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AN ISSUE OF MORALITY? THE ROAD FROM ECONOMIC INEQUALITY TO COLLECTIVE ACTION

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Index

Abstract

Economic inequality is one of the most pressing issues of our times. Importantly, economic inequality keeps increasing even though individuals would prefer greater equality in their society (i.e., ‘the inequality paradox’). Explanations for the inequality paradox lie mainly in the misperception and in the legitimization of current inequalities; I argue here that an additional factor may be that individuals do not think about inequality in moral terms. The present dissertation tests the hypothesis that when individuals moralize inequality they will feel greater moral outrage about it, which in turn will lead to increased collective action intentions. First, the present work includes the validation of a new scale of collective action, the Belief-aligned Collective Action scale, which disentangles support for the investigated cause from actual collective action intentions and presents good structural and construct validity. Then, through this new measure I test my predicted model by applying two main theories of morality to economic inequality: Moral Foundation Theory and the Theory of Dyadic Morality. As for the former, framing inequality through relevant moral terms in three experimental studies did not increase moralization of inequality; as for the latter, in two correlational and one experimental study those who believed that inequality was intentionally caused by human action moralized inequality more. Nevertheless, all studies confirmed the predicted model that moralization would lead to increased collective action via moral outrage. To conclude, the present dissertation shows that when it comes to economic inequality, morality can be a powerful motivator and effectively mobilize people to action.

La disuguaglianza economica è una delle problematiche più urgenti dei nostri tempi. La disuguaglianza economica continua ad aumentare anche se gli individui preferirebbero una maggiore uguaglianza nella loro società (i.e., "il paradosso della disuguaglianza"). Le spiegazioni che la letteratura fornisce al paradosso della disuguaglianza fanno riferimento

principalmente all'errata percezione e alla legittimazione delle disuguaglianze attuali; un ulteriore fattore potrebbe essere rappresentato dal fatto che gli individui non pensano alla disuguaglianza in termini morali. La presente tesi testa l'ipotesi che gli individui che moralizzano la disuguaglianza sentano una maggiore indignazione morale rispetto ad essa, il che a sua volta porterebbe a maggiore intenzione di partecipare in azioni collettive. In primo luogo, il presente lavoro include la validazione di una nuova scala di azioni collettive, la Belief-aligned Collective Action scale, che separa il supporto per la causa indagata dalle effettive intenzioni a partecipare ad azioni collettive e presenta una buona validità strutturale e di costrutto. In seguito, attraverso questa nuova misura testo il modello predetto applicando alla disuguaglianza economica due principali teorie della moralità: la Teoria del fondamento morale e la Teoria della moralità diadica. Per quanto riguarda la prima, applicare un framing della disuguaglianza attraverso termini morali rilevanti non ha aumentato la moralizzazione della disuguaglianza in tre studi sperimentali; quanto alla seconda, in due studi correlazionali e uno sperimentale coloro che credevano che la disuguaglianza fosse intenzionalmente causata dall'azione umana moralizzavano maggiormente la disuguaglianza. Tuttavia, tutti gli studi hanno confermato il modello predetto secondo cui la moralizzazione avrebbe portato a una maggiore azione collettiva attraverso l'indignazione morale. Per concludere, la presente tesi mostra che quando si tratta di disuguaglianza economica, la moralità può essere un potente motivatore e mobilitare efficacemente le persone all'azione.

Introduction

Where We Stand: Economic Inequality Today

In recent years, humanity has been called to face a number of global crises at the same time. Climate change, the financial crisis, the Covid-19 pandemic, as well as ongoing international conflicts and threats to civil rights and social equality between groups have been affecting the world in such a rapid succession, that people would generally agree we are living through unprecedented times. Among these global issues, there is one that is exacerbating the negative outcomes of all the others (Berkhout et al., 2021), that has been increasing in gravity and relevance (OECD, n.d.), and that has quickly become a highly debated social issue (Piketty, 2020): economic inequality[1].

Even though the world has overall become wealthier after World War II[2] (World Bank, n.d.), it has also become more and more unequal: since the early 80ies, the disparity between rich and poor has been steadily increasing in the large majority of countries (Chancel et al., 2022), reaching its peak since World War II (OECD, n.d.). In 2021, 1% of the world population owned about half of global wealth, and the top 10% owned around 80%, whereas the bottom 50% of individuals owned only 1% of total wealth (Shorrocks et al., 2022).

Why should we care about economic inequality? We are not arguing here that inequality is only an issue in virtue of the fact that it's increasing in size: empirical evidence concerning cross-country differences indicates that inequality negatively impacts individual and societal wellbeing. The book *The Spirit Level* by Wilkinson & Pickett (2010) was probably the first, and undoubtedly the most influential, to analyze the link between economic inequality and wellbeing correlationally. The authors review a number of individual, interpersonal, and societal issues spanning from incidence of teenage pregnancy

[1] We use 'economic inequality' as an umbrella term that refers both to income and wealth inequality.
[2] As indicated by Gross Domestic Product (GDP) per capita.

to obesity, and show that across countries, economic inequality is positively correlated with the incidence of such issues. This is true even after controlling for GDP, thus suggesting that it is actually inequality, rather than poverty (as other scholars have argued; e.g., Y. Kim et al., 2022; Zagorski et al., 2014), that is driving these effects. This is also consistent with the evidence suggesting that although the negative outcomes of economic inequality affect the people at the bottom of the social ladder more (i.e., negative social gradient), they also impact richer individuals in some measure (Wilkinson & Pickett, 2017).

Concerning individual wellbeing, higher inequality is connected to lower life expectancy (De Vogli et al., 2005; Hu et al., 2015), poorer physical health, including life-threatening conditions (Drain et al., 2004; Pickett et al., 2005; Suk et al., 2009), and poorer mental health, including lower happiness (Alesina et al., 2004; Oishi et al., 2011), higher status anxiety (Melita et al., 2021) and higher depression (Ribeiro et al., 2017). As for interpersonal relationships, inequality is also connected with bullying (Elgar et al., 2013), dishonesty (e.g., Birkelund & Cherry, 2020; Neville, 2012), lower solidarity and prosociality (Côté et al., 2015; Paskov & Dewilde, 2012), and higher perceived competitiveness and individualism (Sánchez-Rodríguez, Jetten, et al., 2019). This is consistent with the evidence showing the link between inequality and a more independent self-construal (Sánchez-Rodríguez, Willis, et al., 2019). These consequences have been observed for both actual and perceived inequality, although the latter is often a better predictor than the former (e.g., Choi, 2019).

As for societal wellbeing, inequality is linked to criminality (B. Kim et al., 2022), corruption (Wei et al., 2022), homophobia (Andersen & Fetner, 2008), conspiratorial thinking (Salvador Casara et al., 2022), lower political engagement (Solt, 2008), and lower voting in elections (Solt, 2010; Wong & Wong, 2022). Despite lay beliefs about inequality as an incentive, some evidence suggests that inequality is also negatively related to economic growth (Cingano, 2014), though some indicates that this is only true for low income countries (Shen & Zhao, 2022), or instead argues that the relation is positive or inconclusive (Mdingi & Ho, 2021).

While most of this evidence is correlational, it spans across such a high number of (rather threatening) issues that it justifies concern about this global issue and the need to address and contain it.

The Road Behind Us: Perceptions, Attitudes, Ideology

Wilkinson and Pickett's (2010) influential book, as well as pioneering evidence by Norton and Ariely (2011) showing that individuals prefer greater equality compared to the one they perceive in their society, sparked sudden and great interest in the psychology of economic inequality. This, in turn, led to the development of a rich body of literature, branching from the consequences of economic inequality on individuals, to people's perceptions of inequality, their attitudes towards this issue, support for redistribution of wealth, and so on.

In particular, one of the primary interests of social psychology has been addressing the inconsistency between individuals' preferences concerning wealth distribution and the current (or perceived) inequalities within nations. Indeed, even though economic inequality is a harmful and pressing social issue, individuals deem current inequalities to be too high (OECD, 2021), and they would prefer society to be more equal than what they perceive (see Arsenio, 2018, for a review), still inequality is on the rise and has been for the past decades. Consistent with this, actual inequality levels across countries correlate only weakly with concern for inequality (OECD, 2021). This phenomenon was dubbed the "inequality paradox" (Piff et al., 2018), and several mechanisms explaining it have already been identified in the literature. They revolve mainly around two core processes: the misperception of economic inequality on the one side, and its legitimization on the other.

The Misperception of Economic Inequality

One of the first explanations that was provided for the inequality paradox was the idea that individuals may accept current inequalities, and oppose redistributive efforts, because they are not aware of how large economic inequality actually is in their own country. And indeed, a large body of evidence shows that individuals severely underestimate inequality levels: starting from Norton and Ariely (2011)'s pioneering paper, research has consistently shown that individuals underestimate wealth inequality (Arsenio & Willems, 2017; Franks & Scherr, 2019; Norton et al., 2014), though some authors argue that this evidence is only the by-product of the way inequality perceptions were measured (Arsenio, 2018; Eriksson & Simpson, 2012). While similar findings emerged on pay differentials between managers and workers (Kiatpongsan & Norton, 2014), evidence is much less coherent for income inequality estimates, with individuals often correctly estimating or even overestimating differences in the share of income earned by the top and bottom slices of their own countries (Chambers et al., 2014; Marandola & Xu, 2021; OECD, 2021). This inconsistency could be explained by the fact that income inequality is usually smaller than wealth inequality (Piketty & Saez, 2014), as it does not account, for example, for debt or the accumulation of generational wealth. At the same time, however, it is wealth – rather than income – that may be more visible to people in their everyday life: consistent with this prediction, individuals are able to correctly infer the social class of strangers from social media profiles (Becker et al., 2017), shoes (Gillath et al., 2012), and even facial cues (Bjornsdottir & Rule, 2017).

The misperception hypothesis is consistent with the evidence showing that the greater inequality people perceive in their society (regardless of what actual inequality amounts to) the more they support governmental redistribution of wealth (Choi, 2019; Gimpelson & Treisman, 2018), and with the fact that when people become aware of the actual income of the rich (e.g., in the context of donations, public goods games, or taxation to school districts), they start punishing the rich and being more lenient towards the poor (Hauser et al., 2021). Furthermore, providing information about income inequality increased right-wingers' support for redistribution and government action in Australian participants (Hoy & Toth, 2019). Nevertheless, some argue against the theoretical and applied relevance of focusing on misperceptions (e.g., see OECD, 2021), and evidence has shown that even manipulating inequality experimentally, so that participants are perfectly aware of how much inequality there is, greater economic inequality will reduce support for redistribution (Brown-Iannuzzi et al., 2021). Because of these inconsistencies and doubts about the relevance of this predictor, the focus of the field has mostly shifted to analysing the psychological strategies that lead individuals to justify economic inequality.

The Legitimization of Economic Inequality

As previously mentioned, evidence consistently shows that people prefer more equal distributions of income and wealth (Cervone et al., 2021; Eriksson & Simpson, 2012; Norton et al., 2014; Norton & Ariely, 2011). What the same research suggests, however, is that people also do not wish for perfect equality in society. People's preferences, it would seem, lie instead in something Norton and Ariely (2011) dubbed 'unequality': some degree of inequality, but still less inequality than what individuals perceive in society. This phenomenon may be driven by the fact that similarly to extreme inequality, perfect equality is also perceived as unfair, as it does not reward merit, it does not encourage ambition, and it does not recognize individual differences in effort and achievements (a perspective adopted by the tournament model of wage distributions, for example; Lazear & Rosen, 1981).

It appears then that what people care about, rather than inequality, is fairness (Starmans et al., 2017): indeed, by mid-childhood, unfairness will lead children to reject resources (i.e., they will personally pay a cost to punish injustice), even in third-person allocation tasks (McAuliffe et al., 2017). Therefore, concerns about fairness can trump self-interest since childhood. Importantly, fairness judgements are shaped not only by perceptions, but also by ideologies and beliefs about the society individuals are embedded in. Such beliefs, often denoted as ‘legitimizing beliefs’ (or strategies), have received considerable attention in the literature and have been extensively investigated.

One large constellation of legitimizing beliefs clusters around the idea that economic outcomes such as wealth or poverty are (and can be) shaped by individual action and effort. These include, for example, beliefs about meritocracy (i.e., one’s wealth and status result from personal deservingness), social mobility (i.e., the possibility to move easily up and down the social ladder) and equality of opportunity, and causal attributions for poverty and wealth (i.e., whether poverty and wealth are attributed to dispositional, situational, or fatalistic factors). Attributing poverty to individual factors (e.g., laziness; Schneider & Castillo, 2015) and believing that individuals can easily change their social status (Day & Fiske, 2017; Heiserman et al., 2020) are positively related to the belief that the system is fair. Consistently with this, believing in a meritocratic (García-Sánchez et al., 2019) and highly socially mobile system (see Davidai & Wienk, 2021; Day & Fiske, 2019) is related to higher acceptance of inequality, whereas believing that poverty derives from situational factors (Piff et al., 2020) increases opposition to inequality. Beliefs about meritocracy (Rodriguez-Bailon et al., 2017) and equality of opportunity (Colagrossi et al., 2019), internal attributions of poverty (Bai et al., 2022; Bullock et al., 2003), and pessimism about social mobility (among left-wingers; Alesina et al., 2018) are also related to lower support for several forms of governmental intervention aimed at reducing inequalities, such as welfare policies or redistribution of wealth.

Besides these beliefs, other ideologies have been connected to the legitimization of economic inequality and attitudes towards redistribution. The perception of the economic system as a zero-sum game, for example, has to do with the idea that one’s gain can only come at the expense of another person's losses, and vice-versa; people who believe in this negative interdependence between the rich and the poor also accept inequality more (Davidai & Ongis, 2019). Another way in which people can legitimize the system is through the stereotyping and dehumanization of the poorer classes: depriving low-status people of humanity reduces support for welfare policies due to an increase in perceived wastefulness of such policies, so that people believe that low status individuals are uncapable to manage their finances (Sainz et al., 2020). This effect may also be explained by the fact that dehumanization reduces empathy and helping intentions (Andrighetto et al., 2014).

Economic Inequality: Is It Just Unfair?

To sum up, several processes may explain the inequality paradox, a number of which surrounding the concept of economic inequality being fair (rather than unfair). In the philosophical and psychological tradition, fairness has been conceptualized as foundational for human morality: in other words, fairness has been considered among the primary criteria upon which individuals determine what is ethically right or wrong (Turiel, 2015). Consequently, these classic works – as well as theories and models deriving from them – may consider fairness and morality as mostly overlapping (rather than the former being one element of the latter); so much so, that studies investigating fairness will assume participants are thinking about fairness in moral terms, without assessing explicitly whether that is indeed the case (Skitka et al., 2021).

This top-down approach, however, is theoretically limited (Skitka et al., 2021), and I argue here that this is even more so the case in the study of economic inequality, as researchers investigating the subject should be concerned not only with the theoretical rigor, but also with the applied implications of their work. Indeed, there are at least three primary reasons for which it is theoretically and practically relevant to investigate the psychological correlates of the moralization of economic inequality (rather than mere fairness perceptions) and thus to adopt a more bottom-up, subjective perspective to what individuals consider moral concerns (vs. not).

The first reason is that although fairness and morality have mostly been considered as overlapping concepts in the literature, some evidence suggests this may not be the case. For example, liberals attribute greater moral value to fairness than conservatives, and while some authors theorize that conservatives value fairness just as much as other ethical principles, others argue that this is not the case, and conservatives actually value fairness less (Graham et al., 2009). Furthermore, recent evidence suggests that children do not hold fairness violations on the same level as typically moral ones such as harm, and instead consider fairness to be in between the moral and the conventional domains (Yucel et al., 2022). Therefore, this evidence suggests that studies focused exclusively on fairness (similarly to past research on economic inequality) may only be speaking to the morality of specific groups or may even not be speaking to morality at all, but to a different construct altogether.

Linked to the previous point, the second reason is that, while economic inequality is implicitly associated to fairness and justice, it may still pose a threat to other moral principles. For example, the health issues associated with economic inequality may on the one side violate purity norms and elicit disgust, which is a moral emotion (Chapman & Anderson, 2013), and on the other side violate norms about avoiding harm (the primary moral violation) and elicit compassion. Concerns about avoiding harm may be similarly evoked by the outcomes of inequality on intolerance and criminality; the latter may also violate norms about ingroup protection and respect for authorities, which some authors argue are moral in nature (Graham et al., 2013). Thus, reactions to economic inequality may be predicted by a host of moral considerations above and beyond fairness. Importantly, such considerations may be more relevant than fairness concerns in certain contexts or with certain targets: for example, violations of the purity moral norm should be more concerning and relevant for conservative individuals than violations of fairness, and thus potentially mobilize them more against inequalities than fairness violations – a hypothesis we tested in Chapter 3.

Finally, the third reason is that morality, being a long-established and vast field of study, offers a plethora of models and theories that may prove useful in the study of economic inequality. Examples of such models include moral conviction, which focuses on core moralized stances (Skitka et al., 2021), and was found to be predictive of attitudes towards redistribution (Scatolon & Paladino, 2022); moral balancing theory (see also p. 102), according to which individuals balance their immoral behaviours with moral acts and vice-versa, and which was already successfully applied to the topic of climate change and sustainable behaviours (Mullen & Monin, 2016); and naturally the Theory of Dyadic Morality, which was applied to economic inequality in the present dissertation (see Chapter 4). Only focusing on fairness concerns as a proxy for morality, as past research has done, prevents us from employing decades of accumulated research and theorizing on the subject of morality.

Because of the reasons described above, in this dissertation I adopt a broader perspective on economic inequality, that goes beyond fairness concerns and instead employs a more bottom-up, subjective approach to moral reasoning. As mentioned previously, morality is often considered to be an inherent characteristic of situations, issues, or attitudes, so that often moral judgments will not even be directly assessed: researchers will just assume that participants are thinking about the study content (e.g., social issues, behaviours) in moral terms (Skitka et al., 2021). Here instead, I investigate the appraisal of economic inequality as a moral violation by following more subjective approaches to morality that rely on the participant's own assessment of what qualifies as moral (as will be discussed extensively in the following chapters) and investigate how morality – beyond fairness – may contribute to explain the inequality paradox.

The Way Ahead: Morality and Collective Action

When it comes to economic inequality, few studies have adopted a subjective, bottom-up approach to morality and investigated moral judgements that go beyond fairness concerns. Among these, Franks and Scherr (2019) identify additional moral principles that shape preferences towards economic inequality and show that morally framing a charity fighting poverty increased donations intentions, whereas Scatolon and Paladino (2022) show that holding the reduction of inequalities with strong moral conviction was positively related to support for redistributive policies. Indeed, despite the scarcity of evidence on the subjective moralization of economic inequality, there is reason to believe that viewing inequalities in moral terms may encourage efforts to reduce it, or in other words, that the lack of such a perspective may contribute to explaining the inequality paradox.

When a moral norm is violated (i.e., a moral violation occurs), said violation triggers the need to restore the moral balance by engaging in compensatory behaviors (Tetlock et al., 2000) that will either protect one's moral self-image (moral cleansing), or rectify the violation (moral outrage and punishment). For the interest of this dissertation, we will focus on moral outrage.

Moral outrage is the emotional reaction of anger that follows a moral violation, and is usually paired with negative appraisals of the perpetrator and a desire to punish them for the violation (Tetlock et al., 2000). Moral outrage is evoked by moral violations regardless of whether the self is a victim of the violation or not (i.e., third-party anger), separating it from *personal* anger, and regardless of the harmful or harmless outcome of the violation (Hechler & Kessler, 2018; Landmann & Hess, 2017), thus making it a distinct construct from *empathic* anger, contrary to what some scholars have argued (Batson et al., 2007; O'Mara et al., 2011). Similarly, people desire to punish moral transgressors even when they are not the victims of the violation (third-party punishment; e.g., Fehr & Fischbacher, 2004) and even when the punishment comes at a personal cost (Henrich et al., 2006), suggesting that it is not driven by self-interest. Such forms of punishment, even costly punishment, emerge at an early age (Marshall et al., 2021), and for both children and adults it can be an end in itself (retributive punishment) or, more frequently, a means for making an example of the transgressor and reinforcing the norm (Marshall et al., 2021). Additionally, moral outrage can lead to a desire for compensation either jointly with, or as an alternative to, punishment; bystanders compensate victims either monetarily or by addressing their needs otherwise (Heffner & FeldmanHall, 2019).

If economic inequality were perceived as immoral, this perception could evoke moral outrage and the desire to restore the moral order. On the one hand, moral order could be restored through institutional action, for example through redistribution of wealth, welfare programs, or similar policies. Redistribution, in particular, could satisfy both the need for punishment of those who are seen as responsible for inequality (e.g., the elites and the rich; see Chapter 4) and for the compensation of victims. Consistent with this idea, moral outrage was shown to be negatively linked to system justification, and positively to support for redistribution (Wakslak et al., 2007). On the other hand, moral order could be restored through individual action, by driving individuals towards an active effort against inequality: namely, engaging in collective action.

Collective action involves "any actions that individuals undertake as psychological group members to improve the position of a relevant [perceivedly] disadvantaged group as a whole, and/or to protect their or that group's values, moral principles, or ideology" (Agostini & van Zomeren, 2021, p. 685). Through collective action, individuals can successfully exercise change on systems and institutions: for example, the Black Lives Matter protests against police brutality in the United States led to institutional changes such as the reduction of lethal use-of-force by police (Campbell, 2021). Collective action has been receiving extensive interest in the psychological literature, for example concerning social issues such as gender inequality, racial inequality, and climate change. Most of the work has been dedicated to identifying what motivates action towards social change, or in other words the predictors of collective action. Among all models, the Social Identity Model of Collective Action (SIMCA; van Zomeren et al., 2008) has long been the most influential. SIMCA identifies three main drivers of collective action: identification with one's group[3], perceived group efficacy, and importantly for our purposes, 'perceived injustice'. The authors conceptualize 'perceived injustice' primarily as the emotional experience that derives from perceiving injustice – that is, anger. Indeed, anger has been consistently identified as one of the primary predictors of collective action intentions (Becker et al., 2011; Iyer et al., 2007; Mallett et al., 2008; Shepherd et al., 2018; Tausch et al., 2011; van Zomeren et al., 2004). If such anger derives from perceived injustice – that is, a violation of fairness norms – then this anger is, by definition, moral outrage. Consistent with this notion, moral outrage has often been found to predict collective action intentions (Saab et al., 2015; Thomas & McGarty, 2009). For instance, consumers are more likely to engage in boycotts and negative word-of-mouth against unethical corporate behaviours if they experience moral outrage (see Antonetti & Maklan, 2016).

More generally, moral violations were shown to increase collective action intentions (Pauls et al., 2022; van Zomeren et al., 2012). A recent revisitation of the SIMCA (the 'dual chamber model' of collective action; Agostini & van Zomeren, 2021) includes morality as one of the two main drivers of collective action: in their meta-analysis, the authors show that morality and group identity both motivate collective action by increasing perceived efficacy and injustice-driven anger, and that integrating morality in the model explains more variance,

[3] The group does not need to be a social category, but can also be based on common values or opinions ('opinion-based group identity', van Zomeren et al., 2011)

and fits the data better, than the original SIMCA. Therefore, one may conclude that the moral appraisal of economic inequality should increase collective action intentions, as was shown for other social issues, and that this effect would be explained by an increased moral outrage.

The Present Dissertation

In the present dissertation, I test the hypothesis that perceiving economic inequality as a moral violation (i.e., moralizing this issue) should lead individuals to feel greater moral outrage about economic inequality and, consequently, to be more willing to engage in collective action. However, I argue that due to the very nature of the issue and of the debate around it, two main obstacles may prevent the appraisal of economic inequality as a moral violation: an ideological obstacle, centred around how economic inequality is framed, and a socio-cognitive obstacle, driven by the absence of a clear agent causing economic inequality.

Theoretical Note: The Investigation of Morality

The primary question driving this dissertation is whether identifying economic inequality as a moral violation increases moral outrage and collective action. To respond to this question, however, one would first need to identify what a moral violation *is* – or, more broadly speaking, which norms are moral, and which are not. Some scholars identify the criteria a norm should encompass in order to be considered moral: Social Domain Theory (Smetana, 2013), for example, argues that moral norms (contrary to conventional norms and personal preferences) are *generalizable*, meaning that violating the norm is never permissible regardless of context (e.g., killing people is always wrong, regardless of when or where it happens), and they are not *rule contingent* or *authority dependent*, meaning that violating a norm is not permissible even if there is no rule or law defining the norm, and even if an authority allows the violation (e.g., killing people is wrong even if there is no law about it and even if an authority allows it).

The majority of theories and models that formalize moral norms, however, uses a top-down approach and defines a priori which norms are moral (as also argued by Skitka et al., 2021), based for example on philosophical tradition: commonly, norms related to not harming others, justice, and rights. In this framework, moral psychology distinguishes between two main currents: *monism* and *pluralism*. Monist models of morality argue that all moral norms derive from, and can be reconducted to, an individual domain or principle (e.g., "Do not harm"). Pluralist models, instead, argue that morality is constituted by multiple domains or principles (e.g., harm and justice).

This dissertation was developed starting from two competing models of morality: Moral Foundation Theory (Graham et al., 2013), a pluralist model, and the Theory of Dyadic Morality (Schein & Gray, 2018), a monist model. As will be described in greater detail in the following chapters, Moral Foundation Theory (Chapter 3) originally identifies five principles upon which morality is constructed: Care, Fairness, Loyalty, Authority, and Sanctity. The theory is currently open and in progress, and the authors themselves suggest that in the future, new foundations may be included (for example, a new dimension of Liberty/Oppression has recently been proposed, Iyer et al., 2012). The Theory of Dyadic Morality (Chapter 4) argues instead that all moral principles and values can be reconducted to the same norm, that is "Do not harm": events are judged to be immoral when they are perceived as harmful; harmful to others, to the divine, to dignity, and so on. Harm, the authors argue, separates "the unconventional from the immoral" (Schein & Gray, 2018, p. 36), so that a norm violation is only deemed a moral violation if harm is present. The Theory of Dyadic Morality has been criticized on numerous accounts, among which the fact that certain acts (e.g., disgusting acts) are deemed immoral even if no suffering is present (i.e., "harmless wrongs"); the authors discount harmless wrongs by showing that even such acts are perceived as having a victim and involving harm (K. Gray et al., 2014).

I believe both models have their strengths, which is why I am applying and comparing both in the present dissertation. The value of Moral Foundation Theory lies in its descriptive and pluralistic nature, which on the one side makes it possible to explicitly activate specific values and this way to resonate with individuals of different ideologies, and on the other side makes it highly adaptable and applicable to different issues. Due to these characteristics, Moral Foundation Theory is particularly suitable for frames in communication (i.e., the way the information in a message is conveyed, with the aim to favour specific interpretations of the message over other alternatives; Druckman, 2011) and for interventions targeted to individuals across the political and ideological spectrum, which is how we applied it in our line of work. The value of the Theory of Dyadic Morality lies instead in its socio-cognitive theoretical derivation, and its greater focus on the factors that make an event – any event – moral. The Theory of Dyadic Morality identifies the specific elements that need to be present for an event to be judged as immoral (i.e., an intentional agent harming a suffering patient), and how these elements relate to and interact with each other. This makes the Theory of Dyadic Morality particularly suitable for investigating the process underlying moral appraisals and for understanding when and why people moralize issues and events – which led us to pursue this line of investigation.

Overview and Organization

The present dissertation is structured as follows.

In Chapter 2 I will present a new measure of collective action that was developed for the purposes of this research, the Belief-aligned Collective Action scale. This measure solves a methodological confound of common measures of collective action: this measure disentangles support for the investigated cause from actual collective action intentions, by asking participants to indicate their stance towards the investigated issues first, and then assessing collective action aligned to such stance. In two studies, we show structural and construct validity of the scale.

Then, I will focus on the two aforementioned obstacles. The ideological obstacle, discussed in Chapter 3, is constituted by the fact that economic inequality is usually framed as violating values that are typically embraced more by the political left: this may prevent right-wing people from perceiving inequality as a moral violation. In three experimental studies, we rely on Moral Foundation Theory (Graham et al., 2013) to describe economic inequality as a moral violation of either Care and Fairness, two typically progressive values, or of Loyalty, Authority, and Purity, three typically conservative values. We pair this with a frame of social change as something that protects or challenges the system, based on the work by Feygina et al. (2010). Our results, however, show no effects of these frames, even in interaction with political orientation and system justification.

The socio-cognitive obstacle is presented in Chapter 4, and is theoretically derived from the Theory of Dyadic Morality (Schein & Gray, 2018). According to this model, all moral events are mapped upon the same cognitive template: an agent that is intentionally harming a patient. Therefore, not believing that economic inequality is actively and intentionally caused by someone should prevent its appraisal as a moral violation. In three studies (two correlational, one experimental), we show that the more individuals believe that economic inequality is intentionally caused by specific people or groups, the more they believe that inequality is immoral, feel moral outrage, and indicate being more willing to engage in collective action.

Finally, I conclude with a general discussion on limitations and future directions of this line of investigation, as well as describing the theoretical and applied relevance of this work.

Design, Analysis, and Open Science Note

All questionnaires reported in this work were developed on Qualtrics (https://www.qualtrics.com). Analyses were run on IBM SPSS Statistics (Version 26) unless otherwise stated. Materials and data for all studies are available on the Open Science Framework (OSF); links are provided in the following chapters.

Development and Validation of the Belief-aligned Collective Action Scale

Arguably social sciences, and social psychology in particular, are largely characterized by an ideological bias towards typically progressive viewpoints, attitudes, and goals. As early as 1978, Hogan and Emler note a "liberal" bias in American social psychology, particularly in the study of stereotypes and prejudice, which Bilewicz and colleagues (2015) then extended to Western social psychology and among those investigating social issues. Duarte and colleagues (2015) argue that, as a consequence, the research questions investigated in this field tend to be liberal in nature, for example by investigating prejudice mainly against left-wing targets (Jussim et al., 2015). This ideological bias is particularly evident in the study of collective action and can give rise to theoretical and methodological issues, especially concerning the measures with which this topic is usually investigated. Therefore, before moving on to investigating the role of morality applied to economic inequality, the first step of my research project was to develop and validate an unbiased short measure of collective action, that would solve these issues.

The contents of this chapter are also included in the validation paper by Cervone et al. (in press). Supplementary materials, supplementary analyses (e.g., correlations between all study variables), data, and the data codebook for all studies are available on OSF at this link: https://osf.io/mc6nx/?view_only=ab07f19985cd422abe6575a0f66a2fce.

Current Measures of Collective Action

A Theoretical Issue: The Liberal Bias

Theoretically, collective action includes any individual or group-based action aimed at improving "the position of a relevant [subjectively] disadvantaged group" or protecting a "group's values, moral principles, or ideology" (Agostini & van Zomeren, 2021, p. 685). Yet, research on collective action has, with few exceptions (e.g., Choma et al., 2020; Shepherd et al., 2018), mainly focused on left-oriented issues, progressive and system-challenging change, and actions involving minority groups (Duncan, 2012; Thomas et al., 2020): for example, topics include student rights (Shepherd et al., 2013), pro-environmental actions (Sloot et al., 2018), the end of the USA occupation of Iraq (Iyer et al., 2007), stopping the hypothetical UK bombing of Iran's nuclear sites (Shepherd et al., 2013), and feminist issues such as equal pay (Becker & Wright, 2011), policing of sexist behaviour (Paladino et al., 2014), or ending discrimination against women (Ochoa et al., 2019). This "scientific hell", in the words of Tetlock (1994), caused an extensive knowledge gap on the antecedents of right-wing, conservative, or system-supporting collective action (Duncan, 2012), even in the current historical time that witnesses several right-wing protests and movements (e.g., anti-lockdown protests in Western countries, the storm of Capitol Hill, anti-abortion protests, protests against queer rights). This gap has only recently been addressed by the literature: for example, Choma and colleagues (2020) investigated the role of authoritarianism and social dominance orientation in predicting collective action across multiple domains (e.g., the ill financial state of a country), and Milesi and Alberici (2018) showed instead that support for conservative or progressive activist groups is determined by different moral values.

Yet, these important works on the antecedents of conservative collective action share a measurement issue with the others, namely a confound with attitude, which is described below.

A Methodological Issue: The Attitude Confound

Currently, collective action measures usually present participants with a hypothetical situation or current social issue and ask them to indicate whether they had previously engaged, or would engage in the future, in a number of collective actions (e.g., "I would join a feminist march"). These actions most frequently include signing petitions and joining in protests, although every study tends to create its own list of actions, reflecting a lack of agreement on the operational definition of collective action. Alternatively, the items may include extremely general statements (e.g., "I would like to do something with […] to…", van Zomeren et al., 2004).

Such measures are intrinsically confounded because they carry a double question: expressing high (low) agreement for taking action for a cause may signal that the respondent a) ideologically supports (or not) the cause (e.g., is pro-life) and b) is willing to address the cause with engaging (or not) in collective action (e.g., participating in a flash mob). A person may support the cause (is pro-life) but not be willing to take that action (does not like flash mobs), or they may not support the cause (is pro-choice) and hence not be willing to take action against the cause (would rather participate in a pro-choice flash mob). In other words, one-sided measures are unable to differentiate between inactive or indifferent participants and participants who oppose the cause at which collective action is directed. This is problematic from a theoretical perspective, as it may limit the interpretation of potential results (for example by leading to the conclusion that any relation between collective action and other variables will only work for left-wing individuals), but also from an applied perspective: if the end goal of the researcher is to foster collective action in favour of equality (e.g., collective action in favour of gender equality), these two categories of participants would require completely different interventions, the former (e.g., people who support gender equality but do not engage in collective action) focused on facilitating collective action, the latter (e.g., people who engage in collective action but oppose gender equality) focused on shifting the original attitude. Indeed, facilitating collective action in the latter case may be pointless at best, but may actually backfire at worst, unbeknownst to researchers. As a thought experiment, imagine an intervention study aimed at increasing collective action in favour of gender equality in which participants are presented hostile sexism as shared by most men, in line with Becker and Wright (2011). Hostile sexism should increase collective action aimed, for example, at demanding quotas for women or the hiring of more female professors. However, in a sample of extremely sexist participants, being exposed to hostile sexism might potentially be perceived as the shared norm, possibly increasing system justification, and increasing collective action against such policies (see Cialdini et al., 2006). Therefore, if applied in public contexts, this hypothetical intervention might have opposite effects than those intended by the researchers, depending on prior beliefs or attitudes of the recipients.

Scale Development

To solve the theoretical and pragmatic issues described above, the proposed Belief-aligned Collective Action (henceforth, BCA) scale consists of two elements: an introduction in which participants indicate their stance on the investigated topic and the actual collective action items, described below.

Devising the Introduction

Since our main objective was to develop an un-biased measure that could assess collective action concerning any issue regardless of the attitudes towards the issue itself, the first step in the scale development was to devise an introduction that could discriminate between opposing beliefs about the issue at hand. This introduction served to present the topic to participants and assess their personal standing.

The item was structured so that participants were first introduced to a current topic of debate (e.g., socio-economic differences between rich and poor) and to two opposing stances that people may take concerning that issue (e.g., the difference between rich and poor “is a problem” vs. “is necessary”). Furthermore, the introduction included arguments supporting both stances, presenting both positions as legitimate to allow participants to freely take one stance or the other. The arguments in support of the stances were selected so as to be rational and were mostly derived from opinion articles and blog posts asserting that stance.

For example, the introduction for economic inequality stated as follows:

“We now ask you to think about the **socio-economic difference between rich and poor**. Regarding this topic, a heated debate is underway: - According to some, the difference between rich and poor is a **problem**, because the wealth of the upper class stimulates injustice and harms society across all social classes. These people are willing to actively intervene to reduce the gap between rich and poor. - According to others, the difference between rich and poor is a **necessity**, because the wealth of the upper class stimulates productivity and ambition across all social classes. These people are willing to actively intervene to prevent the reduction of the gap between rich and poor.”

At this point, participants were asked to indicate their stance (“Within this debate, what is your position? The difference between rich and poor ...”), using a 6-point bipolar scale (endpoints being “is a problem” and “is necessary”).

Item Selection

Given the extensiveness of socio-psychological literature on collective action (Agostini & van Zomeren, 2021) and since we aimed to develop a short measure, items for our scale were selected through a broad literature review on collective action and activism measures. Specifically, we selected those items that were common in research on collective action, and that would fit the topic of economic inequality (our main area of interest) regardless of stance: for example, despite their recurrence, the items “donating money to an organization” and “volunteering” were not included because there are no organizations explicitly aimed at preserving or enhancing wealth differences. We also sought to include more radical, non-normative actions, that are less frequently investigated in the literature, and some additional items that to our knowledge were missing from previous research (see Table 1 for the list of initial items and studies in which they were employed).

Table 1. Initial Items of the BCA and Source.

Items	Sources
1. Firmerei una petizione a favore della mia posizione. [I would sign a petition in favour of my position.]	Corning & Myers (2002); Foster & Matheson (1995); Iyer et al. (2007); Jost et al. (2017); Lubell et al., (2007); Paladino et al., (2014); Tausch et al. (2011); Thomas et al. (2020); Van Zomeren et al. (2012)
Δ2. Boicotterei le aziende schierate contro la mia posizione. [I would boycott companies that are against my position.]	Corning & Myers (2002); Jost et al. (2017)
Δ3. Voterei un* candidat* politic* che ha adottato la mia posizione. [I would vote a political candidate who adopted my position.]	Corning & Myers (2002); Iyer et al. (2007); Thomas et al. (2020)
4. Parteciperei a una manifestazione, a una marcia o a una protesta per rivendicare la mia posizione. [I would attend a rally, a march, or a protest to assert my position.]	Becker et al. (2011); Corning & Myers (2002); Foster & Matheson (1995); Iyer et al. (2007); Jost et al. (2017); Lubell et al., (2007); Paladino et al., (2014); Tausch et al. (2011); Thomas et al. (2020); Van Zomeren et al. (2012)
5. Scriverei alle istituzioni o ai giornali per portare avanti la mia posizione. [I would write to institutions and newspapers to bring forward my position.]	Corning & Myers (2002); Foster & Matheson (1995); Lubell et al., (2007); Paladino et al., (2014)
6. Collaborerei all'organizzazione di un evento per promuovere la mia posizione. [I would collaborate in organizing an event to promote my position.]	Corning & Myers (2002); Foster & Matheson (1995); Paladino et al., (2014)
7. Distribuirei volantini che promuovano la mia posizione. [I would hand out flyers that promote my position.]	Becker et al. (2011); Tausch et al. (2011)
Δ8. Mi esporrei personalmente sui social, postando video o commenti pubblici per sostenere la mia posizione. [I would expose myself personally on social media, posting videos or public comments to support my position.]	Added ad hoc
9. Esporrei cartelloni o striscioni fuori da casa mia (es. Sul mio balcone o porta di casa) per dichiarare la mia posizione. [I would display posters or banners (e.g., on my balcony or front door) to assert my position.]	Added ad hoc
10. Compirei un atto illegale come parte di una protesta a favore della mia posizione. [I would carry out an illegal act as part of a protest in favour of my position.]	Corning & Myers (2002)
11. Bloccherei l'accesso a un edificio o ad un'area pubblica con il mio corpo per difendere la mia posizione. [I would block the access to a building or public area with my body to defend my position.]	Corning & Myers (2002); Tausch et al. (2011)
12. Occuperei un edificio abusivamente per rivendicare la mia posizione. [I would squat a building to assert my position.]	Tausch et al. (2011)

Note. Items marked with Δ were not included in the final version of the scale due to reasons explained below.

Scale Validation

The proposed BCA scale was developed and tested across five studies. The first two studies focused on collective action linked to economic inequality and assessed the structural validity (through Exploratory Factor Analysis) and construct validity of the scale on an Italian and a British sample. The following studies tested instead the generalizability of the BCA to multiple social topics and confirmed its structural validity through a Confirmatory Factor Analysis. Given the aims of this thesis, we report here the first two studies only. Since the two studies employed the same methodology, we report them here together as “Italian sample” and “British sample”.

For construct validity, we assessed the *perceived efficacy of the actions* included in the BCA, *past engagement* with said actions, and *search for information*, which is occasionally included in collective action measures (e.g., Corning & Myers, 2002); *participative efficacy* and *economic system justification* (considered a proxy for perceived injustice), in line with the SIMCA (van Zomeren et al., 2008), and emotions. Emotions were selected so as to include an other-directed, approach-related emotion (*anger*; Carver & Harmon-Jones, 2009); an other-directed, avoidance-related emotion (*contempt*; Miceli & Castelfranchi, 2018); a self-directed, approach-related emotion (*guilt*; Schmader & Lickel, 2006); and a self-directed, avoidance-related emotion (*shame*; Schmader & Lickel, 2006). On theoretical grounds, one may predict that approach-related emotions would positively predict collective action, as they lead individuals to seek reparation, whereas avoidance-related emotions would negatively predict collective action, as they lead individuals to avoid the issue altogether. However, only anger has been consistently identified as a driver of collective action (Becker et al., 2011; Iyer et al., 2007; Mallett et al., 2008; Shepherd et al., 2018; Tausch et al., 2011; van Zomeren et al., 2004); as for the other emotions, prior research has revealed much more complex patterns. Contempt was found to predict non-normative or radical actions, but not moderate or normative ones (Becker et al., 2011; Tausch et al., 2011). Guilt was found to be linked to collective action by Mallett and colleagues (2008), but not by Iyer and colleagues (2007) or Shepherd and colleagues (2013). Similarly, shame was a positive predictor of collective action in Shepherd and colleagues' (2013) work, while Iyer and colleagues (2007) only found this link for collective action supporting withdrawal of troops (i.e., an avoidance strategy).

To sum up, we expected perceived efficacy, past engagement, search for information, participative efficacy, anger, and guilt to be positively linked with collective action and system justification[4], contempt, and shame, to negatively predict collective action. Importantly, this hypothesized pattern was expected to emerge regardless of stance. Additionally, for exploratory purposes, we included social dominance orientation (Ho et al., 2015) and tolerance of economic inequality (Wiwad et al., 2019): since these constructs represent attitudes towards inequality, the direction of their correlation with collective action should depend on participants' stance about the topic. For those who believe that economic inequality is a problem, the willingness to engage in collective action to reduce inequality should decline as social dominance orientation and tolerance of economic inequality increase (resulting in a negative correlation); vice-versa, for those who believe that economic inequality is necessary, collective action to preserve inequality should increase with these two variables.

[4] Though there is evidence that the negative relation between system justification and collective action is only present in individualistic countries (De Cristofaro et al., 2022).

Method

Participants

Italian Sample. First-year Social Psychology students of the University of Padova were asked to complete and distribute the questionnaire as part of a lab activity spanning three weeks. In total, 613 participants completed the questionnaire. Of these, 28 were excluded because they were underage (n = 3), showed systematic response patterns[5] (n = 17), or completed the questionnaire in less than 7 minutes (n = 8; estimated time was 13 minutes). Thus, the final sample included 585 participants (24% students) from 18 to 80 years old (M = 33.7, SD = 15.8), of which 357 women (61%), 216 men, 9 non-binary people, and 3 who did not indicate their gender. Political orientation was slightly left-leaning (M = 41.66, SD = 26.05, on a scale from 0 – Left to 100 – Right). Furthermore, 167 (29%) stated they had been or were currently members of politically or socially engaged associations, and specifically 58 (10%) of associations dealing with economic inequalities.

British Sample. A representative sample for the United Kingdom (based on gender, age, and ethnicity) was contacted through the crowdsourcing platform Prolific Academic. Prolific workers were paid 1.50£ for participating in the study. Of the 304 participants who answered the questionnaire (300 was the minimum sample required by Prolific), 8 failed one or more attention checks and were thus excluded (since this questionnaire included attention checks, completion time and response patterns were not considered as data quality indicators). The final sample included 296 participants, age 19 to 88 (M = 45.63, SD = 15.42), including 153 women and 143 men. Most participants were White (77%). Political orientation was slightly left-leaning (M = 40.98, SD = 21.43). Furthermore, 46 (16%) stated

[5] We considered "systematic response patterns" cases in which participants indicated the same answer on 80% of the items in scales including reverse items: 10 items for ESJ, 4 for SEIS and 6 for SDO.

they had been or were currently members of politically or socially engaged associations, including 23 of associations dealing with economic inequalities.

Sensitivity analyses ran on G*Power3 (Faul et al., 2007) showed that our sample had 80% statistical power to detect at least an effect size of $\rho = .12$ (Italian sample) and of $\rho = .16$ (British sample) for correlations, two-tailed.

Procedure and Measures

After providing consent, participants first rated how much each action included in the BCA was effective in achieving change for matters of national concern, on a scale from 1 – *Not at all effective* to 7 – *Very effective*. Then, participants were presented with the introduction to the BCA, expressed their personal stance (from 1 – *inequality is a problem* to 6 – *inequality is necessary*), and then indicated the likelihood of engaging in each of the 12 actions of the BCA in the future to support their position on the difference between rich and poor; scores ranged from 1 – *Surely not* to 7 – *Surely*[6]. Then, participants reported likelihood of engaging in four information-search actions in the next 12 months (from 1 – *Surely not* to 7 – *Surely*) and how much they felt our emotions of interest (anger, guilt, contempt, shame, and filler emotions – curiosity, surprise, solitude, doubt) when thinking about socio-economic differences between rich and poor (from 1 – *Not at all* to 7 – *Extremely*). Participants also responded to items investigating participative efficacy (from 1 – *Not at all* to 7 – *Extremely*), system justification, social dominance, and support for economic inequality. For these three scales, answers ranged from 1 – *Completely disagree* to 7 – *Completely agree*.

Examples of items for all scales and reliability in the Italian and British samples are available in Table 2.

[6] In the Italian sample participants responded to six items investigating whether they would (a) attend a rally to increase (decrease) governmental intervention on economy, (b) write to institutions about focusing public spending on welfare (on company incentives), and (c) organize an event in favour of the flax tax (of progressive taxation). As several participants reported they did not understand the task, and opposing items were positively correlated with each other, these items were excluded from analyses and dropped in the British sample.

Table 2. Variables, Examples of Items, and Reliability Scores for Both Samples

Variable	Items	Reliability	
		Italy	UK
Search for information	4 items, e.g., "Attending a conference on the gap between the rich and the poor"	$\alpha = .80$	$\alpha = .87$
Emotions			
Anger	"anger", "outrage"	$r = .63^{***}$	$r = .83^{***}$
Guilt	"guilt", "regret"	$r = .62^{***}$	$r = .58^{***}$
Contempt	"contempt", "disdain"	$r = .52^{***}$	$r = .66^{***}$
Shame	"shame", "unease"	$r = .51^{***}$	$r = .57^{***}$
Participative efficacy (adapted from van Zomeren et al., 2013)	2 items, e.g., "I believe that I, as an individual, can make an important contribution so that, together, we can achieve our goals"	$r = .77^{***}$	$r = .84^{***}$
Economic System Justification (ESJ; Jost & Thompson, 2000)	Translation by Caricati (2008) 12 items, e.g., "It is virtually impossible to eliminate poverty"	$\alpha = .78$	$\alpha = .86$
Social Dominance Orientation (SDO; Ho et al., 2015)	8 items, e.g., "Some groups of people are simply inferior to other groups"	$\alpha = .78$	$\alpha = .86$
Support for economic inequality (SEIS; Wiwad et al., 2019)	5 items, e.g., "The negative consequences of economic inequality have been largely exaggerated"	$\alpha = .77$	$\alpha = .87$

Notes. $N_{Italy} = 585$, $N_{UK} = 296$; $^{***}p < .001$

Finally, participants provided demographic information including gender, age, ethnicity, education, work status, political orientation (general, economic, and social), and subjective socio-economic status of their family (SSES) compared to the average family in their nation (from 0 – *Worse off* to 100 – *Better off*). They were also asked whether they had been or were currently part of associations dealing with socio-economic differences between rich and poor (and if so, which ones), politically active associations, and socially active associations, and were asked how often they had already engaged in the actions included in the BCA (from 1 – *Never* to 7 – *Very often*). At the end of the questionnaire, participants were debriefed.

Results

Factorial Structure

A Kaiser-Meyer-Olkin test for sampling adequacy showed good sampling adequacy (ITA: Overall MSA = .87, threshold = .60; UK: Overall MSA = .89, threshold = .60), and Bartlett's test of sphericity was significant ($p < .001$). A Principal Component Analysis identified three factors with eigenvalues greater than 1 for the Italian sample, though the scree-plot evidenced only two relevant factors (see Figure 1), and two factors through both eigenvalues and the scree-plot for the UK sample.

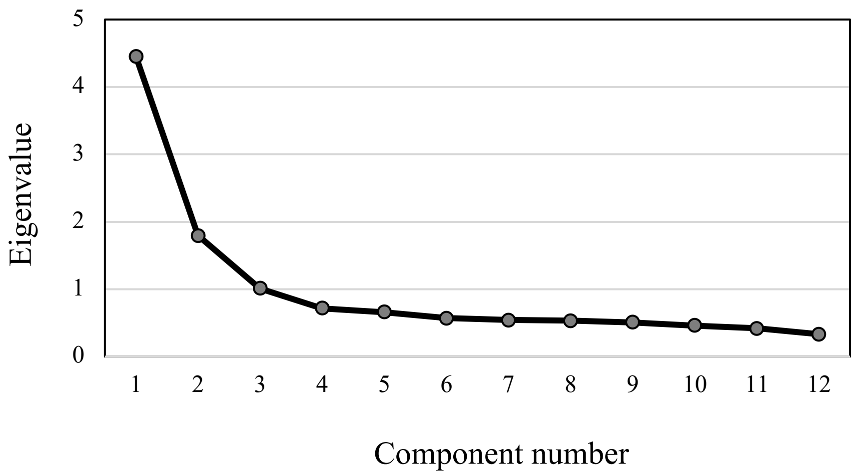

Figure 1. Scree-plot of the Factorial Analysis (Italian sample)

Then, a Common Factor Analysis with principal axis factoring and oblimin rotation, with number of factors fixed to two, showed that, for both studies, eight items loaded on the first factor (which we called Normative actions) and four items loaded on the second factor (which we called Non-normative actions); however, item 2 and item 8 loaded on different factors across the two samples (see Table 3). We attributed this to cultural differences, and as such decided to exclude these two items from the scale. Additionally, following a pilot study described on OSF, item 3 was also deleted to improve the fit. The following analyses were thus run on the final, 9-item version of the scale.

Table 3. Results From an EFA of the Belief-aligned Collective Action (BCA) Scale.

Items	Factor loadings			
	Italy		UK	
	1	2	1	2
1. Firmerei una petizione a favore della mia posizione. [I would sign a petition in favour of my position.]	**.69**	-.10	**.78**	.20
$^{\Delta}$2. Boicotterei le aziende schierate contro la mia posizione. [I would boycott companies that are against my position.]	.20	**.44**	**.51**	-.08
$^{\Delta}$3. Voterei un* candidat* politic* che ha adottato la mia posizione. [I would vote a political candidate who adopted my position.]	**.42**	-.02	**.68**	.18
4. Parteciperei a una manifestazione, a una marcia o a una protesta per rivendicare la mia posizione. [I would attend a rally, a march, or a protest to assert my position.]	**.70**	.10	**.55**	-.37
5. Scriverei alle istituzioni o ai giornali per portare avanti la mia posizione. [I would write to institutions and newspapers to bring forward my position.]	**.66**	-.10	**.60**	-.19
6. Collaborerei all'organizzazione di un evento per promuovere la mia posizione. [I would collaborate in organizing an event to promote my position.]	**.71**	.02	**.67**	-.23
7. Distribuirei volantini che promuovano la mia posizione. [I would hand out flyers that promote my position.]	**.61**	.01	**.58**	-.22
$^{\Delta}$8. Mi esporrei personalmente sui social, postando video o commenti pubblici per sostenere la mia posizione. [I would expose myself personally on social media, posting videos or public comments to support my position.]	**.55**	.10	.25	**-.37**
9. Esporrei cartelloni o striscioni fuori da casa mia (es. Sul mio balcone o porta di casa) per dichiarare la mia posizione. [I would display posters or banners (e.g., on my balcony or front door) to assert my position.]	**.59**	.18	**.58**	-.31
10. Compirei un atto illegale come parte di una protesta a favore della mia posizione. [I would carry out an illegal act as part of a protest in favour of my position.]	-.09	**.74**	.01	**-.69**
11. Bloccherei l'accesso a un edificio o ad un'area pubblica con il mio corpo per difendere la mia posizione. [I would block the access to a building or public area with my body to defend my position.]	.23	**.56**	.09	**-.80**
12. Occuperei un edificio abusivamente per rivendicare la mia posizione. [I would squat a building to assert my position.]	-.09	**.87**	-.06	**-.79**

Note. The extraction method was principal axis factoring with an oblique (oblimin with Kaiser normalization) rotation. Factor loadings over .40 are in bold. Items marked with $^{\Delta}$ were not included in the final version of the scale.

Internal Consistency. Internal consistency was assessed through Cronbach's alpha and omega total by employing the MBESS package (Kelley & Lai, 2012) in R, as suggested by Dunn and colleagues (2014). Reliability was optimal for Normative Actions and for the full scale in both samples, while for Non-Normative Actions it was adequate in the Italian sample and optimal in the UK sample (Table 4).

Table 4. Internal Consistency of the BCA in Italy and the UK.

	Italy		UK	
	α [95% CI]	*ω* [95% CI]	*α* [95% CI]	*ω* [95% CI]
Normative	.83 [.80, .85]	.83 [.80, .85]	.87 [.85, .90]	.88 [.85, .90]
Non-normative	.76 [.69, .81]	.77 [.71, .82]	.82 [.77, .87]	.83 [.78, .87]
Full scale	.82 [.80, .84]	.82 [.80, .84]	.88 [.86, .90]	.88 [.86, .90]

Construct Validity

Correlations. As expected, willingness to engage in both Normative Actions and Non-Normative Actions reliably correlated with perceived efficacy of and past engagement in said actions (r ranging from .37 to .62 for the Italian sample, and from .48 to .61 for the UK sample), see Table 5.

Table 5. Descriptive Statistics and Correlations for Normative and Non-Normative Actions

Variable	Italy M (SD)	UK M (SD)	1	2	3	4	5	6
1. Normative A.	4.15 (1.07)	3.86 (1.43)	-	$.52^{***}$	$\mathbf{.48}^{***}$	$.30^{***}$	$\mathbf{.61}^{***}$	$.23^{***}$
2. Non-Normative A.	2.42 (1.29)	1.84 (1.17)	$.36^{***}$	-	$.17^{**}$	$\mathbf{.60}^{***}$	$.39^{***}$	$\mathbf{.49}^{***}$
3. Efficacy of Normative A.	4.03 (1.37)	3.98 (0.94)	$\mathbf{.62}^{***}$	$.11^{**}$	-	$.27^{***}$	$.29^{***}$	.07
4. Efficacy of Non-Normative A.	1.79 (1.11)	2.78 (1.30)	$.18^{***}$	$\mathbf{.61}^{***}$	.05	-	$.27^{***}$	$.27^{***}$
5. Past Normative A.	2.39 (1.13)	2.46 (1.16)	$\mathbf{.51}^{***}$	$.28^{***}$	$.34^{***}$	$.25^{***}$	-	$.42^{***}$
6. Past Non-Normative A.	1.13 (0.45)	1.13 (0.41)	.04	$\mathbf{.37}^{***}$	-.01	$.34^{***}$	$.24^{***}$	-

Notes. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$. Correlations for the UK sample ($N = 296$) are presented above the diagonal, while those for the Italian sample ($N = 585$) are presented below. A. = Actions. Relevant correlations are in bold.

As for our predictors, the BCA was positively correlated with search for information and participative efficacy, and negatively correlated with ESJ (Table 6). Exploratorily, we also found that in both samples, political orientation correlated negatively, and extremity of stance on the issue (after recoding stance so that higher values corresponded to a more extreme option) correlated positively, with collective action. Splitting the sample by stance generally did not affect our results, with very few exceptions (results available on OSF).

Table 6. Correlations Between the BCA and Study Predictors.

BCA	Search for information		Participative efficacy		System justification		Political orientation		Stance extremism	
	Italy	UK	Italy	UK	Italy	UK	Italy	UK	Italy	UK
Normative	$.59^{***}$	$.67^{***}$	$.40^{***}$	$.44^{***}$	$-.37^{***}$	$-.34^{***}$	$-.35^{***}$	$-.30^{***}$	$.24^{***}$	$.32^{***}$
Non-normative	$.28^{***}$	$.43^{***}$	$.12^{***}$	$.29^{***}$	$-.20^{***}$	$-.30^{***}$	$-.18^{***}$	$-.38^{***}$	$.18^{***}$	$.24^{***}$
Full scale	$.58^{***}$	$.55^{***}$	$.37^{***}$	$.39^{***}$	$-.37^{***}$	$-.43^{***}$	$-.35^{***}$	$-.36^{***}$	$.26^{***}$	$.33^{***}$

Notes. $^{***}p < .001$.

Emotions. Regression models with anger, contempt, guilt, and shame as predictors[4] and the BCA (Table 7) as outcome showed that anger was the strongest predictor of Normative Actions in both samples, so that participants who reported more anger were also more willing to engage in collective action. Additionally, the more participants felt contempt, the more they were willing to engage in Non-Normative actions. The other emotions instead had weaker or inconsistent patterns of relation with collective action.

Table 7. Regression Models with Emotions as Predictors and the BCA as Outcome.

Variable	Normative			Non-normative			Full scale		
	B [95% CI]	*t*	*p*	*B* [95% CI]	*t*	*p*	*B* [95% CI]	*t*	*p*
Italy	$r^2 = .28$			$r^2 = .08$			$r^2 = .28$		
Anger	**.28** [.19, .37]	6.69	< .001	.02 [-.06, .09]	0.47	.636	**.19** [.13, .26]	5.72	<.001
Contempt	.03 [-.05, .11]	0.82	.412	**.12** [.05, .19]	3.34	.001	.06 [-.00, .12]	1.95	.052
Guilt	**.09** [.02, .17]	2.43	.015	**.08** [.01, .15]	2.36	.019	**.09** [.03, .15]	2.90	.004
Shame	**.12** [.03, .20]	2.72	.007	.02 [-.06, .09]	0.42	.674	**.08** [.02, .15]	2.41	.016
UK	$r^2 = .28$			$r^2 = .08$			$r^2 = .24$		
Anger	**.24** [.12, .36]	3.79	< .001	**.14** [.04, .24]	2.72	.007	**.21** [.11, .31]	4.01	<.001
Contempt	.02 [-.09, .14]	0.38	.703	**.16** [.07, .26]	3.41	.001	.07 [-.03, .16]	1.44	.150
Guilt	**.16** [.02, .29]	2.29	.023	.11 [-.00, .22]	1.94	.053	**.14** [.03, .25]	2.51	.013
Shame	.04 [-.11, .19]	0.56	.577	-.01 [-.13, .11]	-0.12	.908	.03 [-.09, .15]	.42	.676

SDO and SEIS. To explore whether SDO and SEIS were oppositely linked to collective action, we split the sample by stance. As pictured in Table 8, for participants who were against economic inequality both SDO and SEIS were consistently negatively linked with the BCA. For participants who believed that inequality is necessary, however, the patterns were inconsistent: in most cases, SDO and SEIS did not correlate with the BCA, with the exception of SDO and Normative Actions in the Italian sample (positive) and SEIS and Non-normative Actions in both samples (negative).

Table 8. Correlations Between the BCA and SDO and SEIS, by Stance.

Predictor	BCA	Stance	
		"Inequality is a problem"	"Inequality is necessary"
Study 1a		$n = 473$	$n = 112$
SDO	Normative actions	$-.35^{***}$	-.13
	Non-normative actions	$-.16^{***}$	$.20^{**}$
	Total scale	$-.34^{***}$	-.04
SEIS	Normative actions	$-.37^{***}$	$-.25^{**}$
	Non-normative actions	$-.16^{***}$	.14
	Total scale	$-.36^{***}$	-.17
Study 1b		n = 227	n = 69
SDO	Normative actions	$-.22^{**}$	-.14
	Non-normative actions	$-.18^{**}$	.08
	Total scale	$-.31^{***}$	-.08
SEIS	Normative actions	$-.30^{***}$	$-.25^{*}$
	Non-normative actions	$-.24^{***}$	-.11
	Total scale	$-.38^{***}$	-.15

Notes. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Discussion

For more than 50 years now, ideological bias has been a known issue in social psychology. This is particularly true for research on collective action, which now leaves the field with a knowledge imbalance between progressive or conservative collective action. Furthermore, the way collective action is usually assessed gives rise to a methodological confound, namely the inability to distinguish inactive participants from participants who oppose the investigated cause, which in turn leads to a difficulty in fully understanding how variables and manipulations included in studies are affecting collective action. The BCA solves both issues, as it allows to measure collective action for opposing goals simultaneously and disentangles the confound between collective action and attitude towards the investigated issue. Across two studies in the Italian and British context, we show structural and construct validity of this measure. Of the original 12 items, three were eliminated either because they loaded on different factors, probably reflecting different cultural habits (such as more common boycotting of companies in the UK than in Italy), or to improve the fit. The resulting two-facture structure (Normative and Non-normative actions) confirmed the initial distinction that we made in selecting the items and had optimal internal reliability. Correlations were consistent with evidence from past literature (e.g., Agostini & van Zomeren, 2021): participative efficacy and anger were positively linked to collective action, while system justification correlated negatively. As for the other emotions, contempt emerged as the most powerful predictor of non-normative collective action, confirming previous findings (Becker et al., 2011; Tausch et al., 2011): this may be explained by the fact that, unlike anger, contempt involves a lack of respect (Gervais & Fessler, 2017), psychological distancing, and possibly also a more general disaffection from the political system (Becker & Tausch, 2015; Tausch et al., 2011). Consistent with this, research on market activism in reaction to corporate wrongdoing has shown that anger predicts constructive and contempt destructive punitive actions (Romani et al., 2013). In fact, Romani et al. (2013) argue that anger is a constructive emotion that functions to correct unjust systems while upholding moral standards; they consider contempt a destructive emotion that leads to hostile actions. As for the self-directed emotions, guilt was generally predictive of collective action (consistent with findings by Mallett et al., 2008), whereas shame was (with one exception) generally not predictive of collective action, contrary our hypothesis and the results of Shepherd et al.

(2013). Thus, our evidence was reflective of the mixed results already described by the literature. Finally, in line with predictions, social dominance and support for inequality showed consistent negative correlations with the BCA among those taking a stance against economic inequality. Among those believing that inequality is necessary, we found the predicted reversal (positive correlation) only in one case; however, the remaining correlations are for the most part non-significant. Only in two cases did we find negative correlations which, however, were considerably smaller than those of the opposite stance. Together, this result pattern suggests that social dominance orientation and support for inequality have, indeed, distinct effects on participants with different stances on economic inequality.

Nevertheless, across our measures, the validity of non-normative collective action was weaker compared to normative collective action, especially for the Italian sample (see Agostini & van Zomeren, 2021, for a similar finding on violent collective action). This may be due to the fact that non-normative actions were rarely endorsed, and floor values (calculated through the DACF package in R; Liu & Wang, 2018) were over 45% in both samples. This is not surprising given that non-normative actions are, by definition, uncommon, and probably embraced only by militant or otherwise highly engaged participants; consistent with this, floor values dropped to 22% (Italy) and 13% (UK) when considering only participants who were part of associations dealing with economic inequalities. Therefore, we suggest investigating non-normative collective action by itself only with samples that include individuals who engage in collective action (see Study 3 on OSF). To conclude, even beyond the specific aims of this Thesis, the BCA is an extremely adaptable short scale of collective action, that allows researchers to investigate collective action in an unbiased fashion. Using this scale, social psychologists may be able to investigate, with a single instrument, both conservative and progressive collective action, and do so without attitude confounds.

An Ideological Obstacle: Value-congruent Framing

Current levels of economic inequality are a topic that individuals are concerned about regardless of their political stance, even though it may be to different degrees. Across the political spectrum, for example, people believe that wage inequality should be smaller than what it is (Kiatpongsan & Norton, 2014), and while political ideology has an effect on how much inequality is perceived (Arsenio, 2018; Kiatpongsan & Norton, 2014), there is no difference between progressives and conservatives in the ideal levels of inequality (Arsenio, 2018). Furthermore, the reduction of inequality and poverty is considered a fundamental element for a democracy across the political spectrum, at least in Europe (Oser & Hooghe, 2018); and in Australia both conservatives and liberals (as well as independent voters) agree with government interventions to reduce wealth inequality, even though there are differences in the degree to which they do so (Norton et al., 2014).

Nevertheless, economic inequality is often framed around the suffering of the poor or the unfairness of the wealth distribution, stressing the need for a radical redistribution of wealth. This type of frame[7], however, is closer to typically left-wing or liberal arguments (Graham et al., 2009). This may lead inequality to be perceived as an issue that is more relevant for the political left than for conservatives, similar to the case of climate change: pro-environmental behaviours are usually framed by the media and researchers alike as 'saving' or 'protecting' the environment (Kaplan, 2000) and consistent with this are seen by liberals, but not conservatives, as moral acts (Feinberg & Willer, 2013). To avoid this, and to persuade conservatives about the importance of mobilization against economic inequality, a different narrative may be required that relies on *experience-near* concepts (Geertz, 1984) such as 'order' or 'respect for authorities' (Haidt et al., 2009).

[7] Throughout this work, 'frame' is used to refer to *frames in communication*.

Message framing has been shown to be effective in modifying attitudes (Feinberg & Willer, 2013; Lammers & Baldwin, 2018; Sniderman & Theriault, 2004), behaviours (Gallagher & Updegraff, 2012; Grewal et al., 1994; Kidwell et al., 2013), and behavioural intentions such as donation intentions (Paramita et al., 2022; Winterich et al., 2012). According to Chong and Druckman (2007), frames can make the interpretation of the content available and accessible, and moral intuitions in particular can increase the strength and relevance of the message. This may, in part, be driven by the fact that when a message is presented through a relevant moral frame, the source is perceived to be part of the ingroup (Wolsko et al., 2016), and consequentially as more reliable (Wathen & Burkell, 2002) and more persuasive (Hurst & Stern, 2020). Therefore, especially when it comes to ideology, a frame that is consistent with the recipient's values may overcome the recipient's resistance to content that contradicts their beliefs. However, for this kind of content it is still unclear just how effective frames can be. According to Day and colleagues (2014), the effect of a value-consistent framing could either be limited to strengthening pre-existing attitudes (*entrenching hypothesis*), or it could actually shift attitudes towards the opposing ideological standpoint (*persuasion hypothesis*). In their own research, the authors find strong evidence for the entrenching hypothesis, whereas the persuasion hypothesis was only confirmed for conservatives; the opposite pattern was instead found by Feinberg and Willer (2015), who show evidence for the persuasion, but not the entrenching hypothesis. While this lack of results for liberals may be caused by ceiling effects, it could also be the by-product of the liberal bias discussed in the previous chapter. Most of the literature on value-congruent framing focuses on attempting to shift conservatives towards social justice and concern for global issues; as such, there is a lack of conclusive evidence on the entrenchment of conservatives and the persuasion of liberals. Nevertheless, the literature is consistent in showing that conservatives can successfully be persuaded through a value-congruent frame (Feinberg & Willer, 2013; Hurst & Stern, 2020; Wolsko, 2017; Wolsko et al., 2016).

Here, we applied a value-congruent frame to economic inequality (via the Moral Foundation Theory; Graham et al., 2013) and to social change (via the system-challenging vs system-sanctioned frame; Feygina et al., 2010). Both frames, together with supporting evidence for their effectiveness, will be described below.

Open Data and Transparency

Supplementary materials, data, and questionnaires for all studies described in this chapter are available on OSF at the following link: https://osf.io/kpgbw/?view_only=4b91cbb228e1438bb1944a03cfaa0ebb.

Framing Inequality: Moral Foundation Theory (Study 1)

Moral Foundation Theory (Graham et al., 2013) bases the concept of morality on 'moral intuitions' (Haidt, 2001). Moral intuitions are described as 'pattern-recognition systems' (Haidt & Joseph, 2004) that evoke an immediate affective reaction of approval or disapproval (or, in the authors' words, tastebuds that produce an immediate flash of like or dislike; Haidt & Graham, 2007; Haidt & Joseph, 2008) when an input (such as an event, a thought, or an imagined situation or behaviour) is perceived.

According to the original formulation of the theory, moral foundations are five specific moral intuitions: Care/Harm, Fairness/Cheating, Loyalty/Betrayal, Authority/Subversion, and Sanctity/Degradation. These foundations presumably arose as a response to specific evolutionary needs and are thus innate. Being innate, the moral foundations are also universal – they are 'building blocks upon which complex moral values are constructed through cultural input (Haidt & Joseph, 2004). Table 9 outlines the specific adaptive challenges, emotional reactions, and socially constructed cultural values associated with each foundation.

Table 9. Moral foundations and associated challenges, emotions, and values (adapted from Graham et al., 2013).

	Adaptive challenge	**Emotion**	**Cultural virtues and vices**
Care/Harm	Protection of new-borns and children	Compassion, anger	Kindness, cruelty, aggression
Fairness/Cheating	Gaining benefits from partnership (especially with non-kin)	Gratitude, anger, guilt	Altruism, justice, trustworthiness
Loyalty/Betrayal	Survival in groups, formation of cohesive groups	Pride, anger	Patriotism, self-sacrifice
Authority/Subversion	Surviving and gaining benefits in hierarchies	Admiration, fear	Leadership, duty, respect, obedience
Sanctity/Degradation	Avoidance of disease transmission	Disgust	Chastity, lust, gluttony, cleanliness

The cultural construction of the foundations into moral virtues and norms has two important implications for the effectiveness of moral framing (Haidt & Joseph, 2004). First, cultures can interpret virtues differently based on which moral foundation they are grounded in (e.g., 'honour' can be construed as integrity if grounded in fairness, but also as chastity if founded on sanctity), and this is also true for social issues (e.g., gun control can be construed as a violation of the care module, or as observance of the loyalty module). Second, cultural learning can be employed to pitch foundations against each other (e.g., concerns for loyalty can trump concerns for harm if loyalty is held at higher value). Third, and related to the previous point, cultures differ in the importance attributed to each foundation and how the foundations are applied: this is the case of the moral divide between liberals and conservatives.

The Moral Foundation Hypothesis

When it comes to the moral domain, the authors argue that the political left and the political right differ on multiple levels. One is moral reasoning: in formulating moral judgments, liberals appear to rely more on slow and controlled processes, whereas conservatives on fast, emotional processes (Lane & Sulikowski, 2017). The other is moral content, or, in other words, what foundations each group values. According to the moral foundation hypothesis (Graham et al., 2009), liberals and conservatives do not attribute the same importance to all five foundations. The authors group the five foundations in *individualizing foundations* (namely Care/Harm and Fairness/Cheating, which according to the initial theorization have to do with the individual level) and *binding foundations* (namely Loyalty/Betrayal, Authority/Subversion, and Sanctity/Degradation, which instead have to do with the group level[8]). The authors argue that conservatives value both sets similarly, whereas liberals distinguish between the two and only place importance on the individualizing foundations (Graham et al., 2009; Haidt & Graham, 2007; Hurst & Stern, 2020). This difference is also reflected in their narrations (Clifford & Jerit, 2013; Graham et al., 2009; McAdams et al., 2008). Although some researchers have argued that conservatives favour binding foundations over individualizing ones (e.g., Feinberg & Willer, 2015), the moral foundation hypothesis has received overall support, both in the United States and other Western countries (Kivikangas et al., 2021).

Besides investigating such differences, in the past decade the literature has been exploiting them for applicative purposes, by framing issues through moral foundations. For example, when it comes to the environment, conservatives showed greater concern for "reducing the dependence on foreign oil" (Gromet et al., 2013, p. 9315), a concept grounded in the Ingroup/Loyalty domain, and framing the issue by referencing conservative values (e.g., pollution, which pertains to the sanctity domain) increases conservatives' pro-environmental attitudes, behaviour, donations, and legislation support (Feinberg & Willer, 2013; Hurst & Stern, 2020; Kidwell et al., 2013; Wolsko, 2017; Wolsko et al., 2016). Moral

[8] Although the terms 'individualizing' and 'binding' are still employed by the literature, the individual-group level distinction based on which they were formulated was refuted by the authors themselves, who have now also considered group-level fairness or the interpersonal level (Graham et al., 2013)

framing was also applied to prosocial behaviour and charity donations: the evidence suggests that individuals are willing to donate more when charities align with their moral values (Winterich et al., 2012), even in the case of organizations that fight economic inequality (Franks & Scherr, 2019).

Aims and Hypotheses

The aim of this study was to test whether a framing based on Moral Foundation Theory would affect left- and right-wing participants differently, with left-wing participants being more persuaded by an argument based on individualizing foundations, and right-wing participants by arguments based on binding foundations.

This study was carried out with the help of Megan Bannon, Valentina Dalla Torre, Jakub Dudzikowski, Susanna Montesano, and Giordana Sofia, who at the time were Masters' students attending an Economic Inequality course. The students constructed the materials under my supervision and collected the data for this study. Originally, the study was run in Italy, Germany, and the UK; however, given the low sample sizes for the German and British samples, we report here only analyses conducted on the Italian sample.

Method

Participants. Data was collected through snowball sampling and social media. In total, 161 participants started the questionnaire, but only 105 completed it. Of these, four did not provide consent to data processing, and three failed the attention check. Therefore, our final sample consisted of 98 participants, of which 63 women, 32 men, and 3 non-binary people, age ranging from 20 to 69 years old (M = 30.76, SD = 11.04). Politically, the sample was left-leaning (M = 26.85, SD = 23.49, on a 100-point scale).

Procedure. At the beginning of the questionnaire, demographic information was assessed: age, gender, country of residence, country of birth, religious beliefs, political orientation (general, social, and economic; α = .88). Then, participants were presented with the short version of the Moral Foundation Questionnaire (Graham et al., 2011), which evaluates beliefs about Harm ("Compassion for those who are suffering is the most crucial virtue", "One of the worst things a person could do is hurt a defenceless animal"; Spearman-Brown = .48), Fairness ("Justice is the most important requirement for society", "When the government makes laws, the number one principle should be ensuring everyone is treated fairly"; Spearman-Brown = .72), Loyalty ("I am proud of my country's history", "People should be loyal to their family, even when they have done something wrong"; Spearman-Brown = .52), Authority ("Respect for authority is something all children need to learn", "Men and women each have different roles to play in society"; Spearman-Brown = .32), Disgust ("People should not do things that arouse disgust even if no one is harmed", "I would call some acts wrong on the grounds that they are unnatural"; Spearman-Brown = .56), and an item assessing general morality ("It is better to behave ethically than unethically"). Participants responded to these items on a scale from 1 (Totally disagree) to 7 (Totally agree). Notably, reliability for the item pairs was extremely low (ranging from .32 to .56, with the only exception of fairness). A large body of international work highlights issues with the structural validity of the questionnaire (e.g., Bobbio et al., 2011; Iurino & Saucier, 2020), including its Italian version; therefore, sub-standard reliability scores were to expected. Nevertheless, such low scores were indeed surprising and made the scale unusable; for this reason, this measure was discarded in the analyses (but see p. 66 for further discussion).

At this point, participants were presented with the manipulation, which was adapted from the ones employed by Wolsko et al. (2016). They read a text that described a call for action against inequality framed through individualizing (e.g., "The economically unequal conditions we live in are cruel and harsh; undermining freedom and integrity while promoting a rigged system") or binding (e.g., "The economically unequal conditions we live in are destructive and scandalous, undermining state authority and betraying our faith") words. As manipulation check, they were also asked to rate how much the five foundations (for clarity, disgust was indicated as "decency") were present in the text on a scale from 1 (*Totally not present*) to 7 (*Totally present*). Then, we assessed moralization of economic inequality (4 items; e.g., "Economic inequality in Italy is wrong from an ethical point of view"; α = .80) and moral outrage (3 items; e.g., "I'm outraged by economic inequality in Italy"; α = .83) on 7-point Likert scales going from 1 – *Totally disagree* to 7 – *Totally agree*. Finally, participants responded to the BCA (α = .91) and were debriefed.

Results

The manipulation did indeed evoke the moral foundations as we intended: Harm was perceived more in the individualizing condition (individualizing: *M* = 4.93, *SD* = 1.88; binding: *M* = 3.23, *SD* = 2.08), *t*(96) = 4.23, *p* < .001, *d* = 0.86, whereas the binding condition elicited more loyalty (individualizing: *M* = 2.43, *SD* = 1.80; binding: *M* = 4.50, *SD* = 1.59), *t*(96) = -6.04, *p* < .001, *d* = -1.22, authority (individualizing: *M* = 3.11, *SD* = 1.70; binding: *M* = 3.88, *SD* = 1.73), *t*(96) = -2.23, *p* = .014, *d* = -0.45, and disgust (individualizing: *M* = 2.09, *SD* = 1.44; binding: *M* = 3.04, *SD* = 1.66), *t*(96) = -3.01, *p* = .002, *d* = -.61. The only exception was fairness for which there was no difference (individualizing: *M* = 5.63, *SD* = 1.42; binding: *M* = 5.58, *SD* = 1.30), *t*(96) = 0.19, *p* = .423, *d* = 0.04, probably due to the topic discussed.

To test our hypothesis, we ran regression models with condition, political orientation, and their interaction as predictors, and our dependent variables as outcome, using the SPSS macro PROCESS (model #1, 10,000 bootstrap resamples). As for moralization, only political orientation emerged as a predictor, *B* = -0.03, 95%CI [-0.04, -0.01], *SE* = .01, *t* = -3.38, *p* = .001. The same was true for outrage, *B* = -0.04, 95% CI [-0.05, -0.03], *SE* = .01, *t* = -5.88, *p* < .001, normative collective action, *B* = -0.05, 95% CI [-0.06, -0.03], *SE* = .20, *t* = -5.60, *p* < .001, and non-normative collective action, *B* = -0.05, 95% CI [-0.07, -0.03], *SE* = .01, *t* = -

5.19, $p < .001$. At this point, we tested our predicted mediation through a moderated mediation model (#5), with condition as moderator. While the moderated mediation was not significant, moral outrage mediated the effect of moralization on collective action regardless of condition (indirect effect: $B = .39$, BootLLCI = .26, BootULCI = .54).

Discussion

In Study 1, we find no evidence that our framing had an effect, neither by itself nor in interaction with political orientation. Even though the manipulation elicited the correct values, an individualizing frame did not evoke stronger moralization, outrage, and collective action intention in left-wing participants, and similarly the binding frame did not have a greater effect on right-wing participants. This may, of course, be attributed to the limited conservative sample we were able to recruit; evidence for this effect may emerge from a balanced sample. Another explanation may be that the moral foundation theory, which was born with the deep political divide between democrats and republicans in the US, may not generalize to a fragmented political reality such as the Italian one (see also the general discussion at the end of this chapter). Finally, another explanation may be that while progressive participants were already generally high in moralization, outrage, and collective action intention, as they are generally more prone to systemic change, framing inequality in relevant terms is not enough of a motivator for conservative participants who instead rely more on tradition and on system protection. Therefore, our next step was to move onto the framing of change as something aimed at challenging or protecting the system.

Framing Change: System-challenging or System-sanctioned (Study 2)

Change can be threatening. According to Jost and colleagues (Jost et al., 2017; Jost & Hunyady, 2003, 2005) individuals have specific epistemic and existential needs, such as a need for stability, order, or safety, that lead them to rationalize and legitimize the systems they live in in order to avoid the negative experiences related to threat and uncertainty. This is the core tenet of System Justification Theory (Jost & Banaji, 1994), which similarly to Moral Foundation Theory, is also presumed to have an evolutionary basis: arguably, fostering social harmony through legitimacy perceptions leads to greater chances of survival of the system (Jost et al., 2018). Most importantly for our purposes, System Justification Theory also argues that these palliative benefits may come with a cost, as they may lead people to accept and defend even systems that are harmful to them or their group. Therefore, system justification inhibits both the intention to obtain societal change (as it would undermine stability and order), as well as the negative emotions, such as anger, that would otherwise drive collective action (Wakslak et al., 2007): if the system is legitimate, not only there is no need to change it, but it would actually be harmful to do so.

When it comes to inequality, this is even more so the case. In later theorizations of system justification (Jost et al., 2010, 2015), the authors add that besides the aforementioned existential and epistemic needs, system justification also satisfies a need for fairness: perceived unfairness has a strong psychological toll on the individual, and system justification serves a palliative function against such negative outcomes, for example cognitive dissonance (Willis et al., 2015), guilt (Miron et al., 2006), and moral outrage (Wakslak et al., 2007), among both high- and low-status individuals (Goudarzi et al., 2020; Jost & Hunyady, 2003). Furthermore, system justification increases not only in situations of system threat, but also in conditions of system dependence, system inescapability, and low personal control (Kay & Friesen, 2011). Applying this notion to economic inequality, one may argue that systems with high inequality are those with highest probability of system justification: first, inequality is threatening in itself - in part due to its harmfulness on individual and societal wellbeing, in part because inequality is the product of current practices in the system, making change aimed its reduction even more threatening, as was argued by Feygina and colleagues (2010) for climate change. Second, the economic system is highly pervasive in our daily lives: as was argued in the introductory chapter, not only does socio-economic standing affect our present lives and our future perspectives, but inequality is also highly visible and easier to recognize the more pronounced the differences between rich and poor are. Third, highly unequal societies have a larger population of low-status individuals, that is a social group that is characterized by feelings of low personal control (Piff et al., 2018). Thus, the characteristics themselves of economic inequality should increase system-justification (though there is some evidence against this hypothesis; Trump & White, 2018), which is in turn associated with perceiving current society as closer to ideal (Willis et al., 2015), lower support for redistribution (Rodriguez-Bailon et al., 2017; Wakslak et al., 2007), and lower intentions to engage in collective action aimed at fighting inequality, as was shown in the previous chapter. Therefore, inequality and system-justification seem to be connected by a self-reinforcing vicious cycle (see Figure 2): high economic inequality makes class differences more salient, which are perceived as unfair; this unfairness perception elicits distress in individuals, who legitimize the system to cope with the distress. System justification will then reduce perceptions of unfairness, leading people to support inequality and reject positive change; this will however lead inequality to increase even more, thus strengthening the need to justify the system.

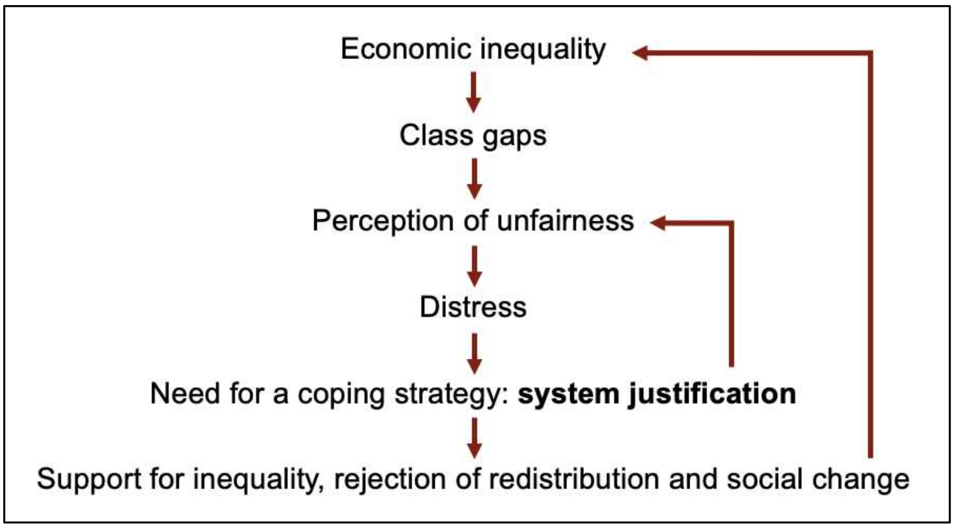

Figure 2. The self-reinforcing cycle of economic inequality and system justification.

Nevertheless, presenting change as something that preserves and protects the system may provide a solution to this conundrum and break the chain that links system justification to the rejection of change. Feygina and colleagues (2010) tested this notion on climate change and pro-environmental behaviour on a sample of US undergraduates. In one study, the authors framed pro-environmental change as the means to protect the American way of life and being patriotic (i.e., 'system-sanctioned change'). For people low in system justification, the frame made no difference; but for people high in system justification, it increased pro-environmental intentions and collective action behaviours. According to the authors, this 'system-sanctioned' framing of change utilizes people's willingness to defend the system to lead them to accept change in order to protect the environment – and, as a consequence, society as it is. In other words, the system-sanctioned frame works "*with* rather than against system justification motivation" (p. 333). In the following study, we applied the same concept of 'system-sanctioned change' – which is still understudied – to economic inequality, and juxtapose it to 'system-challenging change', namely change as something that rejects, rather than protects, current society.

Aims and Hypotheses

The aim of this study was to test whether a system-sanctioned frame would increase moral outrage and collective action intentions in conservatives. It is relevant to note that, in this line of investigation, we decided to employ political orientation – rather than system justification – as a main predictor, for consistency with the previous study and to test the interaction of the change frame with the moral one in Study 3. Indeed, system justification is related to political ideology and can be considered a proxy of political conservatism (Jost et al., 2003). Therefore, we predicted that left-wing participants would be more willing overall to engage in collective action, but most importantly, we predicted an interaction between political orientation and condition, so that right-wing participants would be more willing to engage in collective action in the system-sanctioned change condition, while left-wing participants will be more willing in the system-challenging change condition. Finally, we predicted that these effects would be mediated by moral outrage. This study was preregistered on aspredicted.org (preregistration available on OSF).

Method

Participants. In total, 253 Prolific Academic workers completed the questionnaire and were paid 1.13£ for their participation in the study. Of these, two refused to give consent to data processing at the end of the questionnaire and 10 did not watch the whole video which included the manipulation and were thus excluded[1]. Therefore, our final sample consisted of 241 participants, including 140 men, 100 women and a non-binary person, age ranging from 18 to 65 years (M = 27.46, SD = 8.21). The majority of our sample was comprised of students or working students (56%) and was politically left-leaning (M = 34.81, SD = 21.53, on a scale from 0 – *left* to 100 – *right*).

Procedure. Participants initially provided their first consent to data processing and their Prolific ID. Then, demographic variables were assessed: gender, age, education, work status, political orientation (three items: general, economic, social; α = .88), and family SSES compared to the average Italian family (slider going from 0 – *Worse off* to 100 – *Better off*). Then, participants were presented with the experimental manipulation and completed the study variables. Finally, they were debriefed, answered a second consent form for data processing, and had the possibility to leave comments through an open text box.

Manipulation. Participants were shown a fake video-interview about economic inequality. They were told that the interview was recorded in November 2020, and that faces and information were hidden so as to not influence their judgements (the video was blurred, and both interviewer and interviewee were unnamed). Participants were also provided with subtitles, and time spent on the page was recorded to exclude participants who did not watch the questionnaire thoroughly. The interview was titled “Socio-economic inequalities? Italy can’t go on like this” (system-challenging condition) or “Socio-economic inequalities? Italy needs us to change” (system-sanctioned condition). The interviewee first presented data on the wealth distribution in Italy before and after the Covid-19 pandemic (see the Online Supplementary Materials for the full text), which was identical in both conditions. Then, the interviewee described the solution to economic inequalities as system-sanctioned (“*Italy needs to change; it needs that we change. We need to preserve our country. We must do something if we want to safeguard our society from inequalities, to defend our democracy and our development model. We must act now, for our society*.”) or system-challenging change (“*Italy cannot continue like this, it must change. We need to build a new country. We must do something to end this unequal society and build a new democracy and a new model of development. We must act now, for a different society.*”).

Dependent Variables. First, participants were presented with a description of the debate around economic inequalities, namely whether it is a problem or a necessity. They indicated their own stance in this debate on a bipolar scale from 1 – *problem* to 6 – *necessary*. Then, they were presented with a set of emotions and were asked to rate how much they felt them when thinking about the moral implications of this debate, on a Likert scale from 1 – *Not at all* to 7 – *Extremely*. Specifically, we assessed moral outrage (“anger” and “outrage”, $r[241] = .71$, $p < .001$), contempt (“contempt” and “disdain”, $r[241] = .70$, $p < .001$), shame (“shame” and “unease”, $r[241] = .55$, $p < .001$), and guilt (“guilt” and “remorse”, $r[241] = .64$, $p < .001$). Then, participants completed the BCA (normative actions subscale: $\alpha = .89$; non-normative actions subscale: $\alpha = .90$); among the items we included an attention check. Participants answered on a Likert scale going from 1 – *definitely not* to 7 – *definitely yes*.

At this point, participants were reminded about the title of the interview and were asked about their perceptions of the interviewee: whether they believed the interviewee promoted a system-challenging or system-preserving change ("When it comes to achieving social change, there are two positions: some people think that change must come about through a critique of society, others think that change must happen to safeguard society. In your opinion, what is the interviewee's position?"; 6-point bipolar scale), her likely political orientation (slider going from 0 – *left* to 100 - *right*), and whether they wanted to receive more information about her. Specifically, they indicated whether they wanted the link to her blog, to follow other interviews, and to buy her books, on a multiple-choice item with the possibility to select multiple answers (we then calculated the sum of selected options). Finally, participants were presented with a list of Italian associations fighting economic inequality (Action Aid Italia, Forum Disuguaglianze e Diversità, Oxfam). As cover story, they were told that if they wanted to subscribe to their newsletters, they could select these organizations, and that they would be redirected to a page where they could indicate their email so that we could subscribe them to the selected newsletters. We then calculated the sum of selected options to have a behavioural measure of collective action (from 0 to 3). For exploratory purposes, we also recorded time spent on this page.

Results

First, we checked whether condition affected our study variables. Results showed that participants in the system-sanctioned condition correctly perceived that the interviewee promoted that perspective ($M = 3.09$, $SD = 1.69$), and the same was true for participants in the system-challenging condition ($M = 3.50$, $SD = 1.66$), though it failed to reach statistical significance, $t(237) = -1.85$, $p = .065$. Condition had no effect on other variables.

Collective Action. Analyses on collective action were run including both participants who believed that inequality is a problem ($n = 202$) and those who believed inequality is necessary ($n = 39$), although excluding the latter did not affect results. To test our main hypothesis, we ran regression models including condition, political orientation, and the interaction between the two as predictors, and the two subscales of collective action, interest in the interviewee, and interest in the organizations as dependent variables, using the SPSS macro PROCESS (Hayes, 2018), model #1, 10,000 bootstrap resamples. As for normative collective action, results showed a main effect of political orientation, so that right-wing individuals were less prone to engage in collective action, B = -0.02, 95% CI [-.03, -.01], t = -3.40, p = .001. Additionally, a tendency for the interaction emerged, B = -0.02, 95% CI [-.03, .00], t = -1.96, p = .051. The interaction showed that political orientation was a stronger predictor of normative actions in the system-sanctioned condition, B = -.04, 95% CI [-.05, -.03], SE = .01, t = -6.38, p < .001, than in the system-challenging condition, B = -.02, 95% CI [-.03, -.01], SE = .01, t = -3.40, p = .001 (Figure 3), opposite to our predictions.

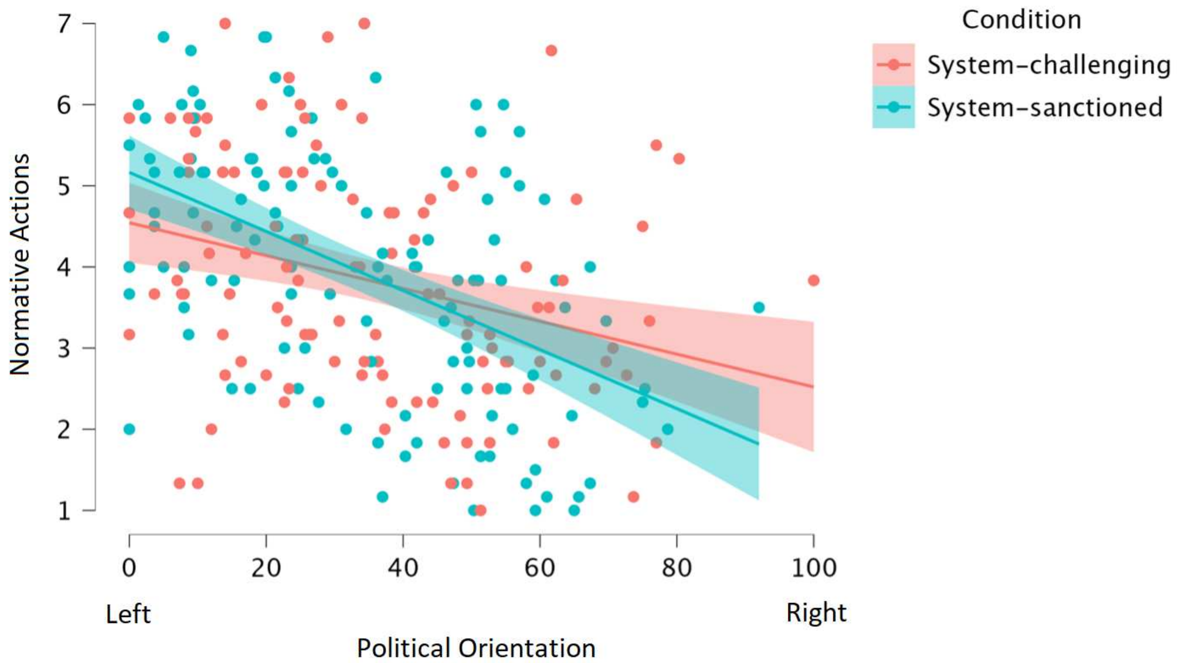

Figure 3. The Effects of Political Orientation and Condition on Normative Actions (Study 2).

As for non-normative collective action, results showed a tendency of political orientation consistent with that described above, B = -0.01, 95% CI [-.02, -.00], t = -1.88, p = .062, but no other effects. Similarly, for interest in the interviewee only political orientation was a reliable predictor, B = -0.01, 95% CI [-.01, .00], t = -2.15, p = .033.

Finally, as for our behavioural measure of interest in organizations, there was a tendency of the interaction, $B = -0.01$, 95% CI [-.02, .00], $t = -1.87$, $p = .063$, so that political orientation was linked to interest in organizations only in the system-sanctioned condition, $B = -.01$, 95% CI [-.02, -.003], $SE = .003$, $t = -3.04$, $p = .003$, and not in the system-challenging condition, $B = -.001$, 95% CI [-.01, .01], $SE = .003$, $t = -.33$, $p = .742$, as shown in Figure 4.

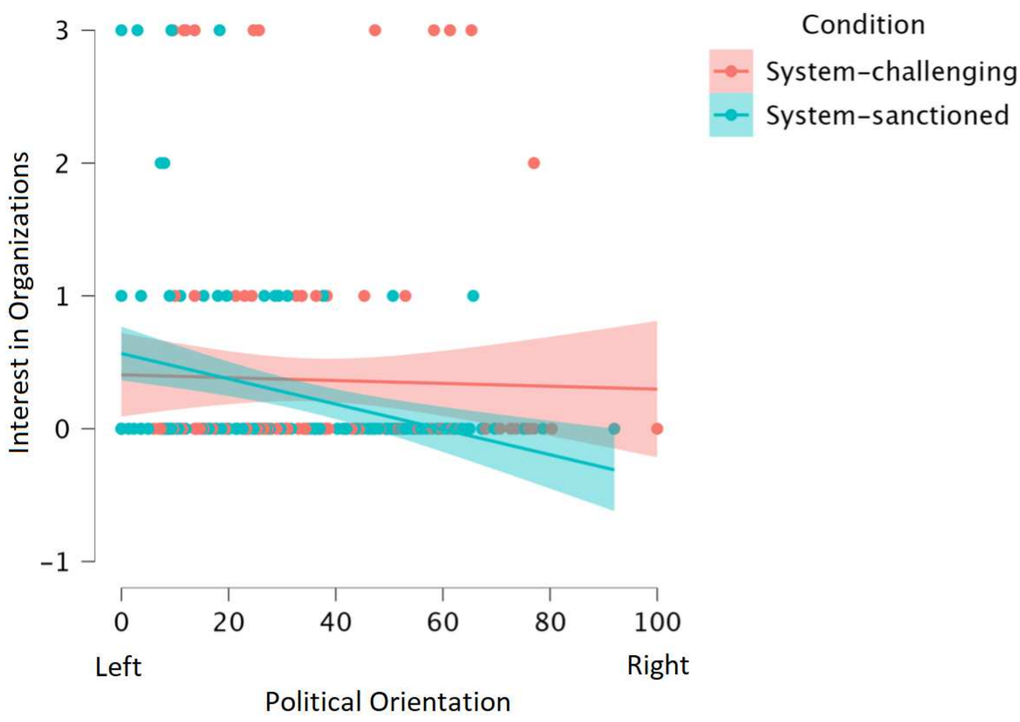

Figure 4. The Effects of Political Orientation and Condition on Interest in Organizations (Study 2)

Emotions. To test the role of our predictors on emotions, we ran the regression models outlined above. As for anger, results showed a main effect of political orientation, so that right-wing individuals felt less outraged by the debate on inequality, $B = -0.03$, 95% CI [-.04, -.02], $t = -5.42$, $p < .001$. Furthermore, there was a tendency of condition, so that anger was stronger in the system-challenging condition, $B = -0.31$, 95% CI [-.64, .03], $t = -1.79$, $p = .075$. As for contempt, results showed a main effect of political orientation, so that right-wing individuals felt less contempt about the debate on inequality, $B = -0.03$, 95% CI [-.04, -.01], t

= -4.10, p < .001. The same was true for shame, B = -0.02, 95% CI [-.03, -.01], t = -3.29, p = .001, and guilt, B = -0.02, 95% CI [-.03, -.01], t = -3.41, p = .001.

At this point, we ran a mediation model to test whether outrage mediated the effect of our predictors on normative collective action and interest in organizations, using the SPSS macro PROCESS (Hayes, 2018), model #8, 10,000 bootstrap resamples. For collective action, results showed that the moderated mediation model was non-significant; instead, outrage mediated the link between political orientation and normative collective action both in the system-challenging (indirect effect: B = -.01, SE = .003, BootLLCI = -.02, BootULCI = -.01) and in the system-sanctioned condition (indirect effect: B = -.01, SE = .003, BootLLCI = -.02, BootULCI = -.01). The same was true for interest in organizations; again, the mediation pattern was similar both in the system-challenging (indirect effect: B = -.004, SE = .001, BootLLCI = -.01, BootULCI = -.002) and in the system-sanctioned condition (indirect effect: B = -.004, SE = .001, BootLLCI = -.01, BootULCI = -.002).

Discussion

Consistent with our predictions, left-wing participants were more willing to engage in collective action, a result partially mediated by moral outrage. Therefore, regardless of conditions, left-wing participants felt more anger towards economic inequality, which led to greater engagement in collective action. More interestingly, and completely opposite to our hypotheses, left-wing participants reported being more willing to engage in collective action in the system-sanctioned condition, whereas right-wing individuals more so in the system-challenging condition. One explanation for this counter-intuitive result lies in the fact that participants may have felt that the Italian system at the time of the study was left-leaning, which would then explain why progressive participants were more willing to act to protect the system, and conservative participants to challenge it. This issue was solved in Study 3 by also assessing Economic System Justification, which is also more consistent with the original paper by Feygina and colleagues (2010).

Nevertheless, the effects were small and failed to reach statistical significance. This study presented some limits that may also contribute to explaining the weakness of the results: first, some participants indicated in comments that they did not find the data or the interviewee believable. Second, some participants reported not indicating interest in organizations because providing us with their email (which was part of the cover story) would violate the anonymity of their response. These issues were solved in Study 3 by improving the contents of the manipulation, employing an actual actor to record the experimental material, and changing the cover story for the interest in organizations item.

Change and Inequality as Interactive Frames (Study 3)

Given the unsatisfactory results of Study 1 and, instead, the promising results of Study 2, the final step of this line of research was to integrate the moral framing with the change framing, following the notion that the moral framing may only be effective when change is perceived as non-threatening for conservatives. We predicted that a binding, system-sanctioned frame would increase moral outrage and collective action intentions in conservatives, but reduce them in progressives, and that the opposite would be true for an individualizing, system-challenging frame. This study was carried out with the help of Tommaso Anderini, Luca Bacchin, Alessandro Cracco, Alberto Corbelli, Marco Disanto, Marta Graziani, Chiara Gulotta, Alessia Lombardi, Giada Lunardelli, Gabriele Messori, Anna Pangrazzi, Chiara Pirani, Matteo Scarazzato, Chiara Schettino, Francesca Taro, and Francesco Zucchini, who at the time were Masters' students attending a Political Psychology course. The students constructed the materials under my supervision and collected the data for this study.

Method

Participants. Data for this study was collected in two phases: first, through snowball sampling and social media by the students, and then through Prolific Academic in order to reach a balanced sample of left- and right-wingers. To do so, we recruited all Prolific workers who had reported being conservative in our previous Prolific studies, as well as an additional amount from the general Prolific pool that was proportional to the convenience sample recruited in the first phase. Workers were paid £1 for their participation in the study.

In total, 877 participants accessed the questionnaire, of which 172 Prolific workers and 705 recruited by the students. However, only 459 of these completed the questionnaire; in addition, 30 participants were excluded for the following reasons: 8 participants did not consent to data processing after the debriefing, one participant was underage, and 21 participants failed at least one attention check. The final sample thus consisted of 429 participants, of which 220 men, 202 women, and 7 non-binary people, aged from 18 to 72 years (M = 32.75, SD = 13.48). Additionally, 36% of participants were students, participants were politically left-leaning (M = 38.49, SD = 23.06, on a scale from 0 – *left* to 100 – *right*) and economically considered their family SSES to be slightly above the Italian average (M = 56.12, SD = 14.83, on a scale from 0 – *worse-off* to 100 – *better-off*).

Procedure. After providing consent to data processing, participants were presented with the experimental manipulation. Similar to Study 2, participants were asked to watch an interview on socio-economic inequalities in Italy that was recorded in October of 2021. The video lasted around two minutes and described inequality through either an individualizing (e.g., "Economic inequality causes suffering and worry especially in more disadvantaged contexts") or binding frame (e.g., "Our families and our businesses are not safe and this uncertainty prevents the Country's stability and unity"), and change through a system-challenging (e.g., "We can't go on like this, it is necessary to change and build a new system") or system-sanctioned frame (e.g., "We have to do something if we want to safeguard our society from inequalities, to defend our democracy and our model of development"), resulting in a 2 (moral frame) x 2 (change frame) design. Then participants were presented with two manipulation checks: they were asked (a) whether the interviewee's stance is that change in society should happen by building a new society or safeguarding our society, on a 6-point bipolar scale, and (b) what was the political orientation of the interviewee on a 100-point slider from *Left-wing* to *Right-wing*. At this point, participants were asked how much outrage ("anger", "outrage"; Spearman-Brown = .78), contempt ("contempt", "disdain"; Spearman-Brown = .73), and positive/neutral emotions ("pride", "satisfaction", "indifference") they felt when thinking about the moral implications of inequality, on a scale from 1 (*Not at all*) to 7 (*Extremely*). Subsequently, participants were presented with the BCA (normative actions: α = .87; non-normative actions: α = .83) and were given the option to subscribe to the newsletter of three organizations fighting economic inequality: to avoid the issues about anonymity emerged in Study 2, participants were told that they would be automatically redirected to the webpages of the associations they selected at the end of the questionnaire. Then, participants responded to the Italian translation (Caricati, 2008) of the Economic System Justification (ESJ) scale by Jost and Thompson (2000; 12 items, e.g., "It is virtually impossible to eliminate poverty from our society"; α = .77 after exclusion of one item) on a 7-point Likert scale (going from *Strongly disagree* to *Strongly agree*), two items assessing trust in institutions ("How much do you trust Italian institutions?", "How much do you believe that Italian institutions are trustworthy?"; Spearman-Brown = .94) on a 100-point slider (going from *Not at all* to *Completely*), and an additional manipulation check asking how believable, reliable, and trustworthy the interview and its content were (7-point Likert scale going from *Not at all* to *Absolutely*; α = 92). Finally, participants responded to demographic items: gender, age, education, work status, political orientation (general, economic, and social; $\alpha = .92$), and SSES; they were debriefed and were asked to confirm or reject consent to data processing. Participants could also leave comments through an open text box.

Results

We tested the effects of condition and political orientation on our variables through the SPSS macro PROCESS (Hayes, 2018), model #3, with political orientation as predictor and the moral frame and change frame as interacting moderators. First, we checked whether the manipulation was effective and credible. The change manipulation was indeed perceived as more system-preserving, $B = 2.14$, 95% CI [1.70, 2.58], $SE = .23$, $t = 9.48$, $p < .001$. Additionally, both frames affected perception of the political orientation of the interviewee, so that he was perceived as more right-wing both in the binding conditions, $B = 7.17$, 95% CI [1.20, 13.15], $SE = 3.04$, $t = 2.36$, $p = .019$, and in the system-sanctioned conditions, $B = 9.54$, 95% CI [3.44, 15.64], $SE = 3.10$, $t = 3.07$, $p = .002$. As for credibility, results showed that the three-way interaction was significant, $B = -0.02$, 95% CI [-0.05, -0.001], $SE = .01$, $t = 2.09$, $p = .037$, indicating that in all conditions except for the challenging x binding one, right-wing participants thought the manipulation was less credible than left-wing ones. Therefore, credibility was used as a covariate in all the following analyses.

Collective Action. Analyses on collective action were run including both participants who believed that inequality is a problem ($n = 368$) and those who believed inequality is necessary ($n = 61$), although excluding the latter did not affect results[9]. As for normative actions, only the effects of political orientation, $B = -0.02$, 95% CI [-0.04, -0.01], $SE = 0.01$, $t = -3.62$, $p < .001$, and credibility, $B = 0.13$, 95% CI [0.03, 0.23], $SE = .05$, $t = 2.67$, $p = .008$, emerged, while there were no effects at all on non-normative actions. As for interest in organizations, a tendency emerged for the change frame, $B = 0.18$, 95% CI [-0.02, 0.38], $SE =$

[9] The only exception being that the effect of credibility on normative actions disappeared.

.10, t = 1.76, p = .079, so that participants in the system-sanctioned conditions were more willing to subscribe to newsletters of organizations fighting inequalities.

Emotions. For outrage, the effect of political orientation, B = -0.02, 95% CI [-0.04, -0.01], SE = 0.01, t = -3.93, p < .001, and credibility, B = 0.26, 95% CI [0.16, 0.35], SE = .05, t = 5.40, p < .001, emerged, similar to normative actions. In addition, however, there were also a main effect of the change frame, B = 0.47, 95% CI [0.10, 0.84], SE = .19, t = 2.49, p = .013, so that participants were more outraged in the system-sanctioned condition, and a tendency of the interaction between political orientation and the moral frame, B = 0.02, 95% CI [-0.001, 0.03], SE = .01, t = 1.89, p = .060, so that the effect of political orientation was stronger in the individualizing than in the binding condition (or, in other words, left-wing participants were more outraged in the individualizing condition and right-wing participants in the binding condition). As for contempt, again only political orientation, B = -0.02, SE = 0.01, 95% CI [-0.03, -0.01], t = -2.15, p = .032, and credibility, B = 0.23, 95% CI [0.12, 0.33], SE = .05, t = 4.29, p < .001, emerged as predictors. As for positive emotions, again political orientation, B = 0.02, 95% CI [0.01, 0.03], SE = .004, t = 4.36, p < .001, and credibility emerged as predictors, B = -0.09, 95% CI [-0.15, -0.02], SE = 0.03, t = -2.62, p = .009, but also the three-way interaction, B = 0.02, 95% CI [0.001, 0.03], SE = .01, t = 2.09, p = .037, showing that the effect of political orientation on positive emotions was stronger for the congruent (individualizing x challenging: B = 0.02, 95% CI [0.01, 0.03], SE = .004, t = 4.36, p < .001; binding x sanctioned: B = 0.02, 95% CI [0.01, 0.03], SE = .004, t = 5.26, p < .001) than the incongruent conditions (individualizing x sanctioned: B = 0.01, 95% CI [0.003, 0.02], SE = .004, t = 2.77, p = .006; binding x challenging: B = 0.01, 95% CI [0.004, 0.02], SE = .004, t = 2.91, p = .004), as shown in Figure 5.

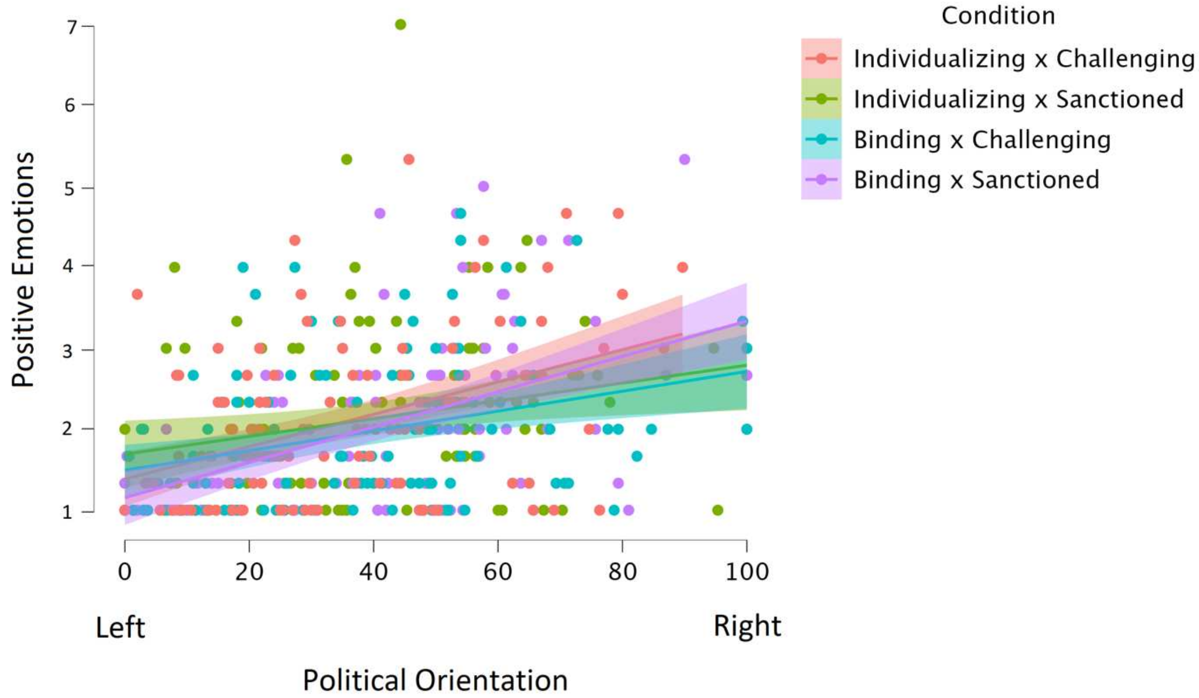

Figure 5. The Effects of Political Orientation and Condition on Positive Emotions (Study 3)

Control Variables. For trust in institutions, the interaction between political orientation and the moral frame emerged, B = -0.30, 95% CI [-0.58, -0.03], SE = .14, t = -2.15, p = .032, so that there was a negative effect of political orientation in the binding, but not individualizing, conditions.

To test the hypothesis that the system-sanctioned frame was effective on participants high in ESJ, rather than on conservative participants, the above models were run with ESJ, rather than political orientation, as main predictor. Results however showed no effect besides that of ESJ on normative actions, non-normative actions, and positive emotions, while for interest in organizations there was a tendency of the interaction between ESJ and the change frame, B = -0.20, 95% CI [-0.42, 0.02], SE = .11, t = -1.83, p = .068, so that the negative effect of system justification was stronger in the system-sanctioned condition. The remaining effects remained the same, with ESJ being a consistent predictor (as political orientation was) of all variables.

Discussion

In Study 3, result patterns across dependent variables were inconsistent. Mostly, we could not detect an effect of the moral frame even with a sample that was more ideologically balanced compared to Study 1, and we could not replicate the effects that had emerged in Study 2, even when considering system justification (rather than political orientation) as a predictor. It is interesting to note that conservative participants deemed the manipulations less credible unless inequality and change were presented through a binding, system-challenging frame. On the one hand, the fact that content presented through an individualizing frame was perceived as less credible is consistent with the moral foundation hypothesis, given that perceived belief similarity between source and receiver affects credibility (Wathen & Burkell, 2002). On the other hand, not only was this not the case for progressive participants and binding frames, but more surprisingly binding frames were only perceived as credible by conservatives when paired with a challenging frame. It may be that conservatives perceive binding values as not being endorsed by the current system, and thus deem an argument employing binding and system-sanctioned frames simultaneously to be uninformed (expertise) or unreliable (trustworthiness).

Conclusion

Across our three studies, ideological framing did not affect emotions and collective action in a consistent way: detected effects were small and sparse. Clearly, these studies presented some limitations to which the lack of results may be imputed. Firstly, a consistent percentage of participants were students, and student samples are usually younger, better educated, and more privileged than the general population (Cummins, 2003). Secondly, despite our best efforts, the conservative sample was very small across the three studies regardless of whether the samples were recruited via snowball or crowdsourcing: therefore, no conclusive interpretation can be made about the fit between framing and ideology.

Nevertheless, we find no evidence of the effect of ideological framing even among left-wing participants, which supports the notion that framing has the ability to persuade, but not entrench progressives (although outrage and collective action were generally higher among progressives, we find no evidence of ceiling effects).

Limitations aside, there is another alternative explanation for our lack of results which does not derive from an experimental flaw, but rather from a theoretical gap. As was briefly mentioned in the discussion of Study 1, Moral Foundation Theory was developed in the very specific and peculiar context of the United States. With its mostly bipartisan structure, the United States are very far from the extremely fragmented reality of Italian politics. Consistent with this notion, Milesi (2017) finds only small (and partly non-significant) correlations between moral foundation endorsement and ideological orientation/voting intentions among Italian participants. Most importantly, only the sanctity foundation predicted right-wing (as opposed to left-wing) voting intentions consistently, whereas result patterns for the other foundations were not consistent across studies and across political parties, so that different foundations (e.g., sanctity vs care/authority) were associated with support for different conservative parties (Milesi, 2017). Also, a recent meta-analysis of the moral foundation hypothesis (Kivikangas et al., 2021) shows that evidence was weaker among independent samples, and that the link between binding foundations and political orientation was stronger in the US compared to Europe, though the authors attribute this difference to the specific case of one country in their European sample (i.e., Latvia). The moral foundation model may then require a further segmentation of the political spectrum, for example following Weber and Federico's (2013) ideological classes: a distinction based on policy support or attitudes, rather than to self-reported ideology, was found to be consistently associated with binding and individualizing frames in the predicted direction by Milesi and Alberici (2018) in the Italian context. Therefore, on the one side, the model itself may not generalize to more complex and fragmented political contexts; on the other side, the evidence of structural issues with the MFQ itself shed doubt on what this scale, which is often employed in research on moral foundations, is actually measuring. Future efforts should include a cross-cultural, nationally representative investigation of this model, and possibly the development of a new scale that overcomes the reliability issues of the Moral Foundation Questionnaire (Kivikangas et al., 2021).

A Socio-Cognitive Obstacle: Intentional Agents

In the previous chapter, we outlined how ideology may hinder the appraisal of economic inequality as a moral violation, by focusing on a pluralistic approach to morality (i.e., the Moral Foundation Theory). In this chapter, we move onto a socio-cognitive approach to answer the question of what drives such appraisals and argue that, on a deeper level, the very nature of economic inequality as a social issue may reduce the likelihood of perceiving economic inequality as immoral. To do so, we apply the Theory of Dyadic Morality (Schein & Gray, 2018), a monistic model that identifies the core criteria that an event requires in order to be perceived as immoral.

The Theory of Dyadic Morality

According to the Theory of Dyadic Morality, actions and events are categorized as immoral or not according to how closely they match the moral dyad: a cognitive template involving a *moral agent* and a *moral patient* who are linked by the act of harm that the agent inflicts on the patient (Schein & Gray, 2018). The moral dyad represents the "essence" of morality, though the content within the template (e.g., type of moral act, identity of the two actors) may be different based on the event itself (K. Gray et al., 2012). Importantly, harm is broadly employed by authors to describe any damage that comes from an agent to a patient (Schein & Gray, 2018) and does not have to be objective, but rather perceived, so that even targets who cannot suffer (e.g., the dead) can be perceived by observers as moral patients (K. Gray et al., 2012). The concepts of moral agent (i.e., who acts rightfully or wrongfully) and patient (i.e., who experiences the right or wrong actions) derives from Aristotle, and was employed by H. M. Gray et al. (2007) to describe differences in mind perception. In an analysis of how 18 mental capacities were attributed to human (e.g., 5-year-old-girl) and non-human (e.g., family dog) targets, the authors found that mental capacities developed along two continuous factors, namely Experience and Agency. The Experience factor included the capacity to feel physical sensations and emotions, resembling components of other dyadic constructs such as warmth (Fiske et al., 2002) and human nature traits (Haslam, 2006), whereas Agency included for example planning, memory, and morality, overlapping instead with competence (Fiske et al., 2002) and uniquely human traits (Haslam, 2006).

Interestingly, the more a target was rated high in Agency, the more they were considered deserving of punishment for a hypothetical wrongdoing; this was not the case for Experience. Oppositely, the more they were rated high in Experience, the more the participants thought it would be painful to harm them, but this was not the case for Agency. As agency is linked to greater responsibility and punishment for moral wrongs, targets high in agency are recognized as moral agents, namely those holding responsibility and deserving punishment for their action. As experience, to the contrary, is linked to unwillingness to harm, targets high in experience are recognized as moral patients, namely those deserving moral rights and protection from wrongs (K. Gray & Wegner, 2012). However, according to the authors, patiency is attributed to the targets only if the observers feels empathy towards them: even if some suffering is recognized, the act will only be perceived as immoral when empathy is also present (Schein & Gray, 2018). Therefore, the same act will be condemned and judged differently based on the agency attributed to the agent and the experience attributed to the victim (K. Gray & Wegner, 2012): for example, the act of hitting someone will be judged as less morally wrong if committed by a child (low agency) rather than an adult (high agency); similarly, the act of degrading a target will be perceived as less morally wrong if the target is a robot (low experience) rather than an animal (high experience). Additionally, the authors argue that targets tend to be assigned to one of the two roles, but not both simultaneously: a process the authors name *moral typecasting*, for which agency and experience perceptions are inversely related (K. Gray & Wegner, 2009).

Most importantly for our purposes, one of the main principles of the Theory of Dyadic Morality is that the moral dyad has to be complete, as both the moral agent and the moral patient must be present: there can be no moral patient without a moral agent, and vice versa (K. Gray & Wegner, 2012). For instance, ambiguous actions described by nonsense verbs are perceived as more immoral, and actors committing those actions are perceived more negatively, when the actions involve a target (Hester et al., 2020). Consistently with this, Nichols and Knobe (2007) show that describing an immoral act complete of agents and patients increases perceptions of responsibility even in an hypothetical deterministic universe. In the same paper, they also present a study in which the cases of two repeated offenders are compared: one committing sexual assault, the other tax evasion. Even in a deterministic universe, the former is considered morally responsible by the majority of participants (64%), while only 23% of participants declared the latter to be morally responsible. While the original authors intended this to be an affect manipulation (the former eliciting greater affect than the latter), Gray and Wegner (2012) attribute this difference to the presence, in the former crime, of a clear victim. As a consequence, harmful events where one element of the dyad is missing (such as blameless or victimless or wrongs) elicit *dyadic completion*, that is the tendency to 'complete' the dyad when one of the elements is missing: for example, suffering on a national scale increases beliefs in an intentional God, and when an intentional agent violates a norm, individuals envisage a victim to said violation. This in turn led the authors to argue that there is no such thing as a "harmless wrong": when violations that ostensibly involve no victim or no suffering are presented, concepts of harm are still activated, and people perceive that a victim and suffering were indeed present (K. Gray et al., 2014). Linked to this, the last component of the dyadic template is that the agent should be committing the immoral act intentionally: perceptions of intentionality increase those of immorality (Hester et al., 2020) as will be described in further detail below.

The Dyadic Template Applied to Economic Inequality

According to the Theory of Dyadic Morality, for economic inequality to be perceived as a moral violation, economic inequality should (a) be recognized as a harm, that should come (b) to a patient/recipient, from (c) a specific agent, who should (d) have the intention to harm. We argue here that the very characteristics of economic inequality and its psychological underpinnings may prove to be obstacles to the moralization of inequality, or, in other words, it may hinder the potential appraisal of economic inequality as a moral wrong, as will be discussed in the following sections.

Economic Inequality and Harm

The idea that all morality can be reduced to the notion of harm has been criticized by pluralists (Graham et al., 2013), and so has the Theory of Dyadic Morality, in particular by Piazza et al. (2019), who argue that justice is a more predictive and reliable moral determinant compared to harm. Regardless of how we identify the "ethical wrong" (be it harm, injustice, or violations of other principles), however, what is relevant when considering economic inequality is that there is no public consensus on the fact that economic inequality is negative per se. Other social issues are usually perceived as wrong, even though their existence may be denied (e.g., racism, misogyny, or climate change). Contrary to this, while the existence of economic differences between richer and poorer people is commonly recognized (as was previously discussed), the fact that these differences are harmful, unfair, or generally negative is not. Indeed, some argue that current economic inequality is positive for societies (see Krueger, 2011, for a review of the main arguments in favour of inequality). Furthermore, individuals generally do not wish for perfect equality in a society, and believe that some degree of inequality between social classes should exist (García-Sánchez et al., 2019; Kiatpongsan & Norton, 2014; Norton & Ariely, 2011), for example to reward differences in effort or ability (see Starmans et al., 2017 for a review). Therefore, also people who are unaware of the size of current inequalities, or who believe that inequality is caused by fair processes, may perceive economic inequality as positive, and even a “moral right”, thus making its reduction immoral, unfair, or harmful. Therefore, the first obstacle to perceiving inequality as a moral violation is the idea that inequality is not harmful.

Together with harm comes the notion of a recipient suffering from it. When it comes to economic inequality, the first patients that come to mind are the poor, although one may argue that economic inequality damages people at every step of the social ladder (Wilkinson & Pickett, 2019). However, there are two ways in which this category may not be recognized as the victims of economic inequality. First, people may be deprived of the mental capacity to experience the harm, namely, to suffer. This is the case, for example, of the dehumanization of the poorer classes (Sainz et al., 2020), which may also be linked to the fact that dehumanization reduces empathy and helping intentions (Andrighetto et al., 2014). Indeed, according to the authors, patiency is attributed to the targets only if the observers feels empathy towards them: even if some suffering is recognized, the act will only be perceived as immoral in the presence of empathy (Schein & Gray, 2018). Second, even if the poorer classes may not be dehumanized, they still may be attributed responsibility for their fate (e.g., by someone who strongly believes that society is meritocratic and who makes dispositional attributions for poverty and wealth). According to the principle of *moral typecasting*, targets tend to be assigned either the role of patient or of agent, but not both simultaneously (Gray & Wegner, 2009); if poor people are believed to be responsible for (or in other words, have agency concerning) their social status, this shifts their role from patient to agent, thus breaking the moral dyad. So, the second obstacle to the moralization of economic inequality is the belief that its ‘victims’ are not, or deserve to be, suffering because of their state.

Economic Inequality as Caused by Intentional Agents

Even if inequality were perceived as a harm, it may not necessarily be considered as caused by someone. Similar to natural disasters, economic inequality may be perceived fatalistically, a harm with no culprit, for example the result of inevitable economic shifts. Indeed, the trend of describing the economy through the use of natural metaphors is common in Economics, and resulted in a way of communicating about issues – such as inequality – as if they were inevitable, and akin to natural phenomena, which follow their own laws and can only be steered by individuals (McRorie, 2019). The same is true of inequality and poverty, which were deemed by classic scholars in Economics as following natural laws (see Blanco, 2020).

Additionally, even if an agent is identified (e.g., billionaires accumulating wealth), the harm of economic inequality may still be perceived as unintentional, an accidental or unavoidable by-product of economic decisions: for example, a CEO may increase inequality in their own company by rewarding top executives or looking for profit, even though they may be unaware, or not have the aim, of doing so in the first place. Instead, to recognize inequality as a moral violation one should perceive that the individual or group that is increasing (or maintaining) inequalities is doing so intentionally. Consistently with this notion, Krauth-Gruber and Bonnot (2020) show that attributing responsibility for inequalities to institutions or to the upper class was positively linked to moral outrage.

Intentionality is perhaps the most interesting factor of the Theory of Dyadic Morality, even though this model was far from being the first to investigate how intention affects moral judgements. First, intentionality matters more when moral norms (compared to conventional norms) are violated (Josephs et al., 2016). Second, intentionality increases perceived wrongness of moral violations (Kollareth & Russell, 2022; Kupfer et al., 2020; Parkinson & Byrne, 2017), and particularly so when harm (as opposed to purity, for example) is involved

(Young & Saxe, 2011). Third, intentionality is a determinant of moral outrage and retribution intentions regardless of actual harm caused. For example, in moral dilemmas involving self-driving cars participants are presented with an automatic vehicle that is forced to kill one of two people, belonging to two different social groups, and they are asked to indicate which should be targeted; while participants exhibit preferences on which group should be targeted, the majority agree that this decision should not be taken arbitrarily and should instead rely on chance (De Freitas & Cikara, 2021). Consistent with the argument that intentionality is a fundamental element of moral violations, De Freitas and Cikara (2021) show that when the car "deliberately" selects which target to kill (e.g., an old person rather than a young one), more outrage is felt towards the owners and the manufacturers of the car, as well as a greater attribution of blame and greater collective action against them, compared to when the target is determined randomly. Interestingly, no blame is attributed to the car itself, probably because no actual intention is attributed to it, while the manufacturer of the car (who, by logic, developed the discriminating algorithm, therefore exhibiting intention) is the most blamed party in this scenario. In a similar fashion, people are less outraged by algorithmic than by human bias, because they don't attribute the same degree of prejudiced motivation to the algorithm (Bigman et al., 2020); in other words, the algorithm is perceived as being less intentionally biased compared to a human. As for direct experimental evidence, manipulating the intentionality of moral violations experimentally was shown to increase moral outrage and collective action intentions (Lu, 2021; Umphress et al., 2013). Additionally, intentionality was identified by Hechler and Kessler (2018) as the main variable discriminating moral outrage from empathic anger. Specifically, the authors show that when a harm is inflicted by someone who had no intention to do so, lower outrage is evoked. Indeed, following moral violations outrage is evoked regardless of the harmful or harmless outcome of the violation (see also Landmann & Hess, 2017), thus disproving the argument that outrage is nothing more than empathic anger for harm caused (e.g., Batson et al., 2007).

To conclude, this evidence suggests that not recognizing an intentional agent behind economic inequality could prevent individuals from perceiving inequality as a moral violation, thus reducing outrage, and, consequently, collective action intentions against inequality.

Aims and Hypotheses

The aim of our studies was to test whether the perception that economic inequality is driven by intentional agents increases moral outrage and, consequently, collective action. Specifically, we predicted that perceiving that economic inequality is caused by individuals, and specifically that it is caused by their intentional decisions, would increase moral outrage, and that this in turn would lead to increased collective action intentions. Supplementary materials, data, and questionnaires for all studies described in this chapter are available on OSF at the following link:
https://osf.io/u37a6/?view_only=2a007e703bb24178a37f559fc21e6be1.

Study 1

Study 1 aimed at investigating whether the perception of an intentional agent is associated to outrage and collective action. We assessed this indirectly, by testing the hypothesis that the more individuals believe that the economy and economic inequality are driven by human decisions, the more they would feel outraged and consequently be willing to engage in collective action. To test this hypothesis, we decided to draw our sample from Economics and Psychology students, with the idea that given their fields of study the former would believe more strongly that these phenomena are nature-like, and the latter would attribute instead greater responsibility to human decisions. Therefore, we predicted (a) a mediational chain of lay-beliefs about the economy, lay-beliefs about inequality, moral outrage, and collective action (Hp1), and (b) that the economy in general, and economic inequality in particular, would be perceived more as nature-like (and less as human-made) by Economics than by Psychology students (Hp2).

Method

Participants. In total, 414 participants completed the questionnaire. After exclusion of 2 participants who refused data processing and 17 who failed the attention check, our final sample consisted in 395 participants, of which 244 women, 147 men and 4 non-binary people (M_{age} = 20.81, SD_{age} = 3.38). Of these, 56% were Psychology students (110 first-years, 34 third-years, 77 fourth-years) and 44% were Economics students (114 first-years and 60 third-years). Political orientation was skewed to the left (M = 37.37, SD 22.54, on a scale from 0 – *left* to 100 – *right*), in particular for Psychology students (M = 28.81, SD = 1.38) compared to Economics students (M = 48.24, SD = 20.33), $t(393) = -9.40$, $p < .001$, d = 0.95, 95% CI [0.74, 1.16].

Procedure. After agreeing to the consent form, participants indicated their field and year of study. First, they were asked whether they believed that the economy shifts as if it was guided by natural laws or if it is shaped by people, through four Likert-scale items (α = .59; e.g., "Economic oscillations and events happen as if they were guided by natural laws" on a scale from 1 – *Not at all* to 6 - *Absolutely*; due to low reliability, these items were not included in the analyses) and a bipolar item ("Some people believe that the economy shifts as if it was driven by natural laws, while others believe that it's shaped by people's choices and decisions. What's your stance?", 1 – *Natural laws* to 6 – *People*). They had the possibility to leave comments on this section through an open text box. The second section was dedicated to inequality, and participants were asked whether they believed that economic inequalities are natural and inevitable (1) or human-made (6), and that society functions better when there is perfect equality (1) or a certain amount of inequality (6). Moralization was assessed through two items (Spearman-Brown = .87; e.g., “Current economic disparity (of income, wealth, or goods) among population segments is immoral”; from 1 – *disagree* to 7 – *agree*) and so was moral outrage (Spearman-Brown = .80; e.g., “I am outraged by current economic disparity (of income, wealth, or goods) between segments of the population”; from 1 – *disagree* to 7 – *agree*), and again participants could leave comments through an open text box. At this point, participants were presented with the BCA on economic inequality (α = .90, from 1 – *surely not* to 7 – *surely*). Finally, participants were asked demographic information: gender, age, university course, political orientation (general, economic, and social; α = .89), and SSES; they were debriefed, and could leave comments about the study through an open text box.

Results

Given the difference in political orientation between the two groups of students, we first ran a 2 (field) x 2 (year[10]) ANOVA on political orientation. Main effects for field $F(1, 391) = 113.47$, $p < .001$, $\eta^2_p = .23$, and for year, $F(1, 391) = 12.88$, $p < .001$, $\eta^2_p = .03$, emerged, as well as their interaction, $F(1, 391) = 14.73$, $p < .001$, $\eta^2_p = .04$, indicating that while in general Psychology students were more left-oriented compared to Economics (first-years: $M = 46.63$, $SD = 17.65$; third/fourth-years: $M = 47.09$, $SD = 20.98$), this was particularly true for Psychology students in their third/fourth year (first-years: $M = 33.80$, $SD = 20.05$; third/fourth-years: $M = 19.82$, $SD = 14.24$). Therefore, political orientation was included as covariate in all of the following analyses.

To test our first hypothesis that perceiving the economy as human-driven would increase perceptions of inequality as human-made, which would increase moralization of inequality, which would increase moral outrage, and eventually collective action, we ran a mediation model by employing the PROCESS macro for SPSS (Hayes, 2018), with model #6

[10] Third- and fourth-year students were grouped into a single category.

and 10,000 bootstrap resamples. Results showed that our mediational pathway was significant, though the effects were very small (indirect effect: $B = 0.02$, BootLLCI = 0.002, BootULCI = 0.03). Indeed, the total effect of lay beliefs about the economy on collective action was non-significant, as shown in Figure 6.

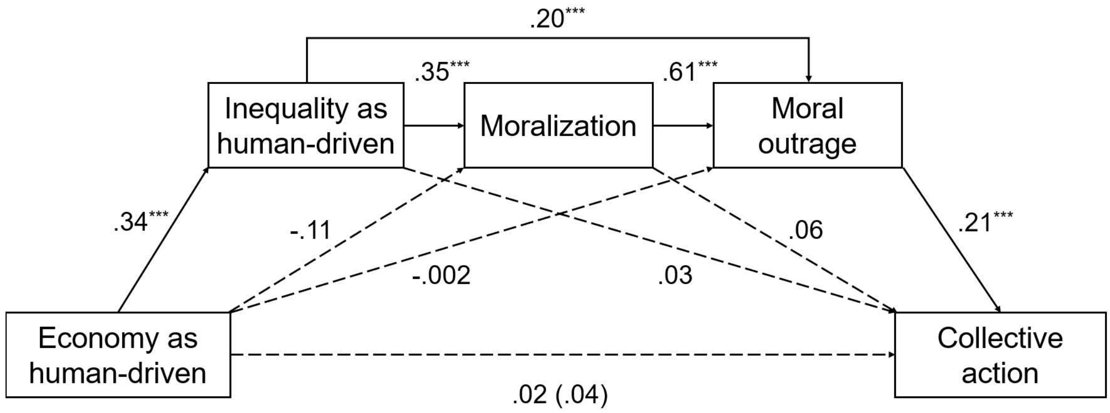

Figure 6. Mediation Model with Economy as Human-driven as Predictor (Study 1)

Therefore, a second model was at this point run with lay beliefs about inequality as main predictor (PROCESS model #6), again including political orientation as covariate. In this case, moralization and moral outrage mediated completely the link between perceiving inequality as a human-driven phenomenon and collective action (indirect effect: $B = 0.04$, BootLLCI = 0.02, BootULCI = 0.07), as shown in Figure 7.

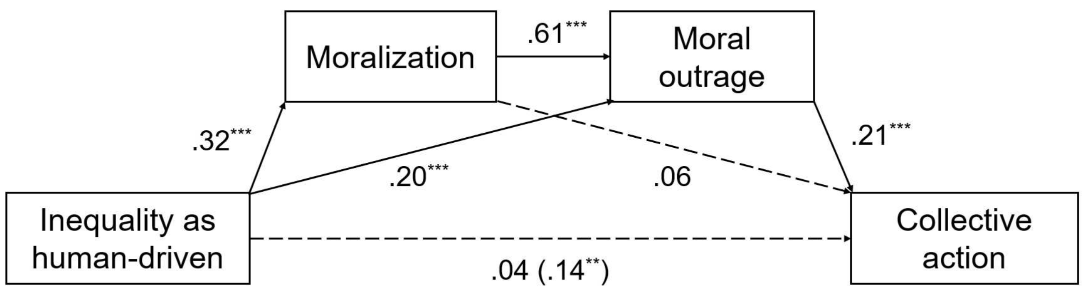

Figure 7. Mediation Model with Inequality as Human-driven as Predictor (Study 1)

To test our second hypothesis, 2 (field) x 2 (year) ANCOVAs with political orientation as covariate were run on all our main variables. No effects emerged on perceptions of economy as natural vs. human-driven (all *p*s > .451, η^2_ps < .01), though political orientation was a reliable predictor, $F(1, 390) = 16.77$, $p < .001$, $\eta^2_p = .04$, indicating that more right-oriented individuals perceived inequality as more natural-like and less human-driven. The same was true for perceptions of inequality as natural or human-made, as political orientation was the only reliable predictor, $F(1, 390) = 60.15$, $p < .001$, $\eta^2_p = .13$ (all other *p*s > .067, η^2_ps < .01). As for preferences for inequality (see Figure 8), a main effect of field emerged, $F(1, 390) = 20.09$, $p < .001$, $\eta^2_p = .05$, so that Economics students preferred greater inequality ($M = 3.75$, $SE = .09$) compared to Psychology students ($M = 3.20$, $SE = .07$).

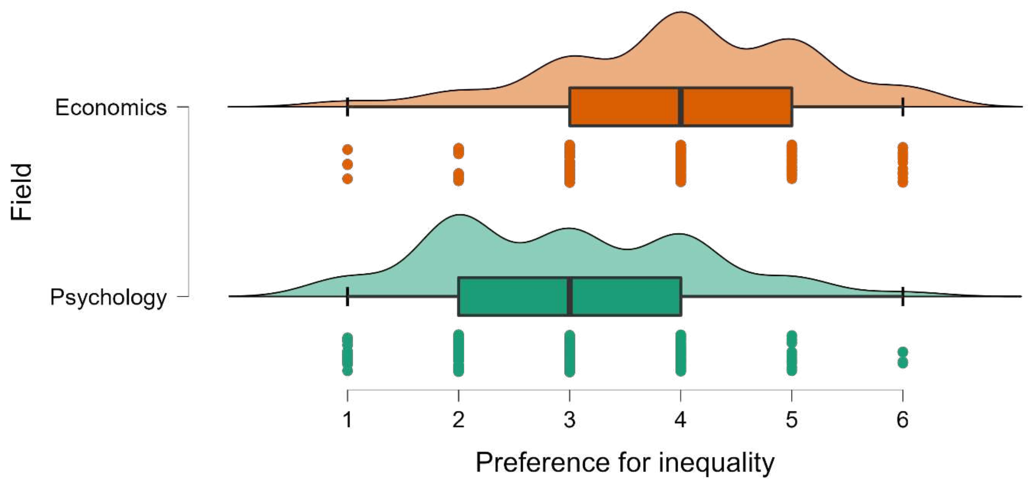

Figure 8. Distributions of Scores for Preference for Inequality by Field (Study 1)

The same pattern emerged for moralization and moral outrage (see Figure 9): Psychology students felt that inequality was more of a moral issue ($M = 5.05$, $SE = .10$) compared to Economics students ($M = 4.63$, $SE = .12$), $F(1, 390) = 6.68$, $p = .010$, $\eta^2_p = .02$, and they also experienced more outrage ($M = 4.76$, $SE = .10$) compared to Economics students ($M = 4.07$, $SE = .12$), $F(1, 390) = 18.20$, $p < .001$, $\eta^2_p = .05$.

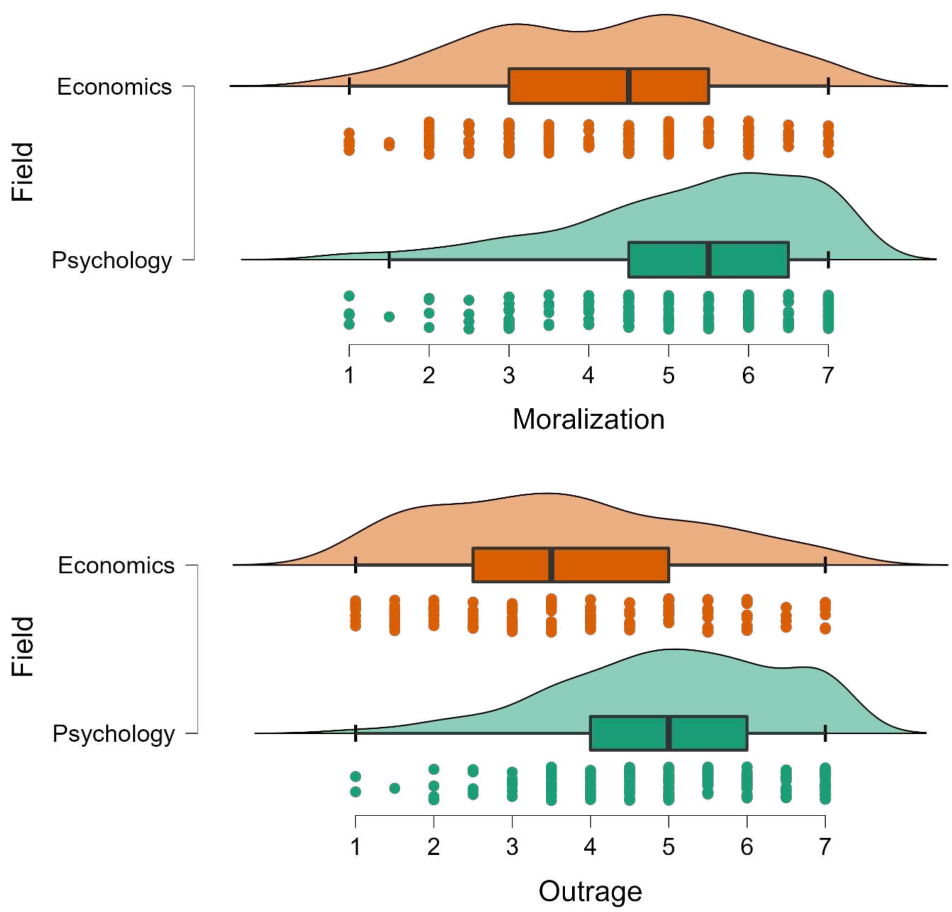

Figure 9. Distributions of Scores for Moralization and Outrage by Field (Study 1)

Finally, as stance on economic inequality was significantly associated with field, $\chi^2(1, N = 395) = 44.01$, $p < .001$ (Economics students were evenly distributed between the two stances whereas 82% of Psychology students believed that inequality is a problem for society), collective action scores were multiplied by -1 when the stance of the participant was against inequality, so that participants against inequality had negative scores in the collective action measure. Again the same pattern emerged (see Figure 10): a main effect of field, $F(1, 390) = 12.36$, $p < .001$, $\eta^2_p = .03$ indicated that Psychology students were more willing to engage in collective action ($M = -2.26$, $SE = .20$) compared to Economics students ($M = -1.10$, $SE = .24$).

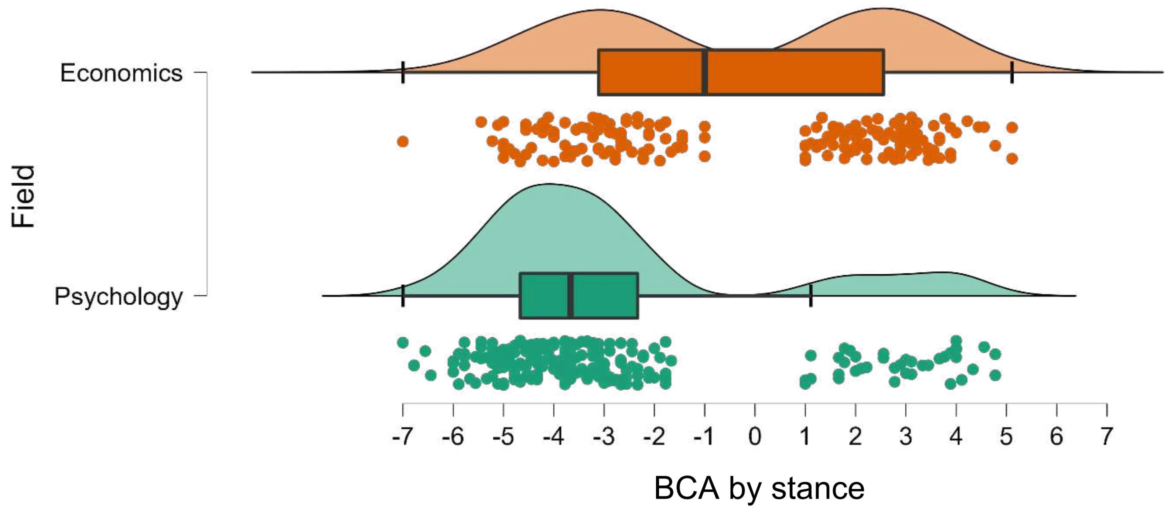

Figure 10. Distributions of Recoded BCA Scores by Field (Study 1)

The pattern was the same when using the original scale without considering the stance (see Figure 11): a main effect of field, $F(1, 390) = 15.49$, $p < .001$, $\eta^2_p = .04$ indicated that Psychology students were more willing to engage in collective action ($M = 3.59$, $SE = .08$) compared to Economics students ($M = 3.13$, $SE = .10$).

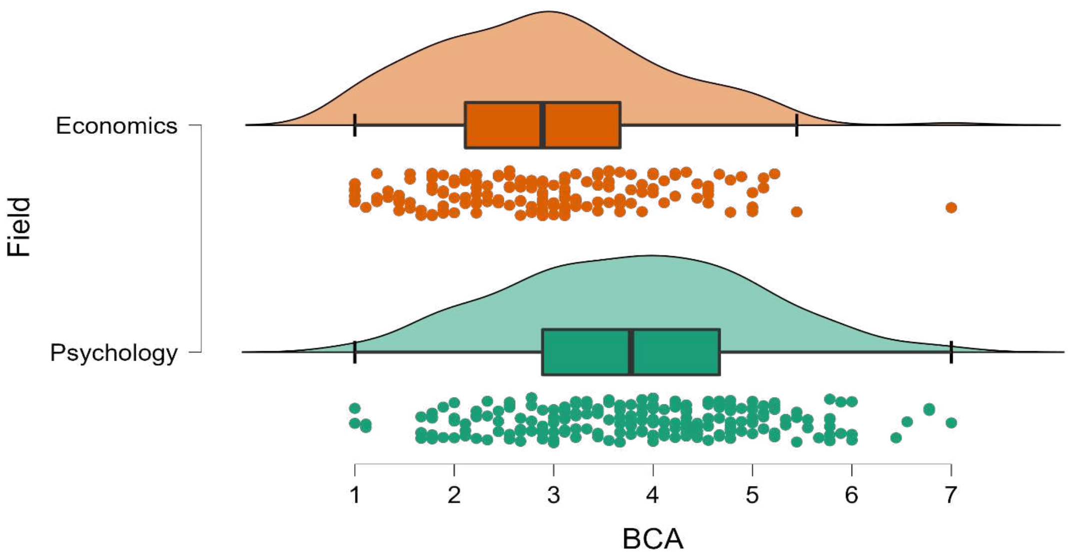

Figure 11. Distributions of BCA Scores by Field (Study 1)

As field predicted preferences for inequality, moralization, outrage, and collective action, we decided to test this path through a mediation model. The PROCESS macro for

SPSS (Hayes, 2018) was employed, with model #6 and 10,000 bootstrap resamples. Political orientation was included as a covariate. Results showed a full mediation of preference for inequality and moral outrage on collective action (indirect effect: B = -0.03, BootLLCI = -0.05, BootULCI = -0.01), as shown in Figure 12.

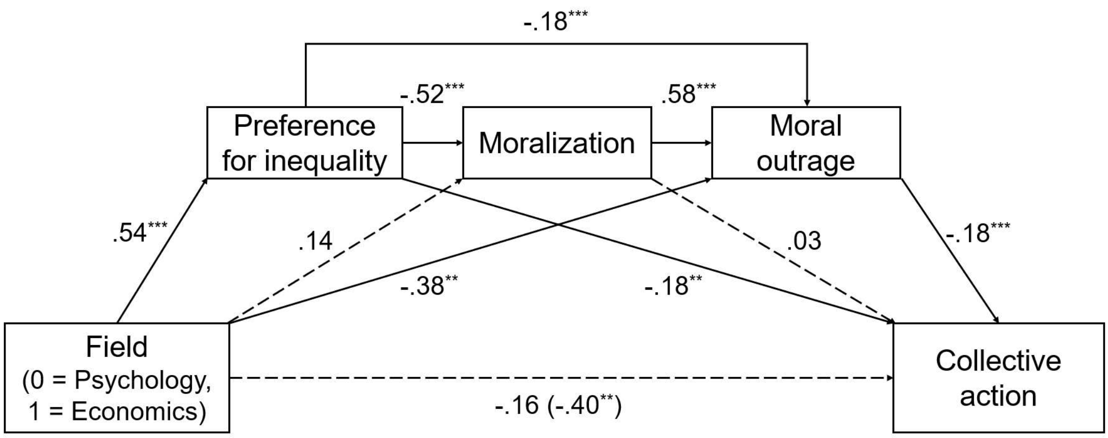

Figure 12. Mediation Model with Field as Predictor (Study 1)

Discussion

Study 1 provides indirect evidence for our main hypothesis, namely that attributing responsibility to individuals (i.e., perceiving an intentional agent) for economic inequalities would lead to greater moral outrage: the more participants perceived inequality as a phenomenon driven by individuals, rather than something natural and inevitable, the more they believed that inequality was immoral, the more outrage they felt, and, in turn, the more they were willing to engage in collective action. Contrary to our hypothesis, this was not predicted by lay-beliefs about the economy in general, though this may have been due to measurement issues: some participants commented in the economy section, but not the inequality section, that it was hard to differentiate between natural-like and human-driven as the two are not opposing concepts (e.g., humans are themselves part of nature and follow natural laws), while others interpreted our nature metaphor literally, referencing for example the influence of natural disasters on the economy.

Our second hypothesis was not confirmed, showing that field of study did not affect lay beliefs about the economy and inequality. Nevertheless, our study showed that Economics students preferred greater inequality compared to Psychology students, which reduced moralization, moral outrage and in turn collective action. This difference in inequality preferences, that went beyond differences in political orientation, may be interesting to explore in future studies as economists are the social scientists most present in institutions (such as the White House), and their attitudes on inequality may concretely impact policies, preventing the reduction of inequalities.

One limit of this study was undoubtedly the confound of political orientation with our study variables. In particular, Economics students were more conservative than Psychology students, which makes comparing these two samples inadequate to test our hypotheses. The evidence that political orientation predicts lay beliefs about economics and inequality, however, provides interesting inputs for future research: it may explain, in part, why right-wing people are generally less prone to engage in collective action aimed at reducing inequalities, or it may be linked to internal vs. external attributions for inequality by the left and the right.

Study 1 showed that the perception of a human driver to economic inequality increased the moralization of this issue, moral outrage, and collective action. We did not, however, distinguish between the "agent" dimension and the "intentionality" dimension, which was the focus of Study 2.

Study 2

Study 2 focused on conceptually separating the perception of an agent causing inequality from the perception that the agent is doing so intentionally, to test whether intentionality is necessary to evoke moralization of inequality. Additionally, there is also the alternative possibility of the agent increasing inequality unintentionally, while still being aware of doing so: as previously discussed, inequality may be a side-product of other actions undertaken by the agent, such as increasing their own profit.

The link between awareness and intentionality was deeply investigated by experimental philosophy and psychology. Interest in this distinction first emerged with a paper by Knobe (2003), showing that agents consciously causing negative side-effects were perceived as intentional even though the side-effect was not their objective in the first place; this was not the case when the side-effects were positive. Later studies (Cova et al., 2016; Cova & Naar, 2012) confirmed that moral evaluations can affect judgments of intentionality, based on the awareness of the agent, or in other words, intentionality and awareness coincide when the event is negative or immoral ('Kobe effect' or 'side-effect effect'). We can define then three degrees of responsibility attributed to the agent: first, an agent who is increasing inequality inadvertently, second, an agent who is increasing inequality unintentionally, but is aware that they are doing so, and lastly, an agent who is intentionally increasing inequality. Two alternatives, at this point, may be possible: that these levels may elicit increasing degrees of moralization and outrage, or that only intentionality may do so.

Therefore, in Study 2 we tested these two alternative outcomes through three separate items, aimed at assessing the three degrees of intentionality. The study is preregistered at https://aspredicted.org/PXZ_MXX.

Method

Participants. Sample size was determined through a Monte Carlo power analysis (Schoemann et al., 2017). The selected model was two serial mediators, with 10,000 replications, 20,000 Monte Carlo draws per replication, 95% confidence level, and 1234 as random seed. The simulation was based on partial correlations between inequality as human-driven, moralization, moral outrage, and BCA in Study 1, while controlling for political orientation. The power analysis indicated that between 268 and 274 participants were needed to detect our mediation with 90% power.

Italian participants were recruited through Prolific Academic and paid £0.88 for their participation in the study. After exclusion of 8 participants who failed at least one attention check, and 5 participants who encountered technical issues, our sample included 337 participants[11], of which 175 men, 153 women, and 9 non-binary people (M_{age} = 28.79, SD_{age} = 8.94). The sample was mainly left-wing oriented (M = 30.36, SD = 19.65, on a scale going from 0 – *left-wing* to 100 – *right-wing*), and 50% of our participants were students or working students.

Procedure and Variables. The study was developed on Qualtrics (https://www.qualtrics.com). After reading the consent form, participants were asked whether in general they believed that economic inequality in Italy is a positive or negative phenomenon ('inequality as positive', from 1 – *negative* to 6 – *positive*) and that economic inequality is natural or human-made ('inequality as human-driven', 1 – *natural* to 6 – *human-made*). Then, we assessed agent perception ("Economic disparity is a phenomenon caused or increased by specific people or groups of people", "It's specific people or groups of people that create or increase economic disparities"; Spearman-Brown = .86; from 1 – *disagree* to 7 – *agree*). Participants who answered positively to this question (n = 284) were redirected to an additional part of the questionnaire: first, they were asked to indicate which people or groups cause inequality through an open text box, then, we assessed perceptions of agent's awareness ("Do you think that in general, the majority of people or groups you just listed… are causing or increasing economic disparity consciously", "…know they are causing or increasing economic disparity"; Spearman-Brown = .85) and agent's intentionality ("… are

[11] Participants were oversampled to be certain that we would have at least 268-274 participants who answered the items on awareness and intentionality.

acting intentionally to cause or increase economic disparity", "… cause or increase economic disparity on purposes"; Spearman-Brown = .95). Answers were provided on a Likert-scale going from 1 – *none of them* to 7 – *all of them*. At this point, for all participants we assessed moralization of economic inequality (four items, e.g., "Economic disparity in Italy is immoral"; α = .83) and moral outrage (three items; e.g., "I am outraged by economic disparity in Italy"; α = .83), on Likert-scales going from 1 – *disagree* to 7 – *agree*. Then, participants were presented with the BCA scale (α = .89, going from 1 – *surely not* to 7 - *surely*), and finally with demographic items: gender, age, education, work status, political orientation (general, economic, and social; α = .90), and SSES. Participants were then debriefed and could leave comments through an open text box.

Results

Agent Perception, Awareness, and Intentionality. All correlations between study variables were significant (see Table 10).

Table 10. Correlations Between Study Variables.

	M (*SD*)	1	2	3	4	5	6	7	8	9
1. Inequality as human-driven	4.61 (1.12)	–								
2. Agent perception	5.22 (1.16)	$.48^{***}$	–							
3. Agent's awareness	5.79 (1.11)	$.14^{*}$	$.37^{***}$	–						
4. Agent's intentionality	5.01 (1.39)	$.23^{***}$	$.34^{***}$	$.62^{***}$	–					
5. Moralization	5.39 (1.20)	$.51^{***}$	$.48^{***}$	$.27^{***}$	$.33^{***}$	–				
6. Moral outrage	5.18 (1.28)	$.45^{***}$	$.41^{***}$	$.31^{***}$	$.35^{***}$	$.72^{***}$	–			
7. Collective action	3.35 (1.24)	$.25^{***}$	$.19^{***}$	$.19^{**}$	$.23^{***}$	$.31^{***}$	$.42^{***}$	–		
8. Inequality as positive	2.02 (1.01)	$-.46^{***}$	$-.34^{***}$	$-.15^{*}$	$-.24^{***}$	$-.62^{***}$	$-.58^{***}$	$-.40^{***}$	–	
9. Inequality as necessary	2.08 (1.13)	$-.47^{***}$	$-.41^{***}$	$-.18^{**}$	$-.21^{***}$	$-.67^{***}$	$-.66^{***}$	$-.39^{***}$	$.72^{***}$	–

Notes. N = 337 for correlations between all variables, with the exception of correlations including awareness and intentionality of the agent (n= 284) *** $p < .001$, ** $p < .01$, * $p < .05$

At this point, we ran mediation models following the procedure employed in Study 1. We ran mediation models on the PROCESS macro for SPSS (Hayes, 2018), with model #6, 10,000 bootstrap resamples, political orientation as covariate, moralization and moral outrage as sequential mediators, collective action as outcome, and (a) inequality as human-driven, (b) agent perception, (c) agent's awareness, and (d) agent's intentionality as alternative predictors. First, we confirmed results from Study 1, meaning that perceiving inequality as human-driven led to collective action through an increased moralization and moral outrage (indirect effect: $B = 0.11$, BootLLCI = 0.06, BootULCI = 0.17). The same was true for agent perception (indirect effect: $B = 0.11$, BootLLCI = 0.06, BootULCI = 0.16), agent's awareness (indirect effect: $B = 0.06$, BootLLCI = 0.03, BootULCI = 0.11), and agent's intentionality (indirect effect: $B = 0.06$, BootLLCI = 0.03, BootULCI = 0.10). The full mediation models are presented in Figure 13.

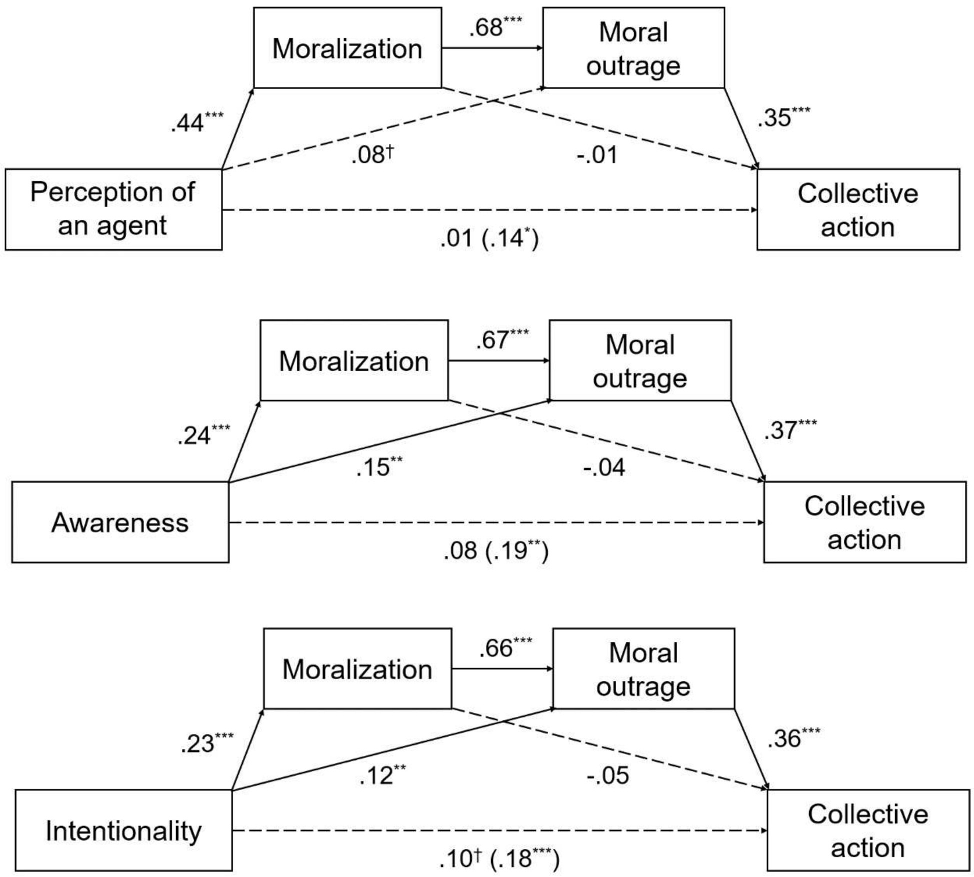

Figure 13. Mediation Models with Perception of an Agent, Awareness, and Intentionality as Predictors (Study 2).

At this point, to better explore the role of the different degrees of responsibility, we categorized participants based on their responses to our predictors. In particular, we distinguished between the 'no agent' group (participants who did not respond to the awareness and intentionality items, $n = 53$), the 'unaware agent' group (participants whose awareness scores were four or lower, $n = 32$), the 'aware but unintentional agent' group (participants with awareness scores greater than four, but intentionality scores lower than or equal to four, $n = 59$), and the 'intentional agent' group (participants who indicated awareness and intentionality scores greater than four, $n = 193$). Independent-samples ANOVAs showed that degree of responsibility predicted moralization, $F(3, 333) = 23.79$, $p < .001$, $\eta^2_p = .18$, moral outrage, $F(3, 333) = 20.95$, $p < .001$, $\eta^2_p = .16$, and collective action, $F(3, 333) = 6.46$, $p < .001$, $\eta^2_p = .06$, see Table 11.

Table 11. Means and Standard Deviations of Dependent Variables, by Degree of Responsibility.

Degree of responsibility	**Moralization**	**Moral outrage**	**Collective action**
No agent	4.38^a (1.38)	4.24^a (1.37)	2.94^a (1.26)
Unaware agent	5.07^b (0.99)	$4.72^{a,b}$ (1.38)	2.93^a (1.18)
Aware and unintentional agent	5.35^b (1.00)	5.03^b (1.06)	$3.16^{a,b}$ (0.98)
Intentional agent	5.75^c (1.01)	5.57^c (1.09)	3.59^b (1.24)

Note. Standard deviations are in brackets. Means sharing the same letter within the same column are not significantly different ($p > .05$) from each other, based on post-hoc comparisons with Games-Howell (moralization and moral outrage) and Tukey (collective action) corrections.

The Identity of Agents: Open Text Boxes. Though it was not preregistered, given the richness of the qualitative data provided to us by the open text boxes on which groups are causing inequality, we decided to analyse the responses that participants gave to this question.

Two coders, blind to the hypotheses, coded the 284 responses to the open text boxes. Coders were instructed to classify responses in the categories (1) political class, (2) rich people, and (3) entrepreneurs[12], and to add any categories they saw fit. Additional categories that emerged in both codifications were (4) multinational corporations, (5) tax evaders, (6) mafia, (7) banks and financial groups, (8) people working in the entertainment industry (which included show business and sports), (9) the poor class, and (10) lobbies. Finally, only one of the coders also included (11) employers, (12) pharmaceutical companies, (13) elites and people in power, (14) legislators, (15) everyone, (16) the free enterprise system, (17) teachers and the school system, and (18) heirs/heiresses. Then, the following procedure was applied to solve disagreements: first, we checked whether the disagreement was caused by

[12] An analysis of frequency for stemmed words run through LIWC indicated these three as the most frequently mentioned categories.

consistent classification into other categories: in that case, the two categories were combined (e.g., one coder distinguished between people in power and the political class, while the other did not: the two categories were thus combined). Then, for remaining disagreements, I selected which codification to retain. See the Appendix for more details.

Results confirmed that the most frequent social groups that participants mentioned were the political class (62%), wealthy people (41%), and entrepreneurs/multinational companies (34%). To test whether the groups identified as agents predicted our dependent variables, we ran independent samples t-tests comparing those who did, and those who did not, mention each of these categories. Interestingly, those who identified the rich as agents were more left-wing ($M = 23.06$, $SD = 16.64$) compared to those who did not ($M = 33.33$, $SD = 20.09$), $t(281) = 4.69$, $p < .001$, $d = 0.55$, and they moralized the issue more ($M = 5.75$, $SD = 0.88$) than those who did not ($M = 5.47$, $SD = 1.12$), $t(281) = -2.37$, $p = .018$, $d = -0.27$, though the effect was small. Identifying either the political class or the entrepreneurial world as agents (vs. not) did not predict any of our dependent variables, nor there was any difference between participants in these two groups. Furthermore, the number of agents that was identified did not correlate with the study variables (rs < |.09|, ps > .113), with the exception of agent's awareness, $r(283) = .15$, $p = .010$, for which the correlation was small.

The Role of Attitudes Towards Inequality. To rule out the possibility that our results were driven by attitudes towards inequality, and to test whether the model remained significant for participants regardless of such attitudes, we ran the same mediation models described above, this time including attitudes towards inequality as a potential moderator. Specifically, we tested whether attitudes moderated the link between the predictor and collective action, and between the predictor and moralization. First, attitudes towards inequality scores were obtained by calculating the mean between the 'inequality as positive' and 'inequality as necessary' ratings (Spearman-Brown = .84). Then, we ran mediation models on the PROCESS macro for SPSS (Hayes, 2018), with 10,000 bootstrap resamples and political orientation as covariate, this time using model #86.

When inequality as human-driven was the predictor, the moderated mediation was not significant (index = -.01, BootLLCI = -.03, BootULCI = .02), showing that the mediational path was significant at all levels of the moderator. The same was true when perception of an agent was the predictor (index = -.01, BootLLCI = -.03, BootULCI = .01).

Interestingly, the pattern changed when agent's awareness was the predictor: in this case the moderated mediation was significant, though small (index = -.03, BootLLCI = -.06, BootULCI = -.001). Specifically, the mediational path was significant when attitudes towards inequality were very negative (1SD below the mean = 1.06; indirect effect = .06, BootLLCI = .02, BootULCI = .11), and when attitudes were less negative (M = 2.04; indirect effect = 0.04, BootLLCI = 0.01, BootULCI = 0.07), but it stopped being significant when attitudes were neutral or positive (1SD above the mean = 3.02; indirect effect = 0.01, BootLLCI = -0.02, BootULCI = 0.05). Additionally, the interaction between agent's awareness and attitudes towards inequality predicted moralization, but not collective action (as shown in Figure 14). Put together, these results indicate that attributing awareness to the agent led to moralizing inequality only when inequality was perceived as harmful, thus generating the mediational chain that leads to collective action.

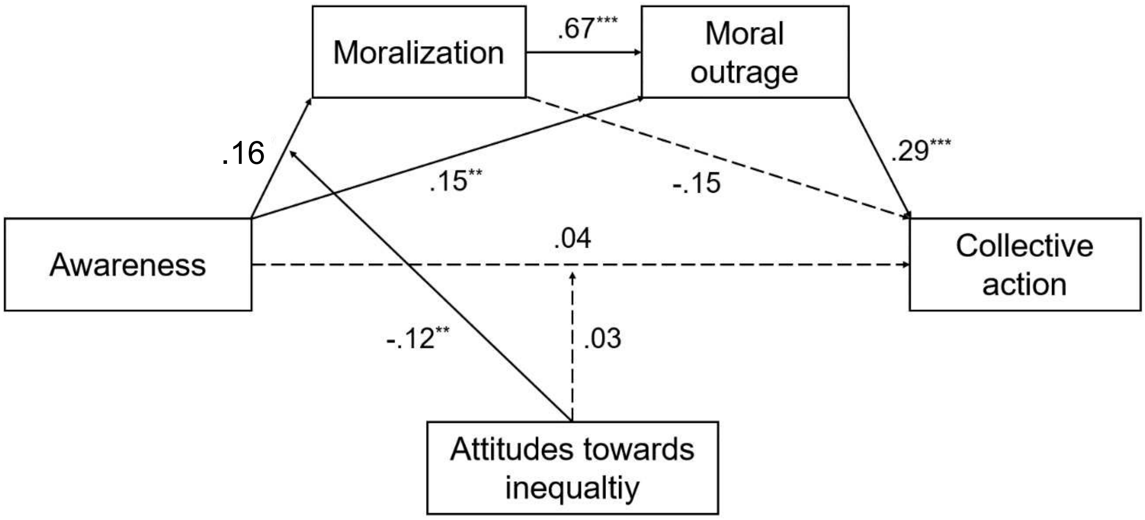

Figure 14. Moderated Mediation Model with Awareness as Predictor and Attitudes Towards Inequality as Moderator (Study 2).

As for agent's intentionality, while the moderated mediation itself was not significant (index = -0.02, BootLLCI = -0.04, BootULCI = 0.01), the pattern was the same as the one described above for agent's awareness: the mediational path was significant when attitudes towards inequality were very negative (1SD below the mean; indirect effect = 0.05, BootLLCI = 0.02, BootULCI = 0.10), and weaker, but still significant, when attitudes were less negative (mean; indirect effect = 0.04, BootLLCI = 0.01, BootULCI = 0.08), but it stopped being significant when attitudes were neutral/positive (1SD above the mean; indirect effect = 0.02, BootLLCI = -0.002, BootULCI = 0.07).

Discussion

Study 2 confirms our hypothesis and results of Study 1, showing that moralization and moral outrage fully mediate the relation between the perception of an agent causing economic inequality and collective action. Furthermore, the qualitative data provided by participants showed that the group identified as responsible for inequality did not affect our variables: therefore, it appears that who is causing inequality is actually irrelevant, and what matters instead is there is an intentional agent in the first place.

Interestingly, for participants who indicated that inequality was negative, the correlation between perception of awareness and perception of intentionality was much stronger, $r(267) = .64$, compared to participants who indicated that inequality was positive, $r(18) = .27$. While no conclusions can be drawn given the small number of the latter participants, from a descriptive point of view our data is consistent with the Knobe effect (Knobe, 2003), namely that intentionality is attributed more strongly to aware agents for immoral, rather than moral acts. Naturally, the first two studies presented the limit of a correlational design, which does not allow us to make inferences on the causal relation between our variables: while, according to the Theory of Dyadic Morality, greater attribution of responsibility should lead to greater perceptions of immorality, it is equally plausible that perceiving an act to be immoral may lead to attribute greater responsibility and blame to the agent. To solve this issue, in Study 3 we employed an experimental design.

Study 3

Study 3 aimed at testing our hypotheses through an experimental design, in which participants were presented Bimboola (Jetten et al., 2015), a fictitious society[13] where inequality was either part of society and not caused by anyone, or actively caused by individuals. We predicted that in the latter case, participants would moralize inequality more, experience more moral outrage, and be more willing to engage in collective action. This study was preregistered at: https://aspredicted.org/BZ6_XMK.

Pilot Studies

To develop our experimental manipulation, we ran four pilot studies.

Pilot Studies 1 and 2. In the first two pilot studies (available on OSF), participants (N = 90 Italian Prolific workers in each study) were either given no information about the cause

[13] As the previous two studies showed that most participants believed that inequality is caused by intentional agents, we wanted to avoid any reactance in the "no agent" condition, therefore we set the study in a hypothetical – rather than our – society.

of inequality (control condition), told that inequality in Bimboola did not have a real cause and was simply a natural part of society (‘no agent’ condition), or that inequality was purposefully caused by specific groups (‘intentional agent’ condition). Results however showed that in the control condition the perception that inequality was intentionally caused by individuals did not differ from the ‘intentional agents’ condition, whereas in the ‘no agents’ condition (compared to ‘intentional agents’ condition) participants were even more convinced that inequality in Bimboola was intentionally caused by individuals. We attributed this result to reactance by participants: either to the idea that inequality has no cause (in other words, to the possibility of chance), or to the idea that inequality is not caused by people on purpose (especially given that most participants were left-wing).

Pilot Study 3. To disambiguate this, in the third pilot study ($N = 90$) we employed a US sample balanced for party affiliation (as Prolific Academic does not allow screening for political orientation in Italian samples), and we compared the ‘intentional agent’ condition to a ‘no agent’ condition (in which inequality is caused by the interaction of multiple factors, so that no single cause can be defined) on the one side, and to a ‘inherent characteristics’ condition (in which inequality is caused by innate individual characteristics and thus out of anyone’s control) on the other. Results showed that while the differences between the ‘intentional agent’ and the ‘inherent characteristics’ conditions were in the predicted direction, the ‘no agent’ condition was for the most part not different from the other two. This may support the possibility of reactance to the ‘no agent’ condition (i.e., to the lack of a clear cause), but it may also be that by mentioning multiple causes, the manipulation may have evoked human involvement and responsibility, which is consistent with the fact that participants in this condition blamed all parties – except for the poor – in similar measure, and blamed society more compared to the other two conditions.

Pilot Study 4. Therefore, we ran a final pilot study in which the 'no agent' condition described inequality as caused by the interaction of available natural resources and luck.

Participants. Participants in this study were 90 US Prolific workers, evenly split by party affiliation (Democrat or Republican). Workers were paid £0.45 for participation in the study. The sample included 58 women, 31 men, and one non-binary person, from 18 to 76 years old (M = 38.28, SD = 14.90). Most participants (86%) were White, followed by 8% Black or African American participants, 9% Asian participants, and 2% Native American or Alaskan. Additionally, 12% of participants was Hispanic or Latino. The majority (63%) of participants was employed or self-employed.

Procedure. After agreeing to the consent form and indicating their Prolific ID, participants were asked demographic information: gender, age, race, ethnicity, work status, political orientation, and income. Then, participants were randomized into one of three experimental conditions (no agent vs. inherent characteristics vs. intentional agent). In all conditions, participants were told that for the duration of the study, they were going to become part of a fictitious society called Bimboola, which is an extremely unequal society. Participants were told that in general, inequality can be caused by different factors: (a) by natural elements such as natural resources or natural disasters ('no agent' condition); (b) by the fact that being rich requires a special aptitude that goes beyond effort and can't be learned ('inherent characteristics' condition), or (c) by the fact that there are specific groups of people who are increasing the gap on purpose ('intentional agents' condition). While all participants were shown these three explanations, the one related to the experimental manipulation was always presented last, and was followed by an additional text:

No agent	When people first settled Bimboola, some people by chance ended up living in areas **with abundant natural resources** while others in areas which instead are instead often **struck by natural disasters**, and that initial bad or good luck has caused some people to be extremely rich and some to be extremely poor to this day, **without anyone being responsible for it.**
Inherent characteristics	In Bimboola, usually rich people are **more brilliant, innately intelligent, and have more talent** compared to poor people, and the result is that some people are extremely rich, and some people are extremely poor, **without anyone being responsible for it.**
Intentional agent	Politicians, the rich, and the ruling/manager class of Bimboola, who have great influence and power, **promote laws and manage society so that** some people are extremely rich and some people are extremely poor.

After reading the text, participants were asked to indicate which was the cause of inequality in Bimboola among the three possibilities and were not allowed to go forward with the questionnaire until they selected the right response; then, participants were shown the income distribution in Bimboola and examples of the house, vehicles, and holidays that people from each income group can afford. At this point, we assessed moralization of inequality ("Would you say that in general, inequality in Bimboola is morally right or wrong?", on a scale from 1 – *Absolutely right* to 7 – *Absolutely wrong*), moral outrage ("Some people feel anger and outrage for the moral implications of economic inequality, others don't. How do you feel about economic inequality in Bimboola?" on a scale from 1 – *Not angry at all* to 7 – *Extremely angry*), collective action ("As a citizen of Bimboola, would you take action to reduce inequalities in Bimboola?", from 1 – *Definitely not* to 7 – *Definitely yes*), and responsibility attributed to the elites, rich people, poor people, the whole society, and chance ("Given what you know about the causes of inequality in Bimboola, how much do you think each of these groups is responsible for causing inequality in Bimboola?", from 1 – *Not at all responsible* to 7 – *Fully responsible*). Finally, participants were debriefed and could leave comments about the study through an open text box.

Results and Discussion. Results (Table 12) were in line with our predictions. In the 'intentional agent' condition, more responsibility was attributed to the elites and the rich, and less to chance. Consistently, participants moralized inequality more and felt greater moral outrage; the differences for collective action were not significant, but still in the expected direction. As for the 'no agent' and the 'inherent characteristics' conditions, no differences emerged. Nevertheless, the 'no agent' condition proved to be a better comparison term for the 'intentional agent' condition than the 'inherent characteristics' condition: first, because effects on responsibility attributed to the elites, the rich, and chance were stronger; second, because in the 'inherent characteristics' condition greater responsibility was attributed also to the poor and to society as a whole, which wasn't in our objectives.

Table 12. Means, Standard Deviations, and Comparisons Between Conditions of Pilot Study 4.

	No agent	Inher. char.	Intent. agent	Difference no agent - intentional		Difference inherent - intentional		Difference no agent - inherent	
	M (SD)	*M (SD)*	*M (SD)*	*t*	*d*	*t*	*d*	*t*	*d*
Moralization	4.48 (1.64)	4.41 (1.59)	5.97 (1.18)	-4.10^{***}	-1.05	-4.36^{***}	-1.12	0.16	0.04
Moral outrage	4.21 (1.76)	4.14 (1.83)	5.84 (1.14)	-4.26^{***}	-1.12	-4.32^{***}	-1.13	0.15	0.04
Collective action	4.97 (1.99)	4.86 (2.00)	5.72 (1.25)	$-1.75^{\dagger}$	-0.46	$-1.99^{\dagger}$	-0.52	0.20	0.05
Responsibility									
Elites	3.72 (2.17)	4.17 (2.14)	6.38 (0.91)	-6.11^{***}	-1.62	-5.14^{***}	-1.37	-0.79	-0.21
Rich	3.76 (2.12)	4.38 (2.06)	6.19 (1.18)	-5.47^{***}	-1.44	-4.15^{***}	-1.09	-1.13	-0.30
Poor	2.14 (1.48)	2.66 (1.59)	1.59 (0.67)	$1.82^{\dagger}$	0.48	3.35^{**}	0.89	-1.28	-0.34
Society	4.31 (1.89)	4.69 (1.97)	3.78 (1.50)	1.22	0.31	2.04^{*}	0.52	-0.75	-0.20
Chance	5.52 (1.33)	4.76 (1.68)	2.91 (1.61)	6.86^{***}	1.76	4.39^{***}	1.13	$1.91^{\dagger}$	0.50

Notes. Inher. char. = inherent characteristics. Intent. agent = intentional agent. $^{***}p < .001$, $^{**}p < .01$, $^{*}p < .05$, † p < .10

Therefore, in Study 3 we only compared the 'no agent' condition to the 'intentional agent' condition, using the same manipulation as Pilot Study 4.

Method

Participants. Participants in this study were 246 US Prolific workers, evenly split by party affiliation (Democrat or Republican). Workers were paid £1.05 for participation in the study. After exclusion of three participants who failed at least one attention check, the sample included 138 women, 99 men, and 6 non-binary people, from 19 to 83 years old (M = 40.98, SD = 14.39). Most participants (90%) were White, followed by 6% Black or African American participants, 6% Asian participants, and 6% Native American or Alaskan. Additionally, 13% of participants was Hispanic or Latino. The majority (62%) of participants was employed or self-employed.

Procedure. The study was developed on Qualtrics (https://www.qualtrics.com). After agreeing to the consent form, participants were asked demographic information: gender, age, race, ethnicity, education level, work status, political orientation (from 1 – *Very liberal* to 7 – *Very conservative*) and yearly household gross income. At this point, participants were presented with one of two experimental conditions (no agent vs. intentional agent), following the same procedure as Pilot Study 4. After reading the text, participants were asked to indicate which was the cause of inequality in Bimboola among the three possibilities and were not allowed to go forward with the questionnaire until they selected the right response. Then, participants were presented with an adapted version[14] of the high inequality condition of the Bimboola paradigm (Jetten et al., 2015). Participants were first told that in Bimboola there are three income groups, that they had been assigned to income group 2, and that to start their life in Bimboola they had to acquire daily necessities. Participants were then asked to select a house, a means of transport, and a vacation package among 9 possible options

[14] We changed the income levels to 500,000 BD/Year (group 1), 40,000 BD/Year (group 2) and 3,000 BD/Year (group 3), as some participants in the first pilot study commented that the original income levels could not justify such a different quality of life. We also specified that participants were being assigned to an income level based on their previous responses to the questionnaire, rather than at random, as some participants indicated the cause of inequality to be “random assignment” in the first pilot study.

(three for group 1, three for group 2, and three for group 3), keeping in mind to select only among those they could afford. After this task, participants were asked to indicate what group they had been assigned to, how wealthy or poor they perceived their group to be (on a scale from 1 – *Very poor* to 9 – *Very wealthy*), and how unequal they perceived Bimboola to be ("Income differences in Bimboola are small", "Income differences in Bimboola are large", on a scale from 1 – *Totally disagree* to 7 – *Totally agree*).

After the Bimboola task, we assessed moralization of inequality (four items; "Economic inequality in Bimboola… is immoral"; α = .85) and moral outrage (four items; "… outrages me"; α = .91), to which participants responded on 7-point Likert scales (from 1 – *Not at all* to 7 – *Extremely*), and collective action through the BCA scale (α = .92; answers going from 1 – *Definitely not* to 7 – *Definitely yes*). After our dependent variables, we asked participants how much responsibility for causing inequality they attributed to (a) the elites, (b) rich people, (c) poor people, (d) the whole society, and (e) chance (from 1 – *Not at all responsible* to 7 – *Fully responsible*). Finally, participants were debriefed and could leave comments about the study through an open textbox.

Results and Discussion

Analyses were run after exclusion of 7 participants who took too long to complete the questionnaire (i.e., were extreme outliers on completion times using the Inter-Quartile Range method of outlier detection; Ghasemi & Zahediasl, 2012). First, we ran independent-samples t-tests to assess differences between the two conditions on our variables (see Table 13). The manipulation worked as expected: in the 'intentional agents' condition, participants blamed the elites and the rich more, and chance less; there was no difference in responsibility attributed to the poor or to society as a whole.

As predicted, participants who learned that inequality in Bimboola is caused by intentional agents moralized inequality more and felt greater outrage; however, they were not more willing to engage in collective action.

Table 13. Means, Standard Deviations, and Comparisons Between Conditions of Study 3.

	No agent *M (SD)*	Intent. agent *M (SD)*	*t*	Cohen's *d* [95% CI]
Moralization	5.00 (1.57)	5.89 (1.27)	-4.74***	-0.62 [-0.88, -0.35]
Moral outrage	4.85 (1.65)	5.30 (1.60)	-2.13*	-0.28 [-0.53, -0.02]
Collective action	3.44 (1.53)	3.56 (1.40)	-0.61	-0.08 [-0.34, 0.18]
Responsibility				
Elites	3.94 (2.21)	6.22 (1.29)	-9.71***	-1.26 [-1.54, -0.98]
Rich	3.83 (2.22)	6.05 (1.28)	-9.44***	-1.22 [-1.50, -0.94]
Poor	1.71 (1.05)	1.69 (1.10)	0.10	0.01 [-0.24, 0.27]
Society	3.86 (2.02)	3.69 (1.73)	0.67	0.09 [-0.17, 0.34]
Chance	5.34 (1.83)	2.61 (1.58)	12.26***	1.60 [1.30, 1.89]
Manipulation checks				
Status of own group	4.74 (0.74)	4.71 (0.72)	0.32	0.04 [-0.22, 0.30]
Perceived inequality	6.71 (0.70)	6.70 (0.79)	0.14	0.02 [-0.24, 0.27]

Notes. Intent. agent = intentional agent. *** $p < .001$, * $p < .05$

At this point, we ran a mediation model following the procedure employed in the previous studies, using the PROCESS macro for SPSS (Hayes, 2018), with model #6, 10,000 bootstrap resamples, political orientation as covariate, condition as predictor, moralization and moral outrage as sequential mediators, and collective action as outcome. Again, we confirmed results from the previous studies (see Figure 15): knowing that inequality is intentionally caused by specific people and groups led to collective action through an increased moralization and moral outrage (indirect effect: B = 0.30, BootLLCI = 0.17, BootULCI = 0.46).

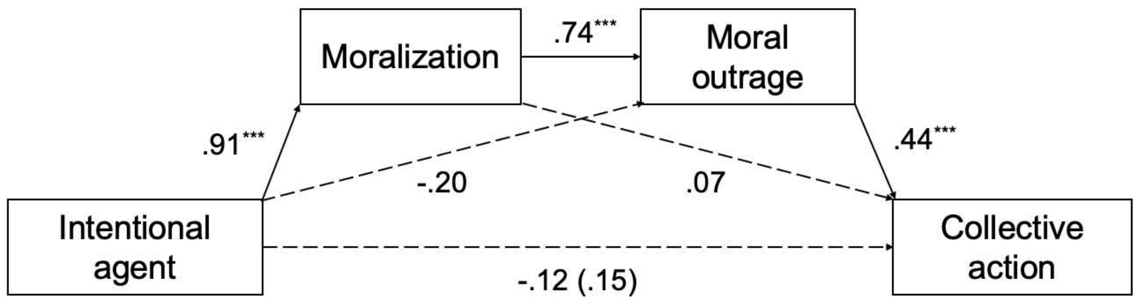

Figure 15. Mediation Model with Intentional Agent as Predictor (Study 3).

Discussion

Study 3 confirms the correlational evidence of previous studies through an experimental design. The knowledge that economic inequality is caused by intentional agents led people to believe that economic inequality is a moral issue, and evoked outrage. Even though we did not find direct effects of the condition on collective action, possibly due to the fact that it was the furthest variable from the manipulation, moralization of inequality had then a cascading effect on collective action as indicated by the mediational model, consistent with the literature linking moral violations to collective action intentions (Pauls et al., 2022; van Zomeren et al., 2012).

Conclusion

Across two correlational and one experimental study, we show that reasoning about inequality as intentionally human-driven led to its appraisal as a moral violation. This, in turn, had a cascading effect on emotional reactions and behavioural intentions, so that identifying inequality as a moral violation evoked moral outrage about this issue, and a willingness to rectify the violation through collective action.

To avoid ideologies about existing inequalities affecting our results, our experimental study was run in a hypothetical setting. Future studies may however employ real-life examples of inequality affected by chance vs. human action, to assess whether moral concerns are elicited in a realistic context, and whether they can work in concert with, or potentially trump, existing ideologies about inequality. Additionally, one might argue that counterfactual thinking, rather than moralization, is driving our effects: the notion that inequality is caused by intentional agents may make counterfactuals (i.e., the idea that things could have gone differently) more accessible, which in turn could increase collective action intentions (Milesi & Catellani, 2011). Future studies should investigate this hypothesis empirically, for example by comparing inequality as caused by either a deterministic, specific, non human-driven cause (e.g., accessibility of natural resources), by random luck (e.g., the toss of a coin), or by intentional agents. Compared to the non-human cause, both random luck and intentional agents should increase the accessibility of counterfactuals; however, only intentional agents should increase moral outrage. Finally, from a theoretical perspective, these studies provide evidence in support of the Theory of Dyadic Morality. For the purposes of this dissertation, we only investigated one side of the dyad; future studies may empirically test the theory in its entirety, and test whether indeed the moralization of economic inequality can be conceived through a hydraulic model in which for example the more agency is attributed to the patients of inequality, the less experience is attributed to them and consequently the less inequality is moralized. Finally, it is interesting to note that based on the results of Study 2 and the first pilot studies of Study 3, it appears that most individuals in our samples generally *do* believe that economic inequality is being caused by intentional agents. This finding was particularly surprising for us, and completely opposite to the intuition with which this line of research was started: namely, the idea that individuals do not engage against inequality because they do not see inequality as being caused by human intervention, thus not triggering the moralization process. While this does not take away from the evidence provided for the model and the theoretical contribution of this work, it may elicit doubts about its applied relevance – if people already moralize inequality, then moralization should not be a key process in mobilizing individuals. We argue, however, that it may be the case that once individuals reason about the causes of inequality, then they attribute it to human action, but that individuals generally *do not* think about inequality through causal reasoning. Therefore, the obstacle to the moralization process may lie even further up in the chain, namely in the lack of reflecting about why inequality exists. This hypothesis may be easily and effectively tested by manipulating the order in which our dependent variables and the causes of inequality are assessed. If, as we suspect, asking about what causes inequality after our dependent variables does not affect attribution of responsibility but it does affect moralization, outrage, and collective action, this would show that priming causal reasoning may be the primary driver that triggers this downstream process.

To conclude, possibly the most interesting contribution of this research is that what matters more to trigger this process of moralization, and consequently outrage and collective action, is the perception that an agent is there – rather than who that agent is and how responsible they are for causing inequality. Therefore, simply reasoning about what is causing economic inequality could function as an intervention to mobilize individuals against this global issue: an approach recently adopted by activist organizations for mobilizing individuals and institutions against the climate crisis (Berkhout et al., 2021; Dabi et al., 2022).

General Discussion

This dissertation aimed to address the so far under-researched role of moral reasoning in the psychological construal of economic inequality. In particular, I intended to answer the question whether perceiving economic inequality as a moral violation would evoke moral outrage in individuals and, as a consequence, increase collective action intentions. To answer this question, I relied on two prominent moral theories: Moral Foundation Theory and the Theory of Dyadic Morality. As for the former, framing economic inequality through values congruent to one's ideology (i.e., binding and individualizing moral foundations) did not influence moralization of inequality and, consistently, neither moral outrage nor collective action. Even when simultaneously framing social change as something that is less threatening to one's individual values, the moral frame did not have an effect overall. Nevertheless, moralizing inequality was positively related to collective action, and this effect was mediated by moral outrage, as predicted. As for the latter theory, we had greater success. Three studies (two correlational and one experimental) confirmed the hypothesis that believing that inequality is human-driven and intentionally caused by specific individuals or groups led individuals to moralize economic inequality, which in turn triggered a cascading effect on moral outrage and collective action. Furthermore, our qualitative data suggest that it is not the nature of the agent, but rather its very existence, that triggers the moralization process.

Thus, overall, our hypothesis that moralizing economic inequality would lead to collective action through increased moral outrage was supported. However, while our model is strongly theory-driven and supported by consistent experimental evidence in the literature, the cross-sectional nature of the research puts into question the directionality of the links between our variables: we cannot be certain of the causality of these relations, and we cannot exclude alternative possibilities (Fiedler et al., 2018; Spencer et al., 2005). For example, we have conceptualized moral outrage as the emotional reaction to moral violations. However, some studies suggest that perceptions of norm violations are an outcome, rather than a driver, of anger (Gutierrez & Giner-Sorolla, 2007, 2011): under cognitive load the tendency to perceive disgusting violations as symbolically harmful disappears, even though anger is still present; the authors argue that perceptions of harm in harmless scenarios are merely post-hoc rationalizations of that immediate emotional reaction. Morality and anger may then be part of a self-reinforcing cycle: an event is instinctively perceived as right vs. wrong, which triggers anger, which then compels a justification for that initial judgment, somewhat in line with the social intuitionist model of moral judgment (Haidt, 2001). Therefore, it would be extremely interesting to apply the social intuitionist lens to our work on the perception of intentional agents, and test whether moralization is present even under cognitive load. If that was indeed the case, this would support the notion that moralization is the initial, immediate assessment of right vs. wrong, and that any sort of values through which that intuition is interpreted (and upon which the debate between monism and pluralism is based) are merely post-hoc justifications.

Inequality and Morality: Future Directions

As few studies have investigated inequality as a moral concern beyond fairness, there are several directions that could be taken to explore the role of moral reasoning, starting from an individualized and subjective approach to morality. For example, although it was not of interest for the present dissertation, future lines of research could investigate whether appraising economic inequality as a moral violation can also trigger moral cleansing (i.e., engaging in compensatory behaviours to protect one's moral self-image; Tetlock et al., 2000). If economic inequality elicited the need for cleansing, it would then become theoretically relevant to investigate the moderators that determine whether individuals react to inequality with moral cleansing or with moral outrage. For example, moral cleansing is particularly relevant for own transgressions; therefore, when applied to economic inequality, the need to protect one's image should manifest primarily in people who believe they are responsible for inequality, such as rich people high in wealth guilt. When considering rich individuals who mobilize against economic inequality, morality emerges as a theme in their narrations about their wealth and privilege: they describe their wealth as immoral and associate it to disgust and dirtiness (Scully et al., 2018), consistent with the metaphorical representation of immorality as dirtiness that is typical in moral cleansing. From an applied perspective, instead, it would be important to assess what implications these two paths have for the containment of inequalities. Differently from moral outrage, that manifests as anger and desire to punish, moral cleansing can manifest in three potential ways (for a review, see West & Zhong, 2015): (a) *restitution cleansing*, that is correcting the violation through behaviors pertaining to the same domain (e.g., donating more money to Black people after being accused of racism; Dutton & Lake, 1973); (b) *behavioral cleansing*[15], that is counter-balancing the violation (i.e., a moral *debit*) by behaving morally (i.e., a moral *credit*) in a different domain (e.g., donating more money to charity after having acted dishonestly; Gneezy et al., 2014); and finally (c) *symbolic cleansing*, that is enacting a symbolic or metaphorical act of restitution (e.g., physically cleansing – for example by washing one's hands – after a violation, Zhong & Liljenquist, 2006). Therefore, when it comes to social issues, moral cleansing comes with a risk: that individuals may cleanse through behaviors pertaining to a different domain, or that they may cleanse symbolically. Therefore, differently from moral outrage, moral cleansing may not ultimately lead to the reduction of inequalities, but rather to their sustainment.

[15] Also known as 'moral balancing'. The balancing can also work in the opposite direction as moral cleansing, so that after acting morally individuals feel licensed to act immorally in the future (i.e., moral licensing). Some evidence argues against moral balancing, and supports instead 'consistency' (or 'spillover'): that is, individuals who behave immorally will show consistency and do so also in subsequent behaviors (Mullen & Monin, 2016).

Another interesting avenue of investigation may lie in the juxtaposition of moral and pragmatic arguments. Indeed, economic inequality may be perceived as harmful from an ethical perspective, but also from a practical point of view, as it has a negative impact on individuals, society, economic growth, and so on. Pragmatic concerns should not evoke moral outrage, and thus should technically not increase collective action intentions; however, they may be linked to support for institutional, rather than individual, action. At the same time, providing pragmatic reasons against inequality (e.g., "we should reduce inequality because it stifles economic growth") may actually backfire if presented to people who strongly moralize this issue (e.g., have a high moral conviction; Skitka et al., 2021). High-moralizing individuals may react with greater hostility to this reasoning because it suggests that moral motivations are not as important, and that the source does not care about the values that the moralizer believes to be fundamental. A great example of this is provided by Hanauer (2014). In his TED talk, Hanauer (a self-defined ".01 percenter") argues that his "fellow plutocrats" should combat rising economic inequality, basing his reasoning on self-interest, economics, and consumerism – all practical motivations. And he does so by devaluing moral considerations:

> "I know I must sound like some liberal do-gooder. I'm not. I'm not making a moral argument that economic inequality is wrong. What I am arguing is that rising economic inequality is stupid and ultimately self-defeating. Rising inequality doesn't just increase our risks from pitchforks, but it's also terrible for business too." (Hanauer, 2014)

Future research could elicit moral or pragmatic reasoning against inequality, or frame inequality as problematic from either a moral or a pragmatic perspective, to compare the processes elicited by one or the other.

Theoretical Contributions and Applied Implications

From a theoretical perspective, the drastically different outcomes of the two lines of research described here compel a broader discussion about the relative utility of these theories of morality, especially in the context of economic inequality. As was argued in the introduction, the strength of the Moral Foundation Theory lies in its descriptive and pluralistic nature – but at the same time, this could also become a weakness. Even though Moral Foundation Theory argues that the foundations have an evolutionary basis and are thus universal, it also asserts that they are not fully fleshed values, but rather simple intuitions upon which cultural values are then constructed. Therefore, culture still has a profound impact on the value and application of moral foundations – and with time, the foundations themselves may change drastically, as the authors themselves acknowledge (Graham et al., 2013). The authors provide the criteria for 'foundationhood'[16], so that the theory may be adapted to cultural and historical shifts in the future. Nevertheless, one may wonder then whether it would be more useful to shift empirical efforts from the investigation of what moral *is* to what moral *entails* – in other words, focusing on unpacking the processes that underlie moral functioning, rather than on determining a priori which intuitions and norms are moral and which are not. The content of morality may vary across time and culture, whereas the psychological processes underlying morality should be universal (especially if based on cognition) and to be able to withstand the test of time and cultural variation: a notion supported by the studies included in the present dissertation. Furthermore, when put together, our evidence suggests that it matters not what sort of morality (be it harm, fairness, and so on) is elicited by economic inequality – what is important is rather that moral concerns are elicited at all, which again highlights the importance of investigating underlying

[16] In order to be considered 'moral foundations', norms should [1] be common in third-party normative judgments, [2] elicit an automatic affective evaluation, [3] be culturally widespread, [4] show evidence of innate preparedness, and [5] be described by an evolutionary model.

processes of moral judgments, rather than the forms that moral judgment can take. Social Domain Theory (Smetana, 2013) and moral conviction (Skitka et al., 2021) are good examples of models investigating processes rather than content. I do believe that that the Theory of Dyadic Morality is not quite there yet – more consistent efforts have been dedicated to justifying the monist nature of the model and demonstrating that harm is the one true foundational value (Schein & Gray, 2018), rather than to test the validity and applicability of the model itself – but the moral dyad can definitely be a step in this direction, as our own work shows.

Furthermore, this dissertation contributes to the literature on collective action through the development and validation of a new measure of collective action, the BCA. All prior measures of collective action suffered from two interconnected problems: on the one side, these measures were for the most part directed at progressive participants but meaningless to conservative audiences, revealing an important ideological bias among researchers. On the other side, they confounded collective action with attitudes: they were unable to distinguish between those not engaging in collective action because they disagreed with its aims and those who endorsed the aims but were unwilling to engage in collective action to achieve them. Our innovative scale resolves both problems.

Turning to its applied contributions, when developing this dissertation, a conscious decision was taken to focus on collective action, rather than attitudes towards other inequality-reducing strategies, such as support for wealth redistribution. For other social issues, small-scale individual behaviours may not make a great difference but can still be helpful to reduce the problem, especially when enacted by a large portion of the population. For example, a man who opposes gender inequalities may work towards that goal by taking on an equitable share of the domestic, care, and unpaid work that is usually requested of women. If the majority of men engaged in these small-scale behaviours, gender inequality would actively be reduced. Similarly, small-scale behaviours may not prevent climate change, yet making environmentally sustainable choices can still reduce one’s carbon footprint and help preserve the planet. When it comes to economic inequality, this is not the case: indeed, it is difficult to even envisage small-scale behaviours that, summed, could contribute to equality. For example, if the majority of the population donated a part of their income to charity – which is already highly implausible – this would still hardly be enough to solve the problem. Economic inequality is the one social issue for which only institutional change or large-scale behaviours can make an impact – and collective action is the only way through which individuals can exercise their power and demand institutions and governments to change. As such, investigating the determinants of collective action against economic inequality may inform interventions aimed at actively and successfully mobilizing the population. For example, our studies suggest that interventions or campaigns focused on reasoning about the causes of economic inequality (for similar examples related to the climate crisis see Berkhout et al., 2021; Dabi et al., 2022) may actively promote collective action by increasing the moral value attributed to inequality and, in turn, evoking outrage.

Conclusions

This dissertation consistently shows that when individuals deem inequality a moral violation, they are more willing to act against it. Morality is a powerful motivator that, through strong emotions, mobilizes individuals to action. On the road that leads us to a more equal society, morality can be that first push that sets us in motion – and with inequalities consistently rising, and this issue being more pressing than ever, as researchers we cannot afford to ignore its potential anymore.

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Appendix

Coding of Open Texts (Chapter 4 – Study 2)

Coding of responses, inter-rater reliability, and number of initial disagreements.

Final coding	Final N (%)	κ (SE_κ)	Dis.	Category by coder 1	Category by coder 2
Political class	175 (62%)	.89 (.03)	16	Political class	Political class
					Elites/people in power
					Legislators
Rich people	117 (41%)	.66 (.04)	47	Rich people	Rich people
					Heirs/Heiresses
Entrepreneurs+ multinationals	95 (34%)	.90 (.03)	13	Entrepreneurs	Entrepreneurs
				Multinationals	Multinationals
Financial groups	16 (6%)	.80 (.07)	7	Banks/financial groups	Banks/financial groups
Mafia	14 (5%)	.82 (.08)	5	Mafia	Mafia
Entertainment industry	13 (5%)	.76 (.10)	6	Entertainment industry	
					Show business
					Sports
Lobbies	11 (4%)	.77 (.10)	5	Lobbies	Lobbies
Tax evaders	10 (4%)	.86 (.08)	3	Tax evaders	Tax evaders
Poor/working class	6 (2%)	.66 (.16)	4	Poor class	Poor class
	10 (4%)				Employers
	10 (4%)				Free enterprise system
	4 (1%)				Teachers/school system
	3 (1%)				Pharmaceutical companies
	2 (1%)				Everyone

Note. Dis. = Number of disagreements between coders.