

# Relative Deprivation: How Subjective Experiences of Inequality Influence Social Behavior and Health

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## Abstract

Discussions of the impact of growing inequality have focused on objective indicators. Focusing on what individuals have or do not have can be misleading without understanding how they subjectively interpret the availability of resources. Relative deprivation (RD) occurs when individuals compare themselves with better-off others and conclude that they do not deserve their disadvantage. These upward comparisons, whether imposed or chosen, can damage people's emotions, behavior, and even mental and physical health. How people respond to RD depends on whether they (a) experience the disadvantage directed toward them as a unique individual or as a member of a group (e.g., ethnic category, occupation), (b) feel anger or another emotion (e.g., sadness), and (c) view the system (e.g., workplace, nation) as open to change. Mobility interventions (e.g., housing and school vouchers) may have unexpected adverse consequences that direct improvements to the local infrastructure and community do not. Costs of RD (including physical illness) increase if people cannot address perceived inequities effectively. RD explains why simply enumerating resources and opportunities does not fully explain how relative disadvantage produces outcomes ranging from social protest to illness. Insights from psychological science that show how individuals respond to social inequities can inform policies for building communities and improving well-being.

## Keywords

relative deprivation, inequality, disadvantage, protest, social movement, emotion, health, illness, policy

## Tweet

People experience disadvantage comparatively, not objectively. If it leads to anger and hopelessness, relative deprivation damages community and well-being.

## Key Points

- Deprivation is subjective, not objective. It is not the size of the “inequity gap” that matters as much as how people make sense of why the gap exists and whether anything can be done about it.
- Relative deprivation (RD) harms health and well-being, especially if people believe that their personal situation is undeserved and social change is not possible.
- Policies that open up opportunities to move into more advantaged settings may backfire due to increased upward comparisons, particularly if these policies serve very few disadvantaged individuals.
- Fair treatment of individuals and their groups can mitigate the adverse physical health impact of RD and decrease the likelihood of damaging forms of protest, but it can also perpetuate structural inequity.

## Introduction

Policy makers, political pundits, and social commentators lament problems created by rising income inequality in the United States and other countries (e.g., Porter, 2014; Shiller, 2014). Research on how people respond to structural inequalities demonstrates some surprising findings. For example, General Social Survey data from 1972 to 2008 show that Americans were less happy in years when societal inequality was larger, in comparison with years when societal income inequality was smaller, even after controlling for their absolute income level (Oishi, Kesebir, & Diener, 2011). Still more striking are the differences in the death rates among Californian women with low income and education (Winkleby, Cubbin, & Ahn, 2006). The higher the income, education, and median household income for their local

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census tract, the higher the mortality rate for these women. Finally, consider an experimental program in which some families were offered a housing voucher to move out of an impoverished neighborhood in contrast to similar families who received no housing vouchers. A decade later, the sons of the families who moved reported higher levels of depression and conduct disorder in comparison to their peers from families who did not move (Kessler et al., 2014).

These counter-intuitive findings illustrate *relative deprivation* (RD) and its consequences. RD occurs when people compare themselves to those who are better off and conclude that their disadvantage is undeserved. RD is useful because it explains why those who *should* feel deprived by objective standards often do not, whereas those who are *not* objectively deprived often feel that they are. When people's subjective expectations about what they deserve change due to imposed or chosen comparisons, their emotions, behavior, and physical health also change. To paraphrase Marx (1935/1947), it is only after people notice that their neighbors have flat screen televisions that they will feel deprived. One may assume that a move to a wealthier neighborhood will benefit individuals because it brings access to more resources and better opportunities. However, there may also be unanticipated psychological costs because these individuals, after the move, are exposed to previously unavailable upward comparisons that can unveil social inequities.

We first argue for the value of assessing *subjective* experiences of inequality. We then describe three key features of the RD experience that determine people's behaviors in response to undeserved disadvantages. We also discuss how RD can affect individuals' physical and mental health. Finally, we summarize insights from RD research that can contribute to discussions about the consequences of social policies designed to increase social capital and improve human welfare.

## Demographic Versus Subjective RD Measures

Epidemiologists, economists, and other social scientists frequently construct objective RD measures from demographic characteristics of particular individuals in comparison with others from similar neighborhoods, schools, or occupations. For example, Eibner and Evans (2005) measure RD as the gap between adult men's own income and richer men from the same state, race, education, and age brackets (the Yitzhaki index). Larger gaps (RD) predicted greater mortality, poorer self-reported health, and higher obesity levels. In other samples, the same index predicted greater migration from poor countries to wealthier countries (Stark & Fan, 2011) and declines in mental health (Eibner, Sturm, & Gresenz, 2004). However, we cannot know from these studies whether participants reacted to the same comparisons that the researchers constructed from demographic characteristics. It may seem obvious that one's objective position in a local

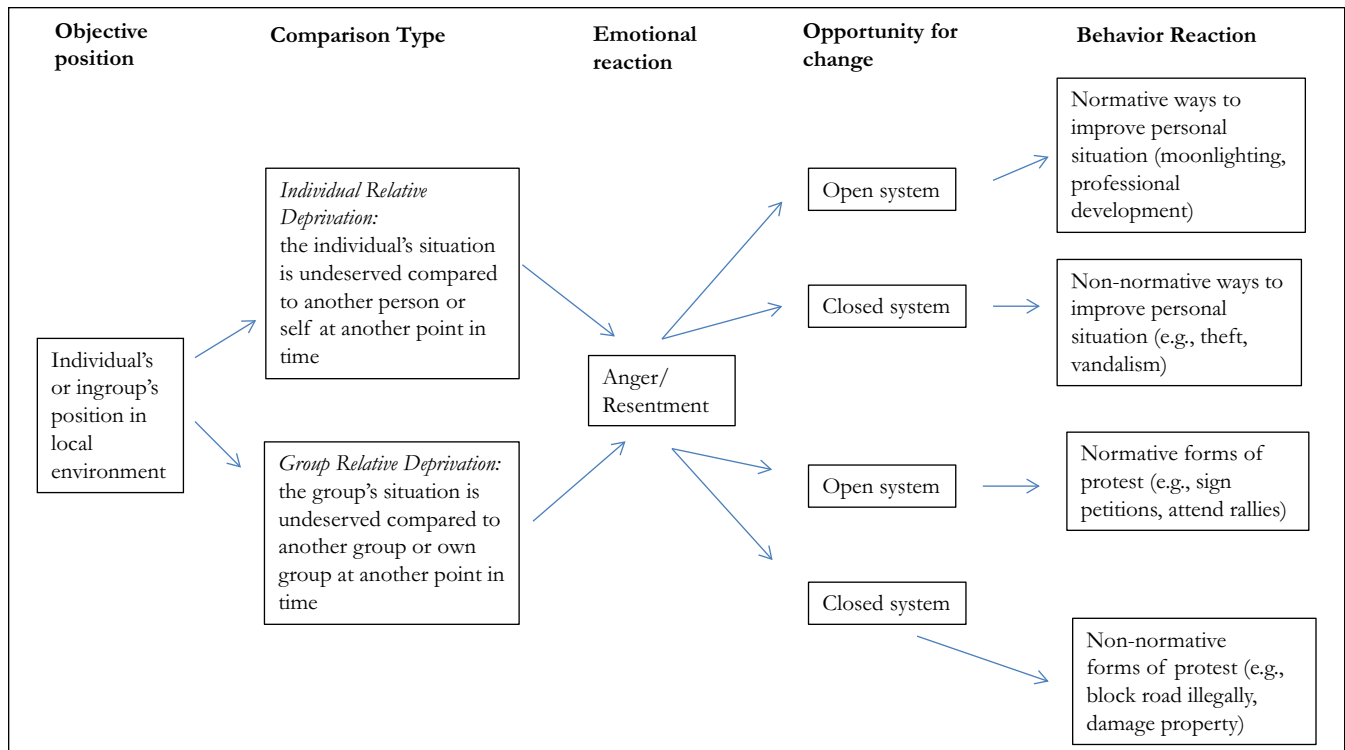
reference group should inform subjective assessments of the situation. But one's place in the local environment does not straightforwardly predict comparison choices or interpretation of one's standing relative to others (Gartrell, 2002; Leach & Smith, 2006). For example, even though sanitation workers in Cambridge, Massachusetts, regularly picked up garbage from homes in wealthy neighborhoods, they did not view the homeowners as relevant comparisons for evaluating their own incomes (Gartrell, 1982). Therefore, it is not surprising that the relationship between demographic RD measures and physical health is not as reliable or robust as researchers first thought (Macinko, Shi, Starfield, & Wulu, 2003). In contrast, a measure of subjective social status (that asks respondents to place themselves between a bottom and top rung of a ladder) predicted people's physical health even after controlling for their objective income, education, access to health care, and pre-existing conditions (Adler & Snibbe, 2003).

A recent meta-analysis of RD research (H. J. Smith, Pettigrew, Pippin, & Bialosiewicz, 2012) included data from 26 studies in which researchers measured RD with both a demographic relative income measure and a subjective RD income measure. Despite enormous variability in the measured outcomes (which included individual achievement, deviance, mental and physical health, personal self-esteem, and attitudes toward the larger social system), subjective RD measures yielded reliably larger effect sizes in comparison with demographic RD measures.

This meta-analysis also illustrates a second reason why understanding the RD experience requires us to focus on the individuals' subjective perceptions. RD occurs when people compare their situation with another possibility using the principle of what "ought to be." It is this emphasis on entitlement or "deservingness" that distinguishes RD from other psychological theories and measures (Feather, 1999; H. J. Smith et al., 2012). RD does not describe the simple discovery that others have more. Rather, it describes a violation of agreed upon justice principles. In the RD meta-analysis (H. J. Smith et al., 2012), RD measures that indexed justice (by asking about deservingness, anger, frustration, or resentment in response to perceived deprivation) were stronger and more reliable predictors of a wide range of attitudes and behaviors in comparison with RD measures that did not index justice. Next, we describe three features of the subjective RD experience (illustrated in Figure 1) that shape people's responses to an undeserved situation.

## Individual Relative Deprivation (IRD) Versus Group Relative Deprivation (GRD)

The first feature listed in Figure 1 that shapes the subjective RD experience is the distinction between IRD and GRD (Runciman, 1966). IRD is an interpersonal comparison between the individual and another person, or a comparison between an individual's current situation and his or her past



**Figure 1.** The relative deprivation experience.

or future situation. In contrast, GRD is an intergroup comparison between an individual's group and another group, or between the group's current situation and that group's past or future situation. For example, a woman could compare her salary with another female employee and experience IRD, or the same woman could compare the salaries for all female employees in her workplace to the salaries of all male employees and experience GRD. IRD predicts individual-oriented responses including interest in professional development (Zoogah, 2010), turnover, absenteeism (Aquino, Griffeth, Allen, & Hom, 1997; Osborne, Smith, & Huo, 2012), and even gambling (Callan, Ellard, Shead, & Hodgins, 2008), whereas GRD predicts group-oriented responses including support for political protest (Walker & Mann, 1987) and increased prejudice toward out-group members (Pettigrew & Meertens, 1995). In the meta-analysis described earlier, GRD best predicted collective action measures whereas IRD best predicted individual behavior measures.

Whereas the experience of IRD is straightforward, when and why individuals experience GRD requires further explanation. A key requirement for the experience of GRD is that individuals view themselves as group members (Ellemers, 2002). When people think of themselves as group members (as opposed to unique personalities), their comparison focus, emotional reaction, and behaviors all change (Jetten, Haslam, & Haslam, 2012; Schmitt, Silvia, & Branscombe, 2000; Schopler & Insko, 1992). Experiments that increase the

salience of group identities show that when people view themselves as group members, they are (a) more likely to notice intergroup differences, (b) less likely to attribute personal losses or gains to their unique personal qualities, (c) more likely to interpret the behavior of out-group members as hostile or greedy, and (d) more likely to engage in collective action to remedy the in-group's unfair disadvantage (Bliuc, McGarty, Reynolds, & Muntele, 2007; Schopler & Insko, 1992; Smith & Spears, 1996; van Zomeren, Spears, Fischer, & Leach, 2004). In everyday life, individuals are more likely to view themselves as a group representative (and so are more likely to experience GRD) when (a) a group membership is especially important to them or (b) the local context makes a particular group membership salient. For example, women in the workplace should be more likely to see themselves in terms of their gender if they are one of very few women, their gender group is associated with negative stereotypes, or they are viewed by others as an "affirmative action" hire (Pettigrew & Martin, 1987; Sekaquaptewa, Waldman, & Thompson, 2007).

### Distinct Emotional Responses to Undeserved Disadvantage

The second important feature of the RD experience is a person's emotional reaction to an undeserved disadvantage. Even if people are aware of another person's or group's

better situation, they do not automatically experience anger and resentment (Fiske, 2011; Leach, Snider, & Iyer, 2002; R. H. Smith & Kim, 2007). For example, poor villagers in Malawi interpreted a neighbor's increased resources as an opportunity for work and protection against shared financial hardship and not as a source of RD (Ravallion & Lokshin, 2010). Thus, a full understanding of RD must distinguish among the different emotions and their associated behaviors that an undeserved individual or group disadvantage can trigger. For example, if people respond to an undeserved disadvantage with anger, they are more likely to take action directed toward redressing their deprivation such as joining a strike against their employer. But if they respond to an undeserved situation with sadness, they should be more likely to withdraw from the situation perhaps by missing work meetings, social events, or entire workdays.

Findings from a survey of 953 California university faculty members who all received a 1 year 10% pay cut due to a state budget shortfall illustrate how different emotional reactions shaped individuals' intentions (Osborne et al., 2012). Faculty members who responded to IRD with angry resentment were most willing to voice their concerns to the administration. In contrast, faculty who responded to IRD with fear indicated their desire to leave their current jobs. Finally, faculty who responded to IRD with sadness were most likely to want to withdraw from their job responsibilities. Surprisingly, some faculty responded to IRD with positive emotions: either relief that the budget crisis was resolved or gratitude that employee lay-offs were avoided. Faculty who felt grateful simply accepted the pay cut and did not indicate intentions to either challenge the situation or to withdraw from it.

Figure 1 lists angry resentment as a key motivator of active responses to either IRD or GRD. In contrast to other emotions, angry resentment (a) directs attention to the social system that produced the inequality, (b) is often a publicly shared and socially supported emotion, and (c) is a less ephemeral and more clearly moral emotion (Leach et al., 2002; Pagano & Huo, 2007; Runciman, 1966). Therefore, we propose that when people respond to an undeserved disadvantage with angry resentment, they are more likely to actively address the inequity. The meta-analysis of RD research described earlier confirmed that when an RD measure included anger *and* resentment, the relationship to both collective and individual behaviors was significantly stronger.

### Availability of Opportunities for Change

The third important feature of the RD experience is whether individuals see the possibility of the system changing (see Figure 1). This perception sparks distinct, behavioral responses. Even if an undeserved situation elicits the same emotional response, such as angry resentment, people will respond to RD in different ways depending on the possibilities for change. Figure 1 distinguishes among four types of

behavior. Among individual-focused options are actions that conform to the standards of the larger social system (including increasing one's work effort or pursuing professional development) and non-normative actions that fall outside existing social rules (including theft and vandalism). Among group-focused behavioral options, the distinction between normative and non-normative reactions parallels a distinction between conventional and unconventional behavior described by political scientists (Herring, 1989; Walker, Wong, & Kretzschmar, 2002). Conventional action refers to institutionalized activities such as writing letters to public officials, participating in legal demonstrations, contributing money to campaigns, and signing petitions. Unconventional action includes illegal, aggressive, or violent activities such as damaging others' property, trespassing, and blocking roads (Herring, 1989; Walker et al., 2002). As noted earlier, GRD predicts group-focused behavior, and IRD predicts individual-focused behavior. But whether the response is normative or non-normative depends on whether people view the social system as open or closed to change (Taylor & Moghaddam, 1994). If people believe that there is an opportunity for change (an open system), they are likely to respond to even an undeserved disadvantage with increased, normative effort. If not (a closed system), they are likely to engage in deviant or confrontational behavior.

One indicator of a system's openness is whether institutional authorities make decisions in a procedurally fair way (Tyler, 2006). If people believe that they have a "voice" (Lind, Kanfer, & Earley, 1990) or that the procedures include opportunities for correction (Leventhal, 1980), they should be more likely to perceive the system as fair and work within it to improve their individual circumstances. If they do not believe in the availability of these opportunities, they should be more likely to feel unfairly treated and engage in non-normative responses. Field, survey, and experimental studies show that people are consistently more likely to accept unfavorable outcomes if they believe that the decision-making procedures were fair (Tyler, 2006). For example, fathers in child custody cases were more likely to comply with court-mandated arrangements if the court allowed them to voice their wishes even if they did not win custody (Emery, Matthews, & Kitzmann, 1994). Likewise, laboratory participants' expectations of future success and their feelings of frustration and resentment separately predicted their behavioral reactions to RD (Wright, Taylor, & Moghaddam, 1990). Participants who expressed more resentment and frustration were more likely to challenge an unfair score on an entrance exam, but hope (indicating a belief that the system is open to change) predicted whether they preferred a normative or non-normative choice.

System openness also can channel the angry resentment associated with GRD. Although traditional procedural justice research focuses on the system's treatment of the individual, people also care about how their groups are treated by system representatives. Perceptions of how their ethnic

groups are treated in the United States predicted Americans' trust in the political system (Huo & Molina, 2006). Similarly, secondary school students' perceptions of how school authorities treated their ethnic group predicted greater school engagement (Huo, Molina, Binning, & Funge, 2010). Just as people are more likely to support individual normative actions in response to IRD if they feel relevant authorities and institutions treat them fairly, people are more likely to support group normative actions in response to GRD if they believe their group is treated fairly. But if they believe that the larger system is incapable of treating their group with fairness, they are more likely to pursue unconventional collective action. In the workplace survey described earlier, people who reported that faculty in their academic area were deprived (GRD) were more likely to participate in collective protest if they believed the university disrespected faculty in their area (Osborne, Huo, & Smith, 2014). In contrast, those who believed the university respected faculty in their area were less likely to participate in collective protest.

### **Mental and Physical Health**

Thus far, we have suggested that whether the system is open or closed to change channels people's resentment toward normative or non-normative behaviors. Beliefs in social mobility and institutional legitimacy (both indicators of system opportunities) may explain why the relatively large and growing gap between the rich and the poor in the United States has not provoked the same level of violence and unrest that has occurred in other nations. To be sure, the inner city riots during the 1960s and the 1992 Los Angeles riots suggest that the United States is not immune to unrest (Sears, 2000). Nonetheless, even in a stable democracy, RD can adversely affect people's physical and mental health—consequences that increase national health expenditures (Adler, 2014; Marmot, 2006). For example, faculty members who reported more IRD in response to the 10% pay cut reported worse physical and mental health (Osborne et al., 2012). Similarly, Icelanders, who reported that the 2010 financial crisis hurt them more than other Icelanders, reported higher levels of depression in comparison with Icelanders who reported that their (objectively poor) situation was no worse in comparison with their neighbors (Ragnarsdóttir, Bernburg, & Ólafsdóttir, 2013). Research on subjective social status documents similar patterns including evidence that people who report lower subjective social status are more susceptible to the common cold (Cohen et al., 2008). In other words, people who experience IRD internalize the perceived inequity and subsequently suffer greater health risks.

In the meta-analysis of RD research, IRD was a stronger predictor of physical and mental illness in comparison with GRD. The question is why GRD is not as strongly related to the physical and mental health consequences associated with IRD. The experience of anger on behalf of an important reference group is not necessarily any less intense than the

experience of anger on behalf of oneself (Leonard, Moons, Mackie, & Smith, 2011). Instead, when RD is framed in group terms, other members of one's group can offer both emotional and instrumental support (Major, Quinton, & McCoy, 2002). They can also help individuals see how structural influences in the environment shape their experiences (Simon & Klandermans, 2001). For example, people who attribute their negative outcomes to group-based discrimination report less psychological distress in comparison with people who do not (Branscombe, Schmitt, & Harvey, 1999; Foster & Tsarfati, 2005). These data suggest that collectively shared RD can buffer some of the adverse mental and physical health consequences associated with perceived inequity.

Procedural justice is a second factor that can mitigate the adverse health outcomes associated with RD. If people feel that the procedures associated with even unfavorable outcomes are fair, they suffer less physical impairment. For example, nurses who learned that their pay was to be reduced reported less insomnia (both immediately after they received the news and 6 months later) when the news was delivered by a supervisor who was trained to convey the information in a fair and respectful manner versus supervisors who received no training (Greenberg, 2006). However, experimental data also show that fair treatment can lead individuals to describe an autocratic decision maker to be as egalitarian as one who truly shares their power in making decisions (Mentovich, 2014). In other words, fair treatment can mitigate the adverse effects of RD on individuals' health, but it can also stifle challenges to objective inequities.

Finally, it is important to recognize that the real health risk might not stem from RD, but from how effective a person's response to an undeserved disadvantage is. If a person's response is successful and circumstances change, people should be buffered from possible health costs. However, if they are unsuccessful, the health costs to them might increase. For example, health researchers describe a "weathering effect" in which the effects of chronic racial inequality lead to early aging (Geronimus, Hicken, & Keene, 2006).

### **Contributions of Basic Research to Policy Action**

The key insights from several decades of RD research can be linked to discussions of policy options for redressing existing social inequalities in the United States. First, a clear implication of RD research is that how societal inequities shape people's experiences is not as straightforward as policy makers and the public might assume. What looks like an obvious improvement (e.g., promotion to upper management, relocation to better-off neighborhoods, or transfer to higher performing schools) could inadvertently induce RD (e.g., why are they better off than me?). Of course, recognition of the social injustice that such comparisons reveal could be the first step toward social change. But as RD research

clearly illustrates, evaluations of relevant social policies must include assessments of people's subjective perceptions of their local environment. For example, RD research suggests that mobility interventions (housing vouchers, school vouchers, school busing) can have at least two unintended, adverse consequences for individuals. First, families and students could lose access to important forms of social support when they leave their familiar environments and established social networks, particularly if they are one of the very few disadvantaged group members required to move to greatly advantaged contexts (Pettigrew & Martin, 1987; Postmes & Branscombe, 2002). Second, new environments can increase uncertainty and thus people's use of upward comparisons. Both factors make people more sensitive to fair treatment and outcomes (Fiske, 2011; van den Bos & Lind, 2002). Importantly, mobility interventions that appear more successful include (a) elements of procedural justice (e.g., informal and formal "social control" strategies), (b) the relocation of larger numbers of families, and (c) greater efforts to integrate new families into the larger community (Albright, Derickson, & Massey, 2013). Successful programs that incorporate these elements illustrate how important it is to consider multiple psychological and sociological processes when designing social interventions (Pettigrew, 2011). Another policy alternative is to invest resources in low income neighborhoods to improve the local infrastructure (e.g., schools) and build social capital and community where people already live.

Second, RD research illustrates how pay transparency and other policies that expand the range of upward contrasts can motivate people to redress actual structural inequality. Indeed, only after we learn how much more top executives in higher education, health care, and other businesses make in comparison with faculty, physicians, and regular employees can we begin to discuss these systemic patterns. This logic is evident in President Obama's 2014 executive order requiring the Department of Labor to collect salary information from federal contractors and prohibiting these contractors from retaliating against employees who talk about their compensation. However, RD research makes clear that it is not the relative size of the comparison "gap" that matters to people but why the inequity exists. A relatively small gap that reveals one's undeserved situation will be a much more powerful motivator in comparison with a large gap that people interpret as legitimate (Martin, 1982). Importantly, people view gaps between groups as much more problematic in comparison with gaps within groups. If there is a choice between reducing either the income gap between groups or the range of incomes among individuals, policies that reduce the income gap between groups should be more effective in addressing the adverse impact of RD. Similarly, policies that support opportunities for mobility and change should be more effective at redressing RD than policies designed as one time efforts to reduce the relative size of inequity (e.g., raising the minimum wage).

The third implication of RD research is that what looks like the cooperative acceptance of inequities could ultimately be more harmful to both individuals and the larger organizations than direct, potentially messy confrontations of disadvantage. In the faculty furlough study, it was the faculty who reported angry resentment who were most actively engaged in addressing the situation and facilitating positive changes. Faculty who felt sad or anxious may not have been visible to university administration, students, or other public officials, but their choice to leave the university or withdraw from discussions about how to improve the university arguably led to more long-term harm for the university.

Most striking is evidence suggesting that RD hurts people's physical health, especially if they interpret their undeserved disadvantage in individual terms. As documented by Adler (2014), the increased stress, depression, and heart disease associated with differences in subjective social status directly affects individuals and increases societal health care costs downstream. Interestingly, group-based normative challenges that can improve the larger society also could protect individual's physical health. Thus, if RD can be collectively confronted (vs. experienced alone), society and individuals both can benefit.

The fourth implication of our review is the importance of legitimate and transparent procedures that offer people true opportunities to affect change. Even though fair and respectful treatment of individuals and their groups can be time and resource consuming, fair procedures make it more likely that people will respond to an undeserved disadvantage in normative or conventional ways. However, institutional authorities must offer true procedural justice, not just the appearance of procedural justice (Tyler, 2006). We cannot prevent RD, but if people are able to redress RD through effective behaviors, they can reduce the adverse impact of chronic RD on their health.

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### References

- Adler, N. E. (2014, June). *Reaching for a healthier life: Facts on socioeconomic status and health in the U.S.* Retrieved from <http://www.macses.ucsf.edu/whatsnew/default.php>
- Adler, N. E., & Snibbe, A. C. (2003). The role of psychosocial processes in explaining the gradient between socioeconomic status and health. *Current Directions in Psychological Science, 12*, 119-123.
- Albright, L., Derickson, E. S., & Massey, D. S. (2013). Do affordable housing projects harm suburban communities? Crime, property values, and taxes in Mount Laurel, NJ. *City & Community, 12*, 89-112. doi:10.1111/cico.12015

- Aquino, K., Griffeth, R. W., Allen, D. G., & Hom, P. W. (1997). Integrating justice constructs into the turnover process: A test of a referent cognitions model. *Academy of Management Journal*, *40*, 1208-1227. doi:10.2307/256933
- Bliuc, A., McGarty, C., Reynolds, K., & Muntele, D. (2007). Opinion-based group membership as a predictor of commitment to political action. *European Journal of Social Psychology*, *37*, 19-32. doi:10.1002/ejsp.334
- Branscombe, N., Schmitt, M., & Harvey, R. (1999). Perceiving pervasive discrimination among African Americans: Implications for group identification and well-being. *Journal of Personality and Social Psychology*, *77*, 135-149.
- Callan, M. J., Ellard, J. H., Shead, N., & Hodgins, D. C. (2008). Gambling as a search for justice: Examining the role of personal relative deprivation in gambling urges and gambling behavior. *Personality and Social Psychology Bulletin*, *34*, 1514-1529. doi:10.1177/0146167208322956
- Cohen, S., Alper, C. M., Doyle, W. J., Adler, N. E., Treanor, J. J., & Turner, R. B. (2008). Objective and subjective socioeconomic status and susceptibility to the common cold. *Health Psychology*, *27*, 268-274. doi:10.1037/0278-6133.27.2.268
- Eibner, C., & Evans, W. N. (2005). Relative deprivation, poor health habits and mortality. *Journal of Human Resources*, *40*, 591-620.
- Eibner, C., Sturm, R., & Gresenz, C. R. (2004). Does relative deprivation predict the need for mental health services? *Journal of Mental Health Policy and Economics*, *7*, 167-175.
- Ellemers, N. (2002). Social identity and relative deprivation. In I. Walker & H. J. Smith (Eds.), *Relative deprivation: Specification, development and integration* (pp. 239-264). New York, NY: Cambridge University Press.
- Emery, R. E., Matthews, S. G., & Kitzmann, K. M. (1994). Child custody mediation and litigation: Parents' satisfaction and functioning one year after settlement. *Journal of Consulting and Clinical Psychology*, *62*, 124-129.
- Feather, N. (1999). *Values, achievement and justice*. New York, NY: Plenum.
- Fiske, S. T. (2011). *Envy up, scorn down: How status divides us*. New York, NY: Russell Sage Foundation.
- Foster, M. D., & Tsarfati, E. M. (2005). The effects of meritocracy beliefs on women's well-being after first-time gender discrimination. *Personality and Social Psychology Bulletin*, *31*, 1730-1738.
- Gartrell, C. D. (1982). On the visibility of wage referents. *Canadian Journal of Sociology*, *7*, 117-143.
- Gartrell, C. D. (2002). The embeddedness of social comparison. In I. Walker & H. J. Smith (Eds.), *Relative deprivation: Specification, development and integration* (pp. 164-184). New York, NY: Cambridge University Press.
- Geronimus, A. T., Hicken, M., & Keene, D. (2006). "Weathering" and age patterns of allostatic load scores among Blacks and Whites in the United States. *American Journal of Public Health*, *96*, 826-833.
- Greenberg, J. (2006). Losing sleep over organizational injustice: Attenuating insomniac reactions to underpayment inequity with supervisory training in interactional justice. *Journal of Applied Psychology*, *91*, 58-69. doi:10.1037/0021-9010.91.1.58
- Herring, C. (1989). Acquiescence or activism? Political behavior among the politically alienated. *Political Psychology*, *10*, 135-153.
- Huo, Y. J., & Molina, L. E. (2006). Is pluralism a viable model of diversity? The benefits and limits of subgroup respect. *Group Processes & Intergroup Relations*, *9*, 359-376.
- Huo, Y. J., Molina, L. E., Binning, K. R., & Funge, S. P. (2010). Subgroup respect, social engagement, and well-being: A field study of an ethnically diverse high school. *Cultural Diversity & Ethnic Minority Psychology*, *16*, 427-436.
- Jetten, J., Haslam, C., & Haslam, S. (2012). *The social cure: Identity, health and well-being*. New York, NY: Psychology Press.
- Kessler, R. C., Duncan, G. J., Gennetian, L. A., Katz, L. F., Kling, J. R., Sampson, N. A., . . . Ludwig, J. (2014). Associations of housing mobility interventions for children in high-poverty neighborhoods with subsequent mental disorders during adolescence. *Journal of the American Medical Association*, *311*, 937-947. doi:10.1001/jama.2014.607
- Leach, C., & Smith, H. J. (2006). By whose standard? The affective implications of ethnic minorities' comparisons to ethnic minority and majority referents. *European Journal of Social Psychology*, *36*, 747-760. doi:10.1002/ejsp.315
- Leach, C. W., Snider, N., & Iyer, A. (2002). "Poisoning the consciences of the fortunate": The experience of relative advantage and support for social equality. In I. Walker & H. J. Smith (Eds.), *Relative deprivation: Specification, development and integration* (pp. 136-163). New York, NY: Cambridge University Press.
- Leonard, D. J., Moons, W. G., Mackie, D. M., & Smith, E. R. (2011). "We're mad as hell and we're not going to take it anymore": Anger self-stereotyping and collective action. *Group Processes & Intergroup Relations*, *14*, 99-111. doi:10.1177/1368430210373779
- Leventhal, G. S. (1980). What should be done with equity theory? In K. J. Gergen, M. S. Greenberg, & R. H. Willis (Eds.), *Social exchange* (pp. 27-55). New York, NY: Springer.
- Lind, E. A., Kanfer, R., & Earley, P. C. (1990). Voice, control, and procedural justice: Instrumental and noninstrumental concerns in fairness judgments. *Journal of Personality and Social Psychology*, *59*, 952-959. doi:10.1037/0022-3514.59.5.952
- Macinko, J. A., Shi, L., Starfield, B., & Wulu, J. T., Jr. (2003). Income inequality and health: A critical review of the literature. *Medical Care Research and Review*, *60*, 407-452. doi:10.1177/1077558703257169
- Major, B., Quinton, W. J., & McCoy, S. K. (2002). Antecedents and consequences of attributions to discrimination: Theoretical and empirical advances. *Advances in Experimental Social Psychology*, *34*, 251-330.
- Marmot, M. G. (2006). Status syndrome: A challenge to medicine. *Journal of the American Medical Association*, *295*, 1304-1307.
- Martin, J. (1982). The fairness of earning differentials: An experimental study of the perceptions of blue-collar workers. *Journal of Human Resources*, *17*(1), 110-122.
- Marx, K. (1947). *Wage labour and capital*. New York, NY: International Publishers. (Original work published 1935)
- Mentovich, A. (2014). *The power of fair procedures: The effect of procedural justice on perceptions of power and hierarchy*. Unpublished manuscript, Harvard University, Cambridge, MA.
- Oishi, S., Kesebir, S., & Diener, E. (2011). Income inequality and happiness. *Psychological Science*, *22*, 1095-1100. doi:10.1177/0956797611417262
- Osborne, D., Huo, Y. J., & Smith, H. J. (2014). Organizational respect dampens the impact of group-based relative deprivation on

- willingness to protest pay cuts. *British Journal of Social Psychology*. Advance online publication. doi:10.1111/bjso.12069
- Osborne, D., Smith, H. J., & Huo, Y. J. (2012). More than a feeling: Discrete emotions mediate the relationship between relative deprivation and reactions to workplace furloughs. *Personality and Social Psychology Bulletin*, *38*, 628-641.
- Pagano, S. J., & Huo, Y. J. (2007). The role of moral emotions in predicting support for political actions in post-war Iraq. *Political Psychology*, *28*, 227-255.
- Pettigrew, T. F. (2011). Towards sustainable psychological interventions for change. *Peace and Conflict*, *17*, 179-192.
- Pettigrew, T. F., & Martin, J. (1987). Shaping the organizational context for Black American inclusion. *Journal of Social Issues*, *43*(1), 41-78.
- Pettigrew, T. F., & Meertens, R. W. (1995). Subtle and blatant prejudice in Western Europe. *European Journal of Social Psychology*, *25*, 57-75.
- Porter, E. (2014, March 11). A relentless widening of disparity in wealth. *The New York Times*. Retrieved from <http://www.nytimes.com/2014/03/12/business/economy/a-relentless-rise-in-unequal-wealth.html?module=Search&mabReward=relbias%3Ar%2C%5B%22RI%3A5%22%2C%22RI%3A17%22%5D>
- Postmes, T., & Branscombe, N. R. (2002). Influence of long-term racial environmental composition on subjective well-being in African Americans. *Journal of Personality and Social Psychology*, *83*, 735-751. doi:10.1037/0022-3514.83.3.735
- Ragnarsdóttir, B., Bernburg, J., & Ólafsdóttir, S. (2013). The global financial crisis and individual distress: The role of subjective comparisons after the collapse of the Icelandic economy. *Sociology*, *47*, 755-775. doi:10.1177/0038038512453790
- Ravallion, M., & Lokshin, M. (2010). Who cares about relative deprivation? *Journal of Economic Behavior & Organization*, *73*, 171-185. doi:10.1016/j.jebo.2009.08.008
- Runciman, W. G. (1966). *Relative deprivation and social justice*. London, England: Routledge & Kegan Paul.
- Schmitt, M. T., Silvia, P. J., & Branscombe, N. R. (2000). The intersection of self-evaluation maintenance and social identity theories: Intragroup judgment in interpersonal and intergroup contexts. *Personality and Social Psychology Bulletin*, *26*, 1598-1606. doi:10.1177/01461672002612013
- Schopler, J., & Insko, C. A. (1992). The discontinuity effect in interpersonal and intergroup relations: Generality and mediation. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 3, pp. 121-151). Oxford, UK: John Wiley.
- Sears, D. O. (2000). Urban rioting in Los Angeles: A comparison of 1965 with 1992. In P. Kivisto & G. Rundblad (Eds.), *Multiculturalism in the United States: Current issues, contemporary voices* (pp. 81-92). Thousand Oaks, CA: Pine Forge Press.
- Sekaquaptewa, D., Waldman, A., & Thompson, M. (2007). Solo status and self-construal: Being distinctive influences racial self-construal and performance apprehension in African American women. *Cultural Diversity & Ethnic Minority Psychology*, *13*, 321-327.
- Shiller, R. (April, 2014). Better insurance against inequality. *The New York Times*. Retrieved from <http://www.nytimes.com/2014/04/13/business/better-insurance-against-inequality.html>
- Simon, B., & Klandermans, B. (2001). Politicized collective identity: A social psychological analysis. *American Psychologist*, *56*, 319-331. doi:10.1037/0003-066X.56.4.319
- Smith, H. J., Pettigrew, T. F., Pippin, G. M., & Bialosiewicz, S. (2012). Relative deprivation: A theoretical and meta-analytic review. *Personality and Social Psychology Review*, *16*, 203-232. doi:10.1177/1088868311430825
- Smith, H. J., & Spears, R. (1996). Ability and outcome evaluations as a function of personal and collective (dis)advantage: A group escape from individual bias. *Personality And Social Psychology Bulletin*, *22*(7), 690-704. doi:10.1177/0146167296227004
- Smith, R. H., & Kim, S. (2007). Comprehending envy. *Psychological Bulletin*, *133*, 46-64. doi:10.1037/0033-2909.133.1.46
- Stark, O., & Fan, C. (2011). Migration for degrading work as an escape from humiliation. *Journal of Economic Behavior & Organization*, *77*, 241-247. doi:10.1016/j.jebo.2010.10.006
- Taylor, D. M., & Moghaddam, F. M. (1994). *Theories of intergroup relations: International social psychological perspectives* (2nd ed.). Westport, CT: Praeger/Greenwood.
- Tyler, T. R. (2006). *Why people obey the law*. Princeton, NJ: Princeton University Press.
- van den Bos, K., & Lind, E. A. (2002). Uncertainty management by means of fairness judgments. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 34, pp. 1-60). San Diego, CA: Academic Press.
- van Zomeren, M., Spears, R., Fischer, A. H., & Leach, C. W. (2004). Put your money where you mouth is! Explaining collective action tendencies through group-based anger and group efficacy. *Journal of Personality and Social Psychology*, *87*, 649-664.
- Walker, I., & Mann, L. (1987). Unemployment, relative deprivation and social protest. *Personality and Social Psychology Bulletin*, *13*, 275-283.
- Walker, I., Wong, N. K., & Kretschmar, K. (2002). Relative deprivation and attribution: From grievance to action. In I. Walker & H. H. Smith (Eds.), *Relative deprivation: Specification, development and integration* (pp. 288-312). New York, NY: Cambridge University Press.
- Winkleby, M., Cubbin, C., & Ahn, D. (2006). Effect of cross-level interaction between individual and neighborhood socioeconomic status on adult mortality rates. *American Journal of Public Health*, *96*, 2145-2153. doi:10.2105/AJPH.2004.060970
- Wright, S. C., Taylor, D. M., & Moghaddam, F. M. (1990). The relationships of perceptions and emotions to behavior in the face of collective inequality. *Social Justice Research*, *4*, 229-250.
- Zoogah, D. B. (2010). Why should I be left behind? Employees' perceived relative deprivation and participation in development activities. *Journal of Applied Psychology*, *95*, 159-179.