BEYOND REASON: MORALITY, POLARIZATION, AND THE COMMUNICATION OF CLIMATE CHANGE

By

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Professor John Orbell

This paper describes cognitive tendencies when people are confronted with politically polarized issues of high moral salience. It argues that political polarization is a result of a combination of group-preferring biases and the emotional basis of the human moral system. Suggestions for how to transcend political polarization and communicate effectively are then offered, specifically for the issue of climate change. The paper's motivation is to work towards conveying the urgency of action to mitigate the severity of climate change to the general public.

Acknowledgments

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Beyond Reason: Morality, Polarization, and Communicating Climate Change

America is mired in a deep partisan impasse. Any major collective action that the country might undertake has been rendered nearly impossible by the deep fissures that run through the country. Since the tumultuous passage of the Affordable Care Act in 2010, little has been accomplished on any major political issue. An optimist could reasonably argue that inaction is not such a bad thing; after all, the problems that legislation would try to ameliorate are mostly longstanding and unlikely to significantly deteriorate simply because few new laws are being passed. Political inaction preserves the status quo, and the status quo isn't all that bad, is it? This optimist would be right about most issues – poverty, the economy, foreign policy, taxes, and most issues will probably not be seriously affected by *inaction*, though they may have been affected (and possibly improved) by action – but would also miss the most significant threat facing the country, and all other countries for that matter: climate change. Climate change is an unusual problem in that its damage to society is a. already predicted to be unacceptably high, and b. increases without action. Political inaction fueled by political/cultural polarization may therefore be tolerable for many problems but not for climate change. Climate change inaction is not keeping the plane on cruise control – it's failing to pull up from a nosedive that's plunging us towards a murky and ominous future. The problem, then, is how to overcome political polarization on climate change in order to make collective action possible, and it is an urgent one.

A clear view of this problem must begin with two elements: first, a model of how human beings moralize, and second, how groups of human beings polarize. I will argue that moralization is done more emotionally than rationally. This follows from the

dual-process theory of mind suggest by Daniel Kahneman and others, and also from literature from the field of evolutionary psychology. This model is then extended to inter-group political dynamics. Here, I endorse a view of human beings as being generally groupish, or prone to bias in favor of their in-groups. This preference for one's own tribe (a tribe based on nationality, political party, race, gender, etc.) exacerbates our tendency towards emotionally-directed thinking on morally-charged subjects.

People think about polarizing issues more emotionally than rationally, I argue, but the form political discourse typically takes appears entirely rational. When people discuss politics, they rarely say things like, "I have warm feelings towards the war" or "President Obama makes me upset." Instead, claims and assertions are offered, such as, "We had to go to war because they were going to attack us" or "President Obama has shredded the Constitution." As a result, the intuitive view of political thought is that it is far more rational than it really is. (Indeed, the intuitive view of the mind in general overemphasizes rationality in much the same way and for much the same reason.)

This illusion of an essentially rational view of politics has led those who seek to communicate the urgency of climate change astray. Communication on emotionally-charged topics must offer emotional content. An effort to convey an idea to someone who brings emotions to a subject must adapt to the emotional content of their thought. Of course, communicative efforts must make sense (be logically sound), and they ought to be rooted in truth, but when it comes to politically polarizing issues, this is not enough. My argument in this paper is that understanding the emotional basis for

thinking about climate change and other polarizing topics is an important element of the effort to persuade the public of the importance of action on climate change.

I plan to examine the extent to which the particular framings of messages about climate change affect the messages' levels of persuasiveness between partisan groups. Section one will review literature on the effects of political/cultural polarization, arguing that polarization both activates cognitive biases and creates incentive problems for beliefs, which are more valuable if they are in line with other community members than if they are accurate. Section two will then present a general theory of human morality, arguing within an evolutionary psychology paradigm. The study will employ Haidt's (2012) Moral Foundations Theory, which specifies six fundamental moral dimensions, akin to the six regions of the taste palette. According to Haidt's research, liberal westerners tend to value two moral foundations, Care and Fairness (as equality), far more than any of the others, while those on the right weigh the other foundations (Loyalty, Authority, Fairness (as proportionality) and Sanctity) almost as heavily as Care and Fairness. The third and last section will then suggest lessons based on the previous discussion of morality and polarization for how to effectively communicate the nature and urgency of climate change.

Climate Change and America's Growing Polarization

Climate change has been an issue predominantly confined to the left. Skepticism regarding climate change is closely correlated with partisan affiliation (McCright & Dunlap, 2011; Kahan, 2012; Whitmarsh, 2011). Many, especially those on the left, explain this polarization by characterizing skeptics as lacking in scientific literacy (for an example from academia, see Pidgeon & Fischhoff, 2011; for one from a popular

periodical, see Heiser, 2012). Yet work by Dan Kahan (2012) has cast doubt on this explanation. Kahan (2012) found that scientific literacy did not increase belief in global warming – on the contrary, increased scientific literacy was correlated with increased cultural polarization. Kahan, Peters, Dawson, and Slovic (2013) demonstrated that numeracy is typically employed to reach ideologically satisfying conclusions, and will not be employed if low-effort heuristics will yield the more appealing conclusion. This research indicates that climate change skepticism cannot be overcome by merely explaining the evidence, the tact taken by many environmental advocates. Furthermore, strategies based on this tactic may in fact be counterproductive because skeptics are likely to entrench themselves in their positions when attacked on a purely evidential basis. They will use their capacity to reason to preserve their political intuitions (Haidt, 2012). Therefore, a different, more nuanced approach must be taken if we are to bridge the climate change gap between different partisan groups.

Climate change is already a polarized issue and has become even more so of late (Marshall, 2014), and as such, it is useful to examine the dynamics of political polarization in general. Political polarization refers to both the degree to which political opinions are opposed to one another and the degree to which political affiliation predicts political attitudes. Political polarization impedes political action by blocking paths to compromise. In a liberal democracy, political decisions are arrived at via negotiation, and political polarization locks both negotiators into their own proposals. As political polarization increases, the number of mutually acceptable compromises dwindles. Worse, the motivation to reach such a compromise evaporates in a cloud of antagonism and mistrust.

Alarmingly, the United States has never been as polarized as it is now (Doherty, 2014; Mann & Ornstein, 2012). Doherty (2014) argues, "Political polarization is the defining feature of early 21st century American politics, both among the public and elected officials." Furthermore, as Doherty writes, "Differences between the right and left go beyond politics." According to him, "differences between the right and left go beyond politics" and "'ideological silos' are now common." 63% of conservatives and 49% of liberals say most of their close friends share their political views (Doherty, 2014). Yet it is too narrow to discuss this in purely political terms, because political attitudes are a reflection of a person's values. We are therefore discussing not just polarization of political opinion, but a broader moral-cultural polarization as well. More polarization means more than just that Democrats are less likely to vote for Republicans and vice versa; it means that we are coming to *be* increasingly different groups of people. The two major American tribes, the conservatives and the liberals, are becoming increasingly deeply entrenched in their own group, and alienated from the other one.

In fact, it is proper to call this a shift towards more *tribalism* (Greene, 2013). It is sometimes suggested that people vote out of self-interest (e.g., Weeden & Kurzban, 2014), but this does not seem to be how political attitudes function. Haidt (2012) summarizes the evidence:

> Parents of children in public school are not more supportive of government aid to schools than other citizens; young men subject to the draft are not more opposed to military escalation than men too old to be drafted; and people who lack health insurance are not more

> likely to support government-issued health insurance than people covered by insurance. (p. 85-86)

As Kinder (1998) writes, “In matters of public opinion, citizens seem to be asking themselves not ‘What’s in it for me?’ but rather ‘What’s in it for my group?’” (p. 808). One explanation for why people hold political attitudes based on their group affiliations rather than their own self-interest is that political attitudes’ main function is to *signal social membership*. Given that we care greatly about our reputation, we have a strong incentive to ensure that our political opinions align with those of our peers (who for most of us are predominantly members of our own partisan group). Conversely, we have little incentive to express or even harbor an opinion that is liable to provoke serious rebuke from people whose judgments we care about. I am not saying that we ignore what we consider to be true in order to make our friends like us more – only that when we cannot be certain of what is true and multiple schools of thought make some degree of sense, as is almost always the case in politics, we have strong incentives to fall in line with what other people “like us” believe.

As a result of our groupish political tendencies, we are frequently guilty of employing our reasoning abilities to defend our political inclinations rather than disinterestedly pursue truth. When it comes to politics, people usually act as lawyers, not scientists. Using reasoning to justify desirable beliefs is known as motivated reasoning, and it is a well-established aspect of cognition. A study by Kahan, Dawson, Peters and Slovic (2013) demonstrates this phenomenon. The authors of the study measured participants’ numeracy, a measurement that reflects one’s capability to work with numbers. The participants were then divided into two groups, and the first group

was asked to assess the efficacy of a skin lotion by evaluating statistical results from a trial of the skin lotion. The statistical analysis was tricky and to get the right answer the study participants had to ignore the more obvious answer, which relied on heuristics, and instead use slow, System 2 thinking. As expected, people with higher numeracy scores got the answer right more often. The other group, however, had to deal with the exact same problem with the exact same numbers, except instead of evaluating skin lotion they were told they would be evaluating the effect of gun control legislation. This time, participants with higher numeracy scores actually scored *worse* than those with lower numeracy scores when getting the answer right would have disagreed with their political attitudes towards gun control. When the correct answer was also the one that was ideologically satisfying, this effect disappeared. The authors concluded that participants relied on System 1 heuristic-driven thinking when doing so would get them the answer they wanted to be true, and only used System 2 deliberation when doing so was the only way to avoid a troubling conclusion.

Our tendencies towards tribalism and motivated reasoning coupled with the urgent need for collective action on climate change makes it imperative that we figure out how to communicate across party lines. I assert that learning how to do this must begin by understanding the nature of our political minds. If we are to escape the blinding nature of polarization, we must understand the how and why of our thinking about politics.

Moral Matrices and the Nature of Political Thought

Politics is rooted in morality. Politics, in the sense I am using the term, means the arena in which groups of people make collective decisions. Political judgments

require criteria that determine whether one action is better or worse than another. These criteria are moral in nature. They are a person's fundamental values. Whenever you make a judgment about a political issue you are relying on these criteria, though often subconsciously. For example, when you decided whether to vote for or against legalizing marijuana, you may have decided to vote for it because you believe in personal freedom or against it because you worry about the harm legalization might do to children, and in either case your concerns are clearly based on moral criteria: in the first case, freedom is the criterion, and in the second, reducing harm to children is the criterion. Even if you think you voted on purely rational, fact-based grounds, how you *weighed* the facts is based on your personal moral values. The facts of an issue almost never point in one direction, and so political thinking is inherently a moral endeavor.

Furthermore, not only is a rationalist approach to politics impossible in theory, it's contradictory to the way human cognition works. Perhaps the most widespread theory of reasoning in psychology is the *dual process theory*. This theory divides human reasoning into two systems, often called System 1 and System 2. System 1 is the default, operating "automatically and quickly, with little or no effort," while System 2 "allocates attention to the effortful mental activities that demand it" and it is "often associated with the subjective experience of agency, choice, and concentration" (Kahneman, 2011, p. 20-21). Joshua Greene (2013) offers the metaphor of a dual-mode camera with both automatic and manual settings. The automatic setting is more efficient because it lets the camera do the work for the user, allowing the user to effortlessly snap a picture. The manual setting, meanwhile, allows the user full control over how the

camera performs. System 1, like the automatic setting, is efficient, easy, and inflexible; System 2, like the manual setting, is inefficient, cognitively demanding, and flexible.

While we are prone to imagine that our beliefs are products of System 2 (i.e. rational deliberation), this is mostly an illusion. Most of us use the automatic settings on our cameras, and the same is true with our minds. Daniel Kahneman is one of the world's leading experts on this subject, and he explains the point well in his 2012 magnum opus *Thinking, Fast and Slow*:

> Systems 1 and 2 are both active whenever we are awake. System 1 runs automatically and System 2 is normally in a comfortable low-effort mode, in which only a fraction of its capacity is engaged. System 1 continuously generates suggestions for System 2: impressions, intuitions, intentions, and feelings. If endorsed by System 2, impressions and intuitions turn into beliefs, and impulses turn into voluntary actions. When all goes smoothly, which is most of the time, System 2 adopts the suggestions of System 1 with little or no modification. You generally believe your impressions and act on your desires. (p. 24)

Kahneman is speaking broadly about how we think in general, but the subservience of reason to intuition is as much the case with our moral faculties as it is with the rest of our cognition. Jonathan Haidt (2012, p. 36-40), whose work I will rely on extensively for this paper, illustrates this point with an interesting study. His team asked participants to read one of several stories, decide whether the actions in the story were morally acceptable, and then explain their judgments. The stories were about

harmless but disturbing events, like consensual incest (with no risk of pregnancy and no risk of discovery) or cannibalism of a person who was already dead. Study participants overwhelmingly declared the stories immoral. When they were asked to explain why, however, one of the members of Haidt's team played devil's advocate, challenging the reasons offered if they contradicted the story. The participants would offer a reason for their condemnation, and would mostly refer to harm done to some imagined victim, like the offspring of the incest who is more at risk of birth defects. But because Haidt's team had been sure to write the stories so that no harm would be done to anyone – for example, in the incest story there is two forms of birth control used, so there is no plausible risk of pregnancy – the devil's advocate would prove the participants' reasoning wrong. Participants in the study would acknowledge that their reason was incorrect, but rather than abandon their moral judgment, as would be expected if it had been arrived at via moral reasoning, they would simply reach for another victim of the act, and then another after that one had been disproven. Most participants would not abandon their moral judgment, even after exhausting all of the reasons they could imagine for their judgment. In sum, this study indicates that moral intuition, as opposed to reasoning, is at the root of most our moral beliefs; System 2 reasoning is employed to justify our intuitions, not arrive at our beliefs.

If morality is a slave to the passions, not reason, then the next question that arises is where our moral intuitions come from[1]. The strongest answer to this question I know is Jonathan Haidt's (2012) Moral Foundations Theory (MFT). He is an excellent

[1] Note that this answer demands a descriptive answer, not a normative one. The task is to understand morality as it actually exists in humans, not to prescribe what it ought to be.)

writer, brimming with verve, and so I will allow him to do the heavy lifting in summarizing the theory. Morality, according to Haidt, is a module.

> Modules are like little switches in the brains of all animals. They are switched on by patterns that were important in a particular ecological niche, and when they detect that pattern, they send out a signal that (eventually) changes the animal's behavior in a way that is (usually) adaptive. … This was a perfect description of what universal moral "taste receptors" would look like. They would be adaptations to long-standing threats and opportunities in social life. (p. 123)

The idea, then, is that humans have morality modules, which are the starting point of moral intuition. Haidt (2012) names the modules in question "moral foundations," and attempted to "identify the universal cognitive modules upon which cultures construct moral matrices" (p. 124). Haidt argues there are six foundations: care/harm, fairness/cheating, loyalty/betrayal, authority/subversion, sanctity/degradation, and liberty/oppression. (See Appendix 1 for a synopsis of these foundations.) These foundations do not explain the entirety of a person's morality. They are, to borrow neuroscientist Gary Marcus's (2004) analogy, more like the outline of a book: "Nature provides a first draft, which experience then revises. … 'Built-in' does not mean unmalleable; it means '*organized in advance of experience*.'" As Haidt (2012) explains,

> The brain is like a book, the first draft of which is written by the genes during fetal development. No chapters are complete at birth, and some are just rough outlines waiting to be filled in during

> childhood. But not a single chapter–be it on sexuality, language, food, preferences, or morality–consists of blank pages on which a society can inscribe any conceivable set of words. (p. 130-131)

The moral foundations are therefore the universal and innate components of morality – but then how to account for the broad spectrum of moral differences? The best way to answer this is with an analogy: morality is like the human palette. We have several taste receptors and several moral foundations, and this is true for all people regardless of culture. Cultures then form cuisines employing these taste receptors, stressing some more than others (some cuisines are more bitter, others sweeter, others spicier, etc.) and triggering the taste receptors in unique ways. Likewise, cultures form a sort of moral cuisine, what Haidt (2012) calls "moral matrices," which rely on each foundation to a greater or lesser extent, and trigger each foundation in culturally specific ways. The concept of the moral matrix is critically important to this thesis, and so it is worth taking a moment to elaborate on it. Here is Haidt's (2012) summary: "Each matrix provides a complete, unified, and emotionally compelling worldview, easily justified by observable evidence and nearly impregnable to attack by arguments from outsiders" (p. 107). A moral matrix is the system in each person's mind that people employ when they form a moral judgment about something. Each person has their own unique matrix, but a person's matrix usually follows the general contours of the cultural group(s) they most strongly identify with.

Certain moral matrices will emphasize some foundations more than others, and this is where politics comes in. Liberals confine themselves to an ethic of autonomy that dates back to John Stuart Mill and his famous maxim "the only purpose for which

power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others." Mill's maxim confines morality to harm reduction, and it is the spheres of Care and Fairness-as-equality that are triggered by direct harm. From this view of morality emerged liberalism. This vision is to be contrasted with Emile Durkheim's warning about anomie, or normlessness, and the necessity of a person being part of something larger than himself. Durkheim values society because it gives people order and meaning and a sense of belonging; Mill envisions society as a place where individuals freely pursue their own ends, either alone or through voluntary cooperation with others. A Durkheimian approach to society requires expanding beyond the Care and Fairness-as-equality foundations, which protect only individuals, and incorporating foundations that protect society from too much individualism. From a Durkheimian view a society needs loyalty from its individual members, respect for legitimate authority, and the sanctification of symbols (which promote individuals binding themselves together). From Mill, you get liberalism; from Durkheim, conservatism (the comparison comes from Haidt, 2008.)

Inducing Conceptual Change

Thus far, this paper has reviewed theories of how the brain processes morality-laden ideas, arguing that ideas evoke automatic reactions, essentially determined by how the idea coheres with a person's moral matrix, that are difficult (and often personally detrimental) to override with deliberative reasoning. Applying this insight into the formation of moral attitudes to the issue of climate change, which has become a potent cultural badge for both the right and the left in the United States, suggests the futility of an approach to climate change denialism that relies exclusively on scientific

explanation.

The essential takeaway from the previous sections of this paper is that our natural tendency is to base our reasoning on our automatic emotional reactions, as Hume argued, and that this tendency is magnified by political polarization. This is not an uplifting conclusion to be sure, but for those like me who were taught a model of thinking that stressed dispassionate reasoning, it's a fact that must be acknowledged and adapted to. If we do not, our ability to communicate effectively (much less persuade) is impotent. We overestimate the power of abstract reason at our own peril.

This paper has framed its discussion around the polarization of attitudes towards climate change, and the Humean theory of mind provides a clear explanation of how attitudes about the reality of anthropogenic climate change have become polarized even though the science has remained essentially unequivocal. Climate skepticism arose because climate change belief became a cultural marker. Due to our innate in-group-preferring/out-group-mistrusting biases, one cultural group, American conservatives, have for the most part found it quite easy to endorse arguments against climate change and ignore the views of experts. It feels good to be in agreement with your friends and it feels bad to be alone in your views, vulnerable to getting "ganged up on" and ostracized. The Humean view predicts that in such a circumstance, the strong tendency for anyone would be to find a coherent story that justifies what feels right. While this explanation for climate change skepticism omits some significant factors, such as cynical self-interested manipulation of public attitudes, I submit that this explanation describes the fundamental dynamics of climate change skepticism.

This third and final section of my paper is about the implications of this explanation. I selected this topic for my thesis because I strongly believe that we need to be doing more about climate change, and merely explaining *why* that kind of an effort faces so much opposition is unhelpful without proposals about what can be done. I would therefore like to suggest some avenues likeminded people might take to better advocate for the scientific view of anthropogenic climate change.

Climate change skeptics do not follow the science on climate change not because the relevant information is unavailable to them or because they as a group simply lack the scientific literacy, but because they lack the motivation to engage in System 1 reasoning to arrive at a conclusion that they have no desire to arrive at. This can be thought of as a result of cognitive biases, but also as an incentive problem. Humans are highly sensitive to in-group/out-group distinctions, and if a person is perceived as a hostile outsider, their words automatically lose impact. Humans are also protective over their reputation, which is determined by the opinions of their peers. To contravene prevailing opinion within a person's social group is a highly costly action to take. The cost for a conservative to break rank and endorse anthropogenic climate is therefore high, as s/he is potentially calling into question his/her allegiance, judgment, and perhaps fundamental decency in the views of fellow tribe members. Furthermore, the other side of the equation, the benefit of endorsing climate change, appears to be negligible for most people. The actual impact any individual can have on climate change is minimal, and therefore a conservative does not help him/herself, and hardly helps anyone else, by simply accepting climate change.

The challenge then is to present a clear, accurate, and compelling image of

climate change so as to minimize the amount of cognitive effort it takes to understand the phenomenon and the urgency of action. The point is captured succinctly by Weber and Stern (2011): “Individuals holding mental models that conflict with the available scientific evidence are not a blank slate, as the metaphor of illiteracy suggests, so the needed educational process is not one of adding to knowledge but one of inducing conceptual change” (p. 323). This section will review research on how conceptual change can be induced.

We need a metaphor for climate change that is simple, compelling, and rich. Here is an example of such a metaphor: climate change is obesity. I will argue why I believe this is a potent metaphor with deep connections to climate change in a moment, but first I will present an example of how this metaphor might be deployed:

We’ve been feeding Mother Nature junk food. Fossil fuels provide a lot of energy, but we’re finding out that they’re loaded with nature’s version of fats and sugar – CO2 and methane. Scientists tell us that we just passed an embarrassing milestone: we’re now tipping the scales at 400 ppm. We’re being warned that we’re dramatically increasing our odds of planetary diseases, like drought, hurricanes, and catastrophic glacier loss. It’s time to make a change. Now, we all know what to do when a person has a weight problem: Mother Nature needs a healthy diet and a commitment to exercise. We need to replace junk fuel with green fuel and stop filling our skies with crud. We need to do the hard work of getting in the lab and beefing up our nature-friendly technologies. No more excuses, no more denying the problem. We’ve let Mother Nature get fat on junk food, and now we need to help her get healthy again.

This metaphor has several helpful features. First, it presents climate change, a completely novel problem for us whose mechanisms are non-intuitive (because the causations are indirect and the processes are invisible), as a problem that all of us are intimately familiar with in one way or another: weight control. We all have to manage our diet and we all know what the consequences are if we don't. We all know what it's like to be tempted by unhealthy food. Furthermore, the cause of both climate change and obesity is the same: overconsumption of energy-dense sources of fuel/food that contain harmful byproducts. The metaphor fits snugly, allowing people to see the basic causal chain in climate change by viewing it as analogous to the easily understood process of weight gain. This conveys a simplified but essentially true view of climate change, and this kind of easy-to-grasp frame is essential for reaching people who are unwilling to endure slow, nuanced learning to ascertain the way climate change works.

This metaphor also has an important moral dimension. It invokes *responsibility* as the moral impetus behind action, and it implies that those who deny or minimize the problem are *lazy*. Political action on climate change often gets mired down in debates about costs and benefits, feasibility, etc. These are important discussions to have, but they are too esoteric for most of the public to engage. Worse, climate change action advocates are unable to appeal to members of the public to become fellow advocates because there is no morally compelling narrative being offered, only opaque debates about tradeoffs. With familiar problems like obesity, however, cultural norms are often available to provide a clear moral judgment. In the case of obesity, most people feel a sense of shame if they cannot control their consumption. Many of us know what it's like to feel overweight and most of us view obesity as a problem. Climate change is hard to

feel as a problem because we have no experience with anything like it. By connecting the concept of climate change to the experience of obesity, the concept gains some emotional force.

A final observation about this metaphor is that it does include some factual content. This paper has taken issue with what it views is an overreliance among climate change activists on dry presentations of evidence, but this is not to imply that rhetoric ought to be devoid of any concrete information. Facts undergird emotion-based appeals. They lend credibility to the emotional narrative a speaker is offering and allow people to trust the emotions the speaker is stirring up in them.

This example serves to illustrate the importance of simplicity, clarity, and emotionally compelling narratives in the effort to communicate climate change to those predisposed towards skepticism. Given that we cannot expect such an audience to give climate change the slow, analytical treatment it requires to fully understand, metaphors are a potent way to connect the issue to preexisting cognitive frames. The presence of a moral dimension is likewise critical. It gives members of the conservative tribe a possible source of motivation to change their beliefs on climate change due to their more important commitment to the value of personal responsibility. Of course, one metaphor alone cannot reshape public opinion, but it can serve as a symbol for the style of discourse climate change advocates must move toward if they wish to start convincing the skeptical.

Conclusion

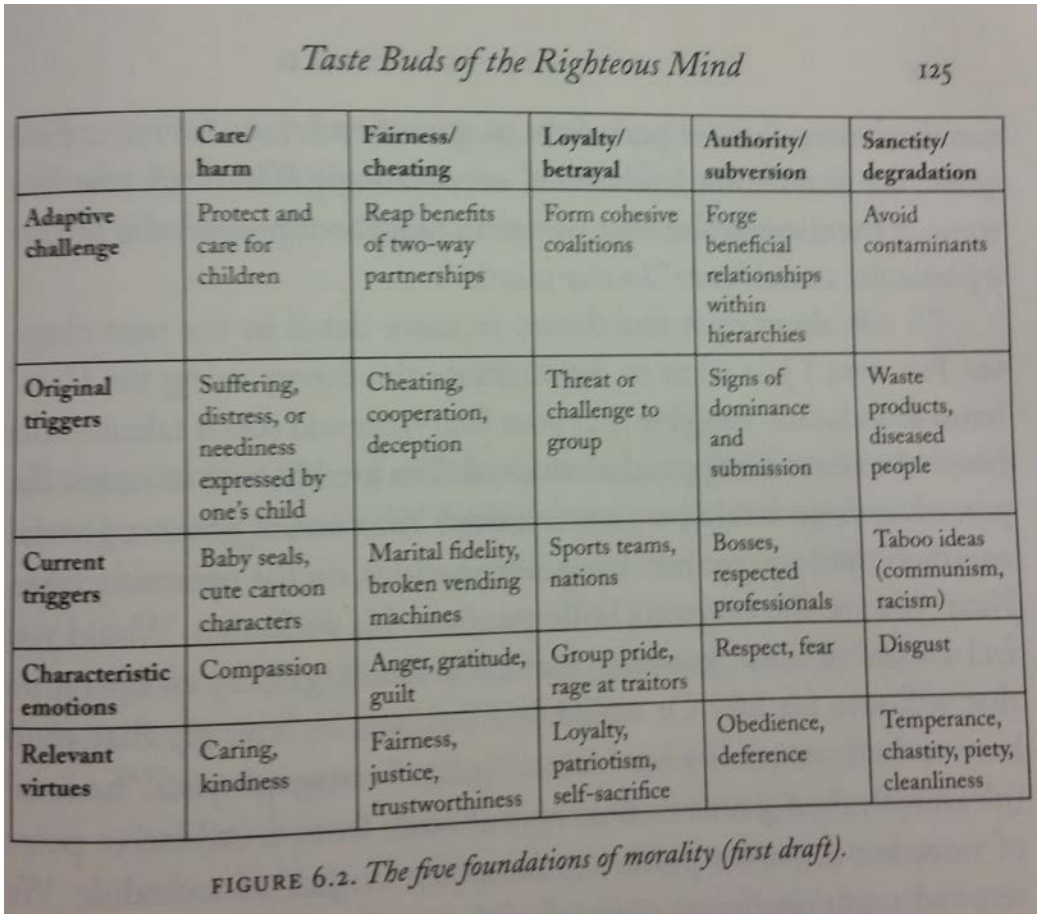
It is often pointed out that understanding yields empathy and kindness, and ignorance produces fear and hostility. This maxim is true. When we allow bitterness and mistrust to recede, when we choose to trust the decency, intelligence, and humanity of those who appear different from us – it is then that bridges can be built and walls can be dismantled. With this thesis I hope to have expanded my own and my readers' understanding of how the tribes of my country – and it really does feel like tribes nowadays – make sense of the world. It is my belief that the way each tribe makes sense of the world, their "moral matrix," is founded on far more wisdom and reason than meets the eye. I believe that the more we learn about moral matrices that are not our own, the more we will come to respect people who see the world differently from us. This project, then, is in part about working towards a more respectful and cooperative society, founded on a faith in pluralism and empathy.

Yet this project's ambitions do not stop there. While learning is valuable, it is sometimes inadequate. Some situations demand nothing short of action. In the face of anthropogenic climate change, in the face of a scientific consensus that warns that we are playing Russian Roulette with our species and that our tepid response so far has only further loaded the chamber, I submit that this is a time for action. My thesis does not take action, admittedly, but it is action-oriented learning. Collective action is critically necessary yet extremely difficult in the current political environment. This project is also about figuring out how to better navigate in such an environment, and even perhaps about altering the political environment itself.

The action component of this thesis raises ethical questions for the author. It calls to mind notorious propaganda campaigns and the dangerous prospect of social engineering. After all, the goal of the "action" of this project would be to shift public attitudes towards a salient political issue. Frankly, I do not think we should pretend that such an effort would be entirely above-board if it was undertaken. Such an effort would be a type of advertising campaign, and as everyone knows advertising does not thrive on naked, untargeted truth. This concern should be taken very seriously, as we should all be suspicious of attempts to manipulate the way people think, especially about something as important as climate change. The biggest threats often demand ethical tradeoffs, however. I believe that we are at a point when inaction is less defensible than impure action. The harms we seem to be facing are too great, and the steps we have taken or appear likely to take are too tepid. I am suspicious of those who would give themselves so much power that they endeavor to shape the way others' think *through targeted messaging*, but I believe that in this case doing so is the lesser of two evils. Furthermore, while the approach advocated for in this thesis does rely on simplification, it does not imply falsification. Properly executed, persuasive communication is enlightening, not obfuscating.

This project is therefore about learning about the moral frameworks of America's "tribes" and seeing what can be done with that knowledge to improve the dangerous climate situation we are confronting in this century. There is much to be learned and much to be done; this project is only a start. Such a start, however, is what the honors college thesis is all about: applying what we learn in a way that we hope will better the world.

Appendix 1:



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	Care/ harm	Fairness/ cheating	Loyalty/ betrayal	Authority/ subversion	Sanctity/ degradation
Adaptive challenge	Protect and care for children	Reap benefits of two-way partnerships	Form cohesive coalitions	Forge beneficial relationships within hierarchies	Avoid contaminants
Original triggers	Suffering, distress, or neediness expressed by one's child	Cheating, cooperation, deception	Threat or challenge to group	Signs of dominance and submission	Waste products, diseased people
Current triggers	Baby seals, cute cartoon characters	Marital fidelity, broken vending machines	Sports teams, nations	Bosses, respected professionals	Taboo ideas (communism, racism)
Characteristic emotions	Compassion	Anger, gratitude, guilt	Group pride, rage at traitors	Respect, fear	Disgust
Relevant virtues	Caring, kindness	Fairness, justice, trustworthiness	Loyalty, patriotism, self-sacrifice	Obedience, deference	Temperance, chastity, piety, cleanliness

FIGURE 6.2. *The five foundations of morality (first draft).*

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