

# RESEARCH AGENDA FOR EXPERIMENTAL ECONOMICS

## Chapter 8: Experiments in Political Psychology

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### 1. Introduction

The political scientist Harold Lasswell famously described politics as the process of deciding “*who gets what, when, and how*”. This suggests that the subject should be amenable to being studied with the aid of incentivised experiments where participants can earn real money based on the decisions they make. But, while commonplace in social psychology, the use of such experiments is still relatively rare in political psychology, with political psychologists largely relying on survey questions. While surveys can certainly be useful for understanding issues in political psychology, they also suffer from drawbacks. For example, surveys may not always reveal private preferences that participants would display in the absence of real-world social and cultural constraints (Pisor *et al.*, 2020). In contrast, the presence of real monetary incentives in predominantly abstract and anonymous economic games can reveal true preferences such as the willingness to share. Consequently, behavioural economists tend to stress the value and importance of incentivised experiments (Chaudhuri, 2009; Smith, 1976, 1982).

Increasingly, researchers across a wide range of disciplines are turning toward experiments as a validated means of testing theoretical predictions. In this chapter, we will provide an overview of the use of incentivised experiments in political psychology, with an emphasis on the intertwined set of political beliefs, values, and attitudes that may be collectively referred to as political ideology. In doing so, we hope to facilitate a fruitful dialogue with researchers in political psychology, who may wish to explore the use of economic experiments (conceivably in conjunction with survey instruments) to study the basic dispositional antecedents of political ideology.

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Traditionally, political scientists have tended to take a unidimensional view of political ideology, placing people along a liberal-conservative (left-right) spectrum. Liberals are generally more open to novelty, egalitarian, and supportive of redistributive policies while conservatives are more concerned with preserving and enforcing traditional values, group conformity, and justifying existing hierarchies (e.g., Jost *et al.*, 2003). However, scholars across diverse disciplines have repeatedly and independently found two primary dimensions of political ideology, often referred to as economic conservatism (vs. economic progressivism), and social conservatism (vs. social progressivism) (see Claessens *et al.*, 2020a for details).

Recently, Claessens *et al.* (2020a) showed that there is a striking concordance between these dual dimensions of ideology and independent evidence for two key shifts in the evolution of human group living. First, humans began to cooperate more, and more widely. Second, humans became more group-minded, conforming to and enforcing social norms in culturally marked groups. Claessens *et al.* (2020a) propose that fitness trade-offs and environmental pressures have maintained variation in these tendencies to cooperate and conform, naturally giving rise to the two dimensions of political ideology. We begin our overview by looking at experimental studies that take a unidimensional view of politics. We then discuss studies that use incentivised experiments to explore the dual foundations of political ideology. Finally, we conclude with some thoughts on what we found in this chapter.

## **2. Experimental studies of unidimensional political ideology**

In this section, we provide an overview of experimental studies that adopt a unidimensional view of political ideology along a single left-right continuum. We divide our discussion into two subsections; one looking at pro-sociality, referring to cooperation, compassion, trust, reciprocity, altruism, generosity, and egalitarianism in both individual and group contexts, and a second subsection that focuses on compliance with established norms and punishment of norm-violators.

### **2.1. Pro-sociality**

Anderson *et al.* (2005) recruited a small sample of undergraduates in the USA to play multiple rounds of trust and public goods games<sup>i</sup>, and found that Democrats or self-described liberals were no more pro-social than Republicans or self-described conservatives. Liberals were, however, more pro-social in the trust game when the experimenters induced inequality by giving some participants a higher endowment than others, suggesting that liberals' pro-sociality is connected to an aversion to inequality.

In another US study with a larger, more representative sample, there was no significant relationship between political ideology (self-described and measured with a Wilson-Patterson Inventory of Attitudes) and pro-sociality in the ultimatum game and a common pool resource extraction game (Alford & Hibbing, 2007). Similarly, recent studies with relatively large samples have found no significant differences in pro-sociality between self-described left- and right-leaning people in public goods games in Germany (Kistler *et al.*, 2017), dictator games in the Netherlands (Thomsson & Vostroknutov, 2017), and prisoner's dilemmas in the USA (Balliet *et al.*, 2018). Moreover, Müller (2019) found that neither self-described left- nor right-leaning people displayed ingroup-biased cooperation in a study using a dictator game and the "minimal group paradigm" (in this case, assigning participants to groups based on their artistic taste).

Interestingly, the Balliet *et al.* (2018) study referred to above also varied whether participants were playing with Democrats or Republicans in two-person prisoner's dilemmas, and found that both Democrats and Republicans displayed ingroup-biased cooperation mediated by trust that co-partisans would reciprocate. Other studies also found that partisans on both sides of the left-right spectrum, especially those who strongly identify with their party, gave more to co-partisans in the dictator game in the US, UK, Canada, and Sweden (Dawes *et al.*, 2012; Fowler & Kam, 2007), and this tendency was more pronounced among *left-wing* partisans (Dawes *et al.*, 2012).

Given the political polarisation in the West, it is not surprising that both liberals and conservatives show ingroup bias in games where political groups are salient. What is less intuitive is that both liberals and conservatives who are more politically engaged/extreme/partisan (Dawes *et al.*, 2011; Fehr *et al.*, 2003; Fowler & Kam, 2007; Müller & Renes, 2020; Smirnov *et al.*, 2010), tend to be more pro-social in economic games *devoid of political content*. This may be partly explained by the fact that the very act of engaging in political activities is a collective action problem and those who become so engaged on both sides are likely to be more pro-social to begin with.

However, a number of more recent studies including several based on large sample sizes provide evidence in favour of greater pro-social tendencies on the political left. Recent German studies found that: (1) left-leaning players in a modified dictator game were more pro-social (n = 116; Müller, 2019); (2) people in large, diverse samples on the political left (self-described and determined by political party support) were more inclined to be egalitarian when playing as "third-party" allocators (n = 2,189; Müller & Renes, 2020), and (3) were likely to

be characterised by benevolent traits like altruism and advantageous inequity-aversion (a dislike of having more than others) in two-person games whereas right-leaning people were likely to be characterised as “selfish”, “spiteful”, and “envious” (n = 2,794; Kerschbamer & Müller, 2020); (4) left-leaning people (self-described and measured by political party support) displayed more pro-social behaviour in public goods and trust games (n = 454; Grünhage & Reuter, 2020). In addition, people who reported voting for the left-wing coalition government in Norway were more generous in dictator games (Cappelen *et al.*, 2017). And in Denmark, Fosgaard *et al.* (2019) undertook a study with 1,926 participants and found that, in a public goods game, self-described left-leaning people contributed slightly (albeit not statistically significantly) more than self-described right-leaning people, but this difference reached statistical significance when the game was framed as taking from the public good. It is possible that the latter framing, which essentially turns the game into a common pool resource extraction game, elicits greater cooperation from left-leaning participants given their proclivity for being more environmentally conscious.

The greater pro-sociality of liberals is not limited to Europe. In an ambitious cross-country study, Dawes *et al.* (2012) recruited over 5,000 participants from the US, UK, Canada, and Sweden to play a dictator game. Self-described left-leaning (vs. right-leaning) people were more generous in the US, UK, and Sweden (left-right ideology was not measured in Canada), and people who voted for left-wing (vs. right-wing) parties in Canada and Sweden were more generous. However, in the US, there were no differences between Democrats and Republicans, and in the UK, supporters of the left-wing Labour party were *less* generous than Tories and Liberal Democrats who tend to be more right-leaning.

Finally, studies conducted in the USA, Italy, and the Netherlands (n = 3,314) relying on the Social Value Orientation measure of pro-sociality (involving non-incentivised decomposed prisoner’s dilemmas) and measuring unidimensional political ideology with self-placement, attitude scales, and/or party support, reveal that left-leaning people are more likely to be classified as pro-social while the right-leaning tend to be pro-self (Balliet *et al.*, 2018; Chirumbolo *et al.*, 2016; Sheldon & Nichols, 2009; van Lange *et al.*, 2012).

## **2.2. Norm compliance and punishment of norm violators**

To our knowledge, only three studies have looked at the role of political ideology in terms of norm compliance and punishment of norm violations. In a recently developed computerised Rule Following Task, participants drag and drop balls into two buckets where every ball put in Bucket A yields, for example, \$0.10 and every ball put in Bucket B yields half that amount.

Participants are explicitly instructed that the rule is to put the balls in Bucket B. Therefore, the task measures willingness to pay a cost to follow an explicit rule, which is interpreted as social norm compliance (Kimbrough & Vostroknutov, 2018). A study using the Rule Following Task found no difference between political liberals and conservatives in rule-following behaviour (Thomsson & Vostroknutov, 2017). Interestingly, this study also investigated the norms that left- and right-leaning individuals held about giving in a dictator game, and found that while giving behaviour did not differ between left- and right-leaning people, their motives for giving did – right-leaning people seemed more concerned about their reputations as norm-followers in the eyes of the recipients.

Putterman *et al.* (2011) measured political attitudes of 80 undergraduates in the USA and examined whether, in a public goods game, they would vote for efficient centralised sanctioning schemes to punish free riding and encourage their groupmates to contribute. The authors report that political conservatives were *less* likely to vote for centralised punishments, a finding that may be related to the right's preference for greater self-reliance and smaller bureaucracies (at least in the US).

Using student participants (n = 120), Smirnov *et al.* (2010) examined whether partisans (those who explicitly identify as Democrat/Republican or strong Democrat/Republican) would display both cooperative and punitive behaviour in public goods and random income games with the option of decentralised punishments. Both Republican and Democrat partisans were more likely than non-partisans to punish high-income players in the random income game and low-contributing players in the public goods game. That is, partisans on both sides of the left-right political spectrum seem inclined to engage in costly norm enforcement. One of the evolutionary functions of norm-enforcement is thought to be the facilitation of group cooperation and cohesion, especially during intergroup competition. Given the intense political polarisation prevalent in the West (i.e., the tribalism on, and competition between, the political left and right) it is not surprising that norm-enforcers are prevalent on both sides.

### **2.3. Summary**

Taken together, the previous literature shows that political liberals tend to be more pro-social compared to political conservatives in economic games, but – going against the hypothesis that conservatives are more group-minded and conformist (Jost, 2017) – there tend to be no significant differences between liberals and conservatives in terms of ingroup bias, norm-following, and norm-enforcing behaviour (except one study showing that conservatives are *less*

likely to vote for strict centralised sanctioning schemes). However, as we note above, this unidimensional view of political ideology is, if not incorrect, at least incomplete. We now turn to studies that acknowledge the two distinct dimensions of political ideology.

### **3. Experimental studies of two-dimensional political ideology and related variables**

According to the Dual-Process Model of political ideology (Duckitt & Sibley, 2009, 2017), economic conservatism – widely measured with the *Social Dominance Orientation (SDO)* scale – sees the world as a competitive jungle and reflects hierarchy-enhancing views. This *economic dimension of ideology* is associated (either positively or negatively) with constructs such as the “individualising” (i.e., “care” and “fairness”) moral foundations (Nilsson & Erlandsson, 2015; Federico *et al.*, 2013), empathic concern and compassion (Chiao *et al.*, 2009; Hirsh *et al.*, 2010; Osborne *et al.*, 2013), scores on Dark Triad scales (narcissism, Machiavellianism, and psychopathy; Jones & Figueredo, 2013), HEXACO honesty-humility (Duckitt & Sibley, 2017), justice sensitivity, i.e., inequality-aversion and social justice activism (Reese *et al.*, 2014), and even physical formidability with physically stronger males more likely to be economic conservatives (Petersen & Laustsen, 2019). For example, those who score higher on the SDO scale are typically less empathic and more comfortable with social hierarchies and economic inequality.

Social conservatism – often measured with the *right-wing authoritarianism (RWA) scale* – sees the world as a dangerous place and reflects conformity- and cohesion-enhancing views that aim to conserve and enforce existing group norms (e.g., religious family values). This *social dimension of ideology* is positively correlated with dispositional variables related to group-mindedness such as need for security, certainty, and conformity (Duckitt & Sibley, 2009; Federico & Malka, 2018), sensitivity to threats in the environment such as terrorism and pandemics (Shaffer & Duckitt, 2013; Fischer *et al.*, 2020a), as well as neurobiological variables related to threat-sensitivity like greater eyeblink startle response (Oxley *et al.*, 2008).

Recently, Claessens *et al.*, 2020a provided an evolutionary account of how these two dimensions of political ideology came about as a response to the essential challenges of human group living. These authors point out two key shifts in the evolution of human group living (Tomasello *et al.*, 2012). The first of these required humans to cooperate more across wider interdependent networks and share the spoils of cooperation more evenly. This resulted in a human mind that was sensitive to the benefits of cooperative interactions with others and could extend cooperation beyond immediate genetic kin. But cooperation is a collective action problem that is vulnerable to free-riding from opportunists. And so, in a second key shift, as

group sizes and intergroup competition increased, humans became more group-minded, conforming to social norms in culturally marked groups and punishing norm-violators, thereby facilitating group cohesion and long-term group viability. Claessens *et al.* (2020a) argue that behavioural plasticity and the fitness trade-offs between cooperation and self-interested competition, on the one hand, and between conformity and individualism on the other, maintain variation between individuals in human groups in terms of motivations to cooperate and conform. These individual differences in cooperativeness and conformity manifest in contemporary human populations as individual differences along the economic and social dimensions of political ideology, respectively.

Below, we review studies that focus on the dual foundations of political ideology, by looking separately at the economic and social dimensions. Given that this is a new and emerging area of research, the literature here is not voluminous with many open research questions providing avenues for further studies. In many instances, researchers have undertaken studies that imply one or both of these dual dimensions without explicitly referring to them as such. We have categorised these studies and results as systematically as possible using the dual foundations schema developed above.

### **3.1. Experimental studies of economic conservatism/progressivism**

#### **3.1.1. Pro-sociality**

Little work has examined behaviour of people with economically conservative vs. economically progressive<sup>ii</sup> policy preferences, but there is some evidence that the latter tend to be more pro-social. Those who support increasing taxes to help the worse-off (an economically progressive position) display cooperative behaviour across a battery of games (Peysakhovich *et al.*, 2014), and compared to economic conservatives, economic progressives are more pro-social in dictator games in the US and UK (Dawes *et al.*, 2012), and two-person games in Germany (Kerschbamer & Müller, 2020).

A number of studies have looked at the relation between economic conservatism/progressivism measured with the SDO scale and pro-sociality. In two studies with undergraduate students in Belgium, SDO was negatively correlated with pro-sociality in many, but not all, economic games (Haesevoets *et al.*, 2015, 2018). In the first study, SDO was significantly negatively related to pro-sociality in the dictator, commons dilemma, and one-shot public goods games, but was not in the prisoner's dilemma, ultimatum, trust, stag hunt, and iterative public goods games. In the second study, SDO was significantly negatively related to pro-sociality across different payoff structures in prisoner's dilemma games. The patterns

across these studies were similar for RWA in that it negatively predicted pro-sociality in a subset of games.

One reason why SDO does not correlate with pro-sociality across all games could be that not all the games measure pro-sociality to the same extent, e.g., the dictator game is arguably a cleaner measure of pro-sociality while for social dilemmas, the notion of pro-sociality may be intermingled with other strategic considerations and beliefs about others' actions. Another potential confound is that studies do not control for RWA (SDO) when exploring SDO's (RWA's) relationship with pro-sociality. This is important because RWA and SDO, or social and economic conservatism, are reliably correlated in the West and suppress each other's effects on external variables (see Costello & Lilienfeld, 2020). Claessens *et al.*, (2020b) accounted for this and recruited a much larger, representative sample ( $n = 926$ ) in New Zealand to examine whether SDO and RWA, controlling for demographic variables, differentially predicted cooperative and punitive latent variables (behavioural phenotypes) across a battery of economic games. They found that SDO (not RWA) significantly negatively predicted pro-sociality across the dictator, trust, ultimatum, public goods, stag hunt, and other games. Unlike Haesevoets *et al.* (2015, 2018), this shows that individual differences in a general cooperative phenotype, that applies across games with different payoff structures, predict individual differences in SDO, and not RWA.

Claessens *et al.*, (2020b) also looked at Schwartz's values, which correspond to the two dimensions of political ideology with "self-enhancement" vs. "self-transcendence" values reflecting economic conservatism vs. economic progressivism, and "conservation" vs. "openness" values reflecting social conservatism vs. social progressivism. They found that, controlling for demographics, self-enhancement (self-transcendence) significantly negatively (positively) predicted the cooperative phenotype, while conservation and openness values were unrelated to this. Evidence from earlier work generally supports this, with self-enhancement values tending to be positively associated with selfish behaviour, self-transcendent values with pro-sociality, and conservation and openness values tending to be unrelated to pro-sociality in different games (Gärling, 1999; Sagiv *et al.*, 2011).

A recent meta-analysis confirms that SDO is significantly negatively correlated with pro-social behaviour aggregated across a number of economic games (Thielmann *et al.*, 2020). Moreover, variables positively associated with SDO, like the Dark Triad, competitiveness, and power, as well as negatively associated with SDO, such as concern for others, inequity-aversion, agreeableness, honesty-humility, and empathy, are significantly related to pro-



sociality (Thielmann *et al.*, 2020). A recent German study not included in the meta-analysis above also shows that SDO mediated the relationship between left-right political affiliation and pro-social behaviour in a public goods game while, RWA mediated this relationship for a trust game (Grünhage & Reuter, 2020). Moreover, studies using the Social Value Orientation measure of pro-sociality show that SDO tends to be more strongly and consistently negatively correlated with pro-sociality than RWA is (Balliet *et al.*, 2018; Chirumbolo *et al.*, 2016; Haesevoets *et al.*, 2015, 2018).

Another noteworthy set of studies look at the connection between pro-sociality and environmentalism. Given that environmental problems like climate change represent social dilemmas – a conflict between self-interest and cooperation – we expect economic conservatives, compared to economic progressives, to be less willing to make sacrifices for the environment. Indeed, environmentalism is more strongly negatively associated with SDO than RWA (Häkkinen & Akrami, 2014; Milfont *et al.*, 2013, 2018; Stanley *et al.*, 2019), and is positively associated with pro-social behaviour in economic games (Barclay & Barker, 2020; Kaiser & Byrka, 2011; Thielmann *et al.*, 2020).

Finally, and in keeping with the concept of behavioural plasticity elucidated in the dual evolutionary foundations model of political ideology, pro-social behaviour is often influenced by situational cues. People low in honesty-humility, who tend to be high in SDO (Duckitt & Sibley, 2017), cooperate more in public goods games when they face the possibility of punishment by their peers (Hilbig *et al.*, 2012). Moreover, high-SDO individuals are particularly competitive and display increased greed, effort, and rule-breaking in situations of resource scarcity (Cozzolino & Snyder, 2008). However, people in general tend to become more cooperative with resource abundance (Nettle *et al.*, 2011) and when dominance hierarchies based on self-interest or effort/skill are removed or replaced with hierarchies based on altruism (Antonioni *et al.*, 2018; Cronin *et al.*, 2015), and this may apply to high-SDO individuals as well.

### **3.1.2. Inequality**

A major facet of the economic dimension of political ideology is inequality-aversion, including redistributive preferences. Esarey *et al.* (2012) undertook a study where undergraduates could earn money by completing a multiple-choice spelling test, and then vote for different redistributive tax schemes. The money earned for the task was based on effort and skill (the task was difficult, tedious, performed under deadline pressure, and some people were better at it). There were also different conditions, a fair one (everyone got the same amount/penalty per

correctly/incorrectly spelled word), one with inequality based on luck (subjects were randomly assigned to get a low or high pay rate), and one with inequality based on effort/skill in the task (after the first two periods, the top 50% of spellers got a higher pay rate than the bottom 50%). Results revealed that, regardless of condition, everyone tended to be self-interested, voting for higher taxes when they were poor, and lower taxes when they were rich, but economic conservatives tended to be more self-interested than economic progressives were.

While the Esarey *et al.* (2012) study supports the view that economic conservatives tend to be more pro-self, it does not find differences between economic conservatives and economic progressives in terms of redistributive preferences. Since redistribution preferences are a defining feature of the economic dimension of ideology, future experiments should study this by varying aspects of the social situation (e.g., wealth can be based on effort, skill, or luck and redistribution can be based on equality or need). There is already suggestive evidence that such an approach will be fruitful. While Pratto *et al.* (1999) examined allocation decisions in hypothetical scenarios as opposed to economic games, they found that high-SDO individuals believe that fairness involves rewarding the meritorious and allocate more resources to meritorious parties, whereas low-SDO individuals believe that fairness involves helping the needy and allocate more resources to needy parties. Furthermore, social justice activism – a well-known correlate of economic progressivism – predicts giving mostly to recipients from actual disadvantaged groups in modified dictator games (Fietzer *et al.*, 2016).

Other fruitful approaches seem to be the use of two-person games wherein participants are presented with various binary choices and must decide how to allocate points between themselves and another person, as well as third-party games. Recent studies with large, diverse samples in Germany found that people with economically progressive views (such as endorsing increased income tax or government intervention to reduce inequality) tend to display egalitarian behaviour in such two-person games (Kerschbamer & Müller, 2020) as well as when acting as impartial third-party allocators (Müller & Renes, 2020). Moreover, recent research using a third-party punishment game shows that people high in “dominance value orientation” (a composite of Individual Dominance Orientation, i.e., the degree to which a person values hierarchical relations between *individuals*, and SDO) seem to want to uphold inequalities between others by punishing people who make egalitarian offers to others (Bergh & Sidanius, 2020). In contrast, people low in dominance value orientation tend to punish people who make selfish offers to others. Finally, in third-party games where the participants witness one player financially harming another and can then help the victim or punish the perpetrator,

well-known correlates of economic progressivism (justice sensitivity, empathic concern, compassion and the fairness moral foundation) are related to helping victims but not consistently related to punishing perpetrators (Baumert *et al.*, 2014b; Weng *et al.*, 2015; Leliveld *et al.*, 2012; Zhao *et al.*, 2017), perhaps because this relationship depends on the relative status of victim and perpetrator (Mattan *et al.*, 2020).

Overall, existing evidence suggests that economic conservatives tend to be more pro-self and tolerant of inequality (but may be happy with redistributing resources based on merit). In contrast, economic progressives tend to be more egalitarian and inclined to redistribute resources to help the disadvantaged and punish the privileged and/or exploitative.

### **3.1.3. Within- and between-group competition**

SDO can be conceptualised as reflecting views that enhance both individual- and group-level hierarchy. On the individual level, this should manifest as self-interested competitiveness, and on the group level, it should manifest as a desire to dominate outgroups. In experimental studies, researchers have tried to tease out intergroup preferences by having participants choose between two or more of the following options in modified social dilemma games: (1) *self-interest*, where the individual keeps their money and so does not make a personal sacrifice for their ingroup, (2) “*ingroup love*”, where the individual sacrifices money to benefit the ingroup but does not affect the outgroup, (3) “*outgroup hate*”, where the individual sacrifices money to benefit the ingroup and harm the outgroup, and (4) *universalism*, where the individual sacrifices money to benefit both ingroup and outgroup members (Aaldering & Böhm, 2019; Fischer *et al.* 2020b; Halali *et al.*, 2018). In such studies, group identity is either based on real groups (e.g., Jews vs. Palestinians) or manipulated via the minimal group paradigm (Tajfel & Turner, 1979).

Taken together, the results suggest that SDO is positively related to self-interest and outgroup hate, unrelated to ingroup love, and negatively related to universalism. Along similar lines, a study measuring vertical individualism, a competitive, status-seeking type of individualism related to economic conservatism (Claessens *et al.*, 2020a), finds that given a choice between self-interest and ingroup love, vertical individualists choose the former; but, given a choice between self-interest and outgroup hate, they choose the latter (Probst *et al.*, 1999). Finally, Halevy *et al.* (2012) show that self-interest and outgroup hate increase perceptions of dominance, while universalism decreases this.

## **3.2. Experimental studies of social conservatism/progressivism**

### **3.2.1. Trust**

In Section 3.1.1., we found that economic rather than social conservatism is consistently negatively related to pro-sociality in general (Claessens *et al.*, 2020b; Thielmann *et al.*, 2020), but it seems that social conservatism is more consistently negatively related to one specific kind of pro-sociality: trusting strangers. Early research using the “Fascism” scale to measure authoritarianism found that it was significantly negatively correlated with trusting behaviour in a two-person non-zero-sum game (Deutsch, 1960). And more recently, many studies show that, compared to SDO, RWA is more reliably negatively related to trusting behaviour (Grünhage & Reuter, 2020; Haesevoets *et al.*, 2015; Ponsi *et al.*, 2017, but see Claessens *et al.*, 2020b). In fact, a meta-analysis showed that of all the widely used psychological variables (including trust propensity) other than Social Value Orientation, RWA was the strongest correlate of distrustful behaviour in the trust game (Thielmann *et al.*, 2020; supplemental materials).

Further evidence comes from studies looking at moral values. The mean of the binding moral foundations (ingroup loyalty, respect for authority, and purity), that are associated with social conservatism (Nilsson & Erlandsson, 2015; Federico *et al.*, 2013), significantly negatively correlates with behaviour in the trust game (Clark *et al.*, 2017). Furthermore, secular values (non-traditional, non-religious), a proxy of social progressivism, in the World Values Survey are related to trusting (and efficient) behaviour in a property rights game (Kistler *et al.*, 2017). This is in line with work showing that religiosity (an important correlate of social conservatism) seems to be associated with less trust and is not consistently associated with other kinds of pro-sociality (e.g., Jacquet *et al.*, 2020). For example, a recent study found that religiosity is inversely related to trust in the trust game and not related to helping people in third-party games (Galen *et al.*, 2020). This evidence suggests that social conservatives are relatively suspicious of anonymous strangers in economic games, which makes sense because social conservatism is conceptualised as relatively parochial and fearful, reflecting trust only for ingroup members and wariness of outsiders (Claessens *et al.*, 2020a).

### **3.2.2. Norm following**

Fischer *et al.* (2020c) use the Rule Following Task developed by Kimbrough & Vostroknutov (2018) to measure whether social conservatives are willing to forego monetary gains in order to comply with an explicit rule they have been told to follow (see Section 2.2 for details on the task). They find that measures of the social dimension of ideology, such as RWA, support for cultural tightness (Jackson *et al.*, 2019), and security and conformity values (Schwartz *et al.*,

2012), are significantly related to rule-following behaviour (whereas SDO is only weakly negatively related to this).

Based on this result, indirect evidence on the social dimension of ideology can be garnered from how people who tend to follow rules in the Rule Following Task behave in subsequent public goods games. In one study (Gürdal, Torul, & Vostroknutov, 2020), participants could choose between three groups with different rules (to put all, half, or any amount of their endowment into the common pool). Compared to rule-breakers, rule-followers tended to prefer groups with the strict rule to contribute the entire endowment and they followed the rules more (i.e., they cooperated more). In Kimbrough & Vostroknutov (2016), participants were either sorted into groups based on their rule-following behaviour or placed into groups at random. Groups of rule-followers maintained higher levels of cooperation for longer periods compared to unsorted groups or groups of rule-breakers. However, in unsorted groups, individual rule-followers did not tend to contribute more than individual rule-breakers. Combined, these studies show that rule-followers prefer having strict rules in place, and when these rules state that they should cooperate at high levels, they do, and groups of rule-followers are particularly good at maintaining high levels of cooperation.

There is also some evidence that, like rule-followers, authoritarians contribute more in public goods games with strict, exogenously imposed contribution rules: In a study conducted in China – which is more collectivistic and accepting of authority and inequality compared to Western countries (Vollan *et al.*, 2017) – 300 people including workers with a rural background and university students played public goods games in three conditions: (1) normal (2) authoritarian (with an exogenously imposed contribution rule to contribute the entire endowment), and (3) democratic (players could vote to implement the rule). In contrast to previous work in the West finding that democratically chosen rules work best at maintaining cooperation, the main result was that the exogenously imposed rule worked best and participants higher in RWA cooperated more in this authoritarian condition; participants lower in RWA cooperated more in the democratic condition.

### **3.2.3. Norm enforcement**

Yamagishi *et al.* (2012) and a recent meta-analysis (Thielmann *et al.*, 2020) show that RWA and the personality trait openness, which is linked to social progressivism (Duckitt & Sibley, 2017; Hirsh *et al.*, 2010; Osborne *et al.*, 2013), are related to punitive responses in the ultimatum game where participants are willing to forego money in order to punish another who is considered to be engaging in unfair behaviour. Moreover, Baumert *et al.* (2014b) found that

the “authority” moral foundation (linked to social conservatism) was positively associated with punishment in the ultimatum game (but not in a third-party punishment game). And Chuah *et al.* (2009) report that valuing individual freedom (corresponding to social progressivism) was associated with less punitiveness in the ultimatum game while parochial attitudes (corresponding to social conservatism) were associated with more punitiveness.

Finally, threat-sensitivity is a well-known correlate of social conservatism and a recent study found that exposure to threat (violent crime) predicted punitive, not cooperative, behaviour across a battery of economic games (Littman *et al.*, 2020). That is, threat coming from within the community seems to activate a norm-enforcing, punitive phenotype but not a cooperative one. However, Claessens *et al.* (2020b) did not find that RWA and conservation/openness values (that correspond to social conservatism/progressivism) generally predict a norm-enforcing, punitive phenotype.

The evidence we have covered here broadly supports the view that, compared to the economic dimension of ideology, the social dimension is more consistently related to punitiveness, at least in the ultimatum game. The reason social conservatism and related variables are often associated with punitive behaviour in the ultimatum game may be that punitiveness in this game seems to reflect normative rather than pro-social or anti-social behaviour (Brañas-Garza *et al.*, 2014; Brethel-Haurwitz *et al.*, 2016; Yamagishi *et al.*, 2012).<sup>iii</sup>

#### **3.2.4. Ingroup bias**

Given that social conservatives are theoretically ingroup-focussed and wary of cooperating with anonymous strangers, they should only cooperate with trusted ingroup members with whom they feel interdependent, and not with outgroup members in intergroup economic games. Those games (mentioned in Section 3.1.3) that ask participants to choose from self-interest, “ingroup love”, “outgroup hate”, and universalism, allow us to study the relationship between group-mindedness and social conservatism. Recently, Fischer *et al.* (2020b) found that right-wing authoritarians tended to engage in ingroup love (as well as identify with the artificial ingroup) and outgroup hate – RWA was unrelated to self-interest and universalism. An older study (also mentioned in Section 3.1.3) looked at the behaviour in single-group (measuring self-interest vs. ingroup love) and intergroup (measuring self-interest vs. outgroup hate) prisoner’s dilemmas and found that vertical collectivists, similar to social conservatives (see Claessens *et al.*, 2020a), were inclined to choose ingroup love and disinclined to choose outgroup hate (Probst *et al.*, 1999).

#### **4. Conclusion**

Overall, studies on unidimensional political ideology using economic games paint conservatives as less pro-social than liberals. However, many studies also show that there are no large differences between liberals and conservatives in pro-sociality (especially ingroup-focussed pro-sociality) as well as norm compliance and punitive behaviour. We argue that the likely explanation for this is that unidimensional measures of ideology are too crude to reveal underlying behavioural differences between people with different ideologies.

Indeed, studies that examine the two primary dimensions of ideology reveal important differences. The evidence on the economic dimension of ideology clearly points to an underlying behavioural phenotype characterised by competition vs. cooperation. That is, economic conservatism seems to be underpinned by a predisposition for within-group competition (self-interest and a behavioural disposition that enhances inequality between individuals) and between-group competition (outgroup hate). In contrast, economic progressivism seems to be underpinned by cooperation extending beyond group boundaries (universalism), egalitarianism, compassion for the disadvantaged, and a tendency to punish selfish people who exploit others. Less research has been conducted on the social dimension of ideology, but social conservatism seems to be characterised by a drive to maintain group conformity. In economic games, social conservatives distrust anonymous strangers, follow rules/norms, punish more (at least in some games), and display both ingroup love and outgroup hate. These results are consistent with the fact that people high in SDO view the world as a competitive jungle or zero-sum game whereas people high in RWA view the world as dangerous and uncertain and therefore turn inwards to their groups for protection and lash out at threatening outgroups.

Findings based on the dual dimensions of ideology also help to explain results from unidimensional studies. They suggest that the pro-sociality associated with liberalism is driven by *economic*, rather than, social progressivism. Moreover, when unidimensional measures of ideology are used, the social dimension of ideology may mask the effect of the economic dimension on pro-sociality, which would explain why many studies fail to find greater pro-sociality among those classified as liberal on unidimensional measures. Moreover, experiments on the dual dimensions suggest that the negative relationship between unidimensional conservatism and trust is driven by *social* conservatism. And the similar levels of ingroup-biased, normative, and punitive behaviour on both ends of the unidimensional spectrum may be driven by left- and right-wing authoritarians, but this requires further research.

We hope this chapter has laid the foundation for a fruitful dialogue between political science and behavioural economics. The studies reviewed here and the gaps identified should provide ample opportunities for future cross-disciplinary collaboration. As we have seen, incentivised experiments are a valuable tool for uncovering basic dispositional differences and similarities between people with different ideologies. This can foster more understanding across political divides and help experts and laypeople alike to gain a firmer grasp of what fuels our political behaviour.

### **Appendix: Glossary of Games**

Below, we provide a description of some behavioural economic games commonly deployed to investigate social preferences related to ideology. All dollar amounts are just examples to help illustrate the structure of the game and approximate relative size of incentives.

#### **Dictator Game**

This is a sequential two-player game. The first mover has \$10; the second mover has no initial endowment. The first mover decides how much of this \$10 to send to the second mover. The second mover has no decision to make. The amount sent by first mover is considered a measure of the first mover's level of generosity/altruism.

#### **Ultimatum Game**

This is a sequential two-player game. The first mover has \$10; the second mover has no initial endowment. The first mover decides on a split of the initial endowment of \$10 (say \$7 and \$3). This decision is then conveyed to the second mover who can either accept or reject offer. If the second mover accepts then each gets the split offered by the first mover (first mover gets \$7, second mover gets \$3). But, if the second mover rejects, then both get nothing. This game (and the second mover's decision to reject small offers) is often used to measure preferences regarding fairness.

#### **Trust Game**

This is a sequential two-player game. Typically, both players start with an initial endowment of \$10. The first mover can choose to send any or all of \$10 to the second mover. Any amount (\$X) sent is multiplied typically by 3 and this tripled amount (\$3X) is given to the second mover. (If the amount is doubled/quadrupled then second mover gets 2X/4X etc.) The second



mover then decides whether to send anything back to the first mover. The latter amount is not multiplied. The amount sent by the first mover is considered a measure of “trust” while the proportion returned by the second mover is considered a measure of trustworthiness/reciprocity. (Since different second movers get different amounts, one cannot look at the absolute amount returned by the second mover but rather the proportion returned.)

**Public Goods Game**

This is a group decision-making game, typically with more than two players such as four, five or more. Let us say a group consists of five players. Each player has \$5 and can keep this entire amount or contribute any or all to the public (group) account. Decisions are made simultaneously. *The amount put in the public account is multiplied by M. This can be any number higher than one but less than the number of players such that M/5 is less than 1; i.e., the multiplied amount divided by the number of players is less than 1. So if there are five players then M could be 2, 3, or 4 (implying that the marginal per capita return = \$0.4, \$0.6, or \$0.8 respectively).* This makes it a dominant strategy to free-ride by keeping the entire \$5 in one’s private account. The social optimum is for every player to contribute everything to the public account as this generates the highest returns for every player.

**Prisoner’s Dilemma Game**

Player #1	Player #2	
	Cooperate	Defect
Cooperate	\$3, \$3	\$0, \$4
Defect	\$4, \$0	\$1, \$1

This is a paired game with decisions made simultaneously. Each player can choose from one of two strategies, generically referred to as “Cooperate” or “Defect”. If both players choose “Cooperate” then they each get \$3. If they both choose “Defect” then each gets \$1. If one player chooses “Cooperate” while the other chooses “Defect” then the player choosing to cooperate gets \$0 while the defecting player gets \$4. Defect is the dominant strategy for both players resulting in a unique dominant strategy Nash equilibrium of {Defect, Defect}, where each gets \$1; even though {Cooperate, Cooperate} is socially optimal and maximizes payoff for both players with each getting \$3. This is because regardless of what the other player chooses (“Cooperate” or “Defect”), the other player is better off choosing “Defect”. For each player

“Defect” yields \$4 as opposed to \$3 (from “Cooperate”) if the other player chooses to “Cooperate”. And “Defect” yields \$1 as opposed to \$0 (from “Cooperate”) if the other player chooses “Defect” also.

**Payoff Ranked Coordination (Stag Hunt) Game**

Player #1	Player #2	
	Hunt Stag	Hunt Rabbit
	Hunt Stag	\$8, \$8
	Hunt Rabbit	\$5, \$0

This is a paired game with decisions made simultaneously. Each player can choose from one of two strategies: hunt stag or hunt rabbit. If both players choose “hunt stag” then they both get \$8 each. If they both choose “hunt rabbit” then they both get \$5 each. If one player chooses “hunt stag” while the other chooses “hunt rabbit” then the player choosing “hunt stag” gets \$0 while the player choosing “hunt rabbit” gets \$5. This game has two Nash equilibria: one where both players choose to hunt stag and a second where both players choose to hunt rabbit. The former is the payoff dominant equilibrium in the sense that both players gets a higher payoff of \$8 each at this equilibrium. The latter is the secure (or risk dominant) equilibrium. This is because a player can guarantee a payoff of \$5 for themselves by choosing “hunt rabbit” (yields \$5 regardless of what the other player chooses).

**Second-Party Punishment Game**

There are two players, each with \$10. This game has two stages: the transfer stage, and the penalty stage. In the transfer stage, each player decides whether to transfer \$3 to the other player. Any amount transferred is doubled and given to the other player. Decisions are made simultaneously. Players get to see the outcome of transfer stage. Next, there is a penalty stage with decisions made simultaneously again. Both players can pay up to \$1 to reduce the other player’s payoff, depending on the decisions made in the transfer stage. \$1 given by one player reduces the other player’s payoff by \$5.

**Third-Party Punishment Game**

Three players, A, B, and C all start with \$10. First, Player A decides whether to ‘take’ from Player B. If Player A takes, Player B loses \$5 points and Player A gains \$3 points (taking is

inefficient). If Player A takes, Player C can then pay up to \$2 to reduce Player A's payoff. Each \$1 given by Player C reduces \$5 from Player A. Player B is passive in the interaction.

### **Random Income Game**

In the random income game, participants are put into groups of four and given a random endowment that their peers could see. Players could then pay a cost to take money away from or give money to their groupmates. Decisions are made simultaneously.

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Endnotes:

<sup>i</sup> We have provided a glossary in the Appendix describing all the games discussed in this chapter. Those not entirely familiar with these games may wish to consult the glossary before reading further.

<sup>ii</sup> It may be useful to address the semantics involved. We refer to those who view the world as a competitive jungle and are more comfortable with hierarchy and inequality as “economic conservatives” and those who are in favour of greater equality, social justice, and redistributive economic policies as “economic progressives”. In the literature, what we call “economic progressivism” is often called “economic liberalism” but we avoid using this terminology because “economic liberalism” can also refer to support for free-market capitalism and opposition to the welfare state and other redistributive economic policies, all of which are actually economically conservative positions. Turning to the social dimension of ideology: “social conservatives” are those who favour adherence to established group norms, whereas “social progressives” (who can also be referred to as “social liberals”) are those who are in favour of individual freedom, e.g., they tend to support same-sex marriage and marijuana legalisation.

<sup>iii</sup> In contrast, the reason *economic* conservatism (Claessens *et al.*, 2020b) and its correlates like self-reported dominance (Pfattheicher *et al.*, 2014) and disagreeableness (Roberts *et al.*, 2013) are sometimes related to punitiveness in games other than the ultimatum game, may be that punitive behaviour in these games is often driven by self-interest, spite, competitiveness, and power (Hilbe & Traulsen, 2012; Houser & Xiao, 2010; Raihani & Bshary, 2019). This is the case for prisoner’s dilemma (Falk *et al.*, 2005), third-party (Delton & Krasnow, 2017; Leliveld *et al.*, 2012), and public goods games (Herrmann *et al.*, 2008; Hoeft & Mill, 2017; Krasnow *et al.*, 2012; Pfattheicher *et al.*, 2014), and even for the punishment phenotype found across games (Chierchia *et al.*, 2017).