

Negotiated Exam

An Examination of Theories Related to Decision-Making Processes and Political Ideologies of

Mental Health Counselors

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Examining Theories Related to Decision-Making and Political Ideologies

Awareness of the impact of interactions between the values and beliefs of counselors, their clients, and various cultures is recognized by the profession as an essential pursuit for the professional counselor. The American Counseling Association (ACA), the largest association representing professional counselors in the United States, published a revision to its *Code of Ethics* in 2014 that expounded on the interaction between the values of the profession and the personal values of individual counselors. These revisions were instituted in great part as a reaction to two court cases, both of which involved clashes between the personal beliefs of counselors regarding homosexuality and the provision of professional care (Meyers, 2014). The code asserts that counselors should be “aware of—and avoid imposing—their own values, attitudes, beliefs, and behaviors” (ACA, 2014, p. 5) and “seek training in areas in which they are at risk of imposing their values onto clients, especially when the counselor’s values are inconsistent with the client’s goals or are discriminatory in nature” (ACA, 2014, p. 5). Similarly, the American Mental Health Counselors Association (AMHCA), the largest association exclusively representing clinical mental health counselors (CMHC)s, revised its code in 2015, requiring CMHCs to be aware of their “own values, attitudes, beliefs and behaviors” (p. 6) as they relate to securing informed consent for counseling (Section I.A.1.b), counseling clients from diverse backgrounds (Sections I.A.4.d and I.C.1.m), formulating treatment plans (Section I.B.1.a), and providing professional consultation (Section I.F.1), . Additionally, the code implores CMHCs to seek awareness of the values of client populations (Section I.C.1.g) and the general public (Section V). Finally, the code requires CMHCs to promote the values of the profession itself (Section IV).

Political beliefs have emerged as an example of a value system that may impact the work of counselors, psychologists, social workers, and other healthcare providers, such as primary care physicians, in the professional literature (Bilgrave & Deluty, 2002; Parikh, Post, & Flowers, 2011; Rosenwald, 2006; Steele, Bischof, & Craig, 2014; Hersch & Goldenberg, 2016). Two studies have produced evidence of a relationship between the political beliefs of CMHCs (Norton & Tan, 2018) and counseling and clinical psychologists (Bilgrave & Deluty, 2002) and their preferred counseling theories. Findings from an additional study supported a relationship between political party affiliations of primary care physicians (PCP)s and the selection of treatment plan objectives in clinical vignettes depicting presenting problems related to politicized issues (Hersch & Goldenberg, 2016). Though no similar study has yet been conducted with mental health professionals, these preliminary findings, coupled with the ethical obligation of CMHCs to understand the role of personal beliefs in the counseling process, warrant an exploration of theories that may explain how and why the political beliefs of CMHCs influence their work. To this end, this examination will address two such theories, neopolitical theory (Schreiber, 2017) and moral foundations theory (Haidt, Graham, & Joseph, 2009), and studies that inform these theories will be examined and critiqued.

Review of Theories

Neopolitical Theory

To the best of the author's awareness, no single theorist is credited exclusively with the founding of neopolitical theory. However, Schreiber's (2017) paper reviewing 20 years of neopolitical findings will be referenced as a primary authority on neopolitical theory, both because he has authored or co-authored several neopolitical studies and because he is one of

the few researchers to publish manuscripts that review the theory comprehensively. Schreiber (2017) describes neuropolitics as a “more recent manifestation of an inquiry into human nature stretching back thousands of years” (p. 114), as far back as Aristotle’s claim that human beings are political animals. It is an interdisciplinary theory, connecting research in neuroscience and political science with the intention of “transforming both fields” (p. 114), made possible in part by the invention of functional magnetic resonance imaging (fMRI) (Schreiber, 2017).

From Schreiber’s work, one can extrapolate several key neuropolitical positions, including:

1. “...Human nature is political” (Schreiber, 2017, p. 114). Humans possess political brains that evolved over three million years “to manage our increasingly dynamic social complexity” (Schreiber, 2017, p. 114).
2. Earlier psychological (e.g., psychoanalytical, behavioral) and economic-political (e.g., rational choice theory) theories of human behavior fail to address the role of biological and neurological factors in political decision-making (Schreiber, 2017).
3. We can understand more about how our political brains work through experimentation, including surveying the political attitudes of participants, examining variations in neural activity as participants view faces of political figures, studying “mechanisms of basic cognition and perception to identify distinctions between liberals and conservatives,” (Schreiber, 2017, p. 118), and studying relationships between genetics and political decision-making (Fowler & Schreiber, 2008).
4. Such research informs us that the brains of conservatives and liberals operate differently under certain conditions (Schreiber, 2017).

5. However, our brains are flexibly wired, and we are not predestined by hardwiring to perform in a specific manner (Schreiber, 2017).

Moral Foundations Theory

Moral Foundations Theory is the byproduct of research conducted by Jonathan Haidt and Joseph Craig on the moral matrices of various cultures in an effort to extract universal cognitive modules humans use when reasoning morally (Haidt & Craig, 2004; Haidt, 2012). Modules are described as “little switches in the brains of all animals...[that] are switched on by patterns that were important for survival 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” (Haidt, 2012, Kindle location 2280). Essentially, human beings (1) start with innate or intuitive psychological systems referred to as moral foundations, then (2) cultures and societies build virtues, narratives, and institutions on these foundations, resulting in (3) unique moralities that co-exist across the world as well as across the political spectrum (Haidt & Craig, 2004; Haidt, 2012). Each moral foundation is theorized to have developed to prepare humans for one or more adaptive challenges and is associated with particular emotions and relevant virtues. Those moral foundations include:

1. Care/Harm: A foundation rooted in the evolutionary process of mammals with attachment systems that enable humans to feel and dislike the pain of others. The foundation was initially triggered by the suffering of one’s own offspring but has generalized with time to additional triggers (e.g., pictures of babies and young children, cute animals, etc.) (Haidt, 2012). It is associated with virtues of caring and kindness and the emotion of compassion (Haidt, 2012).

2. **Fairness/Cheating:** A foundation based on the evolution process of reciprocal altruism, a term coined by Robert Thrivers in 1971 that describes the tendency for humans to remember experiences with each other and to then modulate niceness based on who is likely or unlikely to reciprocate (Haidt, 2012). The foundation enables mutually beneficial cooperation, was initially triggered by acts of cooperation or selfishness, and is modulated by cultural and political institutions (Haidt, 2012). For example, liberals tend to focus on equality and social justice, often through some degree of redistributive fairness or equality (i.e., everyone has an equal share), whereas conservatives tend to emphasize proportional fairness (i.e., equal earnings for equal work) (Haidt, 2012). It is associated with virtues of fairness, justice, and trustworthiness, and emotions of anger, gratitude, and guilt (Haidt, 2012).
3. **Loyalty/Betrayal:** A foundation associated with tribalism that evolved to prepare humans for “the adaptive challenge of forming cohesive coalitions” (Haidt, 2012, Kindle location 2517). This foundation enables humans to band together into groups that often maximize survival and is triggered by threats to group safety (Haidt, 2012). It underlies virtues of loyalty, patriotism, and self-sacrifice and is associated with emotions of group pride and rage at traitors (Haidt, 2012).
4. **Authority/Subversion:** A foundation associated with the adaptive challenge of forging beneficial relationships within hierarchical human structures, originally triggered by signs of dominance and submission (Haidt, 2012). It is associated with underlying virtues of obedience and deference and characteristic emotions of respect and fear (Haidt, 2012).

5. Sanctity/Degradation: A foundation that evolved to aid humans with the challenge of avoiding pathogens, diseases, parasites, and other contaminants and was originally triggered by waste products and diseased people but has generalized with time to taboo ideas (Haidt, 2012). It is associated with virtues of temperance, chastity, piety, and cleanliness and with the emotion of disgust (Haidt, 2012).
6. Liberty/Oppression: A foundation that evolved alongside the development of human language and the technology of weaponry, two tools that enabled human beings to police and, in some cases, overthrow individuals, including leaders, who violated social norms or bullied individuals and groups, creating a weak political egalitarianism within early human tribes (Haidt, 2012). It was originally triggered by signs of attempted domination, such as overly-controlling or aggressive behavior of an alpha male or female, producing a natural tension—and perhaps balance—with the Authority/Subversion foundation, and it is associated with emotions of reactance and resentment (Haidt, 2012).

Evaluation of Theories

For my evaluation and critique of theories, I will employ Murdock's (2016) framework designed for scientific-practitioners, denoting practitioners who "understand the relationships among theory, research, and practice and are able and willing to read and evaluate research relevant to their practice" (p. 7). From the descriptions provided, I have created the following rubric for what Murdock (2016) proposes as "good theory" (p.6) from a scientific-practitioner perspective infused with additional insight offered by Patterson and Watson (1996):

1. Precision and testability: The theory clearly defines constructs and relationships among those constructs.
 - a. Definitions are operationalized (i.e., describe how constructs are measured using terms different than the data described by the constructs).
 - b. The theory generates predictions about behavior that are testable/refutable.
2. Empirical support: The theory is supported by evidence obtained through observation, experience, and/or experimentation.
 - a. If appropriate to the construct(s), efficacy studies or randomly controlled trials have been conducted.
 - b. If appropriate to the construct(s), meta analyses have been conducted that yield robust effects sizes.
 - c. Numerous studies have yielded consistent findings.
3. Parsimony: The simplest explanation that can handle the data is preferable.
4. Stimulation/Importance: The theory stimulates excitement and/or is regarded in the field as important.
 - a. The theory prompts writing and research.
 - b. The theory is accepted and recognized by competent professionals (Patterson & Watkins, 1996).
5. Practicality: The theory provides a solid conceptual framework that can be applied.

I am selecting this framework because the scientific-practitioner model is consistent with the framework of my doctoral program, the philosophy of inquiry appears compatible with the quantitative design of my anticipated dissertation study, and I have read similar models in

other texts in counselor education (e.g., Patterson & Watkins, 1996). However, I acknowledge that there are limitations to this framework. For example, Murdock (2016) relates that complex theories may sometimes have advantages over parsimonious theories, that it may be difficult to ascertain whether a theory is parsimonious, and that the degree of parsimony in a particular theory fluctuates as the body of knowledge related to that theory evolves over time. Indeed, Patterson and Watson (1996) observe that “the law of parsimony appears to be the most widely violated in theory construction” (p. 3). Additionally, operationalization may be restrictive, it can be difficult to gauge importance and level of acceptance of a theory, and many highly regarded and popular theories do not meet all criteria from a scientific-practitioner perspective (Patterson & Watkins, 1996).

Evaluation of Neuropolitical Theory

Precision and Testability

In a review of 8 neuropolitical studies (i.e., Amodio, Jost, Master, & Yee, 2007; Bernabel & Olivera, 2017; Kanai, Feilden, Firth, & Rees, 2011; Oxley et al., 2008; Schreiber et al., 2013; Sperry, Zaidel, & Zaidel, 1979; Vecchiato et al., 2014), 19 primary constructs and variables were identified. Among these 19 constructs, clear operational definitions were consistently identified in the article, with one exception (Table 1). Specifically, Vecchiato et al. (2014) did not clarify how they measured participant assessments of dominance and trustworthiness of political candidates.

Table 1

Operational Definitions in Neuropolitical Articles

Study	Construct	Operationalization
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Amodio et al. (2007)	Conflict monitoring	Neurocognitive activity in the anterior cingulate cortex measured using fMRI
Bernabel and Olivera (2017)	Political beliefs	Scores on political questionnaire
	Cognitive skills	Response times and accuracy rates in go/no-go tasks
Kanai et al. (2011)	Political ideology	Scores on conservatism index questionnaire
	Gray matter volume	Gray matter volume measured by structural MRI scans
Oxley et al. (2008)	Political attitudes	Scores on political orientation questionnaire
	Physical sensitivities to sudden noises and threatening visual images	Skin conductance measured by electromyogram (EMG) and orbicularis oculi startle blink response when exposed to three threatening images (a very large spider on the face of a frightened person, a dazed individual with a bloody face, and an open wound with maggots in it)
Schreiber et al. (2013)	Political attitudes	Scores on a survey instrument containing a battery of 28 political items in a Wilson-Patterson format
	Brain function/brain activity	Level of activity as measured by fMRI scans
Sperry, Zaidel, and Zaidel (1979)	Political ideology	Political party as listed in public party registration records
	Risk-taking/decision-making	Participant responses on a computerized gambling task
Vecchiato et al. (2014)	Favorability	“Thumbs up” or “thumbs down” gesture by participants (commisurotomy patients) when exposed to pictures of political figures with one eye covered
	Neurophysiological activity	Electroencephalogram (EEG) signals and galvanic skin response and heart rate measurements of central and autonomic nervous systems
	Trustworthiness and dominance	Participant self-report of judgment of dominance and vote preference
	Vote preference	Participant self-report of which candidate he or she would vote for

Westen et al. (2006)	Motivated reasoning	Minimization of information threatening to and maximization of information favoring one's preferred political candidate as measured by participants' ratings of whether or not politicians were contradicting themselves
	Neural responses	Neural imaging of brain activity in fMRI scans
	Partisan	(1) Participant self-rating as a strong Democrat or Republican; and (2) ≥ 30 point discrepancy scaled items reflecting favorability and unfavorability of political candidates from within and outside of one's own party
	Motivated reasoning	Minimization of information threatening to and maximization of information favoring one's preferred political candidate as measured by participants' ratings of whether or not politicians were contradicting themselves

In seven of the eight studies (i.e., Amodio, Jost, Master, & Yee, 2007; Bernabel & Olivera, 2017; Kanai, Feilden, Firth, & Rees, 2011; Oxley et al., 2008; Schreiber et al., 2013; Sperry, Zaidel, & Zaidel, 1979), the authors identified clear, specific, and testable hypotheses. In the remaining study (Vecchiato et al., 2014), fairly specific experimental questions were identified instead of hypotheses:

- (1) Is it possible to predict the elections outcome through the subjects' rapid and explicit judgment of dominance and trustworthiness traits?
- (2) Are there any EEG features able to predict subjects' preference of vote? Are there any correlations between the cortical functional activity and the judgment of trustworthiness and dominance?

- (3) Is there any autonomic signature correlating with dominance and trustworthiness traits of politicians' faces? (p. 3).

The tendency for neuropolitical studies to operationally define constructs and identify testable hypotheses consistent with the scientific-practitioner model is perhaps expected given that neuropolitics is a hybrid discipline formed by the intersectionality of two sciences, political science and neuroscience (Schreiber, 2017).

Table 2

Hypotheses in Neuropolitical Articles

Study	Hypotheses and Research Questions
Amodio et al. (2007)	Political liberalism (versus conservatism) would be associated with greater conflict-related anterior cingulate cortex activity.
Bernabel and Olivera (2017)	(1) Liberals would commit fewer errors than conservatives in a task measuring cognitive flexibility, (2) conservatives would outperform liberals in a high-reward/low-flexibility task, and (3) conservatives would choose an optimization path superior to that chosen by liberals in a high-reward/low-flexibility task.
Kanai et al. (2011)	Political liberalism (versus conservatism) is associated with differences in gray matter volume in anterior cingulate cortex
Oxley et al. (2008)	Variations in physical sensitivity to threat are associated with political beliefs.
Schreiber et al. (2013)	Ideological differences between partisans reflect distinctive neural processes
Sperry, Zaidel, and Zaidel (1979)	"We have long favored the view that the disconnected hemispheres in both animal and human subjects are separately conscious in parallel at a moderately high and approximately equal level" (p. 153).
Westen et al. (2006)	Reasoning about threatening information about one's own candidate would activate the ventromedial prefrontal cortex and the anterior cingulate cortex (involved in implicit emotion regulation) and the insula, lateral orbital frontal cortex, and amygdala (involved in elicitation of negative emotion)

Empirical Support

Empiricism refers to the acquisition of knowledge through data collection and observation (Murdock, 2016; Patterson & Watkins, 1996; Pelham & Blanton, 2013). Because neuropolitical theory is derived from a merger of two sciences (neuroscience and political science), neuropolitical researchers tend to employ the scientific method in their research (Schreiber, 2017). From the first published neuropolitical study (i.e., Sperry, Zaidel, & Zaidel, 1979) to the present, neuropolitical theory has been shaped incrementally through a series of scientific experiments. Neuropolitical researchers tend to favor studies that utilize brain imaging technology such as MRI, fMRI, and EEG as a means to measure brain structure and function coupled with questionnaires, surveys, and political party registration records as a means to measure political ideology and statistical analysis to identify relationships between these two constructs under specified conditions (Schreiber, 2017). All eight of the studies reviewed for this evaluation yielded statistically significant relationships between measures of political ideology and neurophysiology. Although neuropolitical research is still in its infancy (Schreiber, 2017), its focus on empiricism appears to be a strength when viewed through the lens of the scientific-practitioner model.

Parsimony

Neuropolitical researchers have demonstrated that there are differences in brain structure between liberals and conservatives, and that the brains of liberals and conservatives function differently when engaged in cognitive tasks involved in political decision-making (Schreiber, 2017). It is difficult to postulate simpler explanations for these findings than the

assertion that these differences are the result of an evolutionary processes. In that sense, I consider neuropolitical theory to be parsimonious.

Stimulation/Importance

Neuropolitics is a relatively new discipline (Schreiber, 2017). No neuropolitical study has been identified prior to 1979 (Schreiber), and to the best of my awareness the term *neuropolitical* was not used in the professional literature prior to 2008. The discipline of neuropolitics was made possible in great part by the advent of contemporary brain imaging technologies, such as fMRI, in the 1990s and early 2000s (Schreiber, 2007). Despite its infancy, neuropolitics appears to be attracting a fair amount of attention in academia. A keyword search for *neuropolitics* restricted to scholarly articles in peer-reviewed professional journals in the University of South Florida's *FindIt!* Database yielded 885 articles as of this writing. A keyword search for *neuropolitics* in Google Scholar yielded 2,070 results. In 2003, the journal *Political Psychology* dedicated a special issue to neuropolitical research (Schreiber, 2017). As will be expounded upon in a subsequential section of this paper, neuropolitical research has been incorporated into other political and moral theories, such as Haidt and Joseph's moral foundations theory (Haidt, 2012). Considering both the infancy of the theory and its growing popularity over the past 20 years, I would rate the theory's level of stimulation or importance as moderate.

Practicality

Neuropolitical research is fairly difficult to conduct in many respects. It can be quite costly, both in terms of financing (e.g., extremely expensive technology, highly-skilled and well-trained researchers) and time (i.e., data collected requires a great deal of time and expertise to

analyze) (Scheiber, 2017). In addition, the application of neuropolitical findings has at times proven to be problematic and controversial. For example, in 2007 a group of researchers published wide-swinging claims about how their research might predict voting patterns in the upcoming political election, triggering a rebuttal letter from 17 prominent neuroscientists asserting that findings had been speculated without sufficient evidence or peer review (Aron et al., 2007; Schreiber, 2017). Ethical concerns about how neuropolitical theory might be applied by governments and corporations have also been raised (Schreiber, 2017). Though Schreiber (2017) does not provide a great deal of information on how neuropolitical findings might be applied constructively, the answer may be better answered in a different theory that incorporates neuropolitical theory, moral foundations theory. This point will be re-addressed in a subsequent section of this paper.

Evaluation of Moral Foundations Theory

Precision and Testability

Seven studies published in two manuscripts (i.e., Graham, Haidt, and Novak, 2009; Iyer et al., 2012) and one book (Haidt, 2012) considered seminal to moral foundations theory were reviewed during this examination. Within the two manuscripts, 23 constructs were identified, and a clear and specific operational definition was offered for each construct (Table 3). Given that the existence of six universal human moral foundations lies at the core of moral foundations theory, combined with the potential to test for differences between political groups in these five foundations, the theory appears to fit Murdock's (2016) description of precision and testability.

Table 3

Operational Definitions in Moral Foundations Theory Articles

Study	Construct	Operationalization
Study 1 (Graham, Haidt, & Novak, 2009)	Political identity	Participant self-identification on a 7-point scale ranging from strongly liberal on one end to strongly conservative on the other
	Moral relevance	Responses on a questionnaire consisting of 15 scaled moral relevance items
Study 2 (Graham, Haidt, & Novak, 2009)	Political identity	(1) Participant self-identification on a 7-point scale ranging from strongly liberal on one end to strongly conservative on the other; and (2) Associations between pictures of well-known politicians and “self” or “other” associations measured by implicit association test (IAT)
	Moral relevance	Responses on a questionnaire consisting of 15 scaled moral relevance items
	Moral judgment	Responses of level of endorsement of moral judgment items on a questionnaire
Study 3 (Graham, Haidt, & Novak, 2009)	Moral trade-offs	Participant responses on 25 moral taboo items
	Political identity	Participant self-identification as strongly liberal, liberal, moderate, conservative, strongly conservative, libertarian, other, don't know/not political
Study 1 (Iyer et al., 2012)	Political self-identification	Participant self-identification as very liberal, liberal, slightly liberal, moderate/middle of the road, slightly conservative, conservative, very conservative, don't know/not political, libertarian, other
	Moral foundations	Participant scores on Moral Foundations Questionnaire
	Values	Participant scores on Schwartz Value Scale
	Ethical positions	Participant scores on Ethics Position Questionnaire
	Moral Relevance	Participant scores on Good Self Scale
Study 2 (Iyer et al., 2012)	Lifestyle and economic/government liberty	Participant scores on 11-item Liberty foundation subscale
	Personality traits	Participant scores on Big Five Personality Inventory
	Empathy	Participant scores on empathy scale
	Disgust	Participant scores on Disgust Scale-Revised
	Physiological resistance	Participant scores on Empathizer-Systemizer Scale
Need for cognition	Participant scores on Need for Cognition Scale	

	Moral Dilemmas	Participant responses to questions related to six moral dilemmas
	Reasoned cognitive style	Participant responses on Cognitive Reflection Task
Study 3 (Iyer et al., 2012)	Individualism and collectivism	Participant responses on Individualism-Collectivism Scale
	Identification with humanity	Participant responses on Identification with All of Us Humanity Scale
	Types of love	Participant responses on Different Types of Love Scale

Empirical Support

For all seven moral foundations theory studies reviewed, researchers' hypotheses were consistently supported by the data collected using a scientific approach. Just as neuropolitical theory is characterized as an intersection of at least two different sciences, moral foundations theory is conceptualized as an intersection of several social sciences, including social psychology, anthropology, and evolutionary psychology (Haidt, 2012). The theory is a scientific theory that lends itself well to an empirical approach.

The founders of moral foundation theory have repeatedly acknowledged that as more data is collected in a variety of disciplines, including anthropology, archeology, neuropolitics, and social psychology, additional universal moral foundations may be supported (Graham, Haidt, & Nosek, 2009; Haidt, 2012). This assertion may be considered a strength in the sense that it illustrates that moral foundations theory prioritizes empirical support. The addition of a sixth moral foundation (i.e., liberty/oppression) in 2012 is indicative of this accommodation for new research findings. Graham, Haidt, & Nosek (2009) wrote, "A broader investigation of these and other potential foundations is also needed to ensure that liberal and conservative differences are characterized correctly...Future investigations will expand the range of

measures and behavioral observations used to assess the moral foundations and their factor structure” (p. 1041). When they included libertarians in the third study detailed in that manuscript, they acknowledged “An additional future direction is to move beyond the unidimensional political spectrum we employed in Studies 1-4...patterns of moral foundation endorsement may be more complex than the single liberal-conservative continuum can adequately describe” (p. 1041). As anticipated, further research provided evidence sufficient for the addition of a sixth moral foundation. Iyer et al. (2012) conducted three studies aimed at expanding the investigative scope to libertarians, an oft-neglected political group, and subsequent factor analysis supporting libertarians as a political group distinct from conservatives and liberals, coupled with perspectives from anthropological research, led to the emergence of a sixth moral foundation; Liberty-oppression (Haidt, 2012).

Parsimony

In its simplest form, moral foundation theory postulates that there are at least six moral foundations that humans have developed through an evolutionary process in order to aid the species in survival. Over time, variations in these moral foundations emerged regionally to contend with the unique demands of survival in different environments. Though diversity in moral reasoning has always existed naturally, over the past few hundred years human beings have become increasingly transient, creating even greater diversity in regional populations (Haidt, 2012). This is a fairly parsimonious explanation of variation in moral, and therefore religious and political, reasoning. However, as moral foundations research expands, and the number of constructs investigated increases, the body of knowledge related to the theory becomes increasingly complex. As previously noted, 23 constructs related to moral foundations

of three political groups (liberals, conservatives, and libertarians) were investigated in just two manuscripts (i.e., Graham, Haidt, and Novak, 2009; Iyer et al., 2012).

All of the research methods used in both manuscripts, with the exception of one IAT measure, consisted of either paper or online self-administered survey responses and correlational research designs. In contrast, true experiments appear to be favored in the scientific-practitioner model (Murdock, 2016).

Stimulation/Importance

Like neuropolitical theory, moral foundations theory is a relatively new theory, having first been formally postulated in 2009 (Haidt, 2012). In spite of this, the theory has garnered a great deal of attention. A keyword search for “moral foundations theory” in the University of South Florida’s *FindIt!* Database yielded 1,325 scholarly articles in peer-reviewed professional journals. A keyword search for “moral foundations theory” in Google Scholar yielded 1,930 hits. Moral foundations researchers, most notably Jonathan Haidt, have appeared on various televised venues (e.g., CNN, Fox News, MSNBC) discussing results, particularly during election periods (CNN, 2012; Fox News, 2012; MSNBC, 2012). Haidt delivered the keynote address at the American Mental Health Counselors Association’s annual conference in 2013 (AMHCA, 2013), his theory appears in contemporary social psychology textbooks, and he has been featured in several TED Talks (TED, n.d.). A Google search for “Jonathan Haidt” yields 547,000 results. Perhaps moral foundations theory has gained substantial traction because it provides a framework for understanding variation in political ideology that is not inherently prejudicial towards any religious orientation.

Practicality

Moral foundations theory is touted by Haidt, Graham, and Joseph (2009) as an “explanatory framework with which to understand the meaning of moral debates in the culture war” (p. 112). The theory helps people to understand how and why there are differences in moral reasoning between and within social groups. Moreover, these differences are portrayed not as immoral or amoral differences; rather, differences in moral reasoning are portrayed as sensible, understandable, and perhaps all valuable in their own rite. This tendency may open people of varying belief systems up to learning about the moral reasoning of other groups in a less pejorative way. Haidt (2012) provides recommendations on how to have civil dialogue about differences in political and religious beliefs with people you disagree with. Graham, Haidt, & Novak (2009) conclude:

Western societies are growing more diverse, and with diversity comes differing ideals about how best to regulate selfishness and about how we ought to live together.

Participants in political debates are motivated in part by moral convictions. Moral foundations theory offers a useful way to conceptualize and measure such convictions.

As research on political psychology thrives (Jost, 2006), we hope that it will clarify the role that morality plays in political thought and behavior (p. 1042).

To the extent that moral foundations theory provides an understandable framework for diversity in moral reasoning, and by extension political and religious reasoning, I consider it quite practical.

Summary and Critique of Studies

Neuropolitical Theory

Although eight manuscripts detailing neuropolitical studies were reviewed in the course of this examination, three of them (detailing five studies) were selected for this section because they appear representative of three different relationships between political ideology and neurophysiology explored in neuropolitical theory, including brain function (i.e., Amodio et al., 2007), brain structure (i.e., Kanai et al., 2011), and cognitive skills (i.e., Bernabel & Olivera, 2017).

Manuscript #1: Amodio et al. (2007)

Amodio et al. (2007) designed a study intended to test the hypothesis that political liberalism would be associated with greater conflict-related activity in the anterior cingulate cortex (ACC). This hypothesis was based on previous research findings suggesting that: (1) conservatives tend to be more structured and persistent in their judgements related to decision-making with higher preferences for order, structure, and closure, whereas liberals tend to be more tolerant of ambiguity and complexity; (2) conflict monitoring, defined as “a general mechanism for detecting when one’s habitual response tendency is mismatched with responses required by the current situation” (Amodio et al., 2007, p. 1246), is associated with increased activity in the ACC.

Participants included 43 right-handed volunteers (63% female). Measures of constructs included:

1. Political liberalism: confidential participant self-report of political attitudes ranging on a scale from -5 (extremely liberal) to +5 (extremely conservative).
2. Conflict monitoring: participants were presented with a Go/No-Go task in which they must “quickly respond to a frequently presented Go stimulus, such that the ‘Go’

response becomes habitual” (Amodio et al., 2007, p. 1246) while occasionally viewing a No-Go stimulus for which they must abstain from the primed Go response, creating a conflict.

3. ACC activity: electroencephalograph readings measuring event-related potentials, defined as “scalp-recorded voltage changes reflecting the concerted firing of neurons in response to a psychological event” (Amodio et al., 2007, p. 1246), with particular attention to response-locked-error-related negativity (ERN), “which peaks at approximately 50 ms following an incorrect behavioral response” (Amodio et al., 2007, p. 1246), thus signaling conflict between habitual tendencies (i.e., the Go-stimulus) and alternative responses (i.e., the No-Go stimulus).

Political orientation was found to strongly correlate with ERN amplitudes ($r(41) = 0.59$, $P < 0.001$). Liberalism correlated with significantly greater conflict-related neural activity when response inhibition was required, whereas ERPs associated with correct Go responses were not correlated with political orientation ($ps > .37$) (Amodio et al., 2007).

The researchers concluded that political orientation “reflects individual differences in the functioning of a general mechanism related to cognitive control and self-regulation” (Amodio et al., 2007, p. 1247). Conservatism was associated with reduced neurocognitive sensitivity to response conflicts, and conservatives were more likely to make errors of commission (Amodio et al., 2007). It was also hypothesized that in tasks that require a more fixed response style than the current study, conservatives would likely fare better (Amodio et al., 2007).

Critique of Manuscript #1

Aside from noting that participants were right-handed and 63% female, the manuscript does not provide information about the participants nor the sampling method used, though this information may be included in supplementary information “available on the Nature Neuroscience website” (Amodio et al., 2007, p. 1247) that could not be accessed for purposes of this evaluation. Presumably, the participants were volunteers, raising the potential for volunteer bias. Additionally, we do not know if the sample was fairly heterogeneous or representative of the general population, raising questions of generalizability. As with all research conducted in a laboratory setting, the degree of ecological and external validity is questionable. The results of the study logically connect to previous findings on relationships between political ideology and judgment styles referred to in the introductory section of the manuscript. If the researchers’ claim that their study was “the first study connecting individual differences in political ideology to a basic neurocognitive mechanism for self-regulation” (Amodio et al., 2007, p. 1247) is true, then this study can be considered a landmark study in neuropolitical theory. Given how frequently the study was referenced in the other seven articles reviewed for this examination, this does appear to be the case. However, replication with diverse samples and alternative measures for constructs would be helpful in further establishing the proposed relationship between political orientation and conflict related activity in the ACC.

Manuscript #2: Kanai et al. (2011)

Kanai et al. (2011) sought to build on findings presented by Amodio et al. (2007) by extending the question of relationship between political ideology and brain *activity* to the added construct of brain *function*. To this end, they recruited a sample of 90 volunteer

participants (mean 23.5 years of age, SD = 4.84, 55 female) from the participant pool at University College London to test two hypotheses: (1) liberalism would be associated with increased gray matter volume in the ACC; and (2) conservatism would be associated with increased gray matter volume in the amygdala (Kanai et al., 2011).

Measures for each construct included:

1. Political orientation: self-report as reflected in responses on a simple five-point scale ranging from very liberal on one end of the spectrum to very conservative on the other end, with “middle-of-the-road” (Kanai et al., 2011, p. 679) in center.
2. Brain structure: magnetic resonance imaging (MRI) scans of brain regions of interest based on previous findings (i.e., anterior cingulate and right amygdala) (Kanai et al., 2011).

Voxel-based morphometry (VBM) analyses were used to explore the relationship between these two constructs, yielding a significant correlation between increased gray matter volume in the ACC and liberalism, $R = -0.27$, $T(88) = 2.633$, $p = 0.010$ (Kanai et al., 2011). Additionally, increased gray matter volume in the right amygdala was significantly correlated with conservatism, $R = 0.23$, $T(88) = 2.22$ (Kanai et al., 2011). To test whether these relationships might be used to predict whether an individual was liberal or conservative, they accurately predicted the political orientation of a single participant based on the participant’s MRI scans. Specifically, “the gray matter volumes of ACC and the right amygdala allowed the classifier to distinguish individuals who reported themselves as very liberal with a high accuracy ($71.6\% \pm 4.8\%$ correct, $p = 0.011$)” (Kanai et al., 2011, p. 678). Lastly, a replication study was

conducted with 28 healthy volunteer participants from the UCL participant pool (mean age 21.0, SD = 2.5, 16 female) with similar results (Kanai et al., 2011).

Critique of Manuscript #2

To the extent that one advantage of MRI over other neuroimaging technologies is its high level of detail for structural imaging (Carlson & Birkett, 2016), the researchers have selected an appropriate tool for measuring brain structure. Although self-report of political ideology may appear questionable as an objective measure of political ideology, Kanai et al. (2011) assert that the measure has been demonstrated in previous research to accurately predict voting behavior. Findings from this study are consistent with the hypotheses of the researchers, which flow logically from their summary of previous research. Data reflecting that in addition to functional differences between the brains of liberals and conservatives there are actual structural differences adds substantially to the validity of neuropolitical theory.

Despite the aforementioned strengths, there are several limitations to the current study. Given that the study was conducted with young adults in a volunteer participant pool at a university in London who were more representative of the middle and upper class in the United Kingdom (Kanai et al., 2011), questions of generalizability to populations of other age groups, nationalities, and socioeconomic statuses are raised, and there is a potential for volunteer bias to influence results. Additionally, the researchers acknowledge that none of their 90 volunteers identified as “very conservative” on the political orientation questionnaire. Consequently, they restricted their categories of analysis for this construct to four variants, including very liberal, liberal, middle-of-the-road, and conservative (Kanai et al., 2011). As with many other neuropolitical studies, the disproportionate participation of people who identify as

liberal raises additional questions as to whether findings generalize well to both national and international populations of conservatives.

Manuscript #3: Bernabel and Olivera (2017)

Bernabel and Olivera (2017) executed two studies designed to test the hypothesis that liberals and conservatives possess different cognitive skills, an implication suggested by previous research. For study 1, they attempted to measure cognitive flexibility in an environment lacking inhibition by asking 99 students in two universities—University of Sao Paulo in Brazil and New York University in the United States, to participate in a go/no-go task that consisted of flashing the letters W and M randomly for one second on a screen for a total of 250 trials. Participants were asked to quickly indicate whether the letter on the screen was the same as the previous one. Previous research demonstrated that in the presence of a response conflict (i.e., the letter displayed is different than the previous one), activity increases in the anterior cingulate cortex (Amodio et al., 2007), with liberals performing fewer errors than conservatives (Bernabel & Olivera, 2017). In both samples, performance was subsidized with either the potential to win a gift card for a substantial sum (Brazilian sample) or a small monetary award for each correct response (U.S. sample). A survey measuring conservative political ideology was administered, yielding a correlation between the number of errors in the go/no go task and higher conservatism index scores ($r(99) = 0.25, p < 0.05$), supporting the hypothesis that liberals would outperform conservatives in the task (Bernabel & Olivera, 2017).

In the second study, 48 students from American University were shown a group of four colored squares (purple, white, and green) on a screen with three of the squares at the bottom of the screen and one on top. The colors would randomly alternate every 0.35 seconds.

Participants were asked to either indicate the position of the white square or the position of the square in the bottom row that had the same color as the square in the top row (i.e., matching) by using the arrow key on a keyboard. Given the speed of the screen changes, choosing to indicate the position of the white square was advantageous to choosing the position of the square in the bottom row that had the same color as the square in the top row. As with the U.S. sample in the first study, performance was incentivized with a small sum being awarded per correct response. The same questionnaire used in study 1 was then administered. The researchers hypothesized that conservatives would outperform liberals (i.e., score higher) and would be more likely to choose the simpler task. Results supported the hypotheses, finding a correlation between conservative ideology and performance on the task ($r(48) = 0.41, p < 0.001$), with conservatives more likely to choose the simpler strategy than liberals (Bernabel & Olivera, 2017). The researchers expressed a hope that their findings would perhaps contributed to increased tolerance in a politically polarized climate by demonstrating that, unlike previous research that focused on the tendency for liberals to handle novel stimuli more efficiently, conservatives hold an advantage in some cognitive tasks (Bernabel & Olivera, 2017). Additionally, they concluded that their results both replicated and strengthened findings from previous research suggesting that disinhibition influences neurocognitive correlates of liberalism and conservatism (Bernabel & Olivera, 2017).

Critique of Manuscript #3

Bernabel and Olivera (2017) note the robust correlations in their data as a strength. Additionally, they opine that the fact that their samples were disproportionately liberal as measured by conservative index scores may actually strengthen the relevance of their findings,

as “one could argue that the findings in this article might be even more pronounced in a sample distributed more evenly across the ideological spectrum” (p. 57). Despite that the researchers did not directly identify any limitations in their study, the lack of political diversity in their sample may just as easily be viewed as a limitation of the study, posing questions as to the generalizability of the study (i.e., whether the results would be similar if a more politically diverse sample were studied). This point relates to an additional limitation of the current study; the authors provide very little information about the survey utilized to measure political conservatism, which appears to have been created by the authors for this particular study. A more detailed description of the questionnaire, its development, and any attempts to validate the measure might be helpful. The fact that Bernabel and Olivera (2017) included a Brazilian sample in the first study with similar findings as the U.S. sample may be considered an advantage by demonstrating a correlation in two different nationalities, but it also raises the question of why only one nationality was explored in the second study. Lastly, one potential disadvantage for any laboratory study involves the question of ecological validity, raising the question of whether findings in a sterile laboratory setting might generalize to cognitive tasks performed in other environments where participants more commonly perform cognitive tasks.

Moral Foundations Theory

Two manuscripts detailing seven studies in moral foundations theory were selected for this section. Manuscript #1 (Graham, Haidt, & Nosek, 2009) is a landmark study in moral foundations theory in which the theory was first tested empirically. Data from Manuscript #2 (Iyer et al., 2012) was used to expand moral foundations theory to include a sixth foundation.

Manuscript #1: Graham, Haidt, and Nosek (2009)

In an attempt to test whether conservatives and liberals varied in the degree to which their moral decision were rooted in the domains of moral foundation theory, Graham, Haidt, and Nosek (2009) conducted four studies. In Study 1, political identity was measured using survey results of 1,613 adults (47% female, 53% male; median age 29) who registered at the Project Implicit website and were randomly assigned to the study. The survey consisted of a 7-point scale depicting a spectrum ranging from *strongly liberal* on one end to *strongly conservative* on the other, with moderate in the middle, which participants had already completed when they registered at the website. Gender, age, income, and education level were also obtained. To measure moral foundations, participants rated 15 moral relevance items on 6-point scales depicting a spectrum ranging from *never relevant* on one end and *always relevant* on the other. Items were intentionally written to exclude partisan language. For example, one of the Fairness items read, “Whether or not someone was denied his or her rights,” without identifying those rights (e.g., gun rights, gay rights, religious rights) (Graham, Haidt, & Nosek, 2009). Cronbach’s alphas obtained for each foundation were .62 (Harm), .67 (Fairness), .59 (Ingroup), .39 (Authority), and .70 (Purity). After accounting for demographic variables of age, gender, education level, and income, political identity predicted all five foundations in the original moral foundations theory model with all p s < .001. Political identity constituted the sole explanatory variable (average $|\beta| = .25$; range .16 to .34) for all five foundations. A multigroup version of the model was created for participants from the United Kingdom ($n = 477$), the United States ($n = 695$) as two groups and other countries as a third group, consisting primarily of participants from Canada ($n = 44$) and Argentina ($n = 61$). In all three groups, liberals favored individualizing concerns (Fairness/reciprocity, Harm/care) as

more morally relevant, whereas conservatives favored binding foundations (Ingroup/loyalty, Authority/respect, and Purity/sanctity) (Graham, Haidt, & Nosek, 2009).

In Study 2, 2,212 participants (62% female, 38% male; median age 32), all United States citizens, were randomly selected from the Project Implicit research pool in an attempt to expand the study's scope to examine "more contextualized and concrete items that could more strongly trigger the sorts of moral intuitions that are said to play an important role in moral judgment" (Graham, Haidt, & Nosek, 2009, p. 1033). Examples of such statements include "Chastity is still an important virtue for teenagers today, even if many don't think it is" (Graham, Haidt, & Nosek, 2009, p. 1034) for Purity and "If I were a soldier and disagreed with my commanding officer's orders, I would obey anyway because that is my duty" (Graham, Haidt, & Nosek, 2009, p. 1034) for Authority. Political identity and moral relevance were measured similarly as with Study 1, with the exception of an added measure for political identity consisting of the administration of an implicit association test (IAT). For the IAT, participants were pictures of U.S. liberal and conservative political figures, and they were asked to associate those pictures with "self or "other." Moral relevance results were similar to those from Study 1. Additionally, the moral foundations hypothesis was supported for moral judgment. Explicit political identity predicted moral judgments in the predicted direction for Harm ($\beta = -.32$), Fairness ($\beta = -.43$), Ingroup ($\beta = .67$), Authority ($\beta = .62$), and Purity ($\beta = .57$), all $p < .001$. Implicit political identity correlated with self-reported political identity ($r = .63$, $p < .001$) (Graham, Haidt, & Nosek, 2009).

In Study 3, the focus was expanded to moral trade-offs involved scenarios in which participants were forced to choose between a sacred value (e.g., human life) and profane

values (e.g., money saved by a hospital). Five potential taboo violations for each moral foundation were generated, such as the question of how much money one would have to pay someone to kick a dog in the head (Harm) or renounce citizenship (Ingroup). For this study, 8,193 adults (40% female, 60% male; median age 34) were selected from a volunteer pool at www.yourmorals.org, including 6,728 participants from the United States, 513 from Europe, 281 from Canada, 183 from Latin America, and 488 from other places. Unlike Studies 1 and 2, additional options were provided for political identity, such as *libertarian*, *other*, and *don't know/not political*. Aggregated moral sacredness ratings for individualizing foundations were higher than for binding foundations, $F(1, 6596) = 3,689.66$, $p < .001$, $\eta_p^2 = .36$, an effect moderated by politics, $F(1,6596) = 236.28$, $p < .001$, $\eta_p^2 = .18$). Libertarians were less likely to refuse to violate moral foundations for money than liberals or conservatives (Graham, Haidt, & Nosek, 2009).

A fourth study was conducted, but its focus on moral text as observed in religious institutions identified as conservative or liberal place the study beyond the scope of this examination.

Graham, Haidt, & Nosek (2009) proposed that their five moral foundations “provide a taxonomy for the bases of moral judgments, intuitions, and concerns. Taxonomies are the building blocks of theory, organizing metaphors that provide a vehicle for theories to exert explanatory power over human behavior” (p. 1040). They concluded that all four studies consistently supported the conclusion that conservatives endorse and use all five of the moral foundations equally, whereas liberals favor two moral foundations (Harm/care and Fairness/reciprocity) above the other three (Ingroup/loyalty, Authority/respect, and

Purity/sanctity). They further demonstrated that these findings are consistent regardless of the nation or region participants lived in (i.e., United States, Europe, Canada, Latin America). In terms of theory relevance and application, they proposed that moral foundations theory might provide a useful way to understand and categorize moral convictions and political ideologies in an increasingly diverse Western world (Graham, Haidt, & Nosek, 2009).

Critique of Manuscript #1

Three strengths inherent in this study include: (1) a large, international sample size representative of national populations in terms of age, education, income, and occupation; (2) use of several methods to measure constructs; (3) consistent results across all four studies; and (4) sampling methods that provide a more diverse sample than studies that primarily involve undergraduate students in universities. To the extent that one inherent risk in conducting research with political implications include the potential for the political bias of researchers to influence results as well as how researchers frame those results and another involves the tendency for partisans in the public to reject findings that contradict their own political beliefs, one of this study's strengths include its use of a model that does not appear prejudicial towards any particular political ideology. None of the five moral foundations are portrayed as being superior to another, which may allow for a more open public dialogue about findings.

Limitations of these four studies include:

1. As with all studies that utilize a survey method, volunteer/sampling bias is a potential threat to the generalizability of findings. Participants were self-selected, and we do not know if participants who volunteer to participate in research are different in terms of political ideology, moral reasoning, or other characteristics that could influence findings

than those who do not participate. Notably, each sample contained a disproportionate number of liberals (Graham, Haidt, & Nosek, 2009). It is possible, for example, that the conservatives who elected to participate in the study were perhaps more liberally-minded than conservatives who did not participate and are not therefore representative of the average conservative. Despite this possibility, notable and significant differences in moral reasoning between conservatives and liberals were supported by the findings.

2. Graham, Haidt, & Nosek (2009) concede that each moral foundation needs to be investigated more thoroughly. For example, it is possible that within the Fairness/reciprocity foundation, there are subtypes of fairness that are more likely to be favored by conservatives than liberals. Indeed, Brooks (2012) asserts that liberals are more likely to favor redistributive fairness, an equalization of rewards, whereas conservatives are more likely to favor meritocratic fairness, a proportional matching of rewards and merit. Similarly, after additional research following the publication of this study, Haidt (2012) differentiated between two types of fairness; equality (favored by liberals), and proportionality (favored by conservatives).
3. Three of the four studies relied on self-report, raising the question of whether participants are responding accurately, insightfully, and honestly, though in Study #2 this potential drawback was partially addressed through use of IAT.
4. Political ideology was measured on a unidimensional spectrum with conservatism on one end, liberalism, on the other, and moderate ideology in the center. Though frequently utilized, this model has long been contested in political science inquiry (e.g., Bryson, 1968; Jost, Federico, & Napier, 2009; Kerlinger, 1984; Treier & Hillygus, 2009) as

well as by Graham, Haidt, & Nosak (2009) themselves, who raise the question of where libertarians (who are socially conservative and politically liberal, yet certainly not moderates) might fit on such a scale.

Manuscript #2: Iyer et al. (2012)

Iyer et al. (2012) established the purpose of their study as a reaction to one of the weaknesses in Manuscript #1 (Graham, Haidt, and Nosak, 2009) relating to limitations inherent in the traditional unidimensional spectrum of political ideology with conservatism on one end, liberalism on the other, and moderation in the middle. They drew their attention to a unique political ideology that does not fit well in this traditional spectrum; libertarians. Libertarian philosophy is rooted in the ideas of Enlightenment-era thinkers in the 17th and 18th centuries who argued that the function of government is to benefit its people, and that people confer power to the State in order to preserve their property rights (Iyer et al., 2012). Libertarianism stresses the nonaggression axiom, which maintains that “no man or group of men may aggress against the person or property of anyone else” (Rothbard, 2006, Kindle location 426). Emanating from this axiom is the rejection of the assertion that the needs of any one person impose a moral duty on any other (Iyer et al., 2012). Therefore, libertarians, often referred to as *classical liberals* in the United States and often portrayed as *liberals* in Europe, tend to reject social programs favored by progressives or contemporary liberals in the United States (i.e., fiscally conservative) while simultaneously favoring individual rights and liberties (i.e., socially liberal). In this sense, the libertarian focus on liberty may be conceptualized as *negative liberty*, referring to freedom from government interference, as opposed to *positive liberty*, referring to governmental provision of social conditions (e.g., healthcare, education, financial security)

avored by progressives (Iyer et al., 2012). Previous research on libertarians raised the tentative hypothesis that libertarians would value liberty above all other moral foundations in the original moral foundations theory model (Iyer et al., 2012).

To explore this hypothesis, Iyer et al. (2012) drew upon the results of 16 surveys conducted with 11,994 self-identified libertarians (45.6% female, median age = 34) to conduct three studies related to three hypotheses:

1. “Libertarians will value liberty more strongly and consistently than liberals or conservatives, at the expense of other moral concerns” (Iyer et al., 2012, p. 3).
2. “Libertarians will rely upon emotion less – and reason more – than will either liberals or conservatives” (Iyer et al., 2012, p. 3).
3. “Libertarians will be more individualistic and less collectivistic compared to both liberals and conservatives” (Iyer et al., 2012, p. 3).

Participants were all raised in the United States until at least 14 years of age, and all of them had visited YourMorals.org, a data collection platform, where they answered demographic questions and self-selected to participate in as many as 40 studies (Iyer et al., 2012).

Measures of constructs included:

1. Political self-identification: self-identification as very liberal, liberal, slightly liberal, moderate/middle of the road, slightly conservative, conservative, very conservative, don't know/not political, libertarian, and other;
2. Moral foundations: participants' scores on the Moral Foundations Questionnaire (MFQ), which measures the degree to which a participant relies on each of the original five

foundations in moral foundations theory (i.e., Harm/care, Fairness/reciprocity, Ingroup/loyalty, Authority/respect, Purity/sanctity);

3. Values: participant scores on the Schwartz Value Scale, which consists of 58 statements categorized into 10 values (achievement, benevolence, conformity, hedonism, power, security, self-direction, stimulation, tradition, and universalism);
4. Ethical positions: participant scores on the Ethics Position Questionnaire, composed of two 10-item subscales measuring moral idealism and moral relativism;
5. Moral relevance: participant scores on the Good Self Scale, a measure of the degree to which one sees moral (vs. non-moral) traits as part of his or her self-concept;
6. Lifestyle and economic/government liberty: participant scores on an 11-item subscale developed for inclusion in a revised version of the original MFQ designed to include the Liberty/oppression foundation suggested by previous research (Iyer et al., 2012).

For Study 1, which was designed to test Hypothesis 1, two analyses were conducted to develop a moral profile for libertarians. First, a cluster analysis was conducted on all participants who completed both the MFQ and Liberty Foundation subscale (N = 3,094), using MFQ sub-scale scores to determine if libertarians could be extracted based on their patterns of responses related to values rather than self-identification. Ward's Method was utilized to calculate the difference between participants, yielding a dendrogram indicative of a three-cluster split. When participants were re-categorized based on this three-cluster solution, 74% of participants in Group 1 self-identified as liberal, showing high concern for harm, fairness, and lifestyle liberty, 44% (a plurality) of Group 2 self-identified as conservative with a more evenly spread distribution of concerns across all moral foundations, and 60% of Group 3 self-identified

as libertarian, showing the highest concern for lifestyle and economic/government liberty and lower concern for the five moral foundations in the original MFQ (Iyer et al., 2012). Second, principal components analysis was conducted using all measures from Study except the Good Self Scale. Scree plot analysis indicated a 4-factor solution, and each factor was extracted using varimax rotation. Those factors were interpreted and labeled as conservative values, other-oriented values, self-oriented values, and liberty values, with all five factors loading greater than .10. After computing standardized factor scores for each participant and across political groups, libertarians were determined to be characterized by liberty values, conservatives by conservative values, and liberals by other-oriented values. These findings were interpreted as evidence that libertarians hold an empirically distinct set of values from conservatives and liberals (Iyer et al., 2012).

Study 2 was designed to examine cognitive and emotional differences between conservatives, liberals, and libertarian in an effort to test hypothesis #2 (i.e., the cognitive style of libertarians will depend less on emotion and more on reason as compared to liberals and conservatives) (Iyer et al., 2012).

Measures of constructs included:

1. Personality traits: participant scores on the Big Five Personality Inventory (BFPI), a 44-item measure of five personality traits (i.e., openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism)
2. Empathy: Participant scores on a 28-item measure of empathy categorized into four empathic responses: (1) empathic concern for others; (2) fantasy; (3) personal distress; and (4) perspective-taking.

3. Disgust: Participant scores on the Disgust Scale Revised (DSR), designed to measure differences in propensity to feel disgust towards certain stimuli, including (1) core disgust, defined as disgust towards animals or body products that pose a threat to health; (2) animal-reminder disgust (e.g., corpses, blood and gore); and (3) contamination (i.e., physical contact with other people who may be infected).
4. Psychological resistance: Participant scores on the Hong Reactance Scale (HRS), an 11-item measure of the extent to which people emotionally resist the advice and influence of others and restrictions on their behavioral freedom;
5. Tendency to empathize: Participant scores on 20 items extrapolated from the 40-item Empathizer-Systemizer Scale (ESS);
6. Need for cognition: Participant scores on the Need for Cognition Scale (NCS), which measures “the extent to which people engage in and enjoy effortful cognitive activities” (Iyer et al., 2012, p. 13);
7. Moral dilemmas: Participant responses to questions related to six moral dilemmas inquiring as to whether it is morally appropriate for the participant to take a particular action for a particular purpose in each scenario and then posing a scaling question reflecting how certain the participant is about his or her answer;
8. Reasoned cognitive style: participant responses on the Cognitive Reflection Task, which consists of three logic questions, each with the option of a correct answer or an intuitive answer, with correct answers denoting a reasoned cognitive style (Iyer et al., 2012).

Results obtained for each of the eight constructs include (note that in parentheses, Cohen’s d-score for liberals and libertarians will be presented after the mean score for liberals,

and Cohen's d-score for conservatives compared to libertarians will be presented after the conservative mean score):

1. Personality traits: On the BFPI, libertarians scored lower than conservatives and liberals on agreeableness (libertarian $N = 2,615$, $M = 3.36$, liberal $N = 19,106$, $M = 3.64$, $d = -.45$, $p \leq .001$, conservative $N = 3,991$, $M = 3.60$, $d = -.37$, $p \leq .001$), conscientiousness (libertarian $M = 3.39$, liberal $M = 3.47$, $d = -.11$, $p \leq .001$, conservative $M = 3.62$, $d = -.33$, $p \leq .001$), and extraversion (libertarian $M = 2.96$, liberal $M = 3.12$, $d = -.19$, $p \leq .001$, conservative $M = 3.10$, $d = -.16$, $p \leq .001$). Additionally, like conservatives, they scored lower than liberals on neuroticism (libertarian $M = 2.69$, liberal $M = 2.88$, $d = -.23$, $p \leq .001$, conservative $M = 2.70$, $d = -.01$), and, like liberals, they scored lower than conservatives on openness to experience (libertarian $M = 4.06$, liberal $M = 4.08$, $d = -.40$, conservative $M = 3.75$, $d = .50$, $p \leq .001$). These findings were interpreted as evidence that libertarians may be more critically- and skeptically-natured than conservatives and liberals and that they are similar to conservatives in some ways and similar to liberals in others (Iyer et al., 2017).
2. Empathy: Libertarians scored moderately lower than conservatives and substantially lower than liberals on empathic concern for others (libertarian $N = 697$, $M = 3.21$, liberal $N = 4,103$, $M = 3.92$, $d = -.91$, $p \leq .001$, conservative $N = 906$, $M = 3.57$, $d = -.44$, $p \leq .001$).
3. Disgust: On the DSR, libertarians scored moderately lower than conservatives on measures of disgust within both genders (libertarian $N = 2,368$, $M = 1.52$, liberal $N = 23,516$, $M = 1.63$, $d = -.20$, $p \leq .001$, conservative $N = 3,617$, $M = 1.91$, $d = -.61$, $p \leq .001$),

interpreted as evidence that “libertarians may not experience the flash of revulsion that drives moral condemnation in many cases of unorthodox behavior” (Iyer et al., 2012, p. 12).

4. Psychological resistance: On the HRS, libertarians scored slightly higher than liberals and moderately higher than conservatives (libertarian $N = 445$, $M = 3.40$, liberal $N = 2,301$, $M = 3.15$, $d = .43$, $p \leq .001$, conservative $N = 510$, $M = 3.01$, $d = .65$, $p \leq .001$).
5. Tendency to empathize: Libertarians scored the lowest of all three groups on empathizing (libertarian $N = 637$, $M = 2.71$, liberal $N = 6,525$, $M = 3.04$, $d = -.76$, $p \leq .001$, conservative $N = 877$, $M = 2.88$, $d = -.38$, $p \leq .001$) and the highest on systemizing (libertarian $M = 2.89$, liberal $M = 2.67$, $d = .49$, $p \leq .001$, conservative $M = 2.76$, $d = .31$, $p \leq .001$). This finding was interpreted as liberals having the most feminine cognitive style, and conservatives and libertarians having the most masculine cognitive style (Iyer et al., 2017).
6. Need for cognition: On the NCS, libertarians scored slightly higher than liberals and moderately higher than conservatives (libertarian $N = 657$, $M = 4.24$, liberal $N = 5,888$, $M = 4.15$, $d = 0.17$, $p \leq .001$, conservative $N = 760$, $M = 3.93$, $d = .54$, $p \leq .001$), which was interpreted as a pattern “consistent with the libertarian valuation of logic and reasoning over emotion” (Iyer et al., 2017, p. 13).
7. Moral dilemmas: Libertarian responses made moderately more utilitarian judgments than conservatives and slightly more utilitarian judgments than liberals (libertarian $N = 616$, $M = -.60$, liberal $N = 2,690$, $M = -1.23$, $d = .23$, $p \leq .001$, conservative $N = 765$, $M = -1.74$, $d = .41$, $p \leq .001$), interpreted as “libertarians are indeed more capable of ‘rational

ethics' where costs and benefits are weighed according to utilitarian principles" (Iyer et al., 2017, p. 14).

8. Reasoned cognitive style: Libertarians were slightly more likely to find correct answers than liberals and moderately more likely to find them as compared to conservatives (libertarian $N = 1,070$, $M = 2.06$, liberal $N = 7,384$, $M = 1.73$, $d = .31$, $p \leq .001$, conservative $N = 1,267$, $M = 1.57$, $d = .46$, $p \leq .001$), interpreted as "behavioral validation that libertarians have a more reasoned cognitive style" (Iyer et al., 2017, p. 14).

In Study 3, the hypothesis that libertarians are more individualistic and less collectivistic than conservatives and liberals was tested (Iyer et al., 2017). Measures of constructs included:

1. Individualism and collectivism: participant's responses on the Individualism-Collectivism Scale (ICS), a 32-item scale designed to measure individual levels of independence and interdependence.
2. Identification with humanity: participant's responses on the Identification with All of Humanity Scale (IAHS), a 27-item measure of connectedness to others in one's community, one's country, and the world.
3. Types of love: participant's responses on the Different Types of Love Scale (DTLS), a 40-item measure of loving feelings towards four different groups, including (1) friends; (2) family; (3) generic others; and (4) romantic partners (Iyer et al., 2012).

Results and interpretations for each construct included:

1. Individualism and collectivism: On the ICS, libertarians scored the lowest on both horizontal collectivism (libertarian $N = 291$, $M = 3.70$, liberal $N = 1,987$, $M = 4.28$, $d = -.70$, $p \leq .001$, conservative $N = 390$, $M = 4.16$, $d = -.55$, $p \leq .001$) and vertical collectivism

(libertarian $M = 2.06$, liberal $M = 3.13$, $d = -.22$, $p \leq .001$, conservative $M = 3.66$, $d = -.89$, $p \leq .001$), interpreted as evidence that libertarians have a stronger preference for individualism and are less collectivistic than conservatives and liberals (Iyer et al., 2012).

2. Identification with humanity: On the IAHS, libertarians identified less with their community (libertarian $N = 1,450$, $M = 2.77$, liberal $N = 8,219$, $M = 3.07$, $d = -.36$, $p \leq .001$, conservative $N = 1,667$, $M = 3.24$, $d = -.55$, $p \leq .001$), country (libertarian $M = 2.94$, liberal $M = 3.01$, $d = -.09$, $p \leq .01$, conservative $M = 3.60$, $d = -.85$, $p \leq .001$), and the world (libertarian $M = 2.69$, liberal $M = 3.41$, $d = -.84$, $p \leq .001$, conservative $M = 2.64$, $d = .06$), interpreted as suggestive of opposition to transnational humanitarian undertakings, like conservatives, and opposition to projects and legislation aimed at strengthening national identity, like liberals (Iyer et al., 2017).
3. Types of love: On the DTLS, libertarians scored lowest for all four categories of love for others, including love for family (libertarian $N = 310$, $M = 4.64$, liberal $N = 1,894$, $M = 4.79$, $d = -.13$, conservative $N = 325$, $M = 5.02$, $d = -.33$, $p \leq .001$), love for friends (libertarian $M = 4.97$, liberal $M = 5.24$, $d = -.27$, $p \leq .001$, conservative $M = 4.75$, $d = -.13$), love for generic others (libertarian $M = 4.47$, liberal $M = 5.24$, $d = -.78$, $p \leq .001$, conservative $M = 5.53$, $d = -.28$, $p \leq .001$), and love for romantic partner (libertarian $M = 5.22$, liberal $M = 5.53$, $d = -.29$, $p \leq .001$, conservative $M = 5.53$, $d = -.30$, $p \leq .001$), although the difference between libertarians and conservatives was not significant on love for friends.

Principal component analysis was conducted using results the 630 participants who completed the ICS, IAHS, and DTLS. The scree plot indicated a two-factor solution, one factor

consisting of broad connection, more universalist-oriented variables (e.g., love of friends, identification with the world), and a second consisting of tight connection, close group-oriented variables (e.g., love of family, identification with country) more typical of conservatives. Of these 630 participants, 590 also completed the MFQ, and data analysis yielded several additional correlations with MFQ scales (Iyer et al., 2017). Factor analysis therefore demonstrated that variables in Study 3 could be grouped into measures of tight social connection and measures of broad social connection, with libertarians scoring lower on both of these factors, conservatives scoring lower on broad social connection, and liberals scoring lower on tight social connection (Iyers et al., 2017).

Iyers et al. (2012) asserted that all three hypotheses formulated supported by the data. These findings were quickly used to revise the original moral foundations theory model to include a sixth foundation, liberty/oppression (Haidt, 2012).

Critique of Manuscript #2

Strengths of this study include: (1) very large sample sizes, enhancing statistical power; (2) use of multiple measures and data points; (3) unique addition to the professional literature by expanding the traditional yet contested unidimensional political spectrum to include libertarians, yielding an additional moral foundation that may not have been discovered without this expanded focus; (4) consistency in findings across the board, suggesting substantial differences between conservatives, liberals, and libertarians.

However, several limitations have also been identified:

1. As mentioned during the critique of Graham, Haidt, & Nosek (2009), studies utilizing a survey method may be vulnerable to volunteer/sampling bias, which in turn may impact

generalizability of findings. Participants were self-selected, and we do not know if participants who volunteer to participate in research are different in terms of political ideology, moral reasoning, or other characteristics that could influence findings than those who do not participate. In fact, Iyer et al. (2012) acknowledge that “our sample is not representative of the general population...The sample tends to be more politically aware, educated, white, and liberal than a representative U.S. sample would be” (pp. 20-21). Liberals were disproportionately represented in all three studies. It is possible that the conservatives who elected to participate in the study were perhaps more liberally-minded than conservatives who did not participate and are not therefore representative of the average conservative.

2. The fact that all of the surveys completed for the three studies were proctored online raises questions as to whether controls were in place at YourMorals.org that prevent participants from taking the same survey repeatedly. It does not appear that the researchers included information about such measures.
3. All three studies relied on self-report measures, raising the question of whether participants were responding accurately, insightfully, and honestly.

Synthesis and Comparison of Studies

Neuropolitical theory and moral foundations theory both provide a framework for understanding why and how human beings make different decisions with respect to choices that are related to political issues. By extension, both may help make sense of why CMHCs of varying political ideologies might choose different treatment plan objectives when presented with clinical vignettes that relate to politicized issues, the intended focus of my dissertation. I

will discuss some of the similarities and differences between these theories through the lens of Murdock's (2016) the scientific-practitioner model for evaluating theories. Table 3 depicts the ratings I have proposed for both theories in each of the five characteristics proposed by Murdock (2016) as a way of summarizing the critique of both theories in a previous section. I chose to depict ratings as low, moderate, and high for each characteristic. Both theories are rated high for precision and testability, as both theories consistently identify clear and specific operationalized definitions for constructs.

The first point of contrast between the two theories involves empirical support. On one hand, researchers from both theoretical orientations favor the scientific method, both theories are the byproduct of interdisciplinary research in social or neurocognitive sciences (i.e., anthropology, evolutionary psychology, political science, social psychology, neuroscience), and studies examined from both theoretical camps consistently yielded data in support of their hypotheses. On the other hand, the methods utilized in neuropolitical research were more likely to involve experimentation and objective measurements such as fMRI, MRI, and EEG that are difficult to discredit, whereas the methods in moral foundations theory almost exclusively involved online surveys and correlational research designs, though the measurements were appropriately validated, and this is a weakness acknowledged by moral foundations researchers (e.g., Graham, Haidt, & Novak, 2009; Iyer et al., 2012). Accordingly, I rated neuropolitical theory a high in empirical support and moral foundations theory as moderate.

Neuropolitical theory asserts that human beings have evolved political brains that serve adaptive purposes in various environments. Therefore, people of varying political orientations differ in brain structure, brain functioning, and cognitive skills, especially when engaging in

tasks that are related to moral and political decision-making. Similarly, moral foundations theory proposes that human beings have developed at least six moral foundations that serve as frameworks for moral decision-making through an evolutionary process. Because activation of one foundation over another might be more advantageous in one environment than another, regional differences in use of these foundations developed over time. This theory is very similar to neuropolitical theory. In fact, Haidt (2012) cites neuropolitical findings throughout his book on moral foundations theory, incorporating neuropolitical findings into his model. Because both theories appear relatively parsimonious, I rated them both as high in parsimony.

Though neuropolitical theory is purported to be only a little more than 20 years old, it has stimulated a great deal of focus, as well as controversy. However, it does not appear to have drawn as much attention as moral foundations theory, which is not quite 10 years old. Moral foundations theory may have drawn more attention because it offers a concrete and understandable framework for conceptualizing moral differences, and the model is not pejorative towards any political orientation. Additionally, the theory was expanded to examine an oft-neglected, yet large, minority political ideology, libertarianism. Lastly, it is possible that concepts such as fairness, care, loyalty, authority, sanctity, and liberty are easier for people to understand and relate to than deliberations on the anterior cingulate gyrus, amygdala, electroencephalography, and evoked response potentials. I rated neuropolitical theory as moderate and moral foundations theory as high in stimulation/importance.

Neuropolitical research is, in some ways, impractical. Studies using more sophisticated technology such as MRI and fMRI require expensive equipment, well-trained and competent staff, and considerable investment of time in comparison to the survey methods often used in

moral foundations theory. Additionally, participants sometimes have to visit a lab or clinic environment perform tasks when connected to cumbersome machinery. Furthermore, the extent to which neuropolitical findings can be applied instrumentally is not well-established, though there have been some controversial assertions about how perhaps corporations, political campaigns, and governments might use or misuse neuropolitical findings.

Nonetheless, one application that has been suggested is an understanding that conservatives and liberals exhibit cognitive strengths in different areas, and that perhaps such findings might reduce stigma towards either political group (Bernabel & Olivera, 2017). Conversely, moral foundations theorists have proposed elaborate accounts of how understanding moral foundations might help conservatives and liberals to understand each other nonjudgmentally, recognizing the valuable contributions that various moral foundations play in the advancement and stability of society (e.g., Haidt, 2012). Accordingly, I rated neuropolitical theory as low-to-moderate and moral foundations theory as high in practicality.

Because moral foundations theory makes room for and incorporates neuropolitical findings in its model, I think of it as a more comprehensive theory of understanding political ideology and decision-making. In this sense, I simultaneously favor moral foundations theory as a way of conceptualizing decision-making differences among CMHCs and find neuropolitical theory to be helpful in augmenting that conceptualization.

Table 3

Comparison of Neuropolitical and Moral Foundations Theories Using Murdock's (2016)

Scientific-Practitioner Model

Characteristic	Neuropolitical Theory	Moral Foundations Theory
Precision and Testability	High	High

Empirical Support	High	Moderate
Parsimony	High	High
Stimulation/Importance	Moderate	High
Practicality	Low-to-Moderate	High

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