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The social psychology of economic inequality

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# WIDER Working Paper 2021/43

# The social psychology of economic inequality

Matthew J. Easterbrook\*

February 2021

Abstract: In this review, I provide an overview of the literature investigating the social psychology of economic inequality, focusing on individuals' understandings, perceptions, and reactions to inequality. I begin by describing different ways of measuring perceptions of inequality, and conclude that absolute measures—which ask respondents to estimate inequality in more concrete terms—tend to be more useful and accurate than relative measures. I then describe how people understand inequality, highlighting the roles of cognitive heuristics, accessibility of information, self-interest, and context and culture. I review the evidence regarding how people react to inequality, suggesting that inequality is associated with higher well-being in developing nations but lower well-being in developed nations, mostly because of hopes or fears for the future. The evidence from developed nations suggests that inequality increases individuals' concerns about status and economic resources, increases their perception that the social world is competitive and individualistic, and erodes their faith in others, political systems, and democracy in general.

**Key words:** inequality, perceptions of inequality, economic inequality, reactions to inequality, measuring perceptions of inequality

**IEL** classification: D91

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3 March 2021: This version rectifies a minor incorrect statement on page 6, where 'greater support for' is replaced by 'greater opposition to'.

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#### 1 Overview

Economic inequality is at historically high levels in much of the world (Piketty and Saez 2014), and has been identified as the major social, political, and economic concern of our times (Obama 2013). Correspondingly, a vast body of academic literature has erupted in the last few decades that documents the broad effects of economic inequality. Researchers have documented how economic inequality has evolved over time and across societies (e.g., Kohler et al. 2017), and how it affects economies (Stiglitz 2015), societies, and human health and longevity (Wilkinson and Pickett 2009).

However, it is becoming increasingly apparent that, beyond these effects, economic inequality also affects human psychology. A huge number of research articles have been published in the last two decades that document the effects of economic inequality on human functioning and psychology. In this review, I offer an overview of the *psychological* consequences of economic inequality, particularly regarding how people perceive, understand, react to, and act upon economic inequality.

Although perceptions of inequality (Hauser and Norton 2017; Phillips et al. 2020), the association between inequality and well-being (Buttrick et al. 2017), the psychological consequences of income inequality (Buttrick and Oishi 2017), and the social psychology of inequality (Jetten and Peters 2020) have been reviewed elsewhere, in this review I attempt to offer a broader perspective than previous reviews, drawing not only on the psychological literature but also, where relevant, on economic and sociological literature in order to provide an overview of the main findings regarding human perceptions of and preferences about economic inequality, the various psychological consequences of economic inequality, micro and macro moderators of these effects, and issues of measurement. I also attempt to identify gaps in the literature to encourage future research.

I begin the review by providing an overview of the literature regarding perceptions of inequality. How are perceptions of economic inequality measured? Are people's perceptions of inequality an accurate reflection of the actual levels of inequality under which they live? What are the challenges that researchers face when it comes to measuring perceptions of inequality? What biases distort people's perceptions of inequality?

I then review evidence regarding how people understand inequality. What are the factors and biases that influence people's perceptions of and reactions to inequality? What are their preferences about and ideal levels of inequality?

I move on to review the literature regarding the psychological consequences of inequality. What are the effects of inequality on well-being and psychological functioning? How does inequality affect people's attitudes and behaviours? How does this vary across individual characteristics and contexts?

In this review, I attempt to synthesize and draw conclusions from the extant literature, although I do not provide a comprehensive or exhaustive literature review, as the literature is indeed vast. I also limit the scope of this review mainly to understanding the effects of economic inequality rather than the effects associated with individual socio-economic status, although I do venture into this literature when the effects of inequality and socio-economic status are inextricably entwined.

A large proportion of the research I review investigates inequality by analysing existing data from large-scale social surveys, such as the International Social Survey Programme (ISSP) or the International Social Justice Project, which contain several different assessments of the estimation and legitimation of inequality across a range of nations. Others conduct new large-scale surveys,

sometimes with a quasi-experimental design (e.g., Cruces et al. 2013), or new smaller surveys that test direct hypotheses (e.g., Eriksson and Simpson 2012; García-Sánchez et al. 2018; Swan et al. 2017). Other researchers conduct experiments that place participants in artificial groups (Nishi et al. 2015) or societies (Jetten et al. 2015) and vary the level of inequality within or between them. I describe these methods throughout the review.

The review is divided as follows. Section 2 discusses measurements of (mis)perceptions of economic inequality; section 3 discusses the understanding of inequality; section 4 discusses reactions to inequality; section 5 concludes.

## 2 Measurements of (mis)perceptions of economic inequality

One of the most fundamental questions in the psychology of inequality is how people perceive the levels of inequality under which they live, and whether those perceptions are accurate. There are a wide range of ways in which researchers have measured people's perceptions of inequality. Some use *relative* measures, which for example ask respondents to estimate the percentage of wealth or income owned by different segments of the population (e.g., Chambers et al. 2014; Norton and Ariely 2011), or assess subjective inequality using pictorial representations of the distribution of income or wealth across segments of society (usually based on figures in the ISSP) (Gimpelson and Treisman 2018; cf. Page and Goldstein 2016). Yet other relative measures compute subjective inequality coefficients (such as a subjective Gini) from these pictorial distributions (Gimpelson and Treisman 2018) or from respondents' estimates of their own quintile position (Engelhardt and Wagener 2014).

Other researchers opt for *absolute* measures, which for example ask respondents to estimate the average wealth or income of different population segments (Eriksson and Simpson 2012), or to estimate the average salaries of different professions (e.g., Gimpelson and Treisman 2018; Kiatpongsan and Norton 2014). Regardless of how perceptions of inequality are assessed, one conclusion is clear: individuals' perceptions of inequality almost never correspond with reality (Hauser and Norton 2017; for one notable exception, see Page and Goldstein 2016). But the extent to which perceptions differ from reality varies depending on how perceptions are measured.

#### 2.1 Relative measures

Relative measures, which usually require respondents to estimate the percentage or proportion of wealth or income that different segments of the population own, often lead to the underestimation of actual levels of inequality (Arsenio and Willems 2017; Norton and Ariely 2011; Norton et al. 2014). For example, a seminal paper by Norton and Ariely (2011) reported results from measures that asked respondents to estimate the percentage of wealth owned by population quintiles. They found that while the wealthiest quintile in the US actually owned 84 per cent of the wealth, respondents estimated that they owned just 59 per cent.

However, the value of relative measures that require respondents to estimate percentages is questionable. In contrast with most other measures of perceptions (e.g., Gimpelson and Treisman 2018), for example, these relative percentage measures do not consistently predict relevant political attitudes—such as attitudes towards increasing the minimum wage, or about whether the government should adopt progressive tax policies (Norton et al. 2014)—implying that they have limited predictive value. What is more, studies assessing respondents' perceptions of social mobility rates—that is, the proportion of people who move up or down in status across their lives—suggest that relative percentage measures (such as those used by Norton and Ariely (2011))

are inadequate because they are overly sensitive to small wording or instructional changes. Two different research teams—both of whom asked respondents for relative estimates of the percentages of population segments who were mobile—found that respondents were inaccurate in their perceptions of mobility rates. However, one team asked for mobility rates for population quintiles and found that respondents *underestimated* mobility (Chambers et al. 2015), while the other asked for mobility rates for population tertiles and found that respondents *overestimated* mobility (Davidai and Gilovich 2015). A follow-up direct comparison of these techniques replicated these findings, and the authors concluded that these relative percentage measures were inadequate (Swan et al. 2017). Although there has not been a direct comparison of different techniques for assessing estimates of inequality, it seems likely that a similar conclusion can be drawn from the literature on perceptions of inequality: relative percentage techniques are not reliable measures of perceptions of inequality.

One frequently used relative measure that avoids percentage estimates, and which is often used because it is included in the ISSP, asks respondents to choose from a range of figures the one that most accurately represents how economic resources are distributed across population septiles. Although the measure does not specify whether the distributions represent wealth or income, it has been argued that because the preceding questions in the survey are about income, respondents are likely to consider the distribution to be of income rather than wealth (Gimpelson and Treisman 2018). These measures merely seem to produce inaccurate estimates: the estimates vary widely across nations, and do not produce consistent over- or underestimations of actual inequality levels (Gimpelson and Treisman 2018; Niehues 2014). This is perhaps not surprising considering that the real distribution is often not accurately represented in the range of figures from which respondents get to choose. Nonetheless, these measures significantly predict relevant political attitudes, such as preferences regarding resource redistribution, while objective measures of inequality (e.g., Gini) often do not (Niehues 2014), suggesting that the level of economic inequality in people's heads is what matters for their opinions about issues related to inequality (Phillips et al. 2020).

#### 2.2 Absolute measures

Absolute measures of perceived inequality tell a more consistent story: when asked to estimate the average income or wealth owned by different segments of the population, people tend to be more accurate than when they are asked for relative estimates, although they still consistently underestimate the true level of inequality (Eriksson and Simpson 2012; Kiatpongsan and Norton 2014; Osberg and Smeeding 2006). Indeed, evidence has shown that absolute estimates tend to be more accurate than relative estimates (Eriksson and Simpson 2012). For example, one direct comparison between a relative measure requiring estimates of the percentage of wealth owned by population quintiles (used by Norton and Ariely (2011)) and an absolute measure requiring estimates of the average income of population quintiles (Eriksson and Simpson 2012) found that the absolute measure produced much more accurate estimates of the true level of inequality. This was true regardless of the type of inequality being assessed, whether economic or otherwise (actual and ideal household wealth, teachers' salaries, or webpage visits). Indeed, when the statistically dependent relationship between the absolute and relative measures was pointed out to respondents who provided both, a (slim) majority indicated that their absolute estimate was closer to their true beliefs (Eriksson and Simpson 2012).

Perhaps the simplest and most intuitive measure of perceived inequality—absolute estimates of the average salaries of high-paid CEOs and low-paid unskilled workers—consistently finds that respondents perceive less inequality than there really is, often by a sizeable margin (Gimpelson and Treisman 2018; Kiatpongsan and Norton 2014). For example, one analysis of the ISSP survey conducted in 40 countries found that respondents consistently underestimated inequality by a large

margin; this was exemplified in results from the US, where respondents estimated the ratio to be 30:1 when it was actually 354:1 (Kiatpongsan and Norton 2014). Perceptions measured in this way have been found to be stronger predictors of relevant political attitudes than objective measures of inequality (Pedersen and Mutz 2019), although it seems unlikely that they are free from bias (either anchoring or ratio bias, see section 3.2) (Pedersen and Mutz 2019).

There is, however, one study that used a different measurement technique and found that individuals' estimations of inequality did not significantly differ from reality. Page and Goldstein (2016) asked respondents to use a distribution builder to graphically represent what they thought was the distribution of the population within different income brackets. They found people were generally accurate. They also found that estimates regarding the proportion of income that the poor received—but not estimates of overall inequality or the proportion of income that the rich received—predicted attitudes towards redistribution (Page and Goldstein 2016). This suggests that perceptions of the wealth or income of the poor both are more accurate and hold more weight in people's political opinions than their perceptions of the rest of society.

Indeed, inaccurate estimates seem to be fuelled mostly by people's misperceptions of the economic resources of those at the top of society (Chambers et al. 2014; Gimpelson and Treisman 2018; Osberg and Smeeding 2006), perhaps because they do not regularly come across such high-status individuals in their daily lives (García-Sánchez et al. 2018). For example, people have been found to vastly *underestimate* the pay of those at the top of society (Osberg and Smeeding 2006), and to be generally inaccurate in estimating the wealth of the top one per cent, often overestimating the wealth they own (Gimpelson and Treisman 2018). Estimates of the pay of low-skilled workers, however, tend to be more accurate and consistent (Osberg and Smeeding 2006). Estimates also vary according to individual characteristics: those who are politically liberal, for instance, tend to inaccurately perceive greater levels of inequality than conservatives (Norton and Ariely 2011; Chambers et al. 2014), as do males and those with higher status and economic resources (Norton and Ariely 2011). I expand on this below.

## 3 Understanding economic inequality

#### 3.1 Ideals and preferences

Measures of perception are often adapted to also assess people's ideal levels of inequality. It is clear from research measuring people's ideal levels of inequality that they prefer less inequality than there really is, or even than they perceive there to be, and often vastly so (Kiatpongsan and Norton 2014; Norton and Ariely 2013). This has been shown using relative (Norton and Ariely 2011) and absolute (Eriksson and Simpson 2012) measures of the proportion of wealth owned by different segments of society, absolute measures of pay differentials (Kelley and Evans 1993; Kiatpongsan and Norton 2014; Osberg and Smeeding 2006), and more direct questions that assess individuals' self-reported attitudes towards or tolerance of inequality (García-Castro et al. 2019, 2020; Hadler 2005). This preference exists across political persuasions and individual economic circumstances, although there is some predictable variation (e.g., Norton and Ariely 2013).

For example, higher ideal levels of inequality tend to be reported by those with characteristics that are associated with higher status: individuals who have higher individual socio-economic status, who are older, who are male, and who are politically right-leaning (Kelley and Evans 1993; Kiatpongsan and Norton 2014; Norton and Ariely 2011; Norton et al. 2014). Indeed, individuals who hold inequality-legitimizing beliefs (such as a belief that society is meritocratic)—which tend to be more common among the political right and wealthier individuals—tend to be more tolerant

of inequality (Trump 2018) and have less intense emotional reactions to inequality (Goudarzi et al. 2020). Furthermore, although there is relative consistency in individuals' preferences about the pay that should be received by those in low-status jobs, preferences regarding the pay received by those in elite jobs vary considerably, particularly according to age, personal income, and national context (Kelley and Evans 1993). This is similar to estimates of the wealth and/or income of those at the top of society, which are also less accurate and less strongly related to political attitudes (Gimpelson and Treisman 2018; Page and Goldstein 2016).

#### 3.2 Cognitive biases

Measuring perceptions and ideal levels of inequality is challenging because individuals' estimates are subject to many forms of bias. Much of this bias is due to the accessibility of knowledge about inequality, which is derived from their personal experience; it is therefore meaningful and informative about how individuals experience inequality (Jachimowicz et al. 2020; Phillips et al. 2020). I describe these biases below. However, measuring perceptions of (and preferences about) inequality is also challenging because of biases that result from cognitive heuristics ignited by the way perceptions are measured, which clouds any conclusions that can be drawn regarding individual experiences of inequality.

One such heuristic is the anchoring-and-adjustment heuristic: individuals' judgements are biased towards an initial (but potentially irrelevant) piece of information (Tversky and Kahenman 1974). Osberg and Smeeding (2006) noted, for example, that there was a strong correlation between perceived and ideal pay ratios ( $r^2 = .78$ ), and suggested that respondents' ideal pay ratios were anchored to their estimates of actual pay ratios. They recommended that researchers account for this by controlling for perceived ratios when investigating the predictive utility of ideal pay ratios. This issue was investigated more directly by Pedersen and Mutz (2019), who found that respondents' ideal pay ratios varied depending on the information or questions they were given beforehand: ideal pay ratios were higher when respondents were provided with the actual pay ratios—which presumably were higher than they thought (e.g., Kiatpongsan and Norton 2014) before being asked to provide their own ideal ratios. They also found that ideal pay ratios only predicted relevant political attitudes (beliefs that pay differentials were too large) once perceived ratios were included in the model; they suggested that this was because ideal levels of inequality were anchored to perceived levels, and so were only predictive once perceived levels were also taken into account. Trump (2018) also found that providing respondents with actual information regarding the pay ratios in their nation increased their tolerance for higher levels of inequality, implying that respondents' ideal ratios were anchored to the real ratios.

Crucially, Pedersen and Mutz (2019) also found that respondents reported that they thought inequalities were too large regardless of whether they indicated that their ideal pay ratios were smaller than, equal to, or larger than their estimates of reality. The latter—where respondents' ideal pay ratios were larger than their estimates of actual pay ratios, but the respondents also indicated that they believed inequalities in pay were too large—is semantically illogical, and so suggests that respondents' estimates were anchored to the figures with which they had previously been presented. It seems, therefore, that individuals' perceptions of inequality anchor their desired levels of inequality (García-Sánchez et al. 2019; Pedersen and Mutz 2019; Phillips et al. 2020).

Pedersen and Mutz (2019) also found that ideal ratios varied depending on whether absolute (average income estimates in dollars) or relative (estimates of multiples) estimates were requested, reflecting a ratio bias: individuals tended to perceive ratios as larger when they were expressed in larger numbers. They found that relative estimates—in which respondents had to indicate how many times the salary of an unskilled worker a CEO should earn, presented in smaller numbers than absolute estimates in raw dollars—led to higher ideal pay ratios compared with absolute

estimates. These studies—as well as those by Eriksson and Simpson (2012) and Swan et al. (2017) described above—demonstrate that there are considerable challenges when it comes to measuring people's perceptions of inequalities because responses vary widely depending on the type of information provided to them and the way in which their estimates are measured.

Overall, however, the findings suggest that relative estimates are less accurate than absolute estimates. The lower accuracy of relative compared with absolute estimates is in part because of the additional computational demands that computing relative rather than absolute estimates requires of respondents: they must estimate the average wealth of different quintiles, as they must in absolute measures, but then must covert these to percentages (Eriksson and Simpson 2012). This latter process is particularly susceptible to the anchor-and-adjustment heuristic, with percentages thought to be anchored to the proportion of the population that respondents are asked to consider (e.g., quintile estimates are anchored to 20 per cent) (Eriksson and Simpson 2012). These are challenges of measurement that must be considered carefully when researchers aim to assess perceptions of inequality (see Jachimowicz et al. 2020; Phillips et al. 2020). However, there are also numerous other sources of bias, which mostly alter the accessibility of information regarding inequality.

### 3.3 Cues and accessibility

Social, physical, or media cues related to inequality or poverty within individuals' environments also bias their perceptions of and reactions to inequality, mostly by rendering some sources of information regarding inequality levels more cognitively accessible than other sources (García-Castro et al. 2020; Phillips et al. 2020). For example, field experiments that expose people to an ostensibly poor person have shown that this exposure causes people to be more likely to sign a petition in support of redistribution policies (Sands 2017), presumably because poverty is a more salient issue in their minds. Another study found that people who had greater exposure to cues of inequality—either by perceiving an expensive car, or by the level of inequality apparent in their local neighbourhood—were more supportive of redistribution taxes (Sands and de Kadt 2019). Other studies that use self-report measures to assess the extent of inequality that people perceive in their everyday lives have found that those who perceive a large number of cues about inequality levels and poverty on a daily basis are less tolerant of inequality (García-Castro et al. 2020). Indeed, neighbourhood indicators related to inequality tend to be stronger predictors of perceptions and reactions to inequality than national-level indicators (Cruces et al. 2013; Page and Goldstein 2016; Wang et al. 2018), suggesting that the salience of inequality in people's lives and minds impacts upon their reactions to inequality. Individuals whose social circles are composed of wealthier people tend to perceive greater levels of wealth in the nation as a whole, and thus show greater opposition to redistributive policies (Dawtry et al. 2015).

People can also be exposed to cues about inequality through the media they consume; this can render inequality more salient, and thus biases their perceptions and concerns about inequality (Phillips et al. 2020). One study, for example, found that when a greater proportion of the national media covered issues related to inequality, individuals became more concerned over the next few days about the economic situation and fairness of their society (Diermeier et al. 2017; see also Phillips et al. 2020). The way that inequality is framed can also alter how concerned people are about inequality. For example, messages that frame inequality as 'the rich have more' rather than 'the poor have less' increase individuals' support for equalizing policies and beliefs (Bruckmüller et al. 2017; Chow and Galak 2012).

#### 3.4 Self-interest and system justification

Aside from cognitive heuristics and accessibility, individuals' perceptions and reactions to inequality are also driven, in part, by self-interest: individuals tend to perceive, understand, and react to inequality in ways that could help to justify policies that preserve or improve their own individual status position or match their political ideals (Phillips et al. 2020). For example, politically left-leaning liberals (inaccurately) perceive greater levels of inequality than conservatives, which is consistent and associated with their desire to change the status quo and reduce inequality (Chambers et al. 2014; Kiatpongsan and Norton 2014; Norton and Ariely 2011; cf. Norton et al. 2014). Relatedly, it has been found that individuals who believe that income differences are too large are more likely to perceive higher levels of inequality than those who are comfortable with large income differences (Gijsberts 2002; Kiatpongsan and Norton 2014). These findings suggest that perceptions of inequality are in part motivated by a self-interested desire to justify and garner support for political ideologies.

Economic self-interest also plays an important role in perceptions of inequality and related political attitudes. For example, greater inequality in the local area—which increases perceived inequality (García-Castro et al. 2019)—has been found to be associated with a reduction in inequality-justifying meritocratic beliefs among low-status individuals, but to increase them among high-status individuals (Newman et al. 2015), in line with self-interest. Although correlational work does not allow any conclusions regarding the direction of these effects (and other work has demonstrated the reverse causal pathway—see below), experimental manipulations embedded within surveys have demonstrated the causal effect of economic self-interest on attitudes towards inequality and redistribution. Manipulations that correct individuals' inaccurate perceptions of their own income position have shown that those who are told they are richer than they believed reduce their support for redistribution (Cruces et al. 2013; Karadja et al. 2016).

Self-interest is not only tied to individuals' present positions, however: it can also be projected into the future, so that individuals may tolerate more inequality if they expect their own status to increase in future (Ravallion and Lokshin 2000). Such hope can be fuelled by perceptions of economic development or increasing inequality within one's own nation (i.e. suggesting that the individual's own position might soon improve) (Davis 2019; Hirschman and Rothschild 1973), personal experiences of upward mobility (Clark 2003), or optimism about the future (Owuamalam et al. 2016, 2017, 2018). Thus, whereas individuals' perceptions of and reactions to inequality are in part motivated by economic self-interest, this may not be consistently linked with the current economic climate.

It is not only the differences in resources between people that matter for people's reactions to inequality, but also how fair the process of distributing resources is perceived to be. Large-scale surveys and experiments have shown that if inequality is perceived to be just and legitimate—because, for example, individuals endorse internal attributions of poverty (and thus blame those in poverty for their low status) (Savani and Rattan 2012; Schneider and Castillo 2015), or believe that resources are allocated justly according to meritocratic principles (Cassar and Klein 2017; McCoy and Major 2007)—people are more accepting of higher levels of inequality (see Jetten, Wang et al. 2017; Starmans et al. 2017). Indeed, procedural justice seems to be key to understanding how people act upon inequality (Tyler 2011). If status differences are seen as illegitimate—because, for example, resources are distributed by chance rather than merit—then people are likely to more strongly reject higher levels of inequality and more strongly support progressive policies (Bjørnskov et al. 2013; Cassar and Klein 2017; Newman et al. 2015; Rustichini and Vostroknutov 2014), and they may even engage in collective action or uprisings against inequality (Jetten et al. 2020; Justino and Martorano 2016). Furthermore, perceiving inequality as unjust or illegitimate seems to explain some of the negative association between inequality and well-being (reviewed

below), at least among individuals in the lower half of the status hierarchy in developed nations (Bjørnskov et al. 2013; Oishi et al. 2011, 2018).

Related work has shown that in hierarchical systems perceived or portrayed as long-standing, unchanging, and stable, inequality is more likely to be perceived as legitimate and more tolerable than under systems that are unstable or have undergone change (Blanchar and Eidelman 2013; Laurin et al. 2013). These findings are in line with predictions from system justification theory (Jost and Banaji 1994; Laurin et al. 2013) and social identity theory (Jetten et al. 2015) that suggest people are more likely to legitimize stable systems of inequality, in part because they want to avoid feeling trapped in an inevitable and substandard system.

Social dominance theory (Sidanius and Pratto 2008) and system justification theory (Jost and Banaji 1994) also suggest that under certain conditions, self-interest among those with low status can be trumped by a desire to preserve and justify the economic system under which they live, particularly under conditions of high inequality. In support of this notion, one study reported that national inequality was associated positively with *greater* endorsement of meritocratic beliefs, particularly among those with fewer economic resources (Mijs 2019).

However, several studies have found that inequality is associated with an increase in support for redistributive policies (García-Castro et al. 2020; Sands 2017; Sands and de Kadt 2019) and with a reduction in support for system-justifying beliefs, especially among the poor (Newman et al. 2015). Experimental work has also found that people are more likely to justify the current system when they believe there is hope that their group's status position will improve in the future (Owuamalam et al. 2016; see also Owuamalam et al. 2017, 2018), in line with motives of collective self-interest rather than system justification. Indeed, a recent novel and large-scale survey across 66 samples in 30 countries found that individual status and the perceived legitimacy of the system were consistently positively associated, including among those with low status (Brandt et al. 2020), against predictions derived from system justification theory.

A possible explanation for some of the conflicting findings pertains to individuals' perceptions of and beliefs about social mobility. For example, experiments have found that manipulating individuals to perceive higher levels of social mobility increases their tendency to justify the current economic system and its levels of inequality (Day and Fiske 2016). A large cross-national survey found that individuals with low status who perceived social mobility as a possibility were more likely to legitimize the system and so to accept more inequality, in line with suggestions that hope for future increases in personal status may underlie attitudes towards inequality (Brandt et al. 2020). Other experimental work inspired by the social identity approach (comprised of social identity theory (Tajfel and Turner 1979) and self-categorization theory (Turner et al. 1987)) has found that people are more likely to justify the current system when they believe there is hope that their group's status position will improve in the future (Owuamalam et al. 2016).

In line with these findings, individuals' personal experiences of mobility are also associated with system justification. For example, Mijs (2019) conducted an analysis of the responses of nearly 50,000 individuals across 23 countries and found that individuals who had experienced social mobility more strongly endorsed meritocratic beliefs. Gugushvili (2016) analysed responses from two large cross-national surveys and found that individuals who had experienced upward social mobility were more likely to endorse internal attributions of poverty and thus to blame low-status individuals for their disadvantaged positions. Furthermore, Alesina et al. (2017) found that mobility beliefs were higher in the US than in Europe—in line with dominant discourses (Alesina et al. 2004)—and that mobility beliefs were causally related to lower levels of support for redistribution. Shariff et al. (2016) also found that higher objective national levels of income mobility were associated with greater tolerance of inequality, and that experimentally manipulating individuals to

believe that mobility rates were high caused them to tolerate higher levels of inequality, partly because of the prospect that they themselves would benefit from upward social mobility. This demonstrates that experiences and perceptions of social mobility are causally related to individuals' reactions to inequality.

#### 3.5 Context and culture

People's preferences about and reactions to inequality also differ by political, social, and historical context, as people seem to imbibe the prevailing discourses, norms, and values of the societies in which they are socialized. Those living in Anglo-Celtic, Catholic, or richer nations tend to report higher ideal levels of inequality, while those living in nations with a history of communism desire lower levels (Hadler 2005; Janmaat 2013; Kelley and Evans 1993). Individuals living in nations with higher actual levels of inequality (Trump 2018), or in nations where people on average perceive higher levels of inequality (García-Sánchez et al. 2019), tend to accept greater levels of inequality. People living in societies characterized by strong functionalist beliefs about inequality (Hadler 2005) or prominent system-justifying discourses (such as meritocracy) (García-Sánchez et al. 2019; Trump 2018) also tend to accept greater levels of inequality. For example, one analysis of survey responses from around 35,000 individuals across 35 nations found that people were less likely to agree that income differences were too large if their society was characterized by strong and homogenous meritocratic (i.e. people get rewarded for effort) and functionalist (i.e. inequality is necessary for prosperity) beliefs (Hadler 2005).

Such aggregate measures of beliefs have been argued to represent culture or shared meaning systems (Fischer 2009), suggesting that cultural orientations more generally may be related to people's reactions to inequality. The most widely studied cultural orientation in psychology is individualism-collectivism, which represents the prominence a society gives to individuals over groups (Triandis 1996). Cultural-level individualism has been found to be associated with greater national inequality (Ahuja et al. 2014), with a stronger emphasis on individual achievement (Schwartz 1990) or economic competitiveness (Leibbrandt et al. 2013), and with individuals favouring equality of opportunity over equality of outcomes (Béteille et al. 1986). This implies that people in more individualistic cultures—which also tend to be white, educated, industrialized, rich, and democratic (WEIRD) (Henrich et al. 2010)—may accept higher levels of inequality.

However, individualistic countries also tend to have citizens who are more supportive of wealth redistribution and welfare (Binder 2018); this is in line with Durkheimian accounts proposing that more individualistic cultures are more likely to support welfare systems—and thus to tolerate less inequality—because they value individuals' dignity, which welfare systems protect (Vignoles et al. 2018). Furthermore, cultural power distance—defined as the extent to which a society expects and accepts inequality in power or wealth between individuals and groups—has been found to moderate the effect of perceived inequality on structural attributions of inequality (Lopez Reyes 2018). In countries characterized by a higher power distance culture, the association between perceived inequality and structural attributions is weaker, suggesting that those in higher power distance cultures tend to be more tolerant of inequality.

It may be, therefore, that cultural orientations are associated with people's preferences about inequality through several indirect pathways: by orientating people towards certain values and beliefs that are related to their tolerance of inequality, and by changing how individuals understand themselves, their achievements, and their interactions with others (see also Sánchez-Rodríguez, Willis, Jetten, and Rodríguez-Bailón 2019).

Overall, the findings reviewed in section 3 suggest that people tolerate or prefer greater levels of inequality if such levels are likely to benefit them personally, align with their political agenda, or

reflect their or their society's dominant values, orientations, or ways of being. People's perceptions of inequality, of how legitimate inequality is, and of the possibilities for future social mobility all mould how people react to inequality. These perceptions have also been found to be associated with well-being, and to partly explain the positive relationship between individual status and well-being (Schneider 2012). I now turn to describing how people's psychology reacts to inequality.

## 4 Reactions to economic inequality

### 4.1 Inequality and well-being in developed nations

In developed nations, objective indicators of inequality—invariably assessed using relative indicators (e.g., Gini)—tend to negatively predict subjective indicators of well-being—such as self-reported well-being, happiness, life satisfaction, depression, and mental health (henceforth collectively labelled well-being)—although not to the same extent among all people in all contexts. Overall, however, studies conducted in developed nations tend to find that higher levels of inequality are associated with lower well-being (Alesina et al. 2004; Buttrick and Oishi 2017; Cheung 2018; Chiavegatto Filho et al. 2013; Ferrer-i-Carbonell and Ramos 2014; Hagerty 2000; Oishi and Kesebir 2015; Oishi et al. 2011, 2018; Schwarze and Härpfer 2007), particularly among those with fewer resources (Oishi et al. 2011, 2018). As I review in the next section, this is likely to be because greater inequality brings about a change in people's psychology that causes them to lose faith in themselves, others, and society at large.

However, the effects of inequality on well-being in developed nations have been found to vary across individuals and contexts, and concerningly also across studies. For example, there are several studies that report that inequality is unrelated (Clark 2003; Kelley and Evans 2017a, 2017b; Ohtake and Tomioka 2004) or even positively related (Clark 2003) to well-being in developed countries, leading some researchers to claim that the overall effect is negligible (Kelley and Evans 2017a; Kenworthy 2017; for a review, see Schneider 2016).

The inconsistencies may arise in part because the effects of inequality on well-being vary according to the rate of change in inequality. For example, two large-scale survey studies found that changes in regional and national inequality in Germany were negatively related to well-being, in both the short (Schröder 2016) and longer term (Cheung 2018). This is in line with evidence demonstrating the effects of an equilibrium rupture (Esping-Andersen and Nedoluzhko 2017), in which inequality sharply rises. This work found that the relationship between inequality and well-being is negligible under normal circumstances in developed nations, but becomes strongly negative when inequality rises sharply, particularly for those with lower levels of economic resources.

Relatedly, the variations in the association between inequality and well-being in studies of developed nations may also be due to differences in individual *experiences* of social mobility (Schneider 2012). Indeed, one study that analysed survey responses from respondents in five European nations over time found that mobility rates were positively related to well-being, and including them in regression models weakened the negative effect of rapid increases in inequality on well-being (Esping-Andersen and Nedoluzhko 2017). Analyses of a British panel survey found that regional inequality was strongly *positively* related to well-being among those who were on the steepest upward income trajectories (Clark 2003). Thus, the experience of upward mobility tends to result in positive effects of inequality on well-being in developed nations.

The possibility of future mobility can, however, have negative effects for those who have the most to lose. Alesina et al. (2004), for example, found that inequality was negatively related to well-being

in both the US and Europe, but that the relationship was stronger in Europe (Alesina et al. 2004). In Europe, the negative effects of inequality on well-being were strongest for individuals on the political left or who were poor (in line with other research conducted in the US (Oishi et al. 2011, 2018; see also Kelley and Evans 2017b)). In contrast, however, the negative effects of inequality on happiness in the US were strongest for the rich. This was theorized to be because of Americans' misperception that they live in a mobile society, which instils among the rich a fear of falling, i.e. a concern that their economic resources and status may decline in the future (see also d'Hombres and Elia 2012; Jetten, Mols et al. 2017).

Experiments inspired by the social identity perspective build on the results of Alesina et al. (2004) and offer explanations why inequality can have negative effects on the well-being of both the poor and the affluent in developed nations (Jetten et al. 2015; Jetten, Wang et al. 2017). These experiments usually ask participants to imagine themselves as a new member of a novel society in which people can be categorized into income groups. Participants are placed in one of the income groups and told that they need to make some essential and luxury purchases to begin their life, such as a house, a car, a phone, and a holiday. They are then presented with several different options for each purchase, which vary in cost so that some options are only affordable for those in the higher income categories. For example, all participants might see five houses available for purchase, but while the richest group can choose any of them, the poorest group can only afford the cheapest. Once this fictional society and the individuals' positions within it are established, the experimenters can easily manipulate the level of inequality or mobility in the fictional society.

In one of these experiments (Jetten et al. 2015), the experimenters manipulated future inequality by informing participants that the level of inequality in the society would either increase in the future, making the poor poorer and the rich richer, or decrease. They found that under conditions of rising inequality, all participants, regardless of their own rank, became more fearful of the future, more distrusting of others, and more opposed to immigrants (Jetten et al. 2015; Jetten, Mols et al. 2017). However, the reasons for these effects were different for the poor and the rich.

Among the poor, inequality was associated with the perception that they were relatively deprived, which induced frustration and anxiety, in line with relative deprivation theory (RDT) (Runciman 1966; Smith and Pettigrew 2015; Smith et al. 2012). RDT proposes that through social or temporal comparisons, low-status individuals can come to feel deprived relative to a higher-status comparator, which then gives rise to negative emotions, angry resentment, and thus lower well-being. A large body of evidence supports RDT (see Smith and Pettigrew 2015), although it does not account for why inequality is sometimes found to be associated with lower well-being among those with high status. Jetten and colleagues also found, however, that among the rich, greater levels of anxiety were driven by fears of losing their high-status position in the future (Jetten et al. 2015; Jetten, Mols et al. 2017). Other studies from this perspective have shown that the rich are more fearful of falling, and thus more anxious, in more mobile societies (Jetten et al. 2020), in line with the results of Alesina et al. (2004). Thus, the relationship between inequality and well-being in developed nations seems to depend, in part, on people's appraisal of changing levels of inequality and whether they believe this may benefit or harm them in the future.

## 4.2 Faith in the self, others, and society

A concept related to the fear of falling is status anxiety: a fear of being perceived as unsuccessful, either economically or in terms of merit, which is thought to be fuelled by economic inequality and to erode individuals' sense of well-being (de Botton 2004; Wilkinson and Pickett 2009, 2017). Indeed, inequality has been found to be associated with higher levels of status anxiety (Delhey et al. 2017; Layte and Whelan 2014; Paskov et al. 2013), often equally so among all income groups (Paskov et al. 2013). Status anxiety has also been found to explain some of the negative relationship

between inequality and well-being, particularly for individuals residing in less affluent developed nations (Delhey and Dragolov 2014; Layte 2012). (It is worth noting, however, that one analysis of a pan-European survey suggests that status anxiety is fuelled by inequalities in class-based cultural consumption rather than economic inequality (Delhey et al. 2017).) Greater levels of inequality have also been found to be associated with increased status-seeking behaviour (Paskov et al. 2013) and increased social comparison (Cheung and Lucas 2016), and have been argued to increase the use of economic resources as a way of understanding people (Jetten, Wang et al. 2017), all of which lays the foundations for heightened levels of status anxiety. Thus, part of the reason why inequality is related to lower well-being in developed nations is because it fuels anxiety about status.

Inequality also has a range of other psychological consequences that may indirectly erode individuals' sense of well-being and alter their behaviour. For example, inequality changes people's perceptions and portrayals of themselves. Experimental studies have found that people see themselves as more independent and less interdependent under conditions of greater inequality (Sánchez-Rodríguez, Willis, and Rodríguez-Bailón 2019). Greater levels of inequality have also been found to increase people's motivation to self-enhance—i.e. to emphasize or exaggerate their own desirable qualities (Loughnan et al. 2011)—and to increase their status-seeking behaviours (Paskov et al. 2013). Greater inequality has also been theorized to increase the propensity of individuals to perceive and understand themselves and others in terms of the economic resources they have (Jetten, Wang et al. 2017; Jetten et al. 2020), and has been found to increase the extent to which people identify with their social class (Andersen and Curtis 2012; Carvacho and Álvarez 2019). Inequality seems, therefore, to make people perceive the social world in more economic and competitive terms, which, as I describe below, may erode their social connections and faith in other people.

Indeed, inequality also changes people's perceptions of and reactions to other people. People in more unequal contexts are more likely to perceive their society as more individualistic and to understand relationships between people as more competitive (Sánchez-Rodríguez, Willis, Jetten, and Rodríguez-Bailón 2019). National inequality increases the use and divergence of ambivalent stereotypes to describe the rich and poor (Durante et al. 2017), primarily by reducing the perceived merit of the poor (Heiserman and Simpson 2017). Inequality has also been found to make the rich less generous and prosocial (Côté et al. 2015; Piff et al. 2010), more selfish (Dubois et al. 2015), and less concerned with procedural justice and fairness (Bratanova et al. 2016). In experimental games, higher levels of inequality have been found to lead individuals to be more likely to take others' winnings, and to take larger amounts (Rustichini and Vostroknutov 2014). Other experimental games have found that the visibility of wealth erodes cooperation between neighbours and, in turn, makes social connections less appealing (Nishi et al. 2015). Furthermore, when wealth is visible and inequality relatively high, subjects who are richer than their neighbours are less likely to cooperate than poorer subjects, which compounds inequality over time (Nishi et al. 2015). Interestingly, this effect is reversed—so that richer subjects are more likely to cooperate than poor subjects—when inequality is low. Inequality seems, therefore, to orientate people away from communal and reciprocal social connections.

Supporting this proposition, studies have found that greater inequality is also associated with reduced social cohesion, trust in others, and social capital (Algan and Cahuc 2013; Delhey and Dragolov 2014; Dragolov et al. 2016; Gustavsson and Jordahl 2008; Layte 2012; Rothstein and Uslaner 2005), perhaps reflecting the tendency of people living under inequality to perceive their relationships as more competitive and instrumental. This erosion of trust partly explains the negative association between inequality and well-being over time in the US (Oishi et al. 2011, 2018) and, according to recent studies, also in China (Cai et al. 2018). Furthermore, residents of US states with higher levels of inequality are less likely to participate in social groups (Alesina and La Ferrara

2000; Costa and Kahn 2003a, 2003b), even when they have the resources available to do so (Lancee and Van de Werfhorst 2012). Relatedly, inequality is also associated with an erosion of solidarity and trust towards fellow nationals, and with citizens engaging in fewer civic and communal behaviours (Paskov and Dewilde 2012; Uslaner 2002; Uslaner and Brown 2005). Correspondingly perhaps, individuals living in more unequal US states have also been found to be lower in the personality trait of agreeableness (de Vries et al. 2011).

These findings suggest that inequality can erode the bonds between people, and perhaps their perception of the social fabric. Supporting this contention, a series of studies found that greater levels of perceived inequality were associated with anomie—a perception that society and its leadership is breaking down—which in turn predicted the desire for a strong and undemocratic leader (Sprong et al. 2019). This is in line with evidence that inequality erodes perceptions of fairness (Cai et al. 2018; Oishi et al. 2011, 2018), support for democracy (Andersen 2012), and political engagement and voting among the poor (Scervini and Segatti 2012; Solt 2008).

Inequality is also associated with an increase in nationalism and class identification among the poor (Andersen and Curtis 2012; Carvacho and Álvarez 2019; Shayo 2009; Solt 2011), which in turn is associated with lower acceptance of within-nation diversity, which can render right-wing populist political rhetoric more attractive (Jay et al. 2019). Indeed, inequality can, in contexts where historical narratives frame inequality as illegitimate, fuel collective protests and uprisings (Jetten et al. 2020; Justino and Martorano 2016), and may fuel political polarization (Han 2015) and populism (Oxendine 2019). The negative association between inequality and well-being in developed nations therefore seems to exist because economic inequality erodes people's positive perceptions of themselves, others, and society at large, with consequences for their well-being, social relations, and behaviours.

Economic inequality, then, alters people's psychology. It causes an increase in their concerns about their own status and economic resources in general, fuels social comparisons, and causes them to perceive the social world as more competitive and individualistic. Inequality also erodes their faith in and connections to other people, reducing trust, solidarity, and their faith in political systems and democracy in general. It is worth noting, however, that the majority of the research that I have reviewed in this section has been conducted in highly developed Western or Anglo countries, and may not be generalizable beyond these WEIRD samples. I now turn to reviewing the evidence from developing nations.

## 4.3 Inequality and well-being in developing nations

In contrast to the results from studies conducted in developed nations, the majority of findings from studies conducted in *developing* nations tend to find that objective inequality is *positively* related to well-being for both the rich and the poor (Cheung 2015; Kelley and Evans 2017b; Wang et al. 2015). This is partly because, in developing nations, inequality fuels a sense of hope that one's own status may increase in the future (Cheung 2015; Kelley and Evans 2017b), which, as I reviewed above, is also associated with increased tolerance of inequality (e.g., Alesina et al. 2004; Cheung 2018). Thus, while individuals within developing nations are less likely than those in developed nations to have experienced upward mobility (Yaish and Andersen 2012), they may be more likely to believe that they will experience upward mobility in the future.

This proposition is in line with Hirschman and Rothschild's (1973) tunnel effect hypothesis, which (along with its later developments (Cheung 2015; Davis 2019)) suggests that inequality is positively related to happiness when levels of national wealth and inequality are low, but negatively related when levels of national wealth and inequality are high. At low levels of inequality, they argue, individuals observe others benefiting from inequality and expect a positive change in their own

status in the future, increasing happiness. At higher levels of inequality, however, individuals become disillusioned with this idea and lose faith in their own future advancement, so that the relationship between inequality and happiness becomes negative.

Evidence supports this proposition. Sanfey and Teksoz (2007), for example, found a positive association between income inequality and well-being in transitioning countries, but a negative association in prosperous and stable countries. Grosfeld and Senik (2010) found a positive association between inequality and happiness during the early stages of Poland's transition to a market economy, but a negative association during the later stages. Ravallion and Lokshin (2000) found that Russians' attitudes to redistribution were related to their expectations for their future status, in line with the tunnel effect hypothesis.

Most convincingly, Wang et al. (2015) found that the association between inequality and happiness was positive in Chinese counties until the Gini coefficient reached 0.405, beyond which the association became negative. This inverted U-shaped relationship held for those with few resources (although the rich tended to be happier at very low levels of inequality) and in rural and urban areas, although the tipping point varied from 0.323 in urban areas to 0.459 in rural areas. This evidence suggests, then, that inequality may have positive effects in developing countries where Gini coefficients are low, but negative effects in more developed nations once Gini coefficients reach 0.32–0.45. However, such tipping points are rarely studied because of a lack of empirical data, and studies have so far been limited to well-being outcomes.

The rate of change in inequality also seems important for the link between inequality and well-being in developing nations. One study of people living in ex-communist nations (Kelley and Evans 2017b), for example, found that for those socialized during communism—when national wealth and inequality were stagnant and relatively low—inequality was negatively related to well-being. However, for those socialized after the collapse of communism and surveyed much later—when wealth and inequality had increased and were continuing to rise—a positive relation between inequality and well-being was found. This was thought to be because those who were socialized under communism had imbibed an aversion to inequality from the dominant societal discourse and had little hope that their own position would improve in the future, whereas those socialized afterwards saw rising inequality as providing hope for an improvement in their economic circumstances in the future. These effects also varied by individuals' political orientations, with those on the left tending to show stronger negative effects of inequality on well-being than those on the right.

#### 5 Conclusion

This review of the psychological literature on economic inequality suggests several conclusions. One fairly problematic conclusion is that measuring people's perceptions and ideal levels of inequality is fraught with problems. The measures themselves are often problematic, with slight variations in the instructions or preceding information causing drastic changes in estimates. This is often due to well-documented cognitive heuristics such as anchoring-and-adjustment or ratio biases. Nevertheless, it is clear that people's self-reported perceptions and ideal levels of inequality are influenced by a range of factors other than objective levels of national economic inequality, such as their personal exposure to cues of inequality and mobility, their personal and societal values and political beliefs, and their own self-interest.

Absolute measures of inequality, which ask respondents to estimate the average wealth or income of different groups, tend to produce more accurate estimates than relative measures, especially for

groups with which respondents are more likely to have had direct contact or everyday experience. However, regardless of the measure used, people perceive lower levels of inequality in their society than actually exist, and want to live under much more equal conditions than they do (although not under strict equality).

Subjective perceptions of inequality, despite their inaccuracy, are much stronger predictors of relevant outcomes than objective indicators. Most political and psychological outcomes are a reflection of people's perceptions or preferences, and so it is perhaps not too surprising that perceptions of inequality are more important in forming people's reactions to inequality than objective levels of inequality. This does mean, however, that to understand an individual's reaction to inequality one must also understand their personal situation, their political attitudes, the context in which they live, and what they see in their everyday life.

There is also a temporal dimension that seems to influence people's psychological reactions to inequality. Studies that investigate changes over time have shown that changes in inequality levels, as well as changes in personal economic circumstances (i.e. mobility), are strongly related to people's reactions to inequality, often more strongly than cross-sectional snap shots. Individuals' psychological experiences of and reactions to inequality are, then, a consequence of current levels of inequality, past levels of inequality, the rate of change in inequality, and their expectations for the future, and researchers should attempt to capture these in their studies.

Inequality also alters people's self-perceptions, and their perceptions of and interactions with other people. Individuals tend to become more self-serving, orientated towards financial resources, and antisocial under higher levels of inequality. They also become more distrusting of others, and perceive the social world around them as more financially driven, competitive, and self-serving. Higher levels of inequality also lead people to become more distrusting of the social system they live under, and of democracy in general. Among the poorest in society, this can lead to a sense of alienation and frustration, which can, under some circumstances, lead to political disengagement or even inspire protests and uprisings. People's psychology is, then, related to past, present, and future levels of inequality, but also to who they are, what they believe in, where they happen to live, what they like, and what they have experienced.

Much of the research on people's perceptions of inequality, their ideals and preferences, and the association of inequality with personal, political, and social outcomes (e.g., trust and well-being) has utilized large international surveys, and so the conclusions from these studies may apply to samples from a broader range of nations. However, the conclusions regarding the effects of inequality on people's self-perceptions and perceptions of others are derived primarily from studies conducted with WEIRD samples, so we have only a limited understanding of how economic inequality may impact on these psychological outcomes among different samples. Still, research on the tipping point at which the association between inequality and well-being changes from positive to negative (Wang et al. 2015) implies that a sense of hope for the future may have stronger effects on human well-being—and perhaps psychology more generally—than does the erosion of faith in the self, others, and society that inequality can produce. This is, however, conjecture, and should be directly investigated in the future.

This review implies that the social psychology of inequality is, in short, a reflection of much more than economic reality.

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