 1–20. <http://dx.doi.org/10.1016/j.rssm.2005.10.001>
- [13] Bourdieu P, Passeron J-C: *Reproduction in education, society and culture*. Sage; 1990.
- [14] Autin F, Batruch A, Butera F: The function of selection of assessment leads evaluators to artificially create the social class achievement gap. *Journal of Educational Psychology* 2019, **111**: 717–735. <https://doi.org/10.1037/edu0000307>
- [15] Batruch A, Autin F, Bataillard F, Butera F: School Selection and the Social Class Divide: How Tracking Contributes to the Reproduction of Inequalities. *Personality and Social Psychology Bulletin* 2019, **45**: 477–490. <https://doi.org/10.1177/0146167218791804>

- [16] Darnon C, Wiederkehr V, Dompnier B, Martinot D: 'Where there is a will, there is a way': Belief in school meritocracy and the social-class achievement gap. *Br J Soc Psychol* 2018, **57**: 250–262. <https://doi.org/10.1111/bjso.12214>
- [17] Darnon C, Smeding A, Redersdorff S: Belief in school meritocracy as an ideological barrier to the promotion of equality. *Eur J Soc Psychol* 2018, **48**: 523–534. <https://doi.org/10.1002/ejsp.2347>
- [18] Stubager R: Education-based group identity and consciousness in the authoritarian-libertarian value conflict. *Eur J Pol Res* 2009, **48**: 204–233. <http://dx.doi.org/10.1111/j.1475-6765.2008.00834.x>
- [19] Easterbrook MJ, Kuppens T, Manstead ASR: The education effect: Higher educational qualifications are robustly associated with beneficial personal and socio-political outcomes. *Soc Indicators Res* 2016, **126**: 1261–1298. <https://doi.org/10.1007/s11205-015-0946-1>
- [20] Noordzij K, der Waal JV, Koster WD: The educational gradient in trust in politicians in the Netherlands: A status-based cultural conflict. *Sociol Quarterly*, in press. <https://doi.org/10.1080/00380253.2019.1580551>
- [21] Spruyt B, Kuppens T, Spears R, van Noord J: Talking politics? Educational category salience reinforces differences in people's willingness to participate in deliberative initiatives. *Pol Psychol*, 2018. <https://doi.org/10.1111/pops.12558>
- [22] Kriesi H, Grande E, Lachat R, Dolezal M, Bornschier S, Frey T: Globalization and the transformation of the national political space: Six European countries compared. *Eur J Pol Res* 2006, **45**: 921–956. <https://doi.org/10.1111/j.1475-6765.2006.00644.x>
- [23] Silver N: Education, not income, predicted who would vote for Trump. Retrieved September 19, 2017, from: <http://fivethirtyeight.com/features/education-not-income-predicted-who-would-vote-for-trump/>
- [24] Goodwin M, Heath O: Brexit vote explained: Poverty, low skills and lack of opportunities, 2016. Retrieved from: <https://www.jrf.org.uk/report/brexit-vote-explained-poverty-low-skills-and-lack-opportunities>
- [25] Mols F, Jetten J: *The wealth paradox: Economic prosperity and the hardening of attitudes*. Cambridge University Press; 2017.
- [26] Carvacho H, Zick A, Haye A, González R, Manzi J, Kocik C, Bertl M: On the relation between social class and prejudice: The roles of education, income, and ideological attitudes. *Eur J Soc Psychol* 2013 **43**: 272–285. <https://doi.org/10.1002/ejsp.1961>
- [27] Houtman D, Achterberg P, Derks A: *Farewell to the leftist working class*. New Transaction; 2008.
- [28] van Noord J, Spruyt B, Kuppens T, Spears R: Education-based status in comparative perspective: The legitimization of education as a basis for social stratification. *Soc Forces* 2019. <https://doi.org/10.1093/sf/soz012>
Analyses of International Social Survey Programme data find that education is (1) consensually seen as a legitimate form of social status, (2) related to higher subjective social status, and (3) more independently related to subjective social status in countries with a higher proportion of higher educated.
- [29] Eurofound: *European Quality of Life Survey 2016: Quality of life, quality of public services, and quality of society* [Data set]. Luxembourg: Publications Office of the European Union.
- [30] Baker D: *The schooled society: The educational transformation of global culture*. Stanford University Press; 2014.

- [31] Elchardus M, De Keere K: Republicanism in mediated society: A comparative analysis on public and private evaluation guided by the theory of symbolic society. *Int J Politics, Culture, & Society* 2013 **26**: 273–290. <https://doi.org/10.1007/s10767-013-9145-8>
- [32] Elchardus M, Spruyt B: Populism, persistent republicanism and declinism: An empirical analysis of populism as a thin ideology. *Government & Opposition* 2016 **51**: 111–133. <https://doi.org/10.1017/gov.2014.27>
- [33] Schumacher G, Rooduijn M: Sympathy for the ‘devil’? Voting for populists in the 2006 and 2010 Dutch general elections. *Elect Stud* 2013 **32**: 124–133. <https://doi.org/10.1016/j.electstud.2012.11.003>
- [34] Cheung F, Lucas RE: Income inequality is associated with stronger social comparison effects: The effect of relative income on life satisfaction. *J Pers Soc Psychol* 2016 **110**: 332–341. <https://doi.org/10.1037/pspp0000059>
- [35] Andersen R, Curtis J: The polarizing effect of economic inequality on class identification: Evidence from 44 countries. *Res Soc Strat Mobil* 2012 **30**: 129–141. <http://dx.doi.org/10.1016/j.rssm.2012.01.002>
- [36] Easterbrook MJ, Hadden IR., Nieuwenhuis M: Identities in context: How social class shapes inequalities in education. In *The Social Psychology of Inequality*. Edited by Jetten J, Peters, K. Springer; in press.
- [37] Iyer A, Jetten J, Tsivrikos D, Postmes T, Haslam SA: (2009). The more (and the more compatible) the merrier: Multiple group memberships and identity compatibility as predictors of adjustment after life transitions. *Br J Soc Psychol* 2009 **48**: 707–733. <http://doi.org/10.1348/014466608X397628>
- [38] Nieuwenhuis M, Manstead ASR, Easterbrook MJ: (2019) Accounting for unequal access to higher education: The role of social identity factors. *Group Procs & Intergroup Rels* 2019 **2**: 371–389. <http://dx.doi.org/10.1177/1368430219829824>
- [39] Hadden IR, Easterbrook MJ, Nieuwenhuis M, Fox KJ, Dolan, P: Self-affirmation reduces the socioeconomic attainment gap in schools in England. *Br J Soc Psychol* 2019. Advanced Online Publication.
A randomized control trial of 562 11- to 14-year-old school students in England found self-affirmation interventions increased the exam results of students eligible for free school meals, reducing the social class achievement gap by 62%.
- [40] Croizet J-C, Claire T: Extending the concept of stereotype threat to social class: The intellectual underperformance of students from low socioeconomic backgrounds. *Pers Soc Psychol Bull* 1998 **24**: 588–594. <http://doi.org/10.1177/0146167298246003>
- [41] Goudeau S, & Croizet J-C: Hidden advantages and disadvantages of social class: How classroom settings reproduce social inequality by staging unfair comparison. *Psychol Sci* 2017 **28**: 162–170. <https://doi.org/10.1177/0956797616676600>
Rare experimental findings demonstrating the role that cultural capital plays in producing the social class achievement gap.
- [42] Spencer B, Castano E: Social class is dead. Long live social class! Stereotype threat among low socioeconomic status individuals. *Soc Justice Res* 2007 **20**: 418–432. <http://doi.org/10.1007/s11211-007-0047-7>
- [43] Park A, Bryson C, Clery E, Curtice J, Phillips M (Eds): *British Social Attitudes: The 30th report*. NatCen Social Research; 2013. Retrieved from www.bsa-30.natcen.ac.uk
- [44] Bulman M: More than 60% of Oxford University students went to private or grammar school, figures show. *The Independent*, Sept 23 2018. Retrieved from <https://www.independent.co.uk/news/uk/home-news/oxford-university-cambridge->

[state-school-socially-inclusive-ethnicity-sunday-times-guide-david-lammy-a8551036.html](http://www.theguardian.com/society/2017/oct/16/state-school-socially-inclusive-ethnicity-sunday-times-guide-david-lammy-a8551036.html)

- [45] Social Mobility Commission: *State of the nation 2017: Social mobility in Great Britain*. Crown Copyright; 2017.
- [46] Department for Education: *Revised GCSE and equivalent results in England, 2016-17*. Crown Copyright; 2018.
- [47] Batruch A, Autin F, Butera F: Re-establishing the social-class order: Restorative reactions against high-achieving, low-SES pupils. *J Soc Issues* 2017 **73**: 42–60. <http://doi.org/10.1111/josi.12203>
Two experiments demonstrate that people react against violations of their expectations that low-SES pupils perform poorly. These biases reinforce the social class hierarchy.
- [48] Hernandez D, Rana S, Rao A, Usselman M: Dismantling stereotypes about Latinos in STEM. *Hispanic J Beh Sci* 2017 **39**: 436–451. <http://doi.org/10.1177/0739986317731100>
- [49] Cohen GL, Garcia J, Apfel N, Master A: Reducing the racial achievement gap: A social-psychological intervention. *Science*, 2006 **313**: 1307–1310. <http://doi.org/10.1126/science.1128317>
- [50] Sherman DK, Hartson KA, Binning KR, Purdie-Vaughns V, Garcia J, Taborsky-Barba S, Tomassetti S, Nussbaum AD, Cohen GL: Deflecting the trajectory and changing the narrative: How self-affirmation affects academic performance and motivation under identity threat. *J Pers Soc Psychol* 2013 **104**: 591–618. <http://doi.org/10.1037/a0031495>
- [51] Goyer, JP, Garcia J, Purdie-Vaughns V, Binning KR, Cook JE, Reeves SL, Apfel, N, Taborsky-Barber S, Sherman DK, Cohen GL: Self-affirmation facilitates minority middle schoolers' progress along college trajectories. *Proc Nat Acad Sci* 2017 **114**: 7594-7599. <https://doi.org/10.1073/pnas.1617923114>
- [52] Borman GD, Grigg J, Rozek CS, Hanselman P, Dewey NA: Self-affirmation effects are produced by school context, student engagement with the intervention, and time: Lessons from a district-wide implementation. *Psychol Sci* 2018, **29**: 1773-1784. <https://doi.org/10.1177/0956797618784016>
This longitudinal follow-up study reports results showing that self-affirmation interventions reduced racial achievement gaps in the US by 50%. The effects of the interventions were strongest for pupils who engaged with the interventions and those within school contexts that cued stronger identity effects.