



Support for redistribution is shaped by compassion, envy, and self-interest, but not a taste for fairness

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Why do people support economic redistribution? Hypotheses include inequity aversion, a moral sense that inequality is intrinsically unfair, and cultural explanations such as exposure to and assimilation of culturally transmitted ideologies. However, humans have been interacting with worse-off and better-off individuals over evolutionary time, and our motivational systems may have been naturally selected to navigate the opportunities and challenges posed by such recurrent interactions. We hypothesize that modern redistribution is perceived as an ancestral scene involving three notional players: the needy other, the better-off other, and the actor herself. We explore how three motivational systems—compassion, self-interest, and envy—guide responses to the needy other and the better-off other, and how they pattern responses to redistribution. Data from the United States, the United Kingdom, India, and Israel support this model. Endorsement of redistribution is independently predicted by dispositional compassion, dispositional envy, and the expectation of personal gain from redistribution. By contrast, a taste for fairness, in the sense of (i) universality in the application of laws and standards, or (ii) low variance in group-level payoffs, fails to predict attitudes about redistribution.

inequality | redistribution | emotion | fairness | morality

[M]ore recently the “Greatest happiness principle” has been brought prominently forward. It is, however, more correct to speak of the latter principle as the standard, and not as the motive of conduct.

—Charles Darwin (1)

Why do people support social policies? One level of explanation addresses properties of populations that individual minds might process—local practices, shared beliefs and ideologies, collective identities, and recent history (2). A second, independent level of explanation asks which specific psychological mechanisms participate in forming the individual’s response to a policy—that is, what interpretive, emotional, and motivational systems are activated by external inputs, shaping the response (3, 4). Here, we explore this second level of explanation. We investigate several evolved psychological mechanisms to see to what degree they pattern the individual’s response to economic redistribution. We also investigate the extent to which a taste for fairness shapes support for redistribution.

By economic redistribution, we mean the modification of a distribution of resources across a population as the result of a political process. In the case of progressive redistribution (henceforth, redistribution)—a policy for which there is large worldwide demand (5, 6)—the ostensible group-level goal is to even out a skewed statistical distribution by transferring resources from the better off to the less well off. However, it is possible that the public rationale for supporting a policy is distinct from the private or even nonconscious motives of

individuals supporting (or opposing) it. It is important to recognize that such a transformation in the distribution of resources does not necessarily entail conservation of a fixed and constant amount of resources: The process of taking from some and giving to others may diminish the total (as when very high levels of taxation reduce productivity) or increase it (as when starving people are returned to productive health).

One class of models of the origins of distributive preferences posits large-scale determinants such as geography, history, political institutions (7–9), racial stereotypes (10), culturally transmitted ideology (7, 11), and party identification (12). For these and other inputs to affect political judgment and decision making, however, the relevant information must be processed by a human-specific psychology—a diverse array of neurocomputational programs that were built by natural selection and are functionally specialized for solving ancestrally recurrent adaptive problems (ref. 13; for review, see ref. 14). Therefore, it is worthwhile to understand how distributive policies are mapped into and refracted through our evolved psychological mechanisms.

Briefly, applying an evolutionary perspective to individual responses to redistribution (or anything else) involves the following (15). Universality: First, humans have a rich, underlying species-universal psychological and developmental architecture (despite some genetic noise that contributes to individual differences). Specialization: Second, this architecture includes a large and diverse set of functionally specialized programs (analogous to “apps” on a smartphone) designed over evolutionary time because

Significance

Markets have lifted millions out of poverty, but considerable inequality remains and there is a large worldwide demand for redistribution. Although economists, philosophers, and public policy analysts debate the merits and demerits of various redistributive programs, a parallel debate has focused on voters’ motives for supporting redistribution. Understanding these motives is crucial, for the performance of a policy cannot be meaningfully evaluated except in the light of intended ends. Unfortunately, existing approaches pose ill-specified motives. Chief among them is fairness, a notion that feels intuitive but often rests on multiple inconsistent principles. We show that evolved motives for navigating interpersonal interactions clearly predict attitudes about redistribution, but a taste for procedural fairness or distributional fairness does not.

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they promoted functional behavior, in addition to whatever general-purpose mechanisms the human mind might contain. Ancestral functional logic: Third, each program (e.g., incest avoidance, disposition to share) will operate according to a proprietary functional logic that reflects an evolved strategy for solving its adaptive problem that would have been effective under ancestral conditions (whether or not it is effective under modern conditions; e.g., liking salt, fat, and sugar). Individual differences: Fourth, despite underlying psychological universality, differences in the responses of these programs from individual to individual arise not only because of genetic and environmental perturbations in their development, but also because these programs are designed to calibrate their operation in functional ways based on the individual's personal, social, and ecological circumstances [e.g., stronger men feel more entitled to favorable treatment (16, 17); people are more shame-prone when they have fewer opportunities to cultivate new relationships (18)]. That is, elements of our psychology operate according to a universal functional logic, but are parameterized individually and locally and, therefore, vary quantitatively at the individual level.

The human mind has been organized by natural selection to respond to evolutionarily recurrent challenges and opportunities pertaining to the social distribution of resources, as well as other social interactions. The lives of ancestral humans involved recurrent social situations ("games") that statistically associated cues, choices, and payoffs, selecting for emotions, preferences, and dispositions designed to navigate those games successfully. This framework has already been successfully used to derive and test hypotheses about the evolved political psychology of redistribution and its close relative, welfare. For example, it was hypothesized that modern welfare activates the evolved forager risk-pooling psychology—a psychology that causes humans to be more motivated to share when individual productivity is subject to chance-driven interruptions, and less motivated to share when they think they are being exploited by low-effort free riders. Ancestrally, sharing resources that came in unsynchronized, high-variance, large packages (e.g., large game) allowed individuals to buffer each other's shortfalls at low additional cost. Accordingly, people are more inclined to share under these conditions than under low-variance conditions (19–21), where need implies low effort instead. Additionally, as predicted by the forager risk-pooling hypothesis, individual and national differences in support for welfare is accounted for by differences in beliefs about whether the unemployed are unlucky or caused their unemployment by low effort (10, 22, 23).

At the most general level, in every generation, our ancestors faced others who were worse off, better off, or equally well off (under equality, no systematic issue of interpersonal redistribution arises). Hence, we propose that the mind perceives modern redistribution as an ancestral game or scene featuring three notional players: the needy other, the better-off other, and the actor herself. The game involves two situations: an actor interacting with a better-off individual, and an actor interacting with someone who is worse off. This scene approximates the minimal ancestrally relevant expression to which the various themes of modern redistribution can be reduced, while still being recognizably about economic redistribution.

We hypothesize that (i) the mind is equipped with evolved emotions and motivations designed for dealing with each of these situations, (ii) the issue of modern redistribution meets the input conditions of, and therefore triggers, those motivational systems, and (iii) the outputs of those motivational systems jointly shape people's judgment and decision making regarding redistribution (24, 25). A number of different motivational systems are expected to shape responses to redistribution, but here we focus on three: compassion, self-interest, and envy. Moreover, individual differences are pervasive in psychological mechanisms (26). Here, we use the existence of individual differences in compassion, self-interest, and envy as a research tool for investigating the joint contribution of these motivational systems to forming attitudes about redistribution.

Interacting with the Needy Other

Our ancestors lived in a world without social or medical insurance, and were perpetually vulnerable to the risks posed by scarcity, variability, and disease (27, 28). Ethnographically, better-off foragers tend to share with needy band-mates (28). This forms a system of mutual assistance that minimizes the risk that individuals and families temporarily encountering a string of bad luck will die from need (29, 30). These patterns appear to be generated by a universal psychology of sharing that was naturally selected over evolutionary time by the payoff structure of this enduring game. If you are better off, and someone else is worse off, you can inexpensively enhance their welfare because the marginal cost to you of giving is less than the marginal benefit to them of receiving. That is, seeing others in need affords you the opportunity to cost-effectively enhance their welfare. If your neighbor is starving, you can give them some of your extra food and save their life at little personal cost. Critically, your benefitting them may cause them to increase the weight they attach to your welfare (31), thus making them more likely to help you when the roles reverse. In contrast, not helping them removes the incentive for them to help you in the future when you are needy: You have already demonstrated your disposition not to help them. Accordingly, cues that a valued or potentially valuable individual is in need elicit the spontaneous motivation to help them (32). By hypothesis, this is orchestrated by the emotion of compassion (33, 34). Of course, evolutionarily, individuals are also designed to place value on themselves and their families [a self-interest component is a central part of the motivational system (35, 36)], and the outcome of the interaction between compassion and self-interest will cause individual differences in the degree to which people are willing to make costly welfare trade-offs on behalf of others (37, 38). [As history shows, beyond a certain limit, self-interest can motivate an individual to take from those who are less well-off, if the taker is sufficiently powerful or the taking is hidden (39).] Compassion will thus be more easily elicited in some individuals than in others, yielding individual differences in dispositional compassion. As applied to the inequality scene, then, support for redistribution should increase with an individual's dispositional compassion.

Interacting with the Better-Off Other

Self-interest motivates support for the transfer of resources from the better-off to the self (40). Here, the goal is increasing one's own level of resources, with the reduction in the welfare of the better-off being simply a by-product. However, some social competition is over positional goods such as rank and prestige, whose consumption by others adversely impacts one's consumption. Here, having more than others helps in such competitions (refs. 41 and 42; see ref. 43). Physical scarcity too may turn a resource (e.g., food) into a positional resource, and so ancestral economies of limited productivity would have featured a higher proportion of such goods than later, more productive economies (44–46). (Ancestral economies also included non-positional goods [e.g., drinking water in a large lake] and positive-sum games [e.g., sharing food to pool risk (47)], although to a lesser extent than modern economies do.) With positional goods, the better-off losing resources is a benefit for the actor even if the actor gets no additional resources; her relative competitive position is improved (48). In such a case, the harm to the better-off is not a by-product of attaining some other good, but the good itself. When efficient, actors will even incur costs to effect such reductions in the welfare of positional rivals (49–52). By hypothesis, this motivation to spitefully reduce the welfare of the better-off is orchestrated by the emotion of envy (53–55). Thus, support for redistribution should be higher in those more disposed to feel envy. [Whether in any specific case it is prudent to act out of self-interest and envy in a way that injures others depends on whether such action can be carried out covertly (56), whether responsibility can be diffused among many others, and the degree to which there is a difference in the aggressive formidability or power of the different players (16).]

Empirical Investigation

We conducted 13 studies with 6,024 participants in four countries to test the hypothesis that compassion, envy, and self-interest jointly predict support for redistribution. Participants completed instruments measuring their (i) support for redistribution; (ii) dispositional compassion; (iii) dispositional envy; (iv) expected personal gain or loss from redistribution (our measure of self-interest); (v) political party identification; (vi) aid given personally to the poor; (vii) wealthy-harming preferences; (viii) endorsement of procedural fairness; (ix) endorsement of distributional fairness; (x) age; (xi) gender; and (xii) socioeconomic status (SES). Different studies used different sets of measures; see *Methods* and *SI Appendix*.

Results

If the mind sees modern redistribution as a three-player game eliciting compassion, envy, and self-interest (57–59), then the intensities of those emotions and motives will independently predict support for redistribution. To test this prediction, we regressed participants' support for redistribution simultaneously on their dispositional compassion, their dispositional envy, and their expected personal gain (or loss) from redistribution. As predicted, the three motives have positive, significant, and independent effects on support for redistribution. This is true in the four countries tested: the United States (US) (study 1a), India (IN) (study 1b), the United Kingdom (GB) (study 1c), and Israel (IL) (study 1d)—standardized regression coefficients (β values): compassion, 0.28–0.39; envy, 0.10–0.14; self-interest, 0.18–0.30. Jointly, these motives account for 13–28% of the variance in support for redistribution. Adding to the regression models age and gender, or age, gender, and SES, does not appreciably alter the effect of the emotion/motivation triplet, or the total variance accounted for. We note that age did not have significant effects in any country. Gender had significant effects in the United States and the United Kingdom (females more opposed to redistribution), but not in India or Israel. SES had a significant (negative) effect in the United Kingdom, but not in the other countries (*SI Appendix, Tables S1–S3*).

Party Affiliation. Participants in the United States also reported the political party they most identify with. Consistent with historical survey data (60), self-described Democrats endorsed redistribution to a greater extent than Republicans and Libertarians did. Democrats also reported more compassion and more expected personal gain from redistribution than Republicans and Libertarians did; envy did not differ by party (*SI Appendix, Table S4*). Thus, compassion and self-interest predict identification with political parties, which are themselves associated with attitudes toward redistribution (12). In isolation, the emotion/motivation triplet accounts for 28% of the variance in support for redistribution, whereas party identification accounts for 34%; when entered together, they have unique effects of similar magnitude (Σr^2 in the full model: triplet, 0.15; party, 0.18; *SI Appendix, Table S1, study 1a, model 4*). This suggests that emotions and party ideology shape attitudes toward redistribution to a similar extent.

Compassion and Envy. Compassion and envy evolved in response to different adaptive problems and have different elicitors and motivational and behavioral outputs. Therefore, different signatures of compassion and envy should be discernible in distributional matters.

Consider personally aiding the poor—as distinct from supporting state-enacted redistribution. Participants in the United States, India, and the United Kingdom (studies 1a–c) were asked whether they had given money, food, or other material resources of their own to the poor during the last 12 mo; 74–90% of the participants had (*SI Appendix, Table S3*). When the emotion/motivation triplet, age, gender, SES, and support for government redistribution were entered as independent variables in binary logistic regressions, dispositional compassion was the only reliable predictor of giving aid to the poor. A unit increase in dispositional compassion is associated with 161%, 361%, and 96% increased odds of having given aid to the poor in the United States, India, and the United Kingdom (*SI Appendix, Table S5*).

Interestingly, support for government redistribution was not a unique predictor of personally aiding the poor in the regressions (*SI Appendix, Table S5*), and its effects were unreliable when considered by itself [zero-order effects as increased odds (95% CI): US, 13% (0.95–1.34); IN, 71% (0.98–2.99); GB, 37% (1.04–1.81)]. Support for government redistribution is not aiding the needy writ large—in the United States, data from the General Social Survey indicate that support for redistribution is associated with lower charitable contributions to religious and nonreligious causes (61). Unlike supporting redistribution, aiding the needy is predicted by compassion alone (62).

Now consider envy. Participants in the United States, India, and the United Kingdom (studies 1a–c) were given two hypothetical scenarios and asked to indicate their preferred one. In one scenario, the wealthy pay an additional 10% in taxes, and the poor receive an additional sum of money. In the other scenario, the wealthy pay an additional 50% in taxes (i.e., a tax increment five times greater than in the first scenario), and the poor receive (only) one-half the additional amount that they receive in the first scenario. That is, higher taxes paid by the wealthy yielded relatively less money for the poor, and vice versa (63). To clarify the rationale for this trade-off, we told participants that the wealthy earned more when tax rates were low, thereby generating more tax revenue that could be used to help the poor. Fourteen percent to 18% of the American, Indian, and British participants indicated a preference for the scenario featuring a higher tax rate for the wealthy even though it produced less money to help the poor (*SI Appendix, Table S3*). We regressed this wealthy-harming preference simultaneously on support for redistribution, the emotion/motivation triplet, age, gender, and SES. Dispositional envy was the only reliable predictor. A unit increase in envy is associated with 23%, 47%, and 43% greater odds of preferring the wealthy-harming scenario in the United States, India, and the United Kingdom (*SI Appendix, Table S6*). Support for government redistribution has no reliable effect on this preference, whether in the regressions (*SI Appendix, Table S6*) or considered by itself [zero-order effects (95% CI): US, 10% (0.89–1.36); IN, –11% (0.56–1.42); GB, 43% (1.05–1.95)].

Compassion and envy motivate the attainment of different ends. Compassion, but not envy, predicts personally helping the poor. Envy, but not compassion, predicts a desire to tax the wealthy even when that costs the poor.

Compassion, envy, and the self-interest independently predict support for redistribution in four countries with different economic histories and distributional policies. This is consistent with an evolutionary–psychological approach that models redistribution as a set of interpersonal relations. However, might redistribution be perceived also as a group-level affair?

Fairness. Prominent views argue that redistribution is driven by concerns over fairness (64–66). Issues of fairness have a long evolutionary history (67) and therefore potentially shape attitudes about modern redistribution. Study 2, conducted in the United States, asks whether a taste for fairness predicts support for redistribution, and how the effect of fairness compares to the effect of the emotion/motivation triplet.

The term fairness is used to refer to many distinct concepts (68), including low variance in outcomes (69, 70); uniformity in the application of rules or the law (64, 71–75); proportionality between payoff and effort, skills, economic output, seniority, need, or social status (e.g., caste, religion, or race, in various times and places) (refs. 76–83; see ref. 84); the availability of institutional safeguards against risk (22, 64); and allocations arrived at through mutual recognition of relative power (85). Although intuitive, the concept of fairness remains ill-specified to date.

Here, we focus on the two concepts most common in political discourse about redistribution: distributional fairness and procedural fairness. For the purposes of these studies, we define distributional fairness as low variance in outcomes, and procedural fairness as the application of the same laws and standards across individuals and groups. Extant measures (e.g., ref.

75) are ill suited for our purposes, so we created two instruments tailored to the present inquiry.

Endorsement of distributional fairness was measured with a set of seven decisions about how to allocate a windfall between the participant herself (P) and two other individuals (P1 and P2)—we note that allocational decisions are widely used to assess fairness preferences (e.g., refs. 38 and 86; see ref. 87). In each decision, the participant must choose one of three options. P receives the same amount in every option, but the amounts for P1 and P2 vary across options. In the Distributional Fairness option, P gets less than P1 but more than P2 (e.g., P1: \$120; P: \$100; P2: \$80); this option has the lowest variance in payoffs and the lowest sum of (absolute) self-other differences. In the Compassion option, P2 gets as much as P, whereas P1 gets (even) more than they would get in the Distributional Fairness option (e.g., P1: \$165; P: \$100; P2: \$100); this option raises P2's payoff to P's level while maximizing total payoffs. In the Envy option, P1 gets less than P, whereas P2 gets (even) less than they would get in the Distributional Fairness option (e.g., P1: \$30; P: \$100; P2: \$70); this option provides P a higher payoff than P1 (and P2) while minimizing total payoffs. A decision is scored "1" if Distributional Fairness is chosen, and "0" otherwise. Our measure of endorsement of distributional fairness is the participant's average score across the seven decisions. [All seven decisions have the same payoff structure; what differs across decisions is (i) the particular amounts, and (ii) the order in which the options are presented. The options were presented to the participants as options 1, 2, and 3.] Importantly, this instrument measures a preference for low variance in payoffs (our operationalization of distributional fairness) barring payoffs compatible with compassion and envy (86, 88), which, as established in studies 1a–d, predict support for redistribution.

To test for fairness effects, we conducted three follow-up studies in the United States (studies 2a–c). The distributional fairness decisions varied across studies, as follows. In studies 2a and 2c, P1 and P2 were two anonymous same-sex individuals, and the amounts were in the single to triple digits. In study 2b, P1 and P2 were groups: "the rich" and "the poor," and the amounts (five to six digits) were described as salaries per capita "from now and into the indefinite future" for each of P1, P, and P2 (see decisions in *SI Appendix, Tables S7–S9*). In studies 2a and 2b, the decisions were hypothetical; in study 2c, the decisions were paid by lottery method. Studies 2a and 2b were conducted with 355 and 364 participants each, yielding ~95% power to detect an effect size of $f^2 = 0.04$ at the 0.05 level in regression analyses. Study 2c included 275 participants.

Endorsement of procedural fairness was measured with a seven-item instrument, including "The law of the land should apply to everybody in the same way," and "It would not bother me much if different groups of people were subject to different rules" (reversed), with scales ranging from 1 (do not agree at all) to 7 (strongly agree).

In addition to measuring how strongly participants endorsed distributional and procedural fairness, studies 2a–c also measured the emotion/motivation triplet (dispositional compassion, dispositional envy, and expected personal gain or loss from redistribution), age, gender, SES, and support for redistribution (*SI Appendix, Tables S10 and S11*).

Endorsement of distributional fairness failed to predict support for redistribution in all three studies: 2a [$r_{348} = -0.10$ (wrong direction), $P = 0.059$]; 2b ($r_{351} = 0.00$, $P = 1$); 2c ($r_{273} = 0.05$, $P = 0.38$). It also failed to do so when entered with the other variables in the regressions (*SI Appendix, Table S12*). Endorsement of procedural fairness predicted support for redistribution at the zero-order level in all three studies (2a: $r_{348} = 0.19$, $P = 0.0003$; 2b: $r_{351} = 0.12$, $P = 0.028$; 2c: $r_{273} = 0.13$, $P = 0.029$). However, when entered with the other variables in the regressions, the procedural fairness effect failed to predict support for redistribution in two of the three studies (it remained only in study 2c; *SI Appendix, Table S12*).

By contrast, dispositional compassion, dispositional envy, and expected personal gain from redistribution predicted support for redistribution in each of the three studies. Moreover, each motive continued to predict support for redistribution when entered

into regressions with procedural fairness and distributional fairness (separately or jointly), or with both measures of fairness and demographic variables (*SI Appendix, Table S12*). In sum, the emotion/motivation triplet has a greater effect on support for redistribution than either measure of fairness does.

In studies 2a–c, the Distributional Fairness option had some variance in payoffs—P gets less than P1 and more than P2. Might a fairness effect be moderated by the (absolute) variance of payoffs? For example, might a taste for equal payoffs (zero variance) succeed in predicting support for redistribution? To answer this question, we conducted a set of two follow-up studies (S1a–b). These were identical to studies 2a (interpersonal allocations) and 2b (allocations among groups), respectively, except that in studies S1a–b the Distributional Fairness option gives identical amounts to P1, P, and P2. Endorsement of distributional fairness had no effect in study S1a; however, it had an effect in study S1b, which survived the inclusion of the other predictors. However, even in study S1b, the effect of the emotion/motivation triplet was several times greater than the effect of distributional fairness (*SI Appendix, studies S1a–b and Tables S13–S17*).

We conducted further follow-up studies to address two potential issues. In the studies conducted so far, the Compassion option of the distributional fairness instrument has the highest efficiency or aggregate payoff. Thus, this instrument may be insensitive to participants who value distributional fairness but not so much to trade it for efficiency (86). We conducted four follow-up studies (S2a–d) in which the Compassion option was removed, thus leaving two options: a high-efficiency, low-variance Distributional Fairness option, and a low-efficiency, high-variance Envy option. Still, the resulting two-option instrument may be insensitive to participants who value low-variance payoffs but fail to correctly identify a particular set of payoffs as the low-variance set. To address this other potential issue, in two of the four studies we included labels indicating the options where the total payoff is higher (lower) and "the money is split most (least) evenly." The four studies measured endorsement of distributional fairness, as follows: interpersonal, options unlabeled (study S2a); interpersonal, options labeled (study S2b); groups, options unlabeled (study S2c); and groups, options labeled (study S2d). In studies S2a–b, the decisions were paid by lottery method. Endorsement of distributional fairness (and efficiency) uniquely predicted support for redistribution in only one of the four studies (study S2d). However, even in this study the effect of the emotion/motivation triplet was far greater than the effect of distributional fairness (*SI Appendix, studies S2a–d and Tables S18–S22*).

To sum up the set of fairness studies, in predicting support for redistribution, the effect of fairness as a group-wide concern is unreliable and of far smaller magnitude than the effect of the emotion/motivation triplet. This is true whether fairness is operationalized as uniformity in the application of laws and standards or as low (or null) variance in payoffs; whether distributional fairness is assayed between individuals (studies 2a, 2c, S1a, S2a, S2b) or between groups ("the rich," "the poor"; studies 2b, S1b, S2c, S2d); and whether allocational decisions are hypothetical (studies 2a, 2b, S1a, S1b, S2c, S2d) or consequential (studies 2c, S2a, S2b).

Discussion

Consistent with the three-player, two-situation model, support for redistribution is predicted by compassion, envy, and self-interest. The fact that a sizeable minority (14–18%) of American, Indian, and British participants prefers a higher tax rate for the wealthy even when that yields less money for the poor underscores that redistribution features spiteful motives (45, 53, 57, 88) alongside humanitarian motives (57, 62, 86), as predicted by the three-player model.

A taste for fairness had little or no effect on support for redistribution. This is striking, because fairness is invoked in many arguments for redistribution. Notions of fairness are intuitive and compelling—they seem to inspire charity, courageous acts, outrages, wars, and moral crusades. Furthermore, notions of

fairness other than those we assessed here may well shape attitudes about redistribution. As stated above, however, fairness refers to a wide variety of distinct phenomena and goals. The usefulness of this concept is thus limited at present.

These data support the evolutionary-psychological hypothesis that redistribution is not perceived—at least not entirely—as a population-level phenomenon. Individual attitudes about redistribution reflect several motivational systems, which is what one would predict given the redistributive games faced by our ancestors. Distributional optima differ by individual (89), but also by mental faculty within individuals. This may explain why the enterprise of optimizing a society-wide variable or distributional state (e.g., aggregate welfare, the welfare of the least well-off) has proven so problematic. For example, obstacles to increasing the welfare of the least well-off involve not only insufficient compassion but also the presence of envy. This is because the motivational mechanisms implicated in redistribution were shaped by different adaptive problems, have different circuit logics, and deliver different, sometimes opposing, outputs. As Walt Kelly's character Pogo famously said, "We have met the enemy and he is us."

Methods

The study procedures were approved by the Institutional Review Boards at the University of California, Santa Barbara, the Ben Gurion University of the Negev, and the Interdisciplinary Center, Herzliya. The studies were conducted in English in the United States, India, and the United Kingdom, and in Hebrew in Israel. All of the participants gave their informed consent. The stimuli are described in full in the *SI Appendix*. The data are included in [Dataset S1](#).

Participants. Amazon Mechanical Turk (AMT) was used to recruit participants for studies 1a–c as follows: study 1a, US: 1,032 participants (559 females, 8 of unknown gender), and mean age, 31 (SD = 11); study 1b, IN: 838 participants; 278 participants were excluded from analyses due to failure to correctly respond to an attention check, leaving an effective sample size of 560 (208 females, 2 of unknown gender); mean age, 28 (SD = 8); study 1c, GB: 646 participants (195 females, 40 of unknown gender); mean age, 29 (SD = 10); study 1d: 282 participants were recruited in Israel from two universities (194 females); their mean age was 23 (SD = 2). These participants completed additional measures; some are reported in refs. 90 and 91, and others are to be reported elsewhere.

Measures for Studies 1a–d.

Support for redistribution. Support for redistribution (studies 1a–c) was measured with 11 items (based on ref. 17), coded on 1 (strongly disagree) to 5 (strongly agree) scales. Examples of items include the following: "Wealth should be taken from the rich and given to the poor," and "The government spends too much money on the unemployed" (reversed). Study 1d used nine, slightly modified items, coded on 1–7 scales. Mean α across studies was 0.78. **Dispositional compassion.** Dispositional compassion (studies 1a–d) was measured with 10 items (92), coded on 1 [very inaccurate (in describing myself)] to 5 [very accurate (in describing myself)] scales. Examples of items include the following: "I suffer from others' sorrows," and "I tend to dislike soft-hearted people" (reversed). Mean α was 0.68.

Dispositional envy. Dispositional envy (studies 1a–d) was measured with eight items (93), coded on 1 (strongly disagree) to 5 (strongly agree) scales. Examples of items include the following: "I feel envy every day," and "It is so frustrating to see some people succeed so easily." Mean α was 0.89.

Expected personal gain from redistribution. Expected personal gain from redistribution (studies 1a–d) was measured with one item, coded on a 1–5 scale (My own economic situation would significantly worsen–improve): "Imagine that a policy of higher taxes on the wealthy is implemented. What overall impact do you think the higher taxes on the wealthy would have on you?"

Aid to the poor. Aid to the poor (studies 1a–c) was measured with one item: "In the last 12 months, did you give money, food, or other material resources of your own to poor people (either directly to them or to charities)?" (yes = 1, no = 0).

Fiscal scenarios. Fiscal scenarios (studies 1a–c): study 1a (US) version, "The top 1% wealthiest individuals pay an extra 50% [10%] of their income in additional taxes, and as a consequence of that the poor get an additional \$100 million [\$200 million] per year (the extra 50% [10%] in taxes paid in former fiscal years leaving the wealthiest with relatively less [more] taxable income)" (coded "1" ["0"]). The IN and GB scenarios featured amounts in local currency.

SES. SES (studies 1a–c) was measured with seven items, coded on 1 (strongly disagree) to 5 (strongly agree) scales. Examples of items: "I have enough money to buy the things I desire," and "I feel relatively poor these days" (reversed). Mean α was 0.75. Study 1d used the single item, "How would you define the socioeconomic status of your parents?," coded on a 1 (low) to 7 (high) scale.

Samples for Studies 2a–c. We recruited 355/364/275 (studies 2a/b/c) participants in the US; 5/11 participants were excluded from analyses in studies 2a/b due to failure to correctly respond to an attention check, leaving an effective sample size of 350/353/275. Their mean age was 34/34/19 (SD = 12/12/1). Participants were AMT users (studies 2a–b), and college students (study 2c).

Measures for Studies 2a–c.

Support for redistribution. Support for redistribution was measured as in studies 1a–c, except that the scales ranged from 1 to 7. Dispositional compassion, dispositional envy, and expected personal gain from redistribution were measured as in studies 1a–d. SES was measured as in studies 1a–c, except that study 2c included an additional item: "How would you define your parents' socioeconomic status?" (low to high).

Endorsement of procedural fairness. Endorsement of procedural fairness (studies 2a–c) was measured with seven items, coded on 1 (do not agree at all) to 7 (strongly agree) scales. Examples of items included the following: "The law of the land should apply to everybody in the same way," and "It would not bother me much if different groups of people were subject to different rules" (reversed). Mean α was 0.66.

Endorsement of distributional fairness. Endorsement of distributional fairness (studies 2a–c) was measured with seven decisions with three options each. Each option dictates a particular allocation of money between the participant herself (P) and two other individuals or sets of individuals (P1 and P2). Decisions are hypothetical, interpersonal (study 2a); hypothetical, between groups ("the rich," "the poor") (study 2b); and interpersonal, paid by lottery method with a chance of 1 in 36 (study 2c). Mean α was 0.86.

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Supplementary Information

Support for redistribution is shaped by compassion, envy, and self-interest, but not a taste for fairness

1. STUDIES 1a–d

Methods

Measures. The measures of Studies 1a–d were as follows:

Support for redistribution (based on (1))

Studies 1a–c

1 (strongly disagree) - 5 (strongly agree)

High incomes should be taxed more than is currently the case.

The government should increase taxes to give more help to the poor.

We should resist the demands for more benefits from people on welfare. (R)

In politics, one should strive to assure similar income levels for everyone, regardless of education and employment.

The government should intervene economically to redistribute wealth from those who have more resources to those who have fewer resources.

The government spends too much money on the unemployed. (R)

Wealth should be taken from the rich and given to the poor.

Wealthy people should not be taxed more heavily than others. (R)

The wealthy should give more money to those who are worse off.

It is not fair that people have to pay taxes to fund welfare programs. (R)

Inequality in the distribution of wealth is unjust.

Study 1d

1 (strongly disagree) - 7 (strongly agree)

The Israeli fiscal authority should take money from those who have more and give it to those who have less.

The Israeli government should increase taxes on high earners to give more help to the poor.

Increasing taxes on the wealthy to expand welfare programs can only worsen the current economic situation in Israel. (R)

The well-to-do should not be taxed more heavily than others. (R)

It is very unfair that income is unequally distributed in Israel.

The rich should be forced to give more to the poor.

It is not fair that people have to pay taxes to fund welfare programs. (R)

High incomes should be taxed more than is currently the case.

The Israeli government already spends too much money on the unemployed. (R)

(R): Reverse-coded item

Dispositional compassion (based on (2))

Studies 1a–d

1 (very inaccurate [in describing myself]) - 5 (very accurate [in describing myself])

I tend to dislike soft-hearted people. (R)

I suffer from others' sorrows.

I try not to think about the needy. (R)

I feel sympathy for those who are worse off than myself.

I can't stand weak people. (R)

I believe people should fend for themselves. (R)

I sympathize with the homeless.

I value cooperation over competition.

I believe in an eye for an eye. (R)

I am not interested in other people's problems. (R)

(R): Reverse-coded item

Dispositional envy (based on (3))

Studies 1a–d

1 (strongly disagree) - 5 (strongly agree)

I feel envy every day.

The bitter truth is that I generally feel inferior to others.

Feelings of envy constantly torment me.

It is so frustrating to see some people succeed so easily.

No matter what I do, envy always plagues me.

I am troubled by feelings of inadequacy.

It somehow doesn't seem fair that some people seem to have all the talent.

Frankly, the success of my neighbors makes me resent them.

Expected personal gain from redistribution

Studies 1a–d

Imagine that a policy of higher taxes on the wealthy is implemented. What overall impact do you think the higher taxes on the wealthy would have on you?

My own economic situation would significantly worsen (1)

My own economic situation would slightly worsen (2)

My own economic situation would stay the same (3)

My own economic situation would slightly improve (4)

My own economic situation would significantly improve (5)

Aid to the poor

Studies 1a–c

In the last 12 months, did you give money, food, or other material resources of your own to poor people (either directly to them or to charities)? (yes, no)

Fiscal scenarios
Studies 1a–c

Consider the following two scenarios and select the one that you prefer.

The top 1% wealthiest individuals pay an extra 50% of their income in additional taxes, and as a consequence of that the poor get an additional \$100 million [US] / ₹100 billion [IN] / £100 million [GB] per year (the extra 50% in taxes paid in former fiscal years leaving the wealthiest with relatively less taxable income.) (coded “1”)

The top 1% wealthiest individuals pay an extra 10% of their income in additional taxes, and as a consequence of that the poor get an additional \$200 million [US] / ₹200 billion [IN] / £200 million [GB] per year (the extra 10% in taxes paid in former fiscal years leaving the wealthiest with relatively more taxable income.) (coded “0”)

Socio-economic status
Studies 1a–c

1 (strongly disagree) - 5 (strongly agree)

My family usually had enough money for things when I was growing up.

I grew up in a relatively wealthy neighborhood.

My family struggled financially when I was growing up. (R)

In the future, I don't think I'll have to worry about money too much.

I will probably be relatively poor later in life. (R)

I have enough money to buy the things I desire.

I feel relatively poor these days. (R)

(R): Reverse-coded item

Study 1d

1 (low) - 7 (high)

How would you define the socio-economic status of your parents?

Table S1.*Regression models predicting participants' support for redistribution (Studies 1a–d)*

Study	1a (United States)				1b (India)			1c (United Kingdom)			1d (Israel)		
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Compassion	.39***	.41***	.41***	.33***	.29***	.29***	.28***	.37***	.38***	.37***	.28***	.30***	.30***
Envy	.14***	.13***	.13***	.11***	.13**	.13**	.11*	.10**	.12**	.09*	.12*	.14*	.15*
Self-interest	.30***	.30***	.30***	.23***	.30***	.30***	.30***	.21***	.20***	.17***	.18**	.18**	.22**
Age		-.05	-.05	-.02		.06	.06		.05	.04		.01	.01
Female		-.09***	-.09***	-.08**		.04	.04		-.09*	-.09**		-.09	-.09
SES			.00	.01			-.05			-.15***			.07
Democrat				.45***									
R ²	.28	.30	.30	.49	.17	.18	.18	.22	.22	.24	.13	.14	.14
N	1032	1024	1024	677	560	558	558	646	606	606	282	282	282

Note. Coefficients are standardized regression coefficients. Asterisks indicate the significance of the *t* statistic (**p* < .05, ***p* < .01, ****p* < .001). SES: Socio-economic status. Democrat: 0 = participant most identified with Republican party or Libertarian Party, 1 = participant most identified with Democratic Party.

Table S2*Scale reliabilities: Cronbach's alphas (Studies 1a–d)*

Study	1a	1b	1c	1d
Redistribution	.90	.58	.85	.78
Compassion	.81	.61	.71	.58
Envy	.91	.87	.90	.87
Socio-economic status	.77	.74	.75	–

Table S3*Descriptive statistics (Studies 1a–d)*

Study	1a (US)	1b (IN)	1c (GB)	1d (IL)
Redistribution	3.19 ^a (0.82)	3.34 ^b (0.46)	3.23 ^a (0.70)	4.45 (1.01)
Compassion	3.55 ^a (0.64)	3.50 ^a (0.50)	3.54 ^a (0.56)	3.68 ^b (0.44)
Envy	2.30 ^a (0.93)	2.60 ^b (0.83)	2.41 ^a (0.91)	1.96 ^c (0.78)
Self-interest	3.22 ^a (0.76)	3.20 ^{ab} (0.87)	3.07 ^b (0.73)	2.92 ^c (0.71)
% Gave to poor ^a	74.4 ^a	89.7 ^b	77.9 ^a	
% Fiscal pref. ^b	13.7 ^a	17.9 ^b	16.7 ^{ab}	

Note. Displayed are means with standard deviations in parentheses, and percentages (two bottom rows). All scales in all studies measured with 5-point Likert scales, except for Redistribution in Israel, which is measured on 7-point scales. US: United States, IN: India, GB: United Kingdom, IL: Israel. Means in the same row followed by the same letter are not significantly different at the .05 level by the Dunnett’s C test (the Study 1d Redistribution mean is not comparable to those of Studies 1a–c). Percentages in the same row followed by the same letter are not significantly different at the .05 level by the Chi-squared test. ^a Percentage of subjects who gave money, food, or other material resources of their own to poor people in the last 12 months. ^bPercentage of subjects preferring the “wealthiest pay relatively more taxes, poor get relatively less money” scenario over the “wealthiest pay relatively less taxes, poor get relatively more money” scenario.

Table S4*Descriptive statistics, by political party (Study 1a)*

	Democratic	Republican	Libertarian	Another party	No party
% Identification	42.3	15.7	7.9	3.5	30.5
Redistribution	3.55 ^a (0.63)	2.44 ^b (0.75)	2.74 ^b (0.86)	3.27 ^{acd} (0.77)	3.17 ^d (0.75)
Compassion	3.70 ^a (0.63)	3.39 ^b (0.62)	3.33 ^b (0.59)	3.27 ^b (0.74)	3.52 ^b (0.63)
Envy	2.30 ^{ab} (0.94)	2.14 ^b (0.88)	2.44 ^{bc} (0.92)	2.72 ^{acd} (0.90)	2.29 ^{bd} (0.92)
Self-interest	3.33 ^a (0.74)	2.99 ^{bc} (0.75)	3.00 ^{bde} (0.80)	3.33 ^{acd} (0.83)	3.24 ^{ae} (0.74)

Note. Displayed are means, with standard deviations in parentheses, and percentages (top row).

Means in the same row followed by the same letter are not significantly different at the .05 (or lower) level by the Dunnett's C or Bonferroni tests.

Table S5

Binary logistic regression models predicting participants having given money, food or resources of their own to the poor in the last 12 months (Studies 1a–c)

Study	1a (United States)		1b (India)		1c (United Kingdom)	
	OR	95% CI	OR	95% CI	OR	95% CI
Constant	.06***		.11		.005***	
Redistribution	0.94	(0.76 - 1.17)	1.17	(0.58 - 2.38)	1.31	(0.94 - 1.82)
Compassion	2.61***	(1.99 - 3.42)	4.61***	(2.25 - 9.45)	1.96***	(1.32 - 2.91)
Envy	1.08	(0.91 - 1.29)	0.84	(0.56 - 1.27)	1.03	(0.82 - 1.30)
Self-interest	0.76*	(0.61 - 0.94)	1.04	(0.74 - 1.47)	0.98	(0.73 - 1.30)
Age	1.02**	(1.00 - 1.04)	0.99	(0.95 - 1.03)	1.04**	(1.01 - 1.06)
Female	1.03	(0.76 - 1.40)	0.67	(0.37 - 1.20)	1.99**	(1.23 - 3.23)
Socio-economic status	1.30*	(1.05 - 1.62)	0.97	(0.58 - 1.64)	1.74***	(1.26 - 2.40)

Note. OR: Odds ratio, CI: 95% confidence interval. Asterisks indicate the significance of the Wald statistic (* $p < .05$, ** $p < .01$, *** $p < .001$).

Table S6

Binary logistic regression models predicting participants' wealthy-harming preference (Studies 1a–c)

Study	1a (United States)		1b (India)		1c (United Kingdom)	
	OR	95% CI	OR	95% CI	OR	95% CI
Constant	.23		.44		.11	
Redistribution	1.20	(0.91 - 1.57)	0.81	(0.47 - 1.40)	1.72*	(1.13 - 2.62)
Compassion	0.73	(0.53 - 1.01)	0.67	(0.39 - 1.15)	0.51**	(0.31 - 0.84)
Envy	1.23*	(1.00 - 1.51)	1.47*	(1.06 - 2.04)	1.43*	(1.07 - 1.90)
Self-interest	0.97	(0.74 - 1.26)	1.17	(0.90 - 1.53)	1.27	(0.90 - 1.81)
Age	1.00	(0.98 - 1.02)	1.00	(0.97 - 1.03)	1.00	(0.97 - 1.02)
Female	0.85	(0.59 - 1.24)	1.41	(0.90 - 2.22)	0.76	(0.43 - 1.36)
Socio-economic status	1.02	(0.78 - 1.33)	0.81	(0.55 - 1.18)	0.95	(0.65 - 1.38)

Note. OR: Odds ratio, CI: 95% confidence interval. Asterisks indicate the significance of the Wald statistic (* $p \leq .05$, ** $p < .01$).

2. STUDIES 2a–c

Method

Participants and Design. We collected data from 355 participants in Study 2a, 364 in Study 2b, and 275 in Study 2c (5 and 11 participants were excluded from analyses in Studies 2a and 2b due to failure to correctly respond to an attention check).

Measures. Support for redistribution was measured with the same scale as in Studies 1a–c, except that the scales ranged from 1 (strongly disagree) to 7 (strongly agree). Dispositional compassion, dispositional envy, and expected personal gain from redistribution were measured with the same scales as in Studies 1a–d. Socio-economic status was measured with the same scale as in Studies 1a–c, except that Study 2c included an additional item: “How would you define your parents' socioeconomic status?” (low–high). Studies 2a–c also included measures of endorsement of 1) procedural fairness, and 2) distributional fairness.

Note: The decisions of the distributional fairness instrument were hypothetical in Studies 2a and 2b, and consequential in Study 2c. In Study 2c, these decisions were paid with a lottery method. Participants rolled two dice at the end of the session. If they rolled double-sixes, one randomly selected decision out of the seven decisions was actualized. Participants had a 1 in 36 chance of causing themselves to earn between \$5 and \$16, and causing two other (anonymous) participants to earn between \$1 and \$22 each. Participants' total chance of earning any money (as deciders or receivers) was thus 3 in 36.

Endorsement of procedural fairness

Studies 2a–c

1 (do not agree at all) - 7 (strongly agree)

The notion of different standards for different individuals is offensive.

Every group should be judged with the same yardstick.

It would not bother me much if different groups of people were subject to different rules. (R)

Equality before the law is the most important principle of a civilized society.

Profiling based on race or ethnicity is a reasonable approach to law enforcement. (R)

The law of the land should apply to everybody in the same way.

Sometimes you just have to disregard the law in order to do the right thing. (R)

(R): Reverse-coded item

Endorsement of distributional fairness. Instructions.

Study 2a

Next, we ask you to make a number of decisions. Each decision has three options, each of which is a particular allocation of money between you and two other persons of your same sex and age. The numbers are in Dollar units.

For example, in this decision [example shown], if you choose option 1, you would get \$60, person 1 would get \$72, and person 2 would get \$48. If you choose option 2, you would get \$60, person 1 would get \$18, and person 2 would get \$42. If you choose option 3, you would get \$60, person 1 would get \$102, and person 2 would get \$60.

The decisions are all hypothetical, but imagine that the options chosen will actually be paid. Please make each of your decisions independently of your other decisions. That is, do not let any decision you make influence any of the other decisions you make. As you work through the decisions, assume that you cannot share any money you receive with the other persons and that they cannot share with you. Also assume that neither the other persons nor anyone else will know what choices you make.

Study 2b

Next, we ask you to make a number of decisions. Each decision has three options, each of which is a particular distribution of incomes among you and two groups of people. These groups are: (a) The rich – the current top 5% income earners in the United States; (b) The poor – the current bottom 5% income earners in the United States. The numbers are in Dollar units.

For example, in this decision [example shown], if you choose option 1, your income from now on would be \$70,000, the income of each person among the rich from now on would be \$90,000, and the income of each person among the poor from now on would be \$50,000. If you choose option 2, your income from now on would be \$70,000, the income of each person among the rich from now on would be \$60,000, and the income of each person among the poor from now on would be \$30,000. If you choose option 3, your income from now on would be \$70,000, the income of each person among the rich from now on would be \$120,000, and the income of each person among the poor from now on would be \$70,000. Assume that the set of incomes chosen will remain fixed from now and into the indefinite future—assume further a future without inflation. Thus, the incomes of you and the current rich and poor will, from now and into the indefinite future, be the incomes indicated in the chosen option.

The decisions are all hypothetical, but imagine that the incomes of you and the current rich and poor will, from now and into the indefinite future, be the incomes indicated in the chosen option—again, assume there will be no inflation in the future. Please make each of your decisions independently of your other decisions. That is, do not let any decision you make influence any of the other decisions you make. As you work through the decisions, assume that you cannot share any fraction of the income with the other persons and that they cannot share with you. Also assume that neither the other persons nor anyone else will know what choices you make.

Study 2c

Next, we ask you to make a number of decisions. These decisions will determine how much money you and two other participants in this room will receive at the end of the experiment.

The identity of these two other participants will be randomly determined at the end of the experiment. You will not know the identity of these persons. For that reason, we'll refer to them as "Person 1" and "Person 2".

Each decision has three options, and each option determines a different distribution of money among you, Person 1, and Person 2.

In this task, the numbers are in Dollar units.

For example, in this decision [example shown], if you choose option 1, you get \$8, Person 1 gets \$10, and Person 2 gets \$6. If you choose option 2, you get \$8, Person 1 gets \$6, and Person 2 gets \$3. If you choose option 3, you get \$8, Person 1 gets \$13, and Person 2 gets \$8.

At the end of the experiment, you will roll two dice. If you roll double sixes, ONE of your decisions will be chosen at random to determine the actual amount of money given to you, Person 1, and Person 2. This means that any single decision you make may end up determining how much real money is given to you, Person 1 and Person 2. (If you do not roll double sixes, no money will be given.)

Because each decision potentially determines a real monetary outcome, please make all of your decisions independently of the others. That is, do not let any decision you make influence any of the other decisions you make.

There really are no "right" or "wrong" answers to the questions. Please respond based on how you actually feel about the options.

Important: If you roll doubles sixes, neither Person 1 nor Person 2 will know the identity of the person causing them to earn money (that is, you). You won't know the identity of Persons 1 or 2 and these persons won't know your identity. Therefore, you won't be able to share any money you receive with them, and they won't be able to share any money with you.

NOTE: Regardless of whether you roll double sixes and get paid, another participant in this room may roll double sixes and you may be randomly selected as this participant's Person 1 or Person 2 for payment. However, bear in mind that since a) participants are not necessarily matched with one another, b) the participants' decisions will not be communicated to one another, and c) the identities of the matching participants will not be disclosed, your decisions cannot affect others' decisions and, likewise, others' decisions cannot affect your decisions.

Endorsement of distributional fairness. Decisions.

Table S7*Interpersonal scale (Study 2a) (amounts in \$)*

	Option 1	Option 2	Option 3
person 1	165	120	<u>30</u>
you	100	100	<u>100</u>
person 2	100	80	<u>70</u>
person 1	<u>6</u>	24	33
you	<u>20</u>	20	20
person 2	<u>14</u>	16	20
person 1	<u>3</u>	17	12
you	<u>10</u>	10	10
person 2	<u>7</u>	10	8
person 1	33	39	<u>15</u>
you	30	30	<u>30</u>
person 2	27	30	<u>12</u>
person 1	50	36	<u>5</u>
you	25	25	<u>25</u>
person 2	25	15	<u>8</u>
person 1	56	<u>8</u>	76
you	40	<u>40</u>	40
person 2	24	<u>20</u>	40
person 1	77	91	<u>35</u>
you	70	70	<u>70</u>
person 2	63	70	<u>28</u>

Note. Each set of three rows separated by a blank line constitutes a separate decision. Bold denotes the option with the least variance and the lowest aggregate self-other difference—the Distributional Fairness option. Underline denotes the Envy option. The unmarked numbers represent the Compassion option. The marks were not presented to the participants. Order of decision was randomized within and between subjects.

Table S8*Groups scale (Study 2b) (amounts in \$)*

	Option 1	Option 2	Option 3
the rich (per person)	110,000	80,000	<u>50,000</u>
you	60,000	60,000	<u>60,000</u>
the poor (per person)	60,000	40,000	<u>20,000</u>
the rich (per person)	<u>30,000</u>	55,000	70,000
you	<u>50,000</u>	50,000	50,000
the poor (per person)	<u>25,000</u>	45,000	50,000
the rich (per person)	<u>25,000</u>	110,000	85,000
you	<u>75,000</u>	75,000	75,000
the poor (per person)	<u>15,000</u>	75,000	65,000
the rich (per person)	45,000	55,000	<u>32,000</u>
you	40,000	40,000	<u>40,000</u>
the poor (per person)	35,000	40,000	<u>30,000</u>
the rich (per person)	150,000	120,000	<u>90,000</u>
you	100,000	100,000	<u>100,000</u>
the poor (per person)	100,000	80,000	<u>60,000</u>
the rich (per person)	50,000	<u>40,000</u>	60,000
you	45,000	<u>45,000</u>	45,000
the poor (per person)	40,000	<u>25,000</u>	45,000
the rich (per person)	75,000	95,000	<u>60,000</u>
you	65,000	65,000	<u>65,000</u>
the poor (per person)	55,000	65,000	<u>35,000</u>

Note. Each set of three rows separated by a blank line constitutes a separate decision. Bold denotes the option with the least variance and the lowest aggregate self-other difference—the Distributional Fairness option. Underline denotes the Envy option. The unmarked numbers represent the Compassion option. The marks were not presented to the participants. Order of decision was randomized within and between subjects.

Table S9*Interpersonal scale (Study 2c) (amounts in \$)*

	Option 1	Option 2	Option 3
person 1	9	6	<u>4</u>
you	5	5	<u>5</u>
person 2	5	4	<u>2</u>
person 1	<u>4</u>	8	11
you	<u>6</u>	6	6
person 2	<u>1</u>	4	6
person 1	<u>4</u>	12	9
you	<u>7</u>	7	7
person 2	<u>2</u>	7	5
person 1	12	16	<u>8</u>
you	9	9	<u>9</u>
person 2	6	9	<u>3</u>
person 1	18	13	<u>6</u>
you	10	10	<u>10</u>
person 2	10	7	<u>3</u>
person 1	14	<u>9</u>	17
you	13	<u>13</u>	13
person 2	12	<u>9</u>	13
person 1	18	22	<u>14</u>
you	16	16	<u>16</u>
person 2	14	16	<u>10</u>

Note. Each set of three rows separated by a blank line constitutes a separate decision. Bold denotes the option with the least variance and the lowest aggregate self-other difference—the Distributional Fairness option. Underline denotes the Envy option. The unmarked numbers represent the Compassion option. The marks were not presented to the participants. Order of decision was randomized within and between subjects.

Table S10*Scale reliabilities: Cronbach's alphas (Studies 2a–c)*

Study	2a	2b	2c
Redistribution	.92	.92	.85
Compassion	.85	.84	.73
Envy	.91	.92	.87
Socio-economic status	.78	.76	.78
P-fair	.68	.74	.56
D-fair	.86	.88	.85

Note. P-fair: endorsement of procedural fairness. D-fair: endorsement of distributional fairness.

Table S11*Descriptive statistics (Studies 2a–c)*

Study	2a	2b	2c
Redistribution	4.44 (1.42)	4.40 (1.38)	4.10 (0.99)
Compassion	3.59 (0.70)	3.65 (0.67)	3.57 (0.55)
Envy	2.33 (0.93)	2.28 (0.96)	2.42 (0.83)
Self-interest	3.24 (0.74)	3.25 (0.82)	3.00 (0.90)
P-fair	5.27 (0.92)	5.24 (0.98)	5.24 (0.80)
D-fair	.33 (.34)	.46 (.38)	.36 (.35)

Note. Displayed are means, with standard deviations in parentheses. P-fair: endorsement of procedural fairness. D-fair: endorsement of distributional fairness (range: 0–1). Redistribution and procedural fairness are measured with 7-point Likert scales; compassion, envy, and self-interest are measured with 5-point scales.

Table S12*Regression models predicting participants' support for redistribution (Studies 2a–c)*

Study	2a (interpersonal - AMT)					2b (groups - AMT)					2c (interpersonal - Students)				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Comp.	.43***	.42***	.43***	.41***	.41***	.43***	.42***	.43***	.42***	.42***	.35***	.34***	.35***	.34***	.35***
Envy	.20***	.21***	.21***	.23***	.18***	.19***	.20***	.20***	.20***	.16**	.15**	.16**	.15**	.16**	.17**
Self-int.	.28***	.27***	.27***	.26***	.23***	.32***	.32***	.32***	.32***	.30***	.29***	.30***	.29***	.30***	.26***
P-fair		.05		.07	.08		.02		.02	.02		.11*		.11*	.13*
D-fair			-.07	-.08	-.08			-.05	-.05	-.04			.01	-.01	-.02
Age					-.09*					-.07					.15**
Female					-.10*					-.06					.00
SES					-.14**					-.10*					-.05
R ²	.37	.38	.38	.38	.42	.38	.38	.38	.38	.39	.24	.25	.24	.25	.28
N	350	350	350	350	350	353	353	353	353	353	275	275	275	275	275

Note. Coefficients are standardized regression coefficients. Asterisks indicate the significance of the *t* statistic (* $p < .05$, ** $p < .01$, *** $p < .001$). AMT: Amazon Mechanical Turk. Comp.: compassion. Self-int.: self-interest. P-fair: endorsement of procedural fairness. D-fair: endorsement of distributional fairness. SES: socio-economic status.

3. STUDIES S1a–b

Introduction

In Studies 2a–c, the Distributional Fairness option of the distributional fairness instrument features *some* variance in payoffs—P gets less than P1 and more than P2. Might the fairness effect be moderated by the (absolute) variance in payoffs? For example, if the fair option consists of equal payoffs (zero variance), would these updated Distributional Fairness choices predict support for redistribution? To answer this question, we conducted Studies S1a and S1b. These were identical to Studies 2a (Distributional Fairness: interpersonal allocations) and 2b (Distributional Fairness: allocations between groups; “the rich”, “the poor”), respectively, except that in Studies S1a–b the Distributional Fairness amounts for P1, P, and P2 were *the same*. Note that, given this modification, the Compassion and Envy options are now more properly termed Efficiency and Spite options (Tables S13–S14).

Methods

Participants. We recruited 347/350 AMT participants in the US (Studies S1a/b); 11/7 participants were excluded from analyses due to failure to correctly respond to an attention check, leaving an effective sample size of 336/343 (% male: 48/43). Their mean age was 36/36 (SD = 13/14).

Measures. Support for redistribution was measured with the same scale as in Studies 1a–c, except that the scales ranged from 1 (strongly disagree) to 7 (strongly agree). Dispositional compassion, dispositional envy, and expected personal gain from redistribution were measured with the same scales as in Studies 1a–d. Socio-economic status was measured with the same scale as in Studies 1a–c. Endorsement of procedural fairness was measured as in Studies 2a–c.

In Study S1a, endorsement of distributional fairness was measured with the same (hypothetical, interpersonal) instrument as in Study 2a, except that the payoffs in the Distributional Fairness option had a variance of zero—that is, the Participant, P1, and P2 would all receive the same amount.

In Study S1b, endorsement of distributional fairness was measured with the same (hypothetical, groups) instrument as in Study 2b, except that the payoffs in the Distributional Fairness option had a variance of zero—that is, the Participant, “the rich”, and “the poor” would all receive the same amounts (salaries) per capita.

Endorsement of distributional fairness. Instructions.

Study S1a

Next, we ask you to make a number of decisions. Each decision has three options, each of which is a particular allocation of money between you and two other persons of your same sex and age. The numbers are in Dollar units.

For example, in this decision [example shown], if you choose option 1, you would get \$60, person 1 would get \$60, and person 2 would get \$60. If you choose option 2, you would get

\$60, person 1 would get \$18, and person 2 would get \$42. If you choose option 3, you would get \$60, person 1 would get \$102, and person 2 would get \$60.

The decisions are all hypothetical, but imagine that the options chosen will actually be paid. Please make each of your decisions independently of your other decisions. That is, do not let any decision you make influence any of the other decisions you make. As you work through the decisions, assume that you cannot share any money you receive with the other persons and that they cannot share with you. Also assume that neither the other persons nor anyone else will know what choices you make.

Study 1b

Next, we ask you to make a number of decisions. Each decision has three options, each of which is a particular distribution of incomes among you and two groups of people. These groups are: (a) The rich – the current top 5% income earners in the United States; (b) The poor – the current bottom 5% income earners in the United States. The numbers are in Dollar units.

For example, in this decision [example shown], if you choose option 1, your income from now on would be \$70,000, the income of each person among the rich from now on would be \$70,000, and the income of each person among the poor from now on would be \$70,000. If you choose option 2, your income from now on would be \$70,000, the income of each person among the rich from now on would be \$60,000, and the income of each person among the poor from now on would be \$30,000. If you choose option 3, your income from now on would be \$70,000, the income of each person among the rich from now on would be \$120,000, and the income of each person among the poor from now on would be \$70,000. Assume that the set of incomes chosen will remain fixed from now and into the indefinite future—assume further a future without inflation. Thus, the incomes of you and the current rich and poor will, from now and into the indefinite future, be the incomes indicated in the chosen option.

The decisions are all hypothetical, but imagine that the incomes of you and the current rich and poor will, from now and into the indefinite future, be the incomes indicated in the chosen option—again, assume there will be no inflation in the future. Please make each of your decisions independently of your other decisions. That is, do not let any decision you make influence any of the other decisions you make. As you work through the decisions, assume that you cannot share any fraction of the income with the other persons and that they cannot share with you. Also assume that neither the other persons nor anyone else will know what choices you make.

Endorsement of distributional fairness. Decisions.

Table S13*Interpersonal scale (Study S1a) (amounts in \$)*

	Option 1	Option 2	Option 3
person 1	165	100	<u>30</u>
you	100	100	<u>100</u>
person 2	100	100	<u>70</u>
person 1	<u>6</u>	20	33
you	<u>20</u>	20	20
person 2	<u>14</u>	20	20
person 1	<u>3</u>	17	10
you	<u>10</u>	10	10
person 2	<u>7</u>	10	10
person 1	30	39	<u>15</u>
you	30	30	<u>30</u>
person 2	30	30	<u>12</u>
person 1	50	25	<u>5</u>
you	25	25	<u>25</u>
person 2	25	25	<u>8</u>
person 1	40	<u>8</u>	76
you	40	<u>40</u>	40
person 2	40	<u>20</u>	40
person 1	70	91	<u>35</u>
you	70	70	<u>70</u>
person 2	70	70	<u>28</u>

Note. Each set of three rows separated by a blank line constitutes a separate decision. Bold denotes the option with zero variance and zero aggregate self-other difference—the Distributional Fairness option. Underline denotes the Spiteful option. The unmarked numbers represent the Efficiency option. The marks were not presented to the participants. Order of decision was randomized within and between subjects.

Table S14*Groups scale (Study S1b) (amounts in \$)*

	Option 1	Option 2	Option 3
the rich (per person)	110,000	60,000	<u>50,000</u>
you	60,000	60,000	<u>60,000</u>
the poor (per person)	60,000	60,000	<u>20,000</u>
the rich (per person)	<u>30,000</u>	50,000	70,000
you	<u>50,000</u>	50,000	50,000
the poor (per person)	<u>25,000</u>	50,000	50,000
the rich (per person)	<u>25,000</u>	110,000	75,000
you	<u>75,000</u>	75,000	75,000
the poor (per person)	<u>15,000</u>	75,000	75,000
the rich (per person)	40,000	55,000	<u>32,000</u>
you	40,000	40,000	<u>40,000</u>
the poor (per person)	40,000	40,000	<u>30,000</u>
the rich (per person)	150,000	100,000	<u>90,000</u>
you	100,000	100,000	<u>100,000</u>
the poor (per person)	100,000	100,000	<u>60,000</u>
the rich (per person)	45,000	<u>40,000</u>	60,000
you	45,000	<u>45,000</u>	45,000
the poor (per person)	45,000	<u>25,000</u>	45,000
the rich (per person)	65,000	95,000	<u>60,000</u>
you	65,000	65,000	<u>65,000</u>
the poor (per person)	65,000	65,000	<u>35,000</u>

Note. Each set of three rows separated by a blank line constitutes a separate decision. Bold denotes the option with zero variance and zero aggregate self-other difference—the Distributional Fairness option. Underline denotes the Spiteful option. The unmarked numbers represent the Efficiency option. The marks were not presented to the participants. Order of decision was randomized within and between subjects.

Results and discussion

Distributional fairness has no effect in Study S1a (interpersonal allocations); however, it has an effect in Study S1b: The more participants prefer *equal payoffs* (salaries) for themselves, the rich, and the poor (i.e. over the Efficiency and Spite alternatives), the more they support redistribution. This effect survives the inclusion of the emotion/motivation triplet, procedural fairness, and demographic variables. Thus, the distributional fairness effect (i) decreases with the (absolute) variance of the fair alternative, and (ii) is specific to groups of individuals (rich, poor). Procedural fairness has no effect in the regressions. The emotion/motivation triplet predicts support for redistribution, even when entered with the other variables. We note that, even in Study S1b, the study where distributional fairness has a significant and unique effect, the effect of the emotion/motivation triplet is several times greater than the effect of distributional fairness (Σsr^2 : emotion/motivation triplet: .25; distributional fairness: .04) (Tables S15–S17).

Table S15*Scale reliabilities: Cronbach's alphas (Studies S1a–S1b)*

Study	S1a	S1b
Redistribution	.93	.92
Compassion	.83	.85
Envy	.92	.91
P-fair	.69	.69
D-fair	.96	.96
SES	.77	.74

Note. P-fair: endorsement of procedural fairness. D-fair: endorsement of distributional fairness.

Table S16*Descriptive statistics (Studies S1a–S1b)*

Study	S1a	S1b
Redistribution	4.37 (1.48)	4.54 (1.45)
Compassion	3.62 (0.70)	3.63 (0.73)
Envy	2.08 (0.93)	2.14 (0.91)
Self-interest	3.18 (0.85)	3.33 (0.79)
P-fair	5.36 (0.95)	5.30 (0.98)
D-fair	.64 (.43)	.43 (.44)
SES	2.91 (0.80)	2.89 (0.76)

Note. Displayed are means, with standard deviations in parentheses. P-fair: endorsement of procedural fairness. D-fair: endorsement of distributional fairness (range: 0–1). Redistribution and procedural fairness are measured with 7-point Likert scales; compassion, envy, self-interest, and SES are measured with 5-point scales.

Table S17*Regression models predicting participants' support for redistribution (Studies S1a–S1b)*

Study	S1a (interpersonal)					S1b (groups)				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Comp.	.40***	.40***	.40***	.40***	.41***	.47***	.46***	.44***	.43***	.44***
Envy	.13**	.14**	.13**	.14**	.10†	.17***	.18***	.15***	.15***	.14**
Self-int.	.37***	.37***	.38***	.38***	.37***	.34***	.34***	.32***	.32***	.31***
P-fair		.01		.01	.03		.05		.04	.05
D-fair			-.02	-.02	-.01			.21***	.21***	.22***
Age					-.15**					-.01
Female					-.02					-.08†
SES					-.01					-.04
R ²	.34	.34	.34	.34	.36	.42	.42	.46	.46	.47
N	336	336	336	336	336	343	343	343	343	343

Note. Coefficients are standardized regression coefficients. Asterisks indicate the significance of the *t* statistic († .050 ≤ *p* ≤ .061, **p* < .05, ***p* < .01, ****p* < .001). Comp.: compassion. Self-int.: self-interest. P-fair: endorsement of procedural fairness. D-fair: endorsement of distributional fairness. SES: socio-economic status.

4. STUDIES S2a–d

Introduction

In Studies 2a–c, the Compassion option of the distributional fairness instrument is the option with the highest aggregate payoff (Tables S7–S9). This is potentially problematic, because people value the total size of the pie, or efficiency (4). Thus, this measure may be insensitive to participants who value distributional fairness but not so much to trade it for efficiency. To address this potential issue, we conducted further follow-up studies where the Compassion option was simply removed from the distributional fairness instrument. The resulting instrument thus features two options: a high-efficiency, low-variance Distributional Fairness option, and a low-efficiency, high-variance Envy option (Tables S18–S19). Still, the resulting two-option measure may lack sensitivity to participants who value low-variance payoffs but fail to correctly identify a particular set of payoffs as *the low-variance* set. To address this other potential issue, we labeled the Distributional Fairness (Envy) options as follows: “Note: In this option, the money is split most (least) evenly and the total amount is larger (smaller)” (we did this in some but not all of the studies; see below). We conducted four follow-up studies in the US with these modified measures of distributional fairness. Each of the four studies measured the emotion/motivation triplet, endorsement of procedural fairness, and endorsement of distributional fairness. The latter was measured in one of four ways: interpersonal, options unlabeled (Study S2a); interpersonal, options labeled (Study S2b); groups, options unlabeled (Study S2c); and groups, options labeled (Study S2d). In studies S2a–b, the decisions were paid by lottery method.

Methods

Participants. We recruited 381/385/384/385 AMT participants in the US (Studies S2a/b/c/d); 9/13/7/12 participants were excluded from analyses due to failure to correctly respond to an attention check, leaving an effective sample size of 372/372/377/373 (% male: 47/50/50/46). Their mean age was 34/34/34/35 (SD = 12/12/12/13).

Measures. Redistribution and endorsement of procedural fairness were measured with the same scales as in Studies 2a–c. Dispositional compassion and dispositional envy were measured with the same scales as in Studies 1a–d. Studies S2a–S2d also included the following measures.

Expected personal gain from redistribution

Imagine that a policy of higher taxes on the wealthy is implemented. What impact do you think the higher taxes on the wealthy would have on you?

- My own economic situation would significantly worsen (1)
- My own economic situation would slightly worsen (2)
- My own economic situation would stay the same (3)
- My own economic situation would slightly improve (4)
- My own economic situation would significantly improve (5)

Endorsement of distributional fairness. Instructions.

Studies S2a and S2b

Next, we ask you to make a number of decisions. Each decision has two options, each of which is a particular allocation of money between you and two other (randomly selected) persons participating in this study. We'll refer to them as person 1 and person 2. The numbers are in Dollar units.

For example, in this decision [example shown], if you choose option 1, you would get \$8, person 1 would get \$10, and person 2 would get \$6. If you choose option 2, you would get \$8, person 1 would get \$6, and person 2 would get \$3. Another example. In this decision [example shown], if you choose option 1, you would get \$8, person 1 would get \$9, and person 2 would get \$7. If you choose option 2, you would get \$8, person 1 would get \$12, and person 2 would get \$4.

IMPORTANT: Potentially, there is actual money involved in this study (a bonus) in addition to your sign-up payment. Your decisions will be selected for payment with odds of 1 in 50. If yours is the 1 in 50 decision set selected for payment, we will pay you (and the other two persons you are paired with) one randomly selected decision of yours, based on the choice you made for the selected decision. Even if your decision set is NOT selected for payment, if you happen to be paired with a person whose decisions ARE selected for payment, you will get paid based on this person's selected decision. **NOTE:** Neither you nor the persons you are paired with will know the identity or the choices of the others. Thus, no one can influence the others' choices.

Please make each of your decisions independently of your other decisions. That is, do not let any decision you make influence any of the other decisions you make. As you work through the decisions, bear in mind that you cannot share any money you receive with the other persons and that they cannot share with you. Also, bear in mind that neither the other persons nor anyone else will know what choices you make.

Studies S2c and S2d

Next, we ask you to make a number of decisions. Each decision has two options, each of which is a particular distribution of incomes among you and two groups of people. These groups are (a) The rich – the current top 5% income earners in the United States. (b) The poor – the current bottom 5% income earners in the United States. The numbers are in Dollar units.

For example, in this decision [example shown], if you choose option 1, your income from now on would be \$65,000, the income of each person among the rich from now on would be \$75,000, and the income of each person among the poor from now on would be \$55,000. If you choose option 2, your income from now on would be \$65,000, the income of each person among the rich from now on would be \$50,000, and the income of each person among the poor from now on would be \$40,000. Assume that the set of incomes chosen will remain fixed from now and into the indefinite future--assume further a future without inflation. Thus, the incomes of you and the current rich and poor will, from now and into the indefinite future, be the incomes indicated in the chosen option.

Another example, in this decision [example shown], if you choose option 1, your income from now on would be \$70,000, the income of each person among the rich from now on would be \$90,000, and the income of each person among the poor from now on would be \$50,000. If you choose option 2, your income from now on would be \$70,000, the income of each person among the rich from now on would be \$110,000, and the income of each person among the poor from now on would be \$30,000.

The decisions are all hypothetical, but imagine that the incomes of you and the current rich and poor will, from now and into the indefinite future, be the incomes indicated in the chosen option-again, assume there will be no inflation in the future. Please make each of your decisions independently of your other decisions. That is, do not let any decision you make influence any of the other decisions you make. As you work through the decisions, assume that you cannot share any fraction of the income with the other persons and that they cannot share with you. Also assume that neither the other persons nor anyone else will know what choices you make.

Endorsement of distributional fairness. Decisions.

Note: Study S2b included the labels “Note: In this option, the money is split most evenly and the total amount is larger” and “Note: In this option, the money is split least evenly and the total amount is smaller” in the headings of the distributional fairness and envy options, respectively. Study S2a did not include any labels.

Table S18*Interpersonal scale (Studies S2a – S2b) (amounts in \$)*

	Option 1	Option 2
person 1	6	<u>4</u>
you	5	<u>5</u>
person 2	4	<u>2</u>
person 1	<u>4</u>	8
you	<u>6</u>	6
person 2	<u>1</u>	4
person 1	<u>4</u>	9
you	<u>7</u>	7
person 2	<u>2</u>	5
person 1	12	<u>8</u>
you	9	<u>9</u>
person 2	6	<u>3</u>
person 1	13	<u>6</u>
you	10	<u>10</u>
person 2	7	<u>3</u>
person 1	14	<u>9</u>
you	13	<u>13</u>
person 2	12	<u>9</u>
person 1	18	<u>14</u>
you	16	<u>16</u>
person 2	14	<u>10</u>

Note. Each set of three rows separated by a blank line constitutes a separate decision. Bold denotes the option with the least variance and the lowest aggregate self-other difference—the Distributional Fairness option. Underline denotes the Envy option. The marks were not presented to the participants. Order of decision was randomized within and between subjects.

Note: Study S2d included the labels “Note: In this option, the money is split most evenly and the total amount is larger” and “Note: In this option, the money is split least evenly and the total amount is smaller” in the headings of the distributional fairness and envy options, respectively. Study S2c did not include any labels.

Table S19*Groups scale (Studies S2c – S2d) (amounts in \$)*

	Option 1	Option 2
the rich (per person)	80,000	<u>50,000</u>
you	60,000	<u>60,000</u>
the poor (per person)	40,000	<u>20,000</u>
the rich (per person)	<u>30,000</u>	55,000
you	<u>50,000</u>	50,000
the poor (per person)	<u>25,000</u>	45,000
the rich (per person)	<u>25,000</u>	85,000
you	<u>75,000</u>	75,000
the poor (per person)	<u>15,000</u>	65,000
the rich (per person)	45,000	<u>32,000</u>
you	40,000	<u>40,000</u>
the poor (per person)	35,000	<u>30,000</u>
the rich (per person)	120,000	<u>90,000</u>
you	100,000	<u>100,000</u>
the poor (per person)	80,000	<u>60,000</u>
the rich (per person)	50,000	<u>40,000</u>
you	45,000	<u>45,000</u>
the poor (per person)	40,000	<u>25,000</u>
the rich (per person)	75,000	<u>60,000</u>
you	65,000	<u>65,000</u>
the poor (per person)	55,000	<u>35,000</u>

Note. Each set of three rows separated by a blank line constitutes a separate decision. Bold denotes the option with the least variance and the lowest aggregate self-other difference—the Distributional Fairness option. Underline denotes the Envy option. The unmarked numbers represent the compassion option. The marks were not presented to the participants. Order of decision was randomized within and between subjects.

Note: the decisions of the distributional fairness instrument were hypothetical in Studies S2c and S2d, and consequential in Studies S2a and S2b. In Studies S2a and S2b, these decisions were paid with a lottery method. Participants were selected with a 1 in 50 chance. If they were selected for payment, one randomly selected decision out of the seven decisions was actualized. Participants had a 1 in 50 chance of causing themselves to earn between \$5 and \$16, and causing two other (anonymous) participants to earn between \$1 and \$18 each. Participants' total chance of earning any money (as deciders or receivers) was thus 3 in 50.

Results

The observed distributional fairness scores have positive zero-order associations with support for redistribution in all four studies ($r_s = .13-.25$, $P_s = 10^{-6}-.01$). However, when entered with the emotion/motivation triplet and procedural fairness, the distributional fairness effect becomes non-significant in 3 of the 4 studies ($\beta = .00-.05$, $P_s = .32-.99$). In the fourth study (S2d), this effect is positive ($\beta = .11$, $P = .007$). Procedural fairness has no effect in the regressions. By contrast, dispositional compassion, dispositional envy, and expected personal gain from redistribution independently predict support for redistribution in all four studies, even when entered with both fairness measures. We note that, even in Study S2d, the study where distributional fairness has a significant and unique effect, the effect of the emotion/motivation triplet is of far greater magnitude than the effect of distributional fairness (Σsr^2 : emotion/motivation triplet: .31; distributional fairness: .01) (Table S20–S22).

Table S20*Scale reliabilities: Cronbach's alphas (Studies S2a–S2d)*

Study	S2a	S2b	S2c	S2d
Redistribution	.92	.91	.92	.92
Compassion	.84	.82	.83	.81
Envy	.89	.90	.91	.90
P-fair	.71	.68	.66	.70
D-fair	.88	.86	.91	.87

Note. P-fair: endorsement of procedural fairness. D-fair: endorsement of distributional fairness.

Table S21*Descriptive statistics (Studies S2a–S2d)*

Study	S2a	S2b	S2c	S2d
Redistribution	4.36 (1.38)	4.41 (1.36)	4.29 (1.4)	4.12 (1.40)
Compassion	3.65 (0.70)	3.69 (0.64)	3.65 (0.70)	3.55 (0.65)
Envy	2.08 (0.82)	2.14 (0.87)	2.14 (0.88)	2.10 (0.87)
Self-interest	3.19 (0.74)	3.29 (0.75)	3.16 (0.80)	3.18 (0.82)
P-fair	5.25 (0.97)	5.32 (0.95)	5.27 (0.95)	5.32 (0.96)
D-fair	.88 (.24)	.93 (.19)	.87 (.27)	.89 (.24)

Note. Displayed are means, with standard deviations in parentheses. P-fair: endorsement of procedural fairness. D-fair: endorsement of distributional fairness (range: 0-1). Redistribution and procedural fairness are measured with 7-point Likert scales; compassion, envy, and self-interest are measured with 5-point scales.

Table S22*Regression models predicting participants' support for redistribution (Studies S2a–S2d)*

Study	S2a	S2b	S2c	S2d
	interpersonal, unlabeled	interpersonal, labeled	groups, unlabeled	groups, labeled
Comp.	.46***	.39***	.47***	.38***
Envy	.09*	.11*	.13***	.17***
Self-int.	.32***	.34***	.31***	.40***
P-fair	.01	-.02	.03	.04
D-fair	.00	.05	.02	.11**
R ²	.35	.32	.42	.40
N	372	372	377	373

Note. Coefficients are standardized regression coefficients. Asterisks indicate the significance of the *t* statistic (* $p < .05$, ** $p < .01$, *** $p < .001$). Comp.: compassion. Self-int.: self-interest. P-fair: endorsement of procedural fairness. D-fair: endorsement of distributional fairness (range: 0-1).

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