

(Mis)perceptions of inequality

Oliver P Hauser and Michael I Norton

Laypeople's beliefs about the current distribution of outcomes such as income and wealth in their country influence their attitudes toward issues ranging from taxation to healthcare — but how accurate are these beliefs? We review the burgeoning literature on (mis)perceptions of inequality. First, we show that people on average misperceive current levels of inequality, typically underestimating the extent of inequality in their country. Second, we delineate potential causes of these misperceptions, including people's overreliance on cues from their local environment, leading to their erroneous beliefs about both the overall distributions of wealth and income and their place in those distributions. Third, we document that these (mis)perceptions of inequality — but not actual levels of inequality — drive behavior and preferences for redistribution. More promisingly, we review research suggesting that correcting misperceptions influences preferences and policy outcomes.

Address

Harvard Business School, USA

Corresponding authors: Hauser, Oliver P (ohauser@hbs.edu), Norton, Michael I (ohauser@hbs.edu)

Current Opinion in Psychology 2017, **18**:21–25

This review comes from a themed issue on **Inequality and social class**

Edited by **Hazel Markus** and **Nicole Stephens**

<http://dx.doi.org/10.1016/j.copsyc.2017.07.024>

2352-250X/© 2017 Elsevier Ltd. All rights reserved.

Introduction

Inequality is arguably the defining societal issue of the 21st century. The debate over 'who gets what' underlies policy debates ranging from taxation to health care to wages, and permeates society at all levels, attracting increasing interest from policymakers, academia, and the general public [1,2]. Most scholars agree that the level of economic inequality within Western societies is at its highest in almost a century; in the U.S., for example, inequality is at its highest peak since before the Great Depression [3–5]. Furthermore, the incomes of the top 1% in many countries around the world is rapidly increasing [6].

Documenting the actual levels of inequality within and across countries is generally considered a critical input to the design of economic and social policy [7–10]; we suggest that assessing laypeople's understanding of those levels, and how that understanding predicts their policy preferences, attitudes and behaviors, is also critical. In this review, we document the often large differences between actual levels of inequality and citizens' (mis)perceptions of those levels. This inaccuracy extends to people's beliefs about the distributions of income, wealth, and social mobility, as well as their beliefs about their place in these distributions. We focus on potential causes that lead to these misperceptions, and discuss the implications that misperceived inequality — but not actual inequality — have for policy and redistribution preferences. We conclude by highlighting research exploring the consequences of correcting these erroneous beliefs.

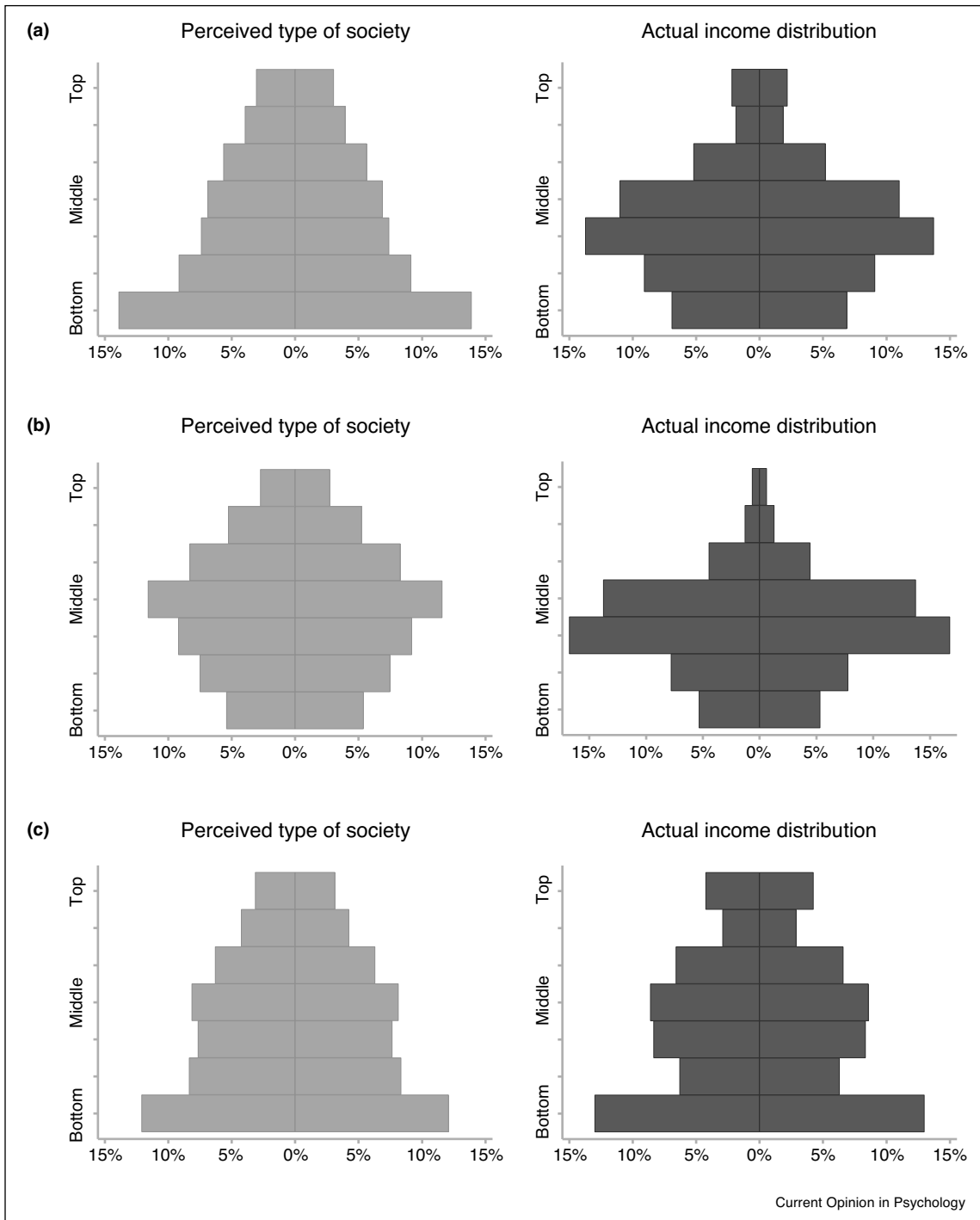
Perceptions differ from reality

Despite the fact that the United States has one of the highest levels of inequality in the Western world, surveys show that Americans typically underestimate the level of wealth inequality [11^{**},12^{**},13]. The misperception of how wealth in the United States is distributed is not only prevalent among adults, but it is even more pronounced among adolescents [14]. Likewise, despite the fact that Australia has a more equal distribution of wealth than the United States, respondents in Australia also underestimate the current levels of wealth inequality in their country [15], suggesting that misperceptions of wealth inequality also exist outside the United States.

In addition to wealth, income inequality is also underestimated in the United States and in other countries. Kiatpongsan and Norton used data from the International Social Survey Program (ISSP) [16], which asked respondents how much they believed, firstly, the average chairman of the board earned and, secondly, the average unskilled worker earned in their country [17^{**}]. The estimated ratio, a measure of perceived inequality, varied widely between countries. But notably across all countries, respondents' estimates were well below the actual level of inequality (for a graphical overview, see figures in [17^{**}]).

Overall, the bulk of the current evidence suggests that people around the world hold incorrect perceptions of inequality in their country — but with variation. In the U.S. and United Kingdom, for example, underestimation of inequality is relatively common [12^{**},17^{**}], while overestimation occurs in other countries, such as France and Germany [11^{**}]. Moreover, there are a few exceptions of

Figure 1



Income inequality is misperceived across the world. **(a–c)** Using graphical illustrations to indicate what survey respondents believe best represents their country’s level of inequality, respondents across 23 countries **(a)** overestimated (e.g., France) and **(c)** underestimated (e.g., U.S.) inequality, or **(b)** were relatively accurate (e.g., Norway). Illustrations from Niehues (2014) based on data from the International Social Survey Program (ISSP).

high accuracy: respondents in Norway, for instance, were relatively accurate in estimating their country's income inequality [11**] (Figure 1). (Note that different methods can produce differences in estimated levels of inequality (e.g., [18]); scholars have attempted to use measurements such as a 'societal ladder' [19*] or graphic illustrations [11**,20].)

Finally, general misperceptions of economic realities are not only limited to static inequality. For example, Gimpelson and Treisman show that people not only misperceive inequality but also the change in inequality in their country over time [20]. And people's perceptions of income mobility are also often flawed: respondents generally believe that upward mobility is more likely than downward mobility [21*,22] — a logical impossibility.

What shapes perceptions of inequality?

The drivers of both accurate and inaccurate perceptions of inequality have yet to be fully characterized. Some recent research, however, has begun to explore contributing factors.

First, people's immediate environments exert a large influence on perceptions of societal inequality. That is, when people are asked the complex question of estimating the extent of inequality in their country, they often answer a more tractable question: what is inequality like around me? Cruces *et al.* conducted a survey and field experiment in Argentina, showing that survey respondents' societal ranking in their local community predicted their perception of inequality at the country level [23**]. Xu and Garand offer further support for the hypothesis that people project local perceptions onto their estimates of national inequality [24].

Second, media coverage dramatically affects perceptions of inequality. Using data from various German TV and traditional media reports, Diermeier *et al.* find that greater coverage of inequality-related stories leads to heightened concerns about the general economic conditions and unfairness in society [25]. More intense coverage of inequality influences perceptions of heightened social injustice with increasing time. Conversely, most media coverage of inequality has only short-term transient effects on economic concerns.

Finally, another predictor of perceptions of inequality stems from an acceptance of hierarchy and beliefs in the role of personal choice on outcomes. Kteily *et al.* shows that individuals who generally endorse hierarchies are also less likely to perceive inequality between groups [26]. In addition, beliefs about merit versus luck predict people's beliefs about inequality and preferences for redistribution. For example, Cappelen *et al.* offered participants the opportunity to earn a bonus payment from a lottery made up of an even number of green and yellow

balls in [27*]. A third participant — the spectator — had the option to redistribute unequal lottery earnings between pairs of 'lottery participants.' When the lottery participants were not given a choice about the winning color of the lottery balls, most spectators redistributed the unequal earnings and restored equality in pairs; when lottery participants could designate which color of the lottery ball they hoped would win, fewer spectators decided to redistribute, believing that the mere act of choosing a lottery color was sufficient grounds for maintaining inequality. Other experiments have shown that beliefs in choice and merit have considerable effects on approving of, and maintaining, inequality [28,29].

Consequences for behavior, emotions, and redistributive preferences

What effect do these misperceptions have on people's policy preferences and behavior? Some research suggests that people's perceptions of inequality exert a larger influence on their policy preferences than the actual levels of inequality. For instance, perceived inequality predicts people's belief that income differences in their country large too large [11**], while actual inequality does not. Similarly, perceived — but not actual — inequality is associated with support for redistribution [20]. Below, we discuss several recent investigations exploring the consequences of either correcting misperceptions by providing accurate information about inequality, or even merely making inequality and information about income more salient.

Correcting misperceptions: effects on beliefs and redistribution

Several experiments have informed participants about the current level of inequality and policies, and then assessed the impact of that information on their preferences for policies that influence inequality (e.g., the estate tax and minimum wage). Previous research suggests that people's ideal levels of inequality are far more equal than their perceptions of inequality [12**,17**,18], suggesting that correcting those perceptions — making people realize how far reality is from their ideals — may influence their beliefs and behaviors.

Indeed, some research does suggest that correcting misperceptions shifts beliefs and affects preferences for redistribution — often in a self-serving manner. Cruces *et al.*, for example, show that when respondents learn that their income position is lower than they estimated, they are more likely to support government redistribution than those who do not learn this information and continue to overplace themselves [23**]. Conversely, in a representative survey experiment in Sweden, Karadja *et al.* elicited respondents' perceptions of their place in the income distribution and subsequently informed some respondents about their actual income position [30**]: respondents who learn that they are richer than they thought

demand less redistribution and support the conservative party more, an effect almost exclusively driven by those on the political right. In sum, when people hold inaccurate beliefs about their relative income position in the population, correcting these beliefs makes them more supportive of redistribution when they thought themselves richer than they actually are (and might benefit from redistribution), but less accepting of redistribution when they realize they are better off than they initially thought (and might suffer from redistribution).

If informing individuals about their relative position in an unequal society changes beliefs and preferences, do they react similarly when they learn about the general state of inequality in their society? Current evidence suggests they might, but to a lesser extent. Kuziemko *et al.* show that providing accurate information about the current level of inequality in the United States (without placing the respondents themselves in the distribution) does increase people's belief that inequality is an important problem, but that this information only weakly changes respondents' preferences for redistribution, with one clear exception: attitudes in favor of the estate tax, which affects only the wealthiest Americans [31**]. These results suggest that policies and media reports aimed at increasing awareness of the state of inequality only — without giving people an accurate picture of where they fall on the spectrum — might have weak effects on redistributive preferences.

Feeling inequality in the moment: emotions and reactive behaviors

As mentioned above, visibility of — often local — inequality plays an important role in shaping perceptions of inequality, which in turn influence redistributive preferences. Moreover, exposure to inequality can be emotionally arousing; evidence from airlines suggests that exposure to contextually-relevant inequality (e.g., seeing first-class seats during boarding) is associated with increased incidence of air rage during flights [32]. This suggests that increasing the visibility of inequality in the moment might also induce reactions against (or sometimes for the benefit of) other people and groups.

Recent research provides some evidence that people react strongly to seeing and experiencing inequality, both when they are at the lower end of the spectrum and at the top end. For example, fear of being in 'last place' can induce people to act harshly toward those near or below them in the income distribution [33]. These sanctioning behaviors can be directed at people both low and high in the distribution. Using a public goods paradigm (see [34–37]), Hauser *et al.* showed that people become more likely to punish the rich when they are aware of income inequality — and thus can see that the rich are not contributing as large a share of their income to the public good as those with lower incomes [38]. However, some

evidence suggests that visible inequality does not always motivate people to take steps to address or reduce inequality [39]. Field experiments in affluent neighborhoods reveal that preferences for redistribution (in the form of a 'millionaire's tax') are reduced in the presence of a poor individual [40*]. Taken together, these findings suggest that seeing and experiencing inequality in the moment may translate into behaviors that influence inequality.

Future directions

We have focused primarily on the evidence accumulated in Western countries on perceptions of inequality. However, future research would benefit from taking a broader view: despite rising levels of inequality within countries, global inequality has decreased in the past 20 years [41]. This raises a number of interesting questions: How do people perceive global inequality and how do they arrive at these perceptions? If those perceptions drive their behavior, how do beliefs about global inequality influence their attitudes and policy preferences toward poorer nations? For example, in one study, Americans who were shown that they dramatically underestimated their placement in the global income distribution supported higher spending on foreign aid [42].

In conclusion, people's perceptions of inequality are often inaccurate and these inaccurate perceptions predict policy preferences; correcting these perceptions has the potential to influence people's attitudes toward redistributive policies. At the same time, while research on inequality is increasing at an exponential rate, more research is needed to elucidate the underpinnings and consequences of (mis)perceptions of inequality. We hope that future research will result in both rigorous academic insights and practical policy recommendations.

Conflict of interest statement

Nothing declared.

Acknowledgements

We are grateful to the Foundations of Human Behavior Initiative at Harvard University for financial support.

References and recommended reading

Papers of particular interest, published within the period of review, have been highlighted as:

- of special interest
 - of outstanding interest
1. Piketty T: *Capital in the Twenty-First Century*. Harvard University Press; 2014.
 2. Stiglitz JE: *The Price of Inequality: How Today's Divided Society Endangers Our Future*. 2012.
 3. Davies JB, Sandström S, Shorrocks A, Wolff E: **The global pattern of household wealth**. *J Int Dev* 2009, **21**:1111–1124.
 4. Keister LA: *Wealth in America: Trends in Wealth Inequality*. 2000.

5. Wolff EN: *Top Heavy: The Increasing Inequality of Wealth in America and What Can Be Done About It*. 2002.
 6. Alvaredo F, Atkinson AB, Piketty T, Saez E: **The top 1 percent in international and historical perspective**. *J Econ Perspect* 2013, **27**:3-20.
 7. Frey BS: *Happiness: A Revolution in Economics*. 2008:1-14.
 8. Kuznets S: **Economic growth and income inequality**. *Am Econ Rev* 1955, **45**:1-28.
 9. Persson T, Tabellini G: **Is inequality harmful for growth?** *Am Econ Rev* 1994, **84**:600-621.
 10. Wilkinson RG, Pickett K: *The Spirit Level: Why More Equal Societies Almost Always Do Better*. Bloomsbury Press; 2009.
 11. Niehues J: *Subjective Perceptions of Inequality and Redistributive Preferences: An International Comparison, Working Paper*. 2014:1-23.
- Using graphical illustrations of societal inequality in the ISSP dataset, respondents in some countries overestimate while others underestimate inequality or are relatively accurate. Perceived — but not actual — inequality predicts belief in ‘income differences are too large.’
12. Norton MI, Ariely D: **Building a better America — one wealth quintile at a time**. *Perspect Psychol Sci* 2011, **6**:9-12.
- Americans drastically underestimate the level of inequality and that their ideal level of inequality is even more equal than their estimates.
13. Osberg L, Smeeding T: **“Fair” inequality? Attitudes toward pay differentials: the United States in comparative perspective**. *Am Sociol Rev* 2006, **71**:450-473.
 14. Arsenio WF, Willems C: **Adolescents’ conceptions of national wealth distribution: connections with perceived societal fairness and academic plans**. *Dev Psychol* 2017, **53**:463-474.
 15. Norton MI, Neal DT, Govan CL, Ariely D, Holland E: **The not-so-common-wealth of Australia: evidence for a cross-cultural desire for a more equal distribution of wealth**. *Anal Soc Issues Public Policy* 2014, **14**:339-351.
 16. ISSP Research Group: *International Social Survey Programme (ISSP): Social Inequality*. Cologne: GESIS Data Archive; 2011.
 17. Kiatpongsan S, Norton MI: **How much (more) should CEOs make? A universal desire for more equal pay**. *Perspect Psychol Sci* 2014, **9**:587-593.
- Respondents in 40 countries underestimated the extent of inequality between CEOs and unskilled workers, and their ideal level of inequality is far below the estimated level.
18. Eriksson K, Simpson B: **What do Americans know about inequality? It depends on how you ask them**. *Judgm Decis Mak* 2012, **7**:741-745.
 19. Engelhardt C, Wagener A: *Biased Perceptions of Income Inequality and Redistribution, Working Paper*. 2014:1-23.
- People in many countries underestimate inequality, and perceived — but not actual — inequality predicts higher support for redistribution while perceived — but not actual — social mobility predicts lower support.
20. Gimpelson V, Treisman D: *Misperceiving Inequality, Working Paper*. 2016:1-56.
 21. Davidai S, Gilovich T: **Building a more mobile America — one income quintile at a time**. *Perspect Psychol Sci* 2015, **10**:60-71.
- Americans have mistaken beliefs about social mobility, generally expecting more upward mobility than downward mobility.
22. Kraus MW, Tan JJX: **Americans overestimate social class mobility**. *J Exp Soc Psychol* 2015, **58**:101-111.
 23. Cruces G, Perez-Truglia R, Tetaz M: **Biased perceptions of income distribution and preferences for redistribution: evidence from a survey experiment**. *J Public Econ* 2013, **98**:100-112.
- Survey and field experiment in Argentina, which shows that own ranking within a local reference group predicts subjective level inequality in the country, and that those who are informed that their income position is lower than they thought show more support for government redistribution.
24. **Economic context and Americans’ perceptions of income inequality**. *Soc Sci Q* 2010, **91**:1-22.
 25. Diermeier M, Goecke H, Niehues J, Thomas T: *Impact of Inequality-Related Media Coverage on the Concerns of the Citizens, Working Paper*. 2017:1-38.
 26. Kteily NS, Sheehy-Skeffington J, Ho AK: **Hierarchy in the eye of the beholder: (anti-)egalitarianism shapes perceived levels of social inequality**. *J Pers Soc Psychol* 2017, **112**:136-159.
 27. Cappelen AW, Fest S, Sørensen EØ, Tungodden B: *Choice and personal responsibility: What is a morally relevant choice? Working Paper*. 2016:1-28.
- Spectators transfer less money from lucky to unlucky recipients when given a plausible (even if insignificant) choice to make, an effect that was particularly strong among self-reported right-wing voters.
28. Mollerstrom J, Seim D: **Cognitive ability and the demand for redistribution**. *PLOS ONE* 2014, **9**:e109955-e109957.
 29. Savani K, Rattan A: **A choice mind-set increases the acceptance and maintenance of wealth inequality**. *Psychol Sci* 2012, **23**:796-804.
 30. Karadja M, Mollerstrom J, Seim D: *Richer (and Holier) than Thou? The Effect of Relative Income Improvements on Demand for Redistribution, Working Paper*. 2015:1-48.
- Large-scale field experiment in Sweden corrects beliefs of one’s own standing in the income distribution and finds those richer than they thought demand less redistribution and increase support for the Conservative Party.
31. Kuziemko I, Norton MI, Saez E, Stantcheva S: **How elastic are preferences for redistribution? Evidence from randomized survey experiments**. *Am Econ Rev* 2015, **105**:1478-1508 <http://dx.doi.org/10.1257/aer.20130360>.
- Participants are informed about the extent of US inequality, the link between inequality and economic growth, and the estate tax: participants view inequality more as a problem, but their preferences for redistribution only change slightly — with the exception of the estate tax.
32. DeCelles KA, Norton MI: **Physical and situational inequality on airplanes predicts air rage**. *Proc Natl Acad Sci* 2016, **113**:5588-5591.
 33. Kuziemko I, Buell RW, Reich T, Norton MI: **“Last-place aversion”: evidence and redistributive implications**. *Q J Econ* 2014, **129**:105-149.
 34. Hardin G: **The tragedy of the commons**. *Science* 1968, **162**:1243-1248.
 35. Fehr E, Gächter S: **Altruistic punishment in humans**. *Nature* 2002, **415**:137-140.
 36. Rand DG, Dreber A, Ellingsen T, Fudenberg D, Nowak MA: **Positive interactions promote public cooperation**. *Science* 2009, **325**:1272-1275.
 37. Hauser OP, Hendriks A, Rand DG, Nowak MA: **Think global, act local: preserving the global commons**. *Sci Rep* 2016, **6**.
 38. Hauser OP, Kraft-Todd GT, Rand DG, Nowak MA, Norton MI: **Invisible inequality leads to punishing the poor and rewarding the rich**. In *Academy of Management Proceedings*. 2016.
 39. Nishi A, Shirado H, Rand DG, Christakis NA: **Inequality and visibility of wealth in experimental social networks**. *Nature* 2015:1-14.
 40. Sands ML: **Exposure to inequality affects support for redistribution**. *Proc Natl Acad Sci U S A* 2017.
- Field experiment varying visibility of inequality which shows that the presence of a poor person reduces support for redistribution.
41. Lakner C, Milanovic B: **Global income distribution: from the fall of the Berlin Wall to the Great Recession**. *World Bank Econ Rev* 2016, **30**:203-232.
 42. Nair G: *Misperceptions of Relative Income and Support for International Transfers in the United States, Working Paper*. 2016:1-51.