

Lecture 04 : Moral Psychology

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1. Introduction to Part II: Do Cultural Differences in Moral Psychology Explain Political Conflict on Climate Change?

In Part II of this course we will consider how, if at all, discoveries in moral psychology can inform an understanding of political conflict and routes to their democratic resolution.

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Although Part II is related to Part I, I will present it as a fresh start. Nearly all of it should make sense independently of anything you learned in Part I.

We will focus on political conflict over climate change. This is also the part of the course where we will consider cultural differences in moral psychology. The overall question for Part II is, Do cultural differences in moral psychology explain political conflict on climate change?

1.1. Simplified Preview

We will approach this topic by working through Feinberg & Willer (2013).

In outline, Feinberg & Willer argue that cultural differences in moral psychology do explain political conflict on climate change on the basis of five considerations.

These are considerations are:

1. 'Moral convictions and the emotions they evoke shape political attitudes' (see *Do Ethical Attitudes Shape Political Behaviours?* (section §2))
2. Moral Foundations Theory is true (see *Moral Pluralism: Beyond Harm* (section §3); *Moral Foundations Theory: An Approach to Cultural Variation* (section §4); and *Operationalising Moral Foundations Theory* (section §5))
3. 'liberals and conservatives possess different moral profiles' (see *Liberals vs Conservatives* (section §6))
4. 'liberals express greater levels of environmental concern than do conservatives in part because liberals are more likely to view environmental issues in moral terms'
5. 'exposing conservatives to proenvironmental appeals based on moral concerns that uniquely resonate with them will

lead them to view the environment in moral terms and be more supportive of proenvironmental efforts.'

We will examine each consideration in turn.

2. Do Ethical Attitudes Shape Political Behaviours?

According to Feinberg & Willer (2013, p. 1), 'moral convictions and the emotions they evoke shape political attitudes.' What evidence supports this claim? By the end of this unit you should have an initial understanding of how researchers have attempted to gather relevant evidence, and you should be familiar with some evidence for this claim.

In this section we aim to understand and evaluate the first key claim in the argument that cultural differences in moral psychology matter for political conflict over climate change:

'Moral convictions and the emotions they evoke shape political attitudes' (Feinberg & Willer 2013, p. 1).

2.1. Attitudes Do Not Explain Behaviours

Even strongly held attitudes have little influence on behaviours according to a classic review by Wicker (1969).

'it is considerably more likely that attitudes will be unrelated or only slightly related to overt behaviors than that attitudes will be closely related to actions' [...] 'substantial proportions of subjects show attitude-behavior discrepancies. This is true even when subjects scoring at the extremes of attitudinal measures are compared on behavioral indices' (p. 65).

Genthner & Taylor (1973) on racist prejudice provides a dramatic illustration. Subjects who self-reported greater prejudice were more aggressive overall in applying electric shocks, but 'aggressed equally against' both White people and Black people. Racist attitudes and racist behaviours are not always correlated (as many of us may know from experience, unfortunately).

2.2. Moral Attitudes Do Explain Behaviours

Skitka et al. (2005) contrasted moral attitudes (e.g. about sexuality) with non-moral but extreme attitudes (e.g. about sport). To what extent do people attempt to maintain social distance from others with conflicting attitudes?

‘The effect of moral conviction on social distance was robust when we controlled for the effects gender, age, attitudinal extremity, importance, and centrality’

‘In contrast, participants were more tolerant of having a distant than an intimate relationship with an attitudinally dissimilar other, when the attitude dissimilarity was on an issue that the participant held with low moral conviction, results that held even when we controlled for attitude strength’ (Skitka et al. 2005, Study 1).

2.3. But Do Moral Attitudes Explain Political Behaviours?

Skitka & Bauman (2008) report that your moral conviction about an election candidate increases both the probability that you will vote (Study 1) and the reported strength of your intention to vote (Study 2).

In both studies: ‘the effects of moral conviction on political engagement were equally strong for those on the political right and left’ (Skitka & Bauman 2008, p. 50).

We should be cautious in relying on these particular studies insofar as the effects could in principle be due to ‘markers of attitude strength’ other than moral conviction (Skitka & Bauman 2008, pp. 36–7).

2.4. What about Attitudes to Climate Change specifically?

Doran et al. (2019) measured (i) the extent to which subjects took climate change to be a moral concern,¹ and (ii) the extent to which subjects evaluated the consequences of climate change negatively.

They found that

‘individuals with strong moral concerns about climate change tend to be more likely to support climate policies.

and that

¹ In this research, the question about moral concern was:

‘Some people have moral concerns about climate change. For example, because they think that its harmful impacts are more likely to affect poorer countries, or because they feel a moral responsibility towards future generations’ (Doran et al. 2019, p. 615)

This appears to highlight the harm and fairness rather than any of the binding moral foundations such as purity. If Graham et al. (2009) are right about cultural differences and political orientation, this might in principle mean that the study confounded moral concern with political orientation.

‘moral concerns [were] substantially more important than consequence evaluations, explaining about twice as much of the variance.’

Conversely, Hornsey et al. (2016) contrasted climate sceptics with people who know humans are causing climate change. They found that merely knowing makes little measurable difference to behaviours. (This is discussed in the recording for *Moral Psychology Drives Environmental Concern* in Lecture 05.) As they put it in a later review:

‘knowing whether people are skeptics or believers tells you surprisingly little about their willingness to engage in actions that matter’ (Hornsey & Fielding 2020, p. 21).

Putting these two findings together (Doran et al. 2019 and Hornsey et al. 2016), knowing about climate change or its consequences does not have much effect on practical support for mitigation compared to perceiving environmental issues as moral issues.

2.5. Conclusion

Overall, we appear to have identified some evidence for the claim that ‘Moral convictions and the emotions they evoke shape political attitudes’ (Feinberg & Willer 2013, p. 1). However, this required us to go beyond the studies those authors themselves cited in support of this claim.

3. Moral Pluralism: Beyond Harm

A pluralist theory is one which entails that there are multiple, incommensurable kinds of moral concern; for example, both purity and harm. By contrast, a monist theory is one which identifies one fundamental aspect, most likely harm, or something related to harm, as the sole basis for all genuinely moral concern.

What kind of evidence might favour pluralism over monism? This section introduces two key sources.

In order to describe human moral psychology, do we need to recognise incommensurable kinds of moral concern?

This section offers three reasons for a positive answer.

First, it seems that harm- and purity-related concerns are incommensurable; and both kinds of concern appear to be involved in ordinary moral judgments (Chakroff et al. 2013; Chakroff et al. 2017).

Second, specific kinds of moral concern (e.g. purity) appear to have had different roles in evolution. For instance, van Leeuwen et al. (2012) had subjects answer questions which indicated the degree to which they endorsed moral concerns linked to purity, authority and loyalty (the ‘binding foundations’) compared to the degree to which they endorsed moral foundations linked to harm and unfairness (the ‘individual foundations’). They found a link between stronger endorsement of binding foundations and the historical prevalence of pathogens in the region subjects lived:

‘historical pathogen prevalence—even when controlling for individual-level variation in political orientation, gender, education, and age—significantly predicted endorsement of In-group/loyalty [stats removed], Authority/respect, and Purity/sanctity; it did not predict endorsement of Harm/care or Fairness/reciprocity’ (van Leeuwen et al. 2012).

This is coherent with the idea that purity has been important because it enabled humans to mitigate risks from pathogens associated with their diet long before they understood pathogens.

The third reason for accepting (descriptive) moral pluralism is that it appears to be needed to explain how cultural differences in moral psychology underpin attitudes to homosexuality. Greater endorsement of binding foundations appears to explain stronger homophobia (Koleva et al. 2012), and this may explain why both being more socially conservative (Barnett et al. 2018) and being more sensitive to disgust (Lai et al. 2014) is correlated with being more homophobic.

While none of these reasons are decisive, it appears that moral pluralism is needed for a variety of explanations. This justifies us in accepting that there are incommensurable kinds of moral concern.

4. Moral Foundations Theory: An Approach to Cultural Variation

Moral Foundations Theory is ‘a systematic theory of morality, explaining its origins, development, and cultural variations’ (Graham et al. 2011, p. 368). It comprises four assertions about the cultural origins of ethical abilities.

By the end of this section you should understand, at least roughly, what Moral Foundations Theory claims.

4.1. Why This Theory?

Moral Foundations Theory is the most difficult theory to understand that we will encounter.

As we will see later, there is at best weak evidence for key applications of Moral Foundations Theory (Davis et al. 2016; Doğruyol et al. 2019; Kivikanigas et al. 2021). It also faces significant theoretical objections (we have already seen one objection in *Moral Disengagement: Significance* in Lecture 03). Its proponents appear to ignore the strongest objections to Moral Foundations Theory and fail to cite research reporting evidence against the theory (e.g. Graham et al. 2019).

So why consider Moral Foundations Theory at all? Some of its strongest opponents make the best case for studying it:

‘It would be difficult to overestimate the influence of this theory on psychological science because it caused a dramatic broadening in conceptualization of morality beyond narrow Western notions that have focused on individualistic virtues associated with protecting one’s rights—especially prevention of harm (Gilligan, 1982) and unjust treatment (Kohlberg, 1969).

‘The expansion of morality psychology to more collectivistic domains has led to substantial research into the role of morality in the political environment. More specifically, there is significant support for the moral foundations hypothesis that predicts that conservatives tend to draw on virtues associated with binding communities more than liberals (Graham et al. 2009; Graham et al. 2011; Koleva et al. 2012)’ (Davis et al. 2017, p. 128).

And although it is usually categorised as psychology, it is also fruitfully considered as philosophy (and perhaps as anthropology). It’s hard not to love it.

4.2. What the Theory Claims

Moral Foundations Theory is the conjunction of four claims.²

The first is a form of nativism:

‘the human mind is organized in advance of experience so that it is prepared to learn values, norms, and behaviors related to a

² Graham et al. (2019) is probably the most accessible introduction, and this is the main source I follow in the lectures. Although a book chapter, it is available online. Haidt (2007) is useful if you are short of time. The theory first appears in Haidt & Graham (2007).

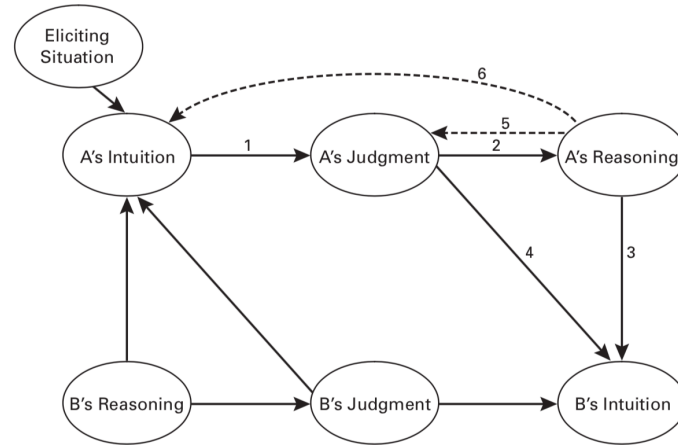


Figure 1: The Social Intuitionist Model of Moral Judgement. Arrows are interpreted causally. Dotted lines represent connections of low significance. Source: Haidt & Bjorklund (2008, figure 4.1)

diverse set of recurrent adaptive social problems' (Graham et al. 2013, p. 63).

Second, moral psychology is affected by cultural learning ('The first draft of the moral mind gets edited during development within a culture.')

Third, the Social Intuitionist Model of Moral Judgement is true. This is a set of hard-to-understand claims in itself (which we already considered briefly in *Moral Disengagement: Significance* in Lecture 03). Two of these are:

'moral evaluations generally occur rapidly and automatically, products of relatively effortless, associative, heuristic processing that psychologists now refer to as System 1 thinking' (Graham et al. 2013, p. 66)

and:

'moral reasoning is done primarily for socially strategic purposes' (Graham et al. 2013, p. 66)

The Social Intuitionist Model is depicted in this figure:

Fourth, moral pluralism is true. ('There are many psychological foundations of morality' (Graham et al. 2019, p. 212).) This was the topic of *Moral Pluralism: Beyond Harm* (section §3). Haidt & Joseph (2004) and Haidt & Graham (2007) claim that there are five evolutionarily ancient, psychologically basic abilities linked to:

- harm/care
- fairness (including reciprocity)

- in-group loyalty
- respect for authority
- purity, sanctity

It is not important to the theory that these be the only foundations, nor that these be exactly the foundations (perhaps one is wrong, and should be replaced by two different ideas).³

5. Operationalising Moral Foundations Theory

In order to use Moral Foundations Theory to identify and explain cultural differences, we need a way to measure individual variations in how moral judgements are made. The Moral Foundations Questionnaire aims to fulfill this need.

By the end of this section you should know what the Moral Foundations Questionnaire is and how attempts have been made to validate it. You should also be aware of some objections to its use as a tool for identifying cultural differences.

According to (Feinberg & Willer 2013), researchers have found evidence that Moral Foundations Theory is true. What is this evidence?

The first step towards finding evidence is to operationalise the theory. To this end, Haidt & Graham (2007) developed the Moral Foundations Questionnaire (which can be found in Graham et al. (2011)). Each foundation is linked to a number of questions.

The questionnaire has been given to many subjects by various researchers. Patterns in subjects' answers can be investigated to discover whether the questionnaire has:

- internal validity (roughly, are the patterns in subjects' answers consistent with the theory that they are answering on the basis of five foundations?⁴);

³ To illustrate, Moral Foundations Theory has had some difficulties with Libertarians ...

'Libertarians have a unique moral-psychological profile, endorsing the principle of liberty as an end and devaluing many of the moral concerns typically endorsed by liberals or conservatives' (Iyer et al. 2012, p 21).

Since 'MFT's five moral foundations appeared to be inadequate in capturing libertarians' moral concerns, [we decided to] to consider Liberty/oppression as a candidate for addition to our list of foundations' (Graham et al. 2013, p. 87).

⁴ For a clear, nontechnical intro to confirmatory factor analysis see Gregorich (2006). (Note that you are not expected to understand this.)

- test-retest reliability (are individuals likely to give the same answers at different times); and
- external validity (roughly, are subjects' answers on other questionnaires correlated with the conceptually related foundations?).

The Moral Foundations Questionnaire exhibits all these features, and passes tests of internal validity in various countries (Graham et al. 2011; Yilmaz et al. 2016). However, Iurino & Saucier (2020) collected new samples across 27 countries but 'we were not able to replicate Graham et al.'s (2011) results indicating that a five-factor model is a suitable approach to modeling the moral foundations' (p.~6).

A further important feature is measurement invariance:

'A finding of measurement invariance would provide more confidence that use of the MFQ across cultures can shed light on meaningful differences between cultures rather than merely reflecting the measurement properties of the MFQ' (Iurino & Saucier 2020, p. 2).

We are particularly interested in one kind of measurement invariance, *scalar invariance*, as this would justify using the Moral Foundations Questionnaire to compare mean scores on a foundation.⁵ That is, it would justify us in drawing conclusions like 'conservatives put more weight on purity than liberals'. Unfortunately attempts to establish scalar invariance have been unsuccessful (Davis et al. 2016; Doğruyol et al. 2019; Davis et al. 2017; Iurino & Saucier 2020, Table 4).

Failure of the Moral Foundations Questionnaire to exhibit scalar invariance may be due in part to lack of diversity in the sample used to develop it:

'Items of the MFQ [Moral Foundations Questionnaire] were refined on the basis of a sample with participants from a variety of countries, but the sample was predominately White (i.e., 87%). Furthermore, the sample involved people who visited the team's website, which inevitably involves some selection bias, potentially associated with ideological background' (Davis et al. 2017, p. 128; compare Kivikangas et al. 2021, p. 84).

Overall, we should be cautious about drawing conclusions about cultural variation from results obtained with the Moral Foundations Questionnaire

⁵ See Lee (2018): 'Ascertaining scalar invariance allows you to substantiate multi-group comparisons of factor means (e.g., t-tests or ANOVA), and you can be confident that any statistically significant differences in group means are not due to differences in scale properties.'

alone. But we have some evidence to suppose that, in some cases, within a single culture, the Moral Foundations Questionnaire can identify aspects of ethical abilities which may be subject to cultural variation:

‘Recognizing ingroup loyalty, authority, and purity as moral concerns—even if they are not your moral concerns—is crucial both for scientific accuracy and for the application of social justice research’ (Haidt & Graham 2007, p. 111).

6. Liberals vs Conservatives

According to Feinberg & Willer (2013, p. 2), ‘liberals and conservatives possess different moral profiles regarding the five moral foundations.’ More specifically, ‘care and fairness are generally negatively, and loyalty, authority, and sanctity, generally positively related to conservative political orientation’ (Kivikangas et al. 2021, p. 77). Is this true?

By the end of this section you should understand the evidence for this claim as well as some objections to it.

In this section we aim to understand and evaluate the third key claim in the argument that cultural differences in moral psychology matter for political conflict over climate change:

‘liberals and conservatives possess different moral profiles regarding the five moral foundations’ (Feinberg & Willer 2013, p. 2).

What evidence supports this claim?

van Leeuwen & Park (2009) found evidence for this claim with a sample of Dutch students both when political affinity was tested using an explicit question and when it was tested using an implicit measure. And Graham et al. (2009) found comparable results with a sample from the USA.

On the basis of a careful meta-analysis of evidence, Kivikangas et al. (2021) conclude that, with some important exceptions noted below,

‘care and fairness are generally negatively, and loyalty, authority, and sanctity, generally positively related to conservative political orientation’ (p. 77).

Further, this result appears broadly robust across different ways of analysing data and different forms of the questionnaire used (Kivikangas et al. 2021, p. 83).

6.1. Objection from a Competing Theory

Gray et al. (2012) propose that ‘all morality is understood through the lens of harm.’ This leads them to the hypothesis that ‘harm is central in moral cognition across moral diversity for both liberals and conservatives’ (Schein & Gray 2015, p. 1158). They offer evidence which is ‘more consistent with a common dyadic template than with a specific number of distinct moral mechanisms that are differentially expressed across liberals and conservatives’ (Schein & Gray 2015, p. 1158).

However, note that this requires working with a particularly broad conception of harm:

‘loyalty, purity, industriousness, and social order [...] are best understood as “transformations” or “intermediaries” of harm, values whose violation leads to perceptions of concrete harm’ (Schein & Gray 2018).

My guess is that this is more likely to capture how some people think in abstract terms (but see Crone & Laham (2015) for counter evidence) than to capture the psychological structure of ethical abilities.

6.2. Objection from Cultural Differences

In New Zealand, Davies et al. (2014, p. 434) found that ‘[a]lthough Harm/care and Fairness/reciprocity showed significant negative correlations with conservatism, these relationships were weak, indicating that these foundations are not related to ideology. [...] the individualizing foundation results are surprising, and different to those found by Graham et al. (2011).’

Davis et al. (2016, p. e29) found evidence from two independent samples that

‘the binding moral foundations would show a weaker relationship with political conservatism in Black people than in White people.’

They conclude that

‘some of the current items may conflate moral foundations with other constructs such as religiosity or racial identity’ (Davis et al. 2016, p. e29).

This conclusion is supported by (Kivikangas et al. 2021)’s meta-analysis:

‘In the representative samples, arguably giving us the least biased estimates for the general population, and its subset of Black respondents, all associations between moral foundations and political orientation were close to zero’ (p. 84).

These findings combined with the (related) failures to find evidence that the Moral Foundations Questionnaire exhibits scalar invariance (see *Operationalising Moral Foundations Theory* (section §5)) indicate that we should be cautious in drawing conclusions about cultural differences.

7. Conclusion So Far

We have evaluated three of the five claims critical to Feinberg & Willer (2013)'s argument that cultural variation in moral psychology can explain political conflict over climate change.

8. Question Session 04

These are the recordings of the live online whole-class question session. They are usually available on the day after the session. (You may need to refresh this page to make them appear.)

8.1. Liberal vs Conservative: Emilie's question

How can we be sure that the dutch 'liberal' is the same as the 'liberal' the moral psychologists are talking about (possibly US⁶) in the study by van Leeuwen & Park (2009)?

The rough answer I gave in the live session was, 'we can't be sure, but there does seem to be something to the one-dimensional opposition in lots of places'.

It's important that the claim is about *socially* liberal vs *socially* conservative. (If we were talking about economic views, the picture would be much more complex.⁷)

⁶ van Leeuwen & Park (2009, p. 169) do indeed rely on research using US samples as background on political identity. Jost et al. (2009)'s authoritative review of the one-dimensional liberal-conservative model of political identity (which they do not cite) covers much of the background they are relying on. This review is entirely focussed on the US. It also does not discuss whether a single model of political identity works equally well across different ethnic groups.

⁷ To illustrate, Malka et al. (2014, p. 1034) notes that 'Eastern European nations formerly subjected to communist rule sometimes show relations between high levels of NSC [needs for security and certainty] characteristics [which are associated with socially conservative views] and left-wing economic preferences.' See also Duckitt & Sibley (2009), who propose that different processes underpin social and economic aspects of political identity.

The moral psychologists do take themselves to be talking about a dimension that is found across the world. For example:

‘Whereas in the US, the political divide is between “liberals” and “conservatives” (or Democrats and Republicans), both the substance of political divides and the terms used to describe them vary across cultural contexts (Malka et al., 2014). However, research suggests that the liberal–conservative divide on social issues in particular manifests in similar ways across cultures (e.g., Feinberg, Wehling, Chung, Saslow, & Melv er Paulin, 2019; Graham et al., 2011)’ (Feinberg & Willer 2019, footnote 1).

Do the references they cite here support these assertions?

As far as I can tell, Graham et al. (2011) depend on the assumption that the socially liberal-socially conservative distinction works in roughly the same way across many countries; in this sense it provides indirect evidence (if this assumption was false, they shouldn’t have been able to get significant results). Feinberg et al. (2020, Study 4a) compares earlier findings from a US sample of participants with studies of people in Austria, France and Germany. Again, this seems to depend on the assumption that (in their words) ‘the same conservative-liberal divisions found in the United States are common in countries across the world’ (Feinberg et al. 2020, p. 790) and so provides at most indirect assumption for it.

Those authors do cite Bornschier (2010) in support of this assumption. This covers multiple countries with relevantly different histories (but not the US). I don’t fully understand this research (yet), but my sense is that it provides one method to identify how robust the idea of a divide between socially liberal and socially conservative is. It also has some very clear figures.

Glossary

binding foundations Categories of moral concern linked to social needs; these are often taken to be betrayal/loyalty, subversion/authority, and impurity/purity (Graham et al. 2011). 6

individual foundations Categories of moral concern linked to individual needs; these are often taken to be harm/care, cheating/fairness (Graham et al. 2011). Sometimes called *individualizing foundations*. 6

moral conviction ‘Moral conviction refers to a strong and absolute belief that something is right or wrong, moral or immoral’ (Skitka et al. 2005, p. 896). 2, 3

Moral Foundations Theory The theory that moral pluralism is true; moral foundations are innate but also subject to cultural learning, and the Social Intuitionist Model of Moral Judgement is correct (Graham et al. 2019). Proponents often claim, further, that cultural variation in how these innate foundations are woven into ethical abilities can be measured using the Moral Foundations Questionnaire (Graham et al. 2009; Graham et al. 2011). Some empirical objections have been offered (Davis et al. 2016; Davis et al. 2017; Doğruyol et al. 2019). See 4. 2, 9

Social Intuitionist Model of Moral Judgement A model on which intuitive processes are directly responsible for moral judgements (Haidt & Bjorklund 2008). One's own reasoning does not typically affect one's own moral judgements, but (outside philosophy, perhaps) is typically used only to provide post-hoc justification after moral judgements are made. Reasoning does affect others' moral intuitions, and so provides a mechanism for cultural learning. 8, 15

References

- Barnett, M. D., Öz, H. C. M., & Marsden, A. D. (2018). Economic and Social Political Ideology and Homophobia: The Mediating Role of Binding and Individualizing Moral Foundations. *Archives of Sexual Behavior, 47*(4), 1183–1194.
- Bornschieer, S. (2010). The New Cultural Divide and the Two-Dimensional Political Space in Western Europe. *West European Politics, 33*(3), 419–444.
- Chakroff, A., Dungan, J., & Young, L. (2013). Harming Ourselves and Defiling Others: What Determines a Moral Domain? *PLOS ONE, 8*(9), e74434.
- Chakroff, A., Russell, P. S., Piazza, J., & Young, L. (2017). From impure to harmful: Asymmetric expectations about immoral agents. *Journal of Experimental Social Psychology, 69*, 201–209.
- Crone, D. L. & Laham, S. M. (2015). Multiple moral foundations predict responses to sacrificial dilemmas. *Personality and Individual Differences, 85*, 60–65.
- Davies, C., Sibley, C., & Liu, J. (2014). Confirmatory Factor Analysis of the Moral Foundations Questionnaire: Independent Scale Validation in a New Zealand Sample. *Social Psychology, 45*(6), 431–436.

- Davis, D., Dooley, M., Hook, J., Choe, E., & McElroy, S. (2017). The Purity/Sanctity Subscale of the Moral Foundations Questionnaire Does Not Work Similarly for Religious Versus Non-Religious Individuals. *Psychology of Religion and Spirituality*, 9(1), 124–130.
- Davis, D., Rice, K., Tongeren, D. V., Hook, J., DeBlare, C., Worthington, E., & Choe, E. (2016). The Moral Foundations Hypothesis Does Not Replicate Well in Black Samples. *Journal of Personality and Social Psychology*, 110(4).
- Doğruyol, B., Alper, S., & Yilmaz, O. (2019). The five-factor model of the moral foundations theory is stable across WEIRD and non-WEIRD cultures. *Personality and Individual Differences*, 151, 109547.
- Doran, R., Böhm, G., Pfister, H.-R., Steentjes, K., & Pidgeon, N. (2019). Consequence evaluations and moral concerns about climate change: Insights from nationally representative surveys across four European countries. *Journal of Risk Research*, 22(5), 610–626.
- Duckitt, J. & Sibley, C. G. (2009). A dual process motivational model of ideological attitudes and system justification. *Social and psychological bases of ideology and system justification*, 292–313.
- Feinberg, M., Wehling, E., Chung, J., Saslow, L., & Paulin, I. M. (2020). Measuring Moral Politics: How Strict and Nurturant Family Values Explain Individual Differences in Conservatism, Liberalism, and the Political Middle. *Journal of Personality and Social Psychology*, 118(4), 777–804.
- Feinberg, M. & Willer, R. (2013). The Moral Roots of Environmental Attitudes. *Psychological Science*, 24(1), 56–62.
- Feinberg, M. & Willer, R. (2019). Moral reframing: A technique for effective and persuasive communication across political divides. *Social and Personality Psychology Compass*, 13(12), e12501.
- Genthner, R. & Taylor, S. (1973). Physical aggression as a function of racial prejudice and the race of the target. *Journal of Personality and Social Psychology*, 27(2), 207–210.
- Graham, J., Haidt, J., Koleva, S., Motyl, M., Iyer, R., Wojcik, S. P., & Ditto, P. H. (2013). Moral Foundations Theory: The Pragmatic Validity of Moral Pluralism. In P. Devine & A. Plant (Eds.), *Advances in Experimental Social Psychology*, volume 47 (pp. 55–130). Academic Press.
- Graham, J., Haidt, J., Motyl, M., Meindl, P., Iskiwitch, C., & Mooijman, M. (2019). Moral Foundations Theory: On the advantages of moral pluralism over moral monism. In K. Gray & J. Graham (Eds.), *Atlas of Moral Psychology*. New York: Guilford Publications.

- Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology, 96*(5), 1029–1046.
- Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology, 101*(2), 366–385.
- Gray, K., Young, L., & Waytz, A. (2012). Mind Perception Is the Essence of Morality. *Psychological Inquiry, 23*(2), 101–124.
- Gregorich, S. E. (2006). Do Self-Report Instruments Allow Meaningful Comparisons Across Diverse Population Groups? Testing Measurement Invariance Using the Confirmatory Factor Analysis Framework. *Medical Care, 44*(11), S78–S94.
- Haidt, J. (2007). The New Synthesis in Moral Psychology. *Science, 316*(5827), 998–1002.
- Haidt, J. & Bjorklund, F. (2008). Social intuitionists answer six questions about moral psychology. In W. Sinnott-Armstrong (Ed.), *Moral Psychology, Vol 2: The Cognitive Science of Morality: Intuition and Diversity* chapter 4, (pp. 181–217). Cambridge, Mass: MIT press.
- Haidt, J. & Graham, J. (2007). When Morality Opposes Justice: Conservatives Have Moral Intuitions that Liberals may not Recognize. *Social Justice Research, 20*(1), 98–116.
- Haidt, J. & Joseph, C. (2004). Intuitive ethics: How innately prepared intuitions generate culturally variable virtues. *Daedalus, 133*(4), 55–66.
- Hornsey, M. J. & Fielding, K. S. (2020). Understanding (and Reducing) Inaction on Climate Change. *Social Issues and Policy Review, 14*(1), 3–35.
- Hornsey, M. J., Harris, E. A., Bain, P. G., & Fielding, K. S. (2016). Meta-analyses of the determinants and outcomes of belief in climate change. *Nature Climate Change, 6*(6), 622–626.
- Iurino, K. & Saucier, G. (2020). Testing Measurement Invariance of the Moral Foundations Questionnaire Across 27 Countries. *Assessment, 27*(2), 365–372.
- Iyer, R., Koleva, S., Graham, J., Ditto, P., & Haidt, J. (2012). Understanding Libertarian Morality: The Psychological Dispositions of Self-Identified Libertarians. *PLOS ONE, 7*(8), e42366.

- Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual review of psychology, 60*, 307–337.
- Kivikangas, J. M., Fernández-Castilla, B., Järvelä, S., Ravaja, N., & Lönnqvist, J.-E. (2021). Moral foundations and political orientation: Systematic review and meta-analysis. *Psychological Bulletin, 147*(1), 55–94.
- Koleva, S. P., Graham, J., Iyer, R., Ditto, P. H., & Haidt, J. (2012). Tracing the threads: How five moral concerns (especially Purity) help explain culture war attitudes. *Journal of Research in Personality, 46*(2), 184–194.
- Lai, C. K., Haidt, J., & Nosek, B. A. (2014). Moral elevation reduces prejudice against gay men. *Cognition and Emotion, 28*(5), 781–794.
- Lee, S. T. H. (2018). Testing for Measurement Invariance: Does your measure mean the same thing for different participants? *APS Observer, 31*(8).
- Malka, A., Soto, C., Inzlicht, M., & Leikes, Y. (2014). Do Needs for Security and Certainty Predict Cultural and Economic Conservatism? A Cross-National Analysis. *Journal of Personality and Social Psychology, 106*(6), 1031–1051.
- Schein, C. & Gray, K. (2015). The Unifying Moral Dyad: Liberals and Conservatives Share the Same Harm-Based Moral Template. *Personality and Social Psychology Bulletin, 41*(8), 1147–1163.
- Schein, C. & Gray, K. (2018). The Theory of Dyadic Morality: Reinventing Moral Judgment by Redefining Harm. *Personality and Social Psychology Review, 22*(1), 32–70.
- Skitka, L. J., Bauman, C., & Sargis, E. (2005). Moral Conviction: Another Contributor to Attitude Strength or Something More? *Journal of Personality and Social Psychology, 88*(6), 895–917.
- Skitka, L. J. & Bauman, C. W. (2008). Moral Conviction and Political Engagement. *Political Psychology, 29*(1), 29–54.
- van Leeuwen, F. & Park, J. H. (2009). Perceptions of social dangers, moral foundations, and political orientation. *Personality and Individual Differences, 47*(3), 169–173.
- van Leeuwen, F., Park, J. H., Koenig, B. L., & Graham, J. (2012). Regional variation in pathogen prevalence predicts endorsement of group-focused moral concerns. *Evolution and Human Behavior, 33*(5), 429–437.

Wicker, A. W. (1969). Attitudes versus Actions: The Relationship of Verbal and Overt Behavioral Responses to Attitude Objects. *Journal of Social Issues*, 25(4), 41–78.

Yilmaz, O., Harma, M., Bahçekapili, H. G., & Cesur, S. (2016). Validation of the Moral Foundations Questionnaire in Turkey and its relation to cultural schemas of individualism and collectivism. *Personality and Individual Differences*, 99, 149–154.