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# **J-I-A-S-S JOURNAL OF THE I-N-D-I-A-N-A A-C-A-D-E-M-Y OF THE S-O-C-I-A-L S-C-I-E-N-C-E-S**

Anthropology • Business • Criminology • Economics • History • Political Science • Psychology



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**Volume 21 (2018)**

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**SENIOR EDITOR IN CHIEF**  
**Kenneth Colburn, Jr.**  
**Butler University**

**SENIOR DEPUTY EDITOR**  
**Surekha Rao**  
**Indiana University Northwest**



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# **JIASS JOURNAL OF THE INDIANA ACADEMY OF THE SOCIAL SCIENCES**

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The objectives of the Academy shall be to facilitate a more effective cooperation among social scientists, to promote the interests of the several social sciences, and to increase the usefulness and advance the effectiveness of both teaching and research in the several social sciences in Indiana.

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The Academy currently recognizes the following social science disciplines: anthropology, business, criminology, economics, history, geography, psychology, political science, and sociology. Environmental studies, gender studies, urban studies, and international studies utilizing social science perspectives and methods are also represented by the Academy. Others may be added by approval of the Board.

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## SENIOR EDITOR IN CHIEF'S NOTE

It is my privilege to present Volume 21 (2018) of the *Journal of the Indiana Academy of the Social Sciences*. Our latest issue leads off with the very well received keynote address by Stephen Morillo delivered at our annual conference at Wabash College: “World History, the Social Sciences, and the Dynamics of Contemporary Global Politics.” This article is not only an insightful survey of the emergence of the social sciences in the latter 19th and early 20th centuries from a world history perspective; it is also a very persuasive exposition of the explanatory power of the global, comparative, and interdisciplinary form of analysis that Professor Morillo pioneered in his 2013 book, *Frameworks of World History: Networks, Hierarchies, Culture*. This paper is definitely worth a read by every social scientist—even those already familiar with Professor Morillo’s work or who were part of the audience last October.

This year’s volume offers nine research papers exploring a wide variety of topics and social science perspectives. The first is Professors Barney and Kara’s study of Securities and Exchange Commission data for 425 firms filing for bankruptcy, in which they attempt to identify the predictive factors influencing Chapter 7 and Chapter 11 bankruptcies. Professors Ceesay, Bandyopadhyay, and Szarleta offer a case study assessing the transportation needs of seniors in one mid-sized Indiana community. Messrs. Crawford and Juricevic propose a structural-contextual framework for understanding how pictorial metaphors may be identified and interpreted, employing their framework in an analysis of a sample of comic book covers from 1938 to the present. Professor Debra Israel examines the topic of support for reducing global greenhouse effects compared to support for reducing local air pollution in an Indiana city, utilizing a survey of university students using the contingent valuation methodology.

Professor Yu Ouyang and associate Chloe Carpentier present results of a pilot study on how gender influences gubernatorial executive orders in seven states where women are currently or have recently served as governor: Arizona, New Hampshire, New Mexico, Oklahoma, Oregon, Rhode Island, and South Carolina. Professor Evelyn Ravuri undertakes a timely analysis of the change in composition of census tracts in Indianapolis as a result of the 300 percent increase in the Hispanic population in the city between 1990 and 2010. Dr. David Root examines chief justice leadership on the Supreme Court during the judicial decision-making process, with an eye toward formulating a model of leadership as he examines case studies of Supreme Court chief justices Marshall, Stone, and Warren. This is followed by an interesting paper from Professor Schrank in which he describes findings from an ethnographic study and from interviews conducted at a local food co-op in Indiana seeking to understand why some folks are willing to join food co-ops and spend more money for food. Professor Laura Wilson offers an important study of the relationship between a political candidate’s race/ethnicity and campaign fundraising as influenced by a state’s political context, her timely research analyzing data on fundraising totals across 15 states for more than 3,000 candidates in the 2006 state legislative campaigns. Finally, this volume concludes with an interesting undergraduate senior research paper by Julia Cant that examines the media portrayal of schizophrenia.

The publication of this volume represents the third issue I have produced since being elected to a second term as senior editor in chief in 2015. It is also the eighth volume I have edited since I first assumed the role of editor in 2010. I am proud of our accomplishments during my tenure as editor. These include the journal's move to an online version in addition to print with my first issue in 2011 and, recently, in the summer of 2017, the migration of the online version to the digitalcommons.com platform—at no cost to the Academy. As a result, our journal is now available to a very large national and global audience; the Digital Commons website is able to track numbers and locations of downloads (10,450 total to date, at a rate of more than 200 per week from around the globe).

Perhaps the single most important change I have enacted, however, is the complete break with the journal's pre-2010 status as a quasi-proceedings, printing only papers presented at the annual conference. Since my first year as editor, beginning with Volume 14 (2010–2011), papers submitted to JIASS are expressly not limited to those presented at the annual meeting. On the contrary, social scientists from anywhere in the world are eligible and welcome to submit their research papers for review for publication, irrespective of annual conference participation. All submissions are subject to the same rigorous double-blind review process. Under my tenure, the journal has also abandoned the practices of identifying papers by discipline and limiting the number of papers published by disciplinary affiliation. Since 2010, we have published papers strictly on the basis of merit, with the result that in any given volume, one may find several papers from a few disciplines and none from others. Our mission is to publish only the best social science research, regardless of discipline, methodology, or theoretical orientation. As senior editor, I have encouraged submission of and have published exceptional undergraduate and graduate student research. Most of all, I am gratified that as editor, my promotion of high standards of scholarship for the journal have resulted in its increased visibility and status across academic circles for its excellence in social science research. Volume 21 (2018) will, as usual, be indexed and available through EBSCO. JIASS is also listed in Cabell's directory (of special interest for scholars in business, economics, and finance). All of these developments represent important milestones for both the journal and the Academy and will ensure their successful transition to the 21st century of scholarly communication.

One new development I am very pleased to report is that the Board of Directors voted at its February 2018 meeting to approve a change in the name of our publication to the *Midwest Social Sciences Journal* by 2019. More information and a formal announcement regarding this change will occur at the annual membership meeting. This is a very exciting prospect and commences a new era for the journal as well as for IASS itself.

I have been very fortunate during the past eight years to have been able to work with a talented and dedicated staff of coeditors, referee-reviewers, and, of course, authors. I would like to publicly acknowledge and thank my editorial staff for their assistance, insight, and guidance throughout this past year. I am appreciative of my current senior deputy editor, Surekha Rao (Indiana University Northwest), who has assisted me for many years. Surekha has been very helpful over the past year by managing several manuscript reviews and making recommendations and suggestions.

Likewise, I have been very fortunate to have the outstanding editorial assistance of Stephanie Seifert Stringham, who has been our copy editor since 2010 (Volume 14: 2010–2011). Stephanie continues to be a major editorial presence and resource behind the scene, ensuring that every line of text and every graph, table, figure, and bibliographic reference meets the highest professional and technical standards. Authors who work with her often express how appreciative they are of her assistance in helping to make their publications sparkle and be the very best they can be. Stephanie has, without a doubt, been largely responsible for the high quality of our finished product year after year.

I also want to publicly recognize and thank our many *referee-reviewers* who serve without fanfare, reading and evaluating papers submitted for publication, helping to ensure that every issue maintains the highest standards of scholarly excellence. Quite simply, JIASS would not be possible without their professional dedication and commitment. (The names of our reviewers are published at the end of the journal. They deserve a moment's attention and thanks from everyone.)

I also acknowledge and thank Jay Howard, Dean of the College of Liberal Arts and Sciences at Butler University, for kindly and consistently supporting my work as editor of JIASS since I first assumed this role in 2010. Dean Howard has provided modest funding to support my work as editor, for which I am grateful.

On a personal note, I have thoroughly enjoyed serving as the journal's senior editor over the past eight years. It has been a privilege and honor, in addition to being professionally and personally rewarding, for me to do so. Life is change, however, and I have informed the Board that I do not plan to continue as senior editor beyond expiration of my current term in October of 2020. I have asked the Board to begin the search this year for a new senior editor-elect to be in position by October 2019. This will permit a year of transition for me to collaborate with the new editor-elect and for him/her to become familiar with the important elements of the job that the new editor will fully assume in 2020.

Kenneth D. Colburn, Jr., PhD

Senior Editor in Chief

*Journal of the Indiana Academy of the Social Sciences*

Butler University

September 2018

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**Keynote Address**

***World History, the Social Sciences,  
and the Dynamics of Contemporary Global Politics\****

STEPHEN MORILLO  
*Wabash College*

**ABSTRACT**

This article argues that the discipline of world history, with its interdisciplinary ties to the social sciences and its incorporation of the cultural insights of recent historiography, makes an ideal tool for conveying the complexities of the contemporary world in a “user-friendly” way. It argues further that one particular global structural analysis, from the author’s world history textbook *Frameworks of World History*, exposes a deep pattern that helps explain many of the central conflicts in contemporary global politics. By highlighting the tension that has existed between individual communities, or *hierarchies*, and the *networks* that connected those communities, a tension going back as far as the modern human species, the article exposes the deep roots of the central conflict between today’s global network and its cultural value of capitalism on the one hand, and modern hierarchies and their central value of nationalism on the other. The cultural aspect of this analysis offers a possible route forward from the problems and repressive politics that flow from this central conflict.

**KEY WORDS** World History; *Frameworks of World History*; Networks; Hierarchies; Nationalism

The disciplines of world history and the social sciences are closely tied together, through their genealogy as academic disciplines and thus their continuing interdisciplinary connections, and through their shared mission within liberal arts education. This article

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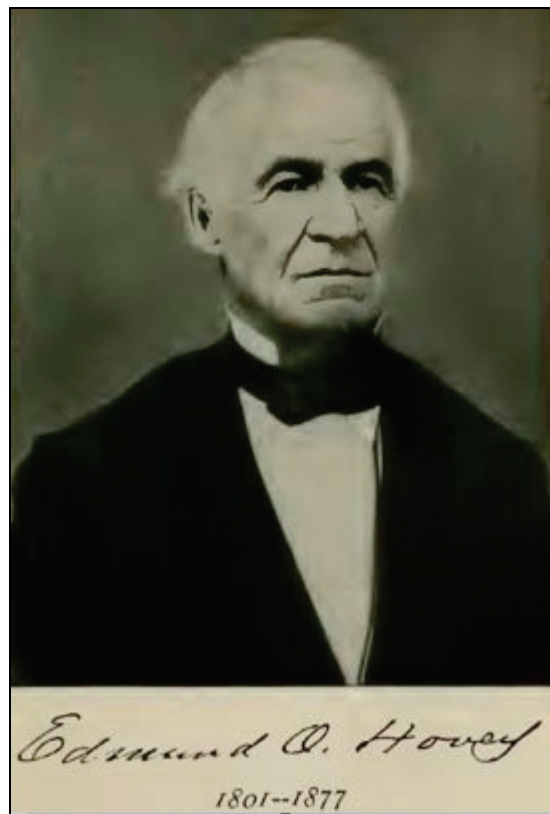
I am indebted to Beth Swift, the Wabash College archivist, for the information about and photos of early Wabash faculty.

will examine both of these connections, the former fairly briefly in order to establish some common ground, and the latter at greater length in order to put the shared mission in the context of global historical patterns and their current expressions in global politics.

### **ACADEMIC HISTORY**

The relationship between history and the social sciences as academic disciplines can be illustrated conveniently, if a bit one-sidedly, from the history of the faculty at Wabash College. The college was founded in 1832, and its early faculty taught broadly from their home bases in classics (Latin and Greek were significant components of the earliest curricula) and the natural sciences and mathematics, reflecting the emerging dominance of science in the intellectual world of the mid-19th century, a topic we will return to in a moment. The iconic figure here is Edmund Hovey (Figure 1), cofounder of the college and its first professor of natural sciences. This state of affairs remained true for much of the rest of the century. Indeed, though Charles White, the second president of the college (and Hovey's brother-in-law), taught history, the first professor hired specifically to teach history was Charles Augustus Tuttle (Figure 2), who joined the college in 1892, sixty years after the college's founding.

**Figure 1. Edmund Hovey**



**Figure 2. Charles A. Tuttle**



The History Department at Wabash now sits in Division III, The Social Sciences. About half of the history departments in the United States are grouped with the social sciences, and about half with the humanities. Honestly, the discipline can fit comfortably in either place, but its placement at Wabash is because of Tuttle, because he taught not only history but also sociology, political science, political economy, and economics, the latter being the field where modern citations to his work still appear most frequently. In other words, he was a one-man Division III (In fact, we don't even teach sociology these days), and the division's departments, except for psychology, all trace back to Tuttle. Thus, history sat firmly with the social sciences at Wabash.

This academic history suggests that the relationship between history and the social sciences is genealogical, stemming from history; however, although history, a field that could look back to the Greek classics in the persons of Herodotus and Thucydides, did precede the social sciences, their mutual influence is far less one-sided. To see this, we need a quick review of some basic historiography.

### *Classical Historicism*

The "modern" academic profession of history traces back to the decade of Wabash's founding, the 1830s, when Theodore von Ranke began teaching at the University of



Berlin. Ranke was determined to put history on the same scientific footing as the natural sciences, or, put another way, to remove it from the realms of literature and rhetoric it had occupied up to then, even when practiced by Enlightenment-era rationalists such as Edward Gibbon and David Hume (see, e.g., Arnold 2000). Doing so entailed setting standards of professional training, for which purpose Ranke invented the seminar, and an emphasis on objective analysis of primary sources, especially “official” documents such as state records and the writings of state leaders. This emphasis emerged from and supported the content of Ranke’s objective of scientific history: a focus on the decisions of the great leaders who were taken to have shaped the history of the nations of the day. Such histories in turn served a deeper purpose: the invention of “nations” (for Ranke, the not-yet-extant German nation, which would “naturally” fall under the political leadership of Prussia, whose capital at Berlin housed Ranke’s university) through the promotion of national histories and thus national identities. Historians have come to call this combination of great man history—purportedly objective and scientific in method but deeply imbued with nationalism and its close ideological cousins racism, sexism, and classism—classical historicism, and this style of history set the mold for the future development of the academic history profession, as can be seen in the continued domination of national divisions in both flagship professional organizations (e.g., the American Historical Association) and their associated journals (e.g., *The American Historical Review*).

The problem for the discipline of history was that this style of historical analysis was obsolete almost as soon as it came into being. Prussia in the 1830s was still largely preindustrial in its social, political, and economic landscapes, but the coal smoke of change was already in the air, and industrialization advanced rapidly through the 19th century across much of western Europe and the United States. (We’ll return later to where that change came from.) The transformations of society, politics, and economics wrought by industry can be summarized neatly under the keyword “mass”—mass politics, mass society, mass production and consumption—all producing reams of data, a vast expansion of the number of political actors, and the formation of industrial classes of people; industrial society organized around mass proved ill-suited to analysis by the sources and methods, focused on the decisions of an elite few, of classical historicism. But because the same forces of professionalization and specialization that shaped the unchallengeable scientizing of historical method also led to a hiring system that tended very strongly to conservative reproduction of the interests and methods of the established masters of the field, the discipline of history proved very slow to adapt to the changing landscape.

Instead, new academic disciplines arose to answer the challenge of analyzing the evidence created by newly industrializing societies. Within the same academic atmosphere of professionalization, specialization, and prestige of the methods and image of natural science (whose discoveries, especially in industrial chemistry, were doing so much to advance industrial growth), the result was the emergence of the social sciences. Marx, of course, led the way, and though he proposed his theories (for which he too claimed the validity of science) as an approach to history, this proved far too radical for that stodgy field, which would begin to accept Marxist influence only in the next century,

and Marxism instead occupied the emerging and contested ground of economics (over against but actually closely akin to classical Smithian economics), political economy, and politics. The sociology of Max Weber followed, along with the invention of psychology at various points by figures such as William James and Sigmund Freud. It was these fields, cousins to rather than descendants of history, that C. A. Tuttle brought to Wabash along with his historical expertise.

### *Social History*

Continuing social change and the political conflicts over identity that were created by industrial change (implicated in histories of national development) meant that history could not remain trapped in its 19th-century mold forever. “Social history,” characterized by what has been widely called a bottom-up rather than a top-down approach to the past, emerged in different forms by the early 20th century: the American Progressives, for example, exemplified by Charles Beard, who famously analyzed the economic class interests of the Founding Fathers and the Constitution they wrote; and various German and French schools of social history, including the roots of the French *Annales* school. Soon after, Marxist analysis finally gained traction (and became the officially sanctioned view of history in the Soviet Union), and social history blossomed and became the dominant brand of history in the 1960s, when a generation of historians from far more diverse backgrounds entered the profession (Iggers 1997).

When social historians began writing, they naturally turned to the methods of analysis already developed by social scientists, creating “social science” history as the methodological corollary of social history’s topical focus. Thus, borrowing from sociology, political science, economics, and even psychology, historians learned to incorporate statistical models and to use big data drawn from a whole new class of government (and other) documents to supplement older narrative sources. This focus on aggregates of thousands of small pieces of data rather than on the actions of a few leaders, events, or cases therefore had the further methodological result of driving at least some history away from narrative exposition of stories and toward thematic analysis of trends, and even (for the *Annales* school) of stasis—toward synchronic rather than diachronic history, in other words.

Many traditional historians were uncomfortable with such developments, of course, and justified their resistance by claiming that history was meant to get at the individuality of stories and events from the past—stories that inevitably undermined any grand generalizations that a social science model might attempt to capture. But social historians could answer such charges by claiming that they were simply doing “better science”—a defense that resonated with the scientific professionalism built into Ranke’s invention of modern historical method. Social history, while challenging some of the topical foci and philosophical assumptions of classical historicism, therefore maintained significant philosophical continuity with it, and still operated largely within the earlier school’s nationalist frame.

*World History and the Question of Culture*

I have so far been talking about the discipline of history generally. It is time to bring the specific subdiscipline of world history, within which I have built (at least part of) my career, into focus. To begin with, we must recognize that the desire to encompass as much of the world as possible in histories has deep roots, undoubtedly because the more universal a history could claim to be, the more authority its conclusions could lay claim to. Thus, medieval monks who wrote histories, even ones largely focused on recent events in their own locality, often framed them as “universal” histories, beginning with Adam and Eve and summarizing biblical history before transitioning to “modern” times. Ranke himself claimed to write universal history, the claim to universalism here being at least in part a product of the scientific method (or at least the image of scientific method) that Ranke wished to create for his discipline. Natural science, especially since Newton, aimed at discovering laws of nature that were universally true—Newton’s law of gravity, which united the previously separate physics of earthly phenomena (why do objects fall to the earth?) and cosmic motion (why do planets apparently “circle” the sun in elliptical orbits?) provided the model. (Ironically, the fact that Newton’s law accounted for observed fact but potentially separated that reality from transcendent causation, failed to impress Ranke, whose “universal history” exposed, he said, God’s plan, connecting Ranke more to medieval monks than to modern scientists.)

Ranke’s universal history was almost exclusively a history of Europe and European nations, as in no other region of the world, as he saw it, was the progressive change necessary to true history happening. (Marx’s “Asiatic mode of production” viewed the world the same way.) The next generation of world history saw explicit attempts to encompass the globe geographically. The two best known—the early-20th-century German historian Oswald Spengler (Spengler 1932) and the mid-20th-century British historian Arnold Toynbee (Toynbee 1957)—divided the world into cultures or civilizations that they treated (explicitly, in Spengler’s case) as biological organisms with “natural” lifespans and patterns of growth and decay (yet another reflection of the scientific pretensions of the historical discipline). The result was world history as classical historicist grand narrative, with civilizations or cultures replacing great men and nations as the central actors in the drama. While both were immensely influential, the rise of social history and the Eurocentric assumptions underlying their narratives sent both into eclipse by the 1960s, when the new wave of social history came to dominate the discipline.

A new school of world history was part of this development. Exemplified most famously in the work of William McNeill, whose *Rise of the West* (1963) deliberately responded, in its title, to Spengler’s iconic work, *The Decline of the West*, but also in the work of the Greek-Canadian scholar L. S. Stavrianos (Stavrianos 1971), the new world history saw a vast leap in complexity of analysis, partly through consideration of processes that transcended “civilizational” boundaries, and partly through the incorporation of comparative and “bottom-up” perspectives inspired by more local social histories. This new focus in turn entailed a logical turn to social historical methods.

This style also raised for world history the question that history as a whole began to ask in the 1980s: What about culture? What has since come to be called the cultural

turn arose from the influence of literary critical studies on theories of history, as historians not only brought culture into focus as a topic of study but also began questioning some of the fundamental philosophical assumptions regarding the accessibility of the past, the reliability of sources and narrative as a method (Hayden White [1990] famously asked whether there was a difference between historical narrative and fiction, since both necessarily involved imagination), and in general problematizing the objectivity of the “science” of history and the social sciences. This, too, had deep roots; in 1846, Jacob Grimm had written a defense of the “imprecise sciences” of history, philology, and law grounded in his nationalist view of the centrality of German culture to these fields. Perhaps because cultural difference as a central fact of world history was unavoidable, world history met the crisis of the cultural turn somewhat more readily than did history as a whole, and it began to incorporate cultural analysis into its methodological tool kit.

We therefore arrive roughly at the present day, with world history as a field tying all of the liberal arts—social sciences, humanities, and even, via Big History, the natural sciences—together. What I propose to do now is turn this analytical package back on itself and examine liberal arts education and its purpose in the context of world history.

## **WORLD HISTORY AND THE LIBERAL ARTS**

I’m going to assume that one of the central purposes of a liberal arts education is to teach something like global citizenship to our students. As Wabash College says in glossing its mission statement, “Wabash also challenges its students to appreciate the changing nature of the global society and prepares them for the responsibilities of leadership and service in it.” The unquestioned assumption behind this purpose is that global citizenship is unproblematically a good thing, that it instantiates the belief that we’re all in this together, that divisions and misunderstanding cause trouble in the world. My analysis will not question the “good” part of this assumption but will point out that it is far from unproblematic.

I will start with a story. A month or two before the 2016 election, which brought these very questions of divisiveness versus inclusion into sharp relief, I heard an NPR report wherein the reporter interviewed a Trump supporter in rural South Carolina and asked him why he was planning to vote the way he was. His answer (which I must paraphrase from memory) was because Trump’s nationalist agenda recognized the fact that “multicultural society can’t work.” This raises some questions for us: Why does he hold this attitude? How can it be overcome? And what’s the role of the liberal arts in doing so?

I will claim first that our informant holds this opinion in the face of abundant evidence to the contrary. This evidence lies in the existence of functioning big cities, where not only does multiculturalism work but support for it, according to opinion polls, is strongest. This is especially true in what are often called world cities: places such as New York, London, Berlin, Buenos Aires, Mumbai, Tokyo, and so on.

So can we just take our informant to a big city and show it to him to convince him he’s wrong? Sadly, no. Chances are he’ll feel lost, threatened, perhaps scorned if he’s just dropped into a big city. This is because he’s got a view of the world that makes sense of

the world for him, and that view—what I will call his cultural frame values—makes big cities appear both dangerous and nonfunctional. What he needs is a friendly tour guide who can not only show him the sights but also show him how things work and make the city comprehensible, and in that way show him and include him in on how multiculturalism really does work in urban society.

I think, because the academic history of world history has built social science, humanities, and even natural science perspectives into its analytical tool kit, that the discipline of world history is ideally situated to act as the guided tour of the metaphorical big cities of global human geography, history, and contemporary politics. I cannot claim it is the only discipline that can do so, but its inherent interdisciplinarity makes it a potentially effective one. Making the tour effective means not just exposing students to the cultural differences of the world—a “cabinet of curiosities” approach that in fact does little to build appreciation for diversity and connection—however. Instead, our ideal tour guide needs to teach understanding of the underlying structures and patterns of world history (which will be a largely social science-driven analysis, including cultural patterns within that analysis), with the results made into an attractive story (which is where the humanities move from object of analysis to contributor). In short, we need an analytical world cities tour guide that acknowledges that things aren’t simple and obvious and that antiglobalists aren’t simply stupid but are grappling (from a different perspective) with the same problems that we are.

### ***FRAMEWORKS OF WORLD HISTORY: A TEXT WITH A MODEL***

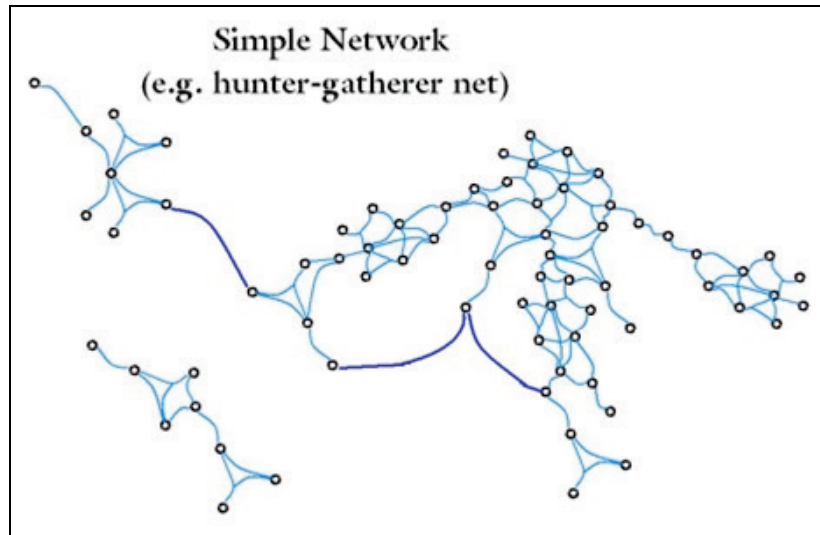
I must now ask the reader’s indulgence while I introduce my own foray into creating such a tour guide: *Frameworks of World History: Networks, Hierarchies, Culture* (Morillo 2013). It attempts a global, comparative analysis using a social science approach in so far as it is built around a visual-conceptual model of the key structures of human history as I see them. This model allows me to highlight commonalities among different societies and processes transcending single societies. With the establishment of a sort of baseline of commonalities, significant differences stand out more and invite further analysis. Pedagogically, the model can serve as an analytical tool for understanding primary source readings, and it conversely generates hypotheses that can be tested against the source evidence and that serve as theses that give the entire book an argument (a particular concern of mine, as one of the first things we teach our students when they write papers is to have a thesis, and yet the first history book many of them encounter, their textbook, usually does not have one).

The model consists of three main pieces, representing the three main structures within which all humans have lived their lives: first, networks, the horizontal structures of connection between separate human communities; second, hierarchies, the vertical structures of power and organization within different human communities; and third, culture, represented as a structure in the model by what I call cultural screens and cultural frames. A brief explanation of each will set up our analysis.

Networks are the most straightforward and conventional of these structures. (They form the focus of the world history *The Human Web* by William McNeill and his son

[McNeill and McNeill 2003].) Networks consist of connections of trade, migration, religious missions, and so forth—the connections that spread people, goods, and ideas beyond their points of origin. Networks can be represented straightforwardly diagrammatically. Figure 3 shows a fairly simple network of mostly short-range connections between undifferentiated nodes. (All diagrams are from *Frameworks*.)

**Figure 3. A Simple Network**

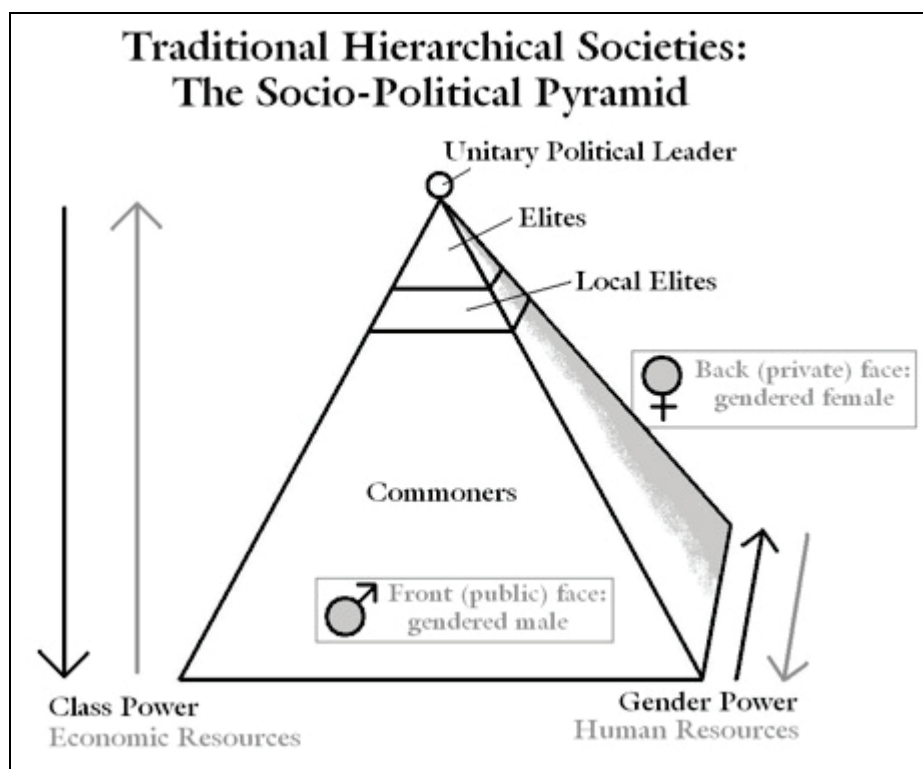


Hierarchies are more varied (and their variety also introduces some variety into networks, as hierarchies become large, complex nodes in more sophisticated networks), as they represent the internal organization of the many communities that humans have lived in throughout history, ranging from the simple bands of our ancient hunter-gatherer ancestors and the simple tribes that emerged when bands coalesced around favored locations, through more complex chiefdoms and, finally, complex state-level societies that have come to dominate human history since they first emerged in Mesopotamia and Egypt nearly six thousand years ago. Figure 4 represents the common structure of such state-level hierarchies during the long agrarian era, when agriculture formed the dominant source of wealth.

Figure 4 represents a number of significant characteristics that were so common as to be nearly universal among preindustrial societies. The first is that such societies were built around inequality and exploitation of two sorts: (1) class power, or the dominance of a small elite (who were rich because of their power, as opposed to modern elites, who are powerful because of their riches) who used their power (backed by specialists in the use of force) to draw upward and concentrate the meager surpluses that agrarian economies generated from the producers of wealth (farmers who were subjected largely to various degrees of unfreedom) and (2) gender power, whereby the males (ultimately, the rich males) controlled the other producers of wealth, the females who (re)produced the labor force. (An interesting pattern revealed by this model is a consistent

inverse relationship between the rigidity of class and gender power—that is, the more loosely class power was enforced in a society, the more rigidly gender power was enforced. The classic example is the contrast between democratic Athens with its fairly broad male participation in state power and functions, but cloistered and powerless women, and monarchical Sparta with its very narrow military elite, serf-based economy, and relatively public and independent female population.) What this pair of inequalities reveals about preindustrial hierarchies is that they were built not to promote freedom or innovation but to secure stability and that, ideologically, their fundamental stability was grounded in naturalized patriarchy.

**Figure 4. Agrarian-Era Hierarchy**

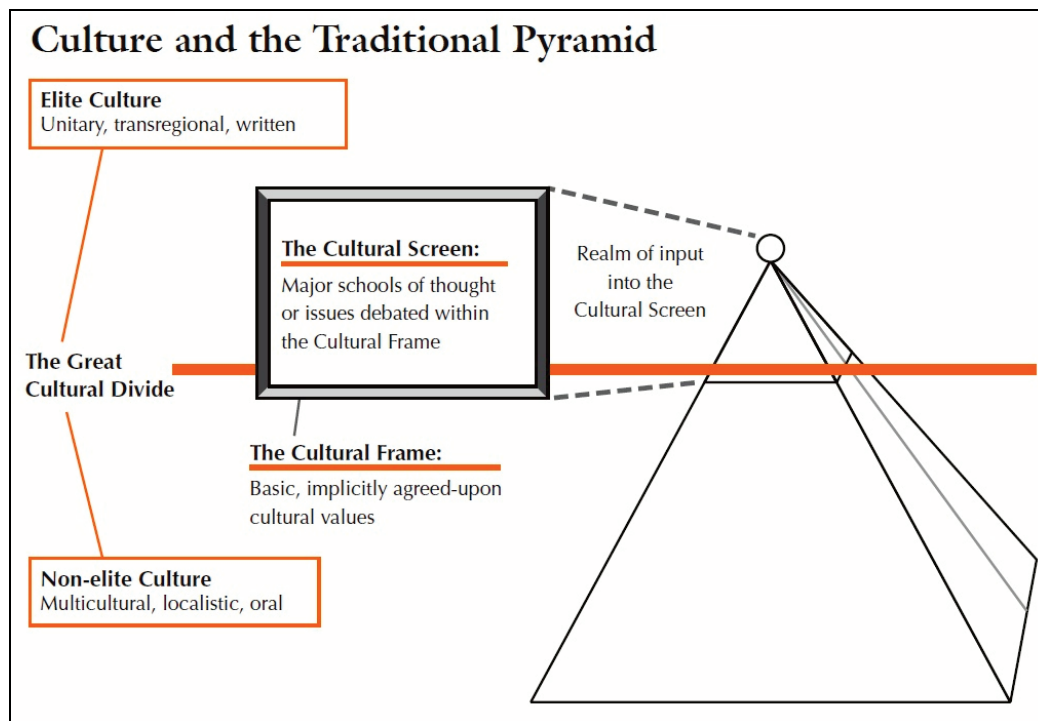


The mention of ideology brings us to the third structure within which humans have always lived their lives: culture. I represent the key functional operations of culture with a metaphorical image of a screen (like a movie screen) and the frame surrounding it (Figure 5).

The screen itself represents the cultural space where political, social, and cultural arguments, competitions, and discussions take place: individuals up through large cultural groups project images onto the screen, so to speak, as a way of constructing identities and proposing meaningful claims about the world. The other part of the structure—perhaps the more significant one—is the cultural frame around the screen. This represents the unspoken agreements that (almost) everyone in a particular society holds, the

fundamental values or assumptions about how the world works that not only contain the screen (and thereby limit the images that can plausibly be projected on it) but also act as a lens through which the world outside the society is viewed. The most profound clashes between cultures are always grounded in a clash of fundamentally different frame values. The overall “function” within any society of the cultural dynamics represented by the frame and screen is to create identity and make the universe meaningful.

**Figure 5. Cultural Frames and Screens**



### **FRAMEWORKS ANALYSIS OF OUR PROBLEM**

This brief outline of the three major structures that have defined human history allows us to see what the *Frameworks* model says about the social sciences and liberal arts more generally in the context of current political conflicts.

#### *A Constant Theme: Network-Hierarchy Tension*

The central fact to take note of is the relationship between the three major structures. In particular, world history shows us that although networks and hierarchies connect with each other and often reinforce each other in important ways, there is a constant tension between the two structures that arises from the divergent purposes, and consequently the



different cultural values, of the people who live primarily within networks and those who live primarily within (and especially those who control) hierarchies.

A brief overview of the key characteristics of the two structures reveals why their intersection was tense. Networks were *horizontal* structures. That is, they connected separate communities or societies without necessarily placing one over the other. This is because they were also *cooperative*. This is clearest in the case of the economic aspect of network connections: Trade is by definition a consensual exchange of goods in which each party perceives itself as having received fair value in return for what it gives away. But the cooperative, or at least noncoercive, nature of networks also applies to the other sorts of exchanges that flowed through them. Networks were also *extensive*, connecting communities that could be widely separated geographically and politically. Finally, they were (especially later, after the rise of state-level societies) focused on *urban* centers. The tentacles of trade and cultural exchange, of course, reached into the countryside of farming villages and pastoral lands, but the great centers of exchange tended to be cities.

Hierarchies, in contrast, were *vertical* structures, as the name implies. The essence of a hierarchy was the ranking of social groups above and below each other. This is because they (especially complex hierarchies) were *coercive* structures, which is another way of saying that they were political rather than economic. The coercion might take many forms (it might be well justified, disguised, consented to, and so forth), but the central feature of a state or even the distributed power of a simple community was that it enforced individual compliance with orders, laws, or informal norms—; that is, it made cooperation work in an unequal environment. Hierarchies were *intensive*; a hierarchy focused its coercive power over the specific area under its control, and additions to that area tended to be contiguous. Finally, hierarchies were based in *rural* production. They might have urban centers—and indeed, cities were central to most (though not all) state-level societies—but the role of cities as centers of exchange in networks differed from the role of cities as centers of the concentration of power and of people who wielded power, embodying the basic network-hierarchy tension in a single location. The fundamental conflict is that hierarchies were built to ensure stability (and thus keep the powerful in power), whereas networks existed to promote the flow of goods and ideas.

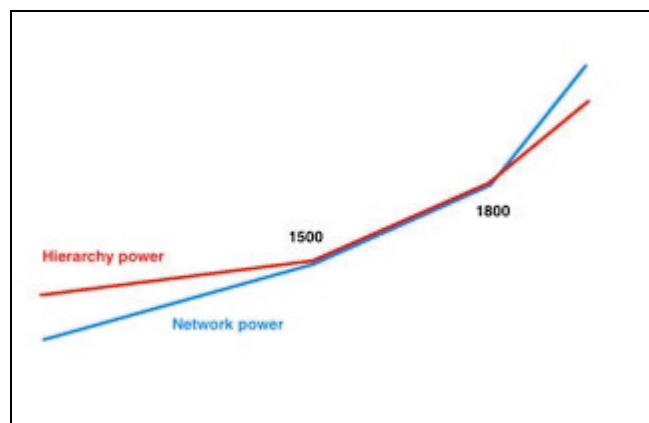
In this fundamental way, they were diametrically opposed to each other, and yet networks profited from the stability created by hierarchies, and hierarchies profited from the wealth generated by networks, while hierarchy elites benefited from the status goods that networks (especially trade in long-distance luxury goods) provided to them. The visible result in historical patterns is what I call the merchant dilemma: Hierarchy elites wanted the goods that merchants delivered but didn't trust merchants themselves, viewing merchants as subversive of hierarchy stability and of proper social order. (Merchants could accumulate wealth that was not tied to control of land and people, clearly a perversion of the proper bases of social and political power.)

The result was that almost every agrarian hierarchy with any significant merchant activity used a variety of institutional and cultural mechanisms to limit or denature the threat posed by merchants. They would sequester foreign merchants in defined quarters of major international trade cities (including the western European tendency to “foreignize” and ghetto-ize their own Jewish merchants); they often regulated domestic merchants heavily,

sometimes prohibiting them from going abroad, sometimes forcing them into government-controlled guilds; and great merchant families who accumulated too much wealth could find all of that wealth suddenly confiscated by the state. The most effective mechanisms used to limit the threat of merchants, however, were forms of cultural co-opting that brought merchants into the hierarchy values of the society, meaning that merchant wealth ended up reinforcing hierarchy values instead of subverting them. Examples of this included Chinese merchants who adopted Confucian morals (and therefore tended eventually to invest their family riches in the education of a son to be a state bureaucrat); the Hindu caste system, which saw merchant wealth as a fulfillment of caste dharma unconvertible into political power; and Islamic values that, because of the career of Mohammed himself, also tended to channel merchant wealth into investment in the religious laws and structures of society. Such mechanisms were most effective because they made merchant communities basically self-policing while putting the fewest restrictions on merchant activity, maximizing the wealth generation that the hierarchy could profit from. (An important side note here: despite the restrictions on their Jewish merchants which became restrictive enough to mostly kill off Jewish merchant activity, western European hierarchies largely failed to control, co-opt, or otherwise denature their growing merchant communities, with significant long-term implications that I will return to below.)

Although both networks and hierarchies became more complex and powerful over time, their relative importance shifted. This changing relationship provides another basis for world history chronology. Down through the high agrarian era, or to about 1500 CE, the world consisted of hierarchies connected by networks: The experience of hierarchies was primary. Between 1500 and 1800, as previously separate networks connected, the balance shifted toward greater equality (Figure 6). After 1800, as industrialization gave huge boosts to productivity and transportation capacity, the world increasingly became a global network divided into hierarchies: a world where network effects are arguably primary. Naturally, the stronger that networks became relative to hierarchies, the more difficult managing network challenges became for hierarchy elites. Today's conflicts over massive global migration are the most obvious symptom of this.

**Figure 6. Network vs. Hierarchy Influence**



I must make a distinction in this chronology: The last era (the period since the beginning of the Industrial Revolution) is, like almost everything across the agrarian-industrial divide, qualitatively as well as quantitatively different from what preceded it. Not only did industrialization supercharge the global network, but phenomena such as the merchant dilemma were translated across the divide into different problems, even while the basic tension between networks and hierarchies continued. To understand this, we must take a quick look at the causes of the Industrial Revolution in terms of the *Frameworks* model.

### *The Industrial Turning Point*

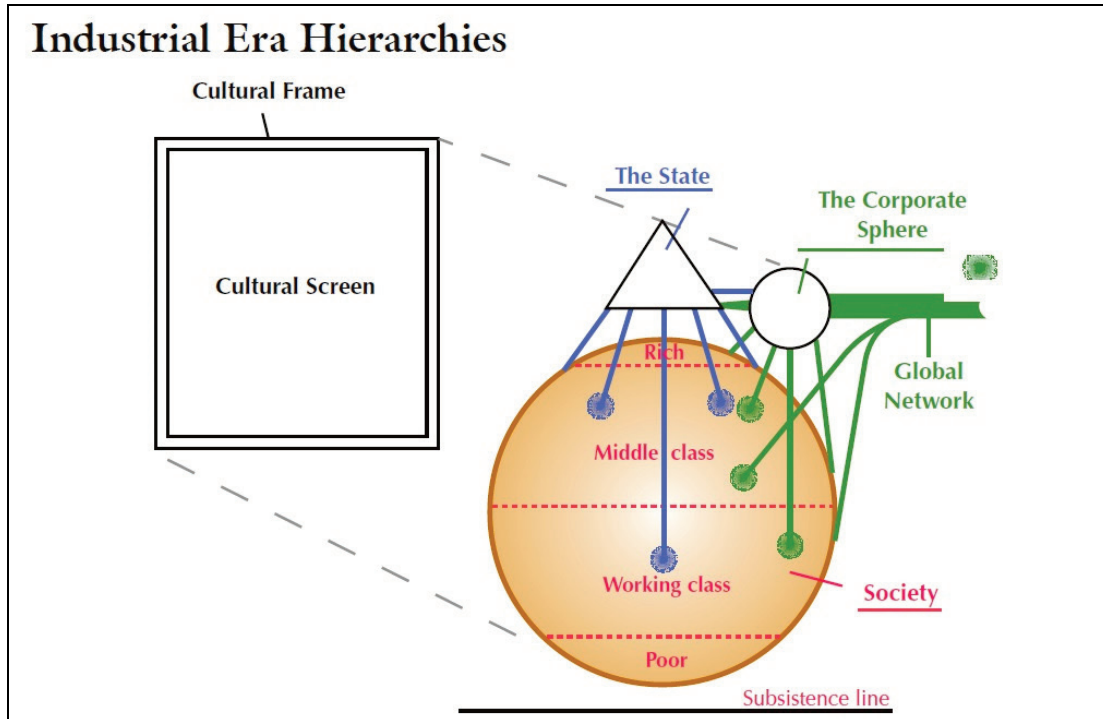
Explaining the Industrial Revolution, of course, is one of the thorniest and most argued-about problems in world history, and I am under no illusions that my explanation will win universal agreement. One reason this is such a difficult problem is that explaining how the Industrial Revolution happened is so closely tied to explaining why it happened where it did, which slides inevitably into problems raised by Eurocentrism and the subsequent 19th- and 20th-century history of imperialism, “western dominance” (remember *The Rise of the West*), and the notion of progress bequeathed to us by that history.

Although a full explanation would exceed the limits of this article, the *Frameworks* answer starts from the assumption that because Agrarian hierarchies were built to promote stability, resist change, and protect the interests of the traditional elites (generally, priests, scribes, and warriors), industrialization should not have been an expected outcome in human history. Remember, industrialization promotes change, undermines stability, and generates new elites (mercantile and then industrial) whose interests do not always coincide with those of the traditional elite. Thus, as the European economy expanded after the Black Death of 1348 and joined up with an increasingly global network, mercantile network values (including market economics) began to infect the way these hierarchies were run in a few western European hierarchies, whose elites generally had failed to invent ways of co-opting or controlling network practitioners (mainly merchants) and thereby solve the merchant dilemma. This is reflected in the emergence of mercantilist theory and policies, and in cultural developments such as the rise of science (which, like mercantile operations, depends on rational analysis assisted by quantification). Within the particularly weird structure of the British hierarchy and its massive global network flows, this infection produced the innovation of joint stock companies. These created an institutional connection between hierarchy governance and network activity, backed by capitalism as a network-generated value system that cemented these new network-hierarchy institutional ties.

The result was hierarchies that adopted network values and therefore promoted and amplified network activity rather than regulating and suppressing it. This created an environment in which market economics instead of birth status underpinned social organization—in other words, in which wealth led to power rather than power leading to wealth—and thus in which capitalist industrialization could take hold. Network-hierarchy relations were increasingly institutionalized in a multinational corporate sphere connected

to a state that became a professional economic managerial organization. This new hierarchy structure is represented in Figure 7, which should be contrasted with the agrarian pyramid presented earlier (Figure 4).

**Figure 7. Industrial-Era Hierarchy**



Given that this new structure emerged from a hybrid of hierarchy and network structures and values, one might think that the old tension between hierarchies and networks would have disappeared. One would, however, be wrong. That tension simply moved and, like everything else in industrial-era hierarchies, became a subject of mass politics, which is where it continues to sit now. The next section lays this out in terms of the *Frameworks* model.

*Networks, Hierarchies, and Modern Cultural Frames*

The fundamental point is that networks and hierarchies are still built to do opposing things. Networks promote fluidity—the flow of goods, ideas, and people for which hierarchy boundaries are barriers to profitable transactions—and hierarchies are built to promote stability, which the massive flows of the modern global network can undermine. Whereas in the agrarian era, the binary division between networks and hierarchies was reflected in a binary division between the elites of hierarchies and network practitioners, however, the more complicated, multipart construction of modern hierarchies creates new possibilities for political alliances and conflicts.

Specifically, the threat to stability in hierarchies is now concentrated in the social sphere. The corporate sphere, as the key institutional locus of network activity, is the key generator of threats to stability. The state, as a professional managerial organization, is where the natural political conflict between promotion of stability, on one hand, and promotion of profitable flows, on the other, must be decided. Where the state's policies fall becomes the key question, as significant 19th-century analyst of the consequences of industrialization saw. As Karl Marx said in *The Communist Manifesto*, "To the great chagrin of Reactionists, it [the Bourgeoisie] has drawn from under the feet of industry the national ground on which it stood."

When we talk about political competition, we enter the realm of the projection of screen images within cultural frame values, so our question now is, What competing frame values are available to mediate the tension between the needs of hierarchies and the needs of network activity? Marx's Bourgeoisie and Reactionists give us a good place to start.

*Networks: Capitalism.* The frame value of the bourgeoisie and of the modern industrial network, especially of the corporations who dominate it, is capitalism. Note that I mean here capitalism as an ideology, as a set of ideas about how the world is constructed, rather than the actual economic system of capitalism (whose smooth operations depends on acceptance of its ideology). The set of ideas subsumed under capitalism as a frame value includes private property, profit as a good thing, and a materialist view of the world, including human value. The problems created for democracy by treating corporations as people reveals the ideological side of capitalism quite clearly. Ideological capitalism is closely associated with more obviously ideological positions such as liberalism, neoliberalism, and communism (also a materialist, economically based ideology that arose in dialogue with early classical economics; the deep ideological opposition between capitalism and communism very much has the character of sibling rivalry, as will become clearer when we examine nationalism below). More complicatedly, capitalism is closely associated (intentionally) with the ideology of market economics. I insist on distinguishing the two, however, as their conflation is an intentional ideological move designed to legitimize capitalism. Capitalism as an economic system, in my view, requires only three conditions: private ownership of capital, division of capital and labor, and that the benefits of doing business (profits) accrue to the owners of capital. Capitalist enterprises operate all the time—and very happily—in nonmarket economic settings (viz, regulated monopolies such as utilities), and free markets do not need capitalist participants. Distinguishing the two as different and not even always mutually supportive (what else is state regulation to limit monopolies about?) is critical for useful historical analysis of the growth of capitalism, but is, I recognize, not standard among economic theorists.

The results of a capitalist-framed network tend toward promotion of the universal and unhindered flow of goods, services, and, indeed, people, and toward the creation of a universal, egalitarian, and economically based creation of identity for people everywhere. These results can be read in progressive terms and arguably are progressive in some cases. The practical problem is that the economic operations of capitalism effectualize the idealistic results of network activity only for some. Indeed, the concentration of capital inevitably

created by capitalist economics actively undermines egalitarian ideals and highlights the conflict between property rights and human rights built into basic capitalist values.

*Hierarchies: Nationalism.* I take it as given that nations are not “real” but are cultural constructions created around the promotion of nationalist ideology in all its various forms. Nationalism is thus the fundamental frame value of modern hierarchies, as is visible in the fact that the paradigmatic form of the modern state is almost universally accepted to be the nation-state. Since the invention and widespread diffusion of the ideology of nationalism beginning just over 200 years ago, the most powerful versions of nationalist ideology have been ethnically based. (Yes, ethnicity is also a cultural construct.) Nationalism is thus closely associated with a number of other ideological positions, including racism, fascism, and a wide range of populisms as well as (usually) close association with constructions of gender and gender roles that are claimed to be natural and/or traditional. Nationalism also aligns closely with religious fundamentalisms, including evangelical Christianity.

The result of the promotion of nationalist ideologies is the creation of structures designed to promote stability, meaning, and identity, though crucially for only *some* people within the area occupied by a “nation” of people, given that, as is inevitable in ideologies of identity, defining a group requires an “other,” more or less explicitly. (Even the perhaps attractive-sounding “populism” carries this problem: Who are “the people” that Donald Trump’s—or any other—populism appeals to?) Note also that, similar to how the operations of capitalist economics undermine the potential egalitarianism made possible by that same economic system, the political stability and order promoted by nationalism disproportionately benefit a small group of leaders already in positions of power, whose deployment of nationalist rhetoric is clearly intended to enhance and cement that power. These are Marx’s Reactionists.

*The Relationship of Capitalism and Nationalism.* Capitalism and nationalism constitute the two most influential and thus important ideologies in the global history of the past 200-plus years. Crucially, they are fundamentally hostile to each other, reflecting and re-creating the network-hierarchy tension of the agrarian era in new form, and despite the apparent resolution of the structural tension between them that the corporate sphere seemed to resolve. This hostility runs deep and has multiple expressions.

Capitalism is inherently international (see Marx above), a result of the constant search for new markets and resources built into capitalism’s predatory economic model, as well as unifying, as expressed in today’s global market. Nationalism is inherently anti-international because of its divisive us-against-them outlook on the world.

Capitalism tends toward peace. (I’ll give traditional leftists a moment to catch their breath here.) There are exceptions—the vast global arms trade most prominent among them—but actual war is, for the most part, bad for business. The “McDonald’s corollary”—that no two countries both with McDonald’s, like no two countries both with democracies, have gone to war—expresses this underlying dynamic even if it is empirically open to question. A quick reading of the works of Heinrich von Treitschke

is enough to show that nationalism is inherently inclined toward conflict and, ultimately, war.

At a deeper philosophical level, capitalism is essentially a materialist view of the world (which is the main reason that communism and capitalism are variants of each other). Nationalism is essentially a spiritually or morally based outlook (which is definitely not a positive characteristic, at least in my view). This accounts for the tendency of capitalism and nationalism to simply talk past each other—they are not on the same mental field of battle most of the time.

Finally, capitalism, at least at the most basic level, views everyone equally, if only as potential cogs in an economic machine—but note the fundamentally economic logic of equal pay for equal work and of nondiscrimination policies as they affect both hiring and attracting customers. This is one aspect, along with capitalism's role in spreading industrial capitalist economics *at the expense of "traditional values"* (see the decline of blue laws—a trend sadly slow to reach Indiana—as a paradigmatic case), of capitalism as inherently "modernizing." Nationalism, for all its role in creating "modern" nation-states, is inherently anti-modernizing. Consider the central goal of nationalist-inspired state policies. Nationalist leaders generally want the benefits to the nation (really, the state) of industry and global network activity, without the disruptive social effects (labor strife, erosion of "traditional" values, and so on) that inevitably accompany them, accounting for the repressive politics that this paradoxical set of desires entails. This desire for industrial-military might without industrial social effects is, in fact, the central paradox that characterizes Fascism.

As a source illustrating this fundamental conflict in world views between capitalism and nationalism, one cannot do better than the pronouncement by Steve Bannon on 23 February 2017 denouncing the "corporatist, globalist media" for being "adamantly opposed to an economic nationalist agenda," which embodies the new network-hierarchy tension of the industrial era and points to the potential incoherence of the notion of "global (capitalist?) citizenship (nationalism?)." So what are the alternate frame values within which we can narrate our big, conflicted global city and make "global citizenship" coherent (and in the process make global politics perhaps less fraught with nukes and Nazis)?

One possibility, of course, is science, including social science. The value here is that debates about values can be useful and potentially productive—but debates about "facts" and their "alternatives" are not. Ultimately, we're all perforce global inhabitants, so we'll all be global citizens together or we'll all be underwater in our separate identities. Though I think science (by which I really mean the scientific method as an approach to understanding the world) is absolutely necessary to the survival of our modern global world, it has two drawbacks in this particular battle of frame values. First, although science is unbeatable in explaining the "how" questions it is designed to answer, it isn't so good at answering "why" questions—questions about the existential meaning of things that many scientists in fact consider irrelevant to their jobs. This was the problem that Galileo faced in the 17th century: He could show the evidence that the earth orbited the sun but could not explain why that should be true, which made his story emotionally unsatisfying. Not until Newton could science provide a (still religiously

tinged) explanation of heliocentrism with elliptical orbits. Second, because of its lack of “why” answers and its necessary tendency to produce nuanced, complex answers that can be difficult to convey succinctly—never mind that science never produces final answers but just keeps narrowing the possibility space of right answers—science often makes a bad storytelling frame. An example from social science illustrates this: How well have economists been able to tell the true story of the benefits of immigration against the false—but easy and emotionally powerful—stories about “stealing our jobs and murdering us” that constitute our immigration debates?

So, is there another frame value left to us?

*The Hidden Option: Democracy.* Oh, right, *that* value! Whether democracy remains a frame value in current American politics or has been reduced to a screen image by authoritarian attacks, foreign interference, and the fundamentally antidemocratic world view of evangelical Christianity is, sadly, now open to question, I’m afraid, but let’s be optimistic and run with it in hopes of reestablishing its position among our central frame values. Democracy is based on universal Enlightenment values of human equality, dignity, and human rights. It has the advantage of being able to operate at both the local and the global level. In other words, it can accommodate individual identities in a context of Enlightenment-inspired universal rights, guaranteeing minority rights within majoritarian mechanisms. It can therefore potentially locate a notion of citizenship more globally than can nationalism and more humanistically than can capitalism—not to mention that democracy blends excellently with science, its Enlightenment cousin and itself a largely democratic process, and with material forces via its economic cousin, free market economics.

The question is, If this is all true, why is democracy not a more obvious answer? I think the problem is that democracy’s potential opponents (and even some of its erstwhile friends) have disguised its real identity by associating it with other values.

First, democracy has been deliberately conflated with capitalism by the latter’s proponents, via neoliberalism among other ideologies (note the common formula “liberal capitalist democracies”). I should not have to point out that though they can be associated, democracy and capitalism are far from the same thing and (as the distortion of democratic politics by corporate money demonstrates beyond doubt) can be pretty seriously opposed to one another. The growing result of this conflation has been to discredit democracy by association with the growing influence of global corporate elite rule—a charge that seems to have done Hillary Clinton serious damage in her campaign against the “populist” image projected by Donald Trump, for example.

Second, democracy has been conflated, again deliberately, with populism and with nationalism. (Note that calls for elections, at least in form, often appeal to the principle of “national self-determination,” eliding the problematic and constructed nature of “nations” noted earlier.) Such confluations, usually deliberate on the part of populist and nationalist leaders—such as Russia’s Putin—to legitimize their own positions, have too often led democracy down self-destructive authoritarian roads, a result for which democracy somehow takes the blame. Such attacks often then conflate democracy further with the evils of multiculturalism expounded by ethnic nationalist politicians.



So, if democracy is to serve as the basis of new narratives of the meaning and value of our global city Earth, it needs to be rescued from these adulterations.

## CONCLUSION

I do not mean to suggest, simply by naming democracy as a potentially useful frame value, that the problem I have described admits of an easy solution. Telling a good, attractive story about global citizenship and about the metaphorical global city we inhabit has to confront deep tensions in the global system of networks and hierarchies. Individual human communities have always sought stability, while the network flows they inevitably participate in have always tended to undermine stasis, if not stability. Our modern capitalist and nationalist expressions of this problem evolved from agrarian-era tensions that lasted for millennia. The tension is global, not just the creation of a few crazies in the United States, and the past couple of years have shown how wide open to political exploitation by demagogues the tension is.

The tension between networks and hierarchies is not only hard but also complex. In the terms I have set out here, focused on the educational mission of the social sciences with the wider liberal arts, it's a problem of culture—of framing a true story to make that story comprehensible and attractive—but also of politics, economics, and the topics of social science research generally—including world history, the path I have followed to analyze this problem. Other, deeper, thinkers than I have taken shots at this target before. As one of them once put it, offering his own solution, “Workers of the world, unite; you have nothing to lose but your chains!”—a call the implications of which we don't usually think deeply enough about.

We have to figure out how to tell that story in order to make the “global city” of today, with its long and fascinating past, look a lot less threatening and more like something everybody will *want* to be a citizen of.

At least, that's what I think world history tells us.

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## Research

### *Chapter 7 and Chapter 11 Bankruptcy Factors\**

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#### **ABSTRACT**

In light of the Financial Accounting Standards Board's August 2014 Accounting Standard Update on management *Going Concern Statements*, research using financial ratios to predict bankruptcy is more relevant than ever. Even though numerous research articles examine factors that predict bankruptcy, few make the distinction between the factors that affect Chapter 7 versus Chapter 11 bankruptcy. This work examines the factors that affect these two bankruptcy types (7 and 11) using the Securities and Exchange Commission data on 425 firms that filed for Chapter 7 or Chapter 11 bankruptcy. We tested our data using *t*-test, ordinary least squares (OLS), and logistic regression. Our results indicate that the asset turnover ratio and going concern statement are significant predictors of Chapter 7 versus Chapter 11 bankruptcy. We note the implications for auditors, corporate management, corporate creditors and investors, and the Financial Accounting Standards Board.

**KEY WORDS** Chapter 7 Bankruptcy; Chapter 11 Bankruptcy; Financial Ratios; Going Concern Statement

Identifying factors reflective of corporate success or failure has been the subject of much research and discussion for decades. The topic has taken on a renewed emphasis with the U.S. Financial Accounting Standards Board's August 2014 pronouncement (FASB 2014) requiring corporate management to address corporate continuity starting with reporting periods ending after December 15, 2016. Numerous studies have compared bankrupt and viable firms, developed predictive models of bankruptcy, and examined financial ratios that

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are predictive of bankruptcy. In previous bankruptcy studies, researchers have examined Chapter 7 and Chapter 11 bankruptcies as the same. They are not the same, however.

U.S. Federal bankruptcy law (U.S. Code Title 11) identifies six types of bankruptcy. The two bankruptcy filing types most commonly associated with businesses are Chapter 7 and Chapter 11. With a Chapter 7 filing, corporate management plans to “close up shop.” Corporate assets are liquidated and distributions are made to creditors in a liquidation plan; the business ends operations. With a Chapter 11 filing, corporate management anticipates that the corporation has the ability to continue operating after a financial reorganization of the corporation. The corporation will undergo a financial reorganization but will continue operations during this reorganization period.

This article examines these two bankruptcy types (7 and 11) as two of three (including viable corporations) possible outcomes. It identifies factors predictive of Chapter 7 versus Chapter 11 bankruptcy using *t*-tests, correlations, OLS regression, and logistic regression. The study also examines the predictive ability (ability to predict Chapter 7 versus Chapter 11 bankruptcy) of the resulting OLS and logit models. In addition, this study splits the bankrupt-firm set into more refined data sets: firms filing for Chapter 7 bankruptcy and firms filing for Chapter 11 bankruptcy. Because the expected differences between Chapter 7 firms and Chapter 11 firms are finer than the expected differences between bankrupt firms and viable firms, we hypothesize that this study will identify fewer explanatory variables with less discriminatory power than do traditional bankruptcy studies. In addition, we hypothesize that the predictive model will have less explanatory power (lower *R*-square) than traditional bankruptcy-prediction studies because of the similarity of Chapter 7 firms and Chapter 11 firms when compared with viable firms. The results of this research will help auditors, corporate management, corporate creditors and investors, and the FASB.

## **LITERATURE REVIEW**

A plethora of research articles address bankruptcy prediction, starting with seminal works such as Beaver’s 1966 ratio analysis and Altman’s development of a Z-score in 1968. These previous works and the work conducted here are even more important in light of the FASB’s August 2014 accounting standards update (ASU) on going concern statements. This ASU requires corporate management to include in the financial statements (annual and interim) a statement about continuity-indicated concerns, beginning with reporting periods ending after December 15, 2016.

Business managers and financial analysts have long used accounting information to make various decisions, including lending decisions. Practitioners used and recognized financial ratios as effective indicators of financial well-being decades before academicians systematically explored their usefulness. Articles about the value of financial data for failure prediction existed in the first half of the 20th century (e.g., Merwin 1942). More recently, however, Beaver and Altman wrote seminal research articles about using financial data for predictive purposes.

In a 1966 study, Beaver examined the usefulness of ratios as predictors of corporate financial well-being. Beaver tested the usefulness of financial ratios with regard

to a specific purpose: failure prediction. Beaver defined failure as the inability to make scheduled debt payments. He adopted three criteria for selecting ratios: popularity, ratio performance in previous studies, and ratios defined by cash flow. Popular ratios were those commonly found in the practical literature. Because corporate management knew that these ratios are common ones on which to judge corporate performance, Beaver expected corporations to “window dress” these ratios, which would result in the reduced utility of popular ratios. Beaver’s list of possible explanatory ratios numbered 30. He grouped these ratios into six “common element” categories and compared common element ratios by their ability to predict failure or non-failure. Beaver used the ratio in each category that predicted with the least error to represent the group. Beaver’s model included six ratios: cash flow to total debt, net income to total assets, debt to assets, working capital to total assets, current ratio, and quick assets less current liabilities (1966:78). He predicted that all the ratios would be greater for non-failed firms than for failed firms, with the exception of debt to assets, which should be greater for failed firms.

Beaver used a univariate, dichotomous classification to test the predictive abilities of the six ratios. He arrayed the ratios in ascending order and selected a cutoff point that optimally classified the failed and non-failed firms. Stated another way, he selected a value for the ratio that best divided the firms into failed and non-failed groups. The optimal cutoff point minimized the misclassifications. Beaver calculated this optimal cutoff point for each of the six ratios; he did this 30 times: for each of the six ratios in each of the five years.

Overall, Beaver’s ratios were quite predictive of failure. Cash flow to total debt was most accurate at 87 percent one year before failure. This declined to 78 percent five years before failure. Beaver noted that this level of accuracy is still much better than random prediction (50 percent). The order of accuracy (descending) of other factors was return on assets, debt to assets, working capital to total assets, and current ratio. Beaver tested for but did not find any conclusive evidence that either industry or asset size had any significant predictive ability.

Altman developed his Z-score in 1968 as a bankruptcy-prediction model. Although researchers before Altman examined bankruptcy and provided evidence of financial predictability of bankruptcy, Altman’s work is often cited as the seminal work using statistical methods to evaluate and predict bankruptcy. Numerous researchers have since refined his model and developed specialized bankruptcy-prediction models. Altman examined 66 bankrupt and non-bankrupt firms using a multiple discriminant analysis (MDA) method. Whereas Beaver examined the predictive ability of the ratios one at a time, MDA provided Altman the opportunity to examine the predictive power of the ratios in unison.

Altman’s sample included 33 failed and 33 non-failed firms. The bankrupt firms filed for bankruptcy between January 1946 and December 1965. Non-failed firms were those still in existence in 1966. Altman’s group of non-failed firms “consisted of a paired sample of manufacturing firms chosen on a stratified random basis. The firms are stratified by industry and by size, with the asset size range restricted to between \$1–\$25 million” (Altman 1968:594).

Altman's variable selection began with an exposition of the 22 ratios reported to be significant in previous studies and several that Altman cited as possibly useful in his study. He grouped these ratios into five commonly used categories of "liquidity, profitability, leverage, solvency, and activity" (1968: 594). Altman's final selection of five variables from among the 22 resulted from a four-step process: (1) determination of the contributions made by each variable independently, (2) examination of intercorrelations, (3) consideration of accuracy of various combinations of variables, and (4) "judgment of the analyst." Altman performed many computer runs using different linear combinations of ratio profiles (combinations of ratios) and found that earnings before interest and taxes/total assets, market value equity/book value of total debt, and sales/total assets were most significant.

Altman used three methods to test the results of his analysis. First, he used an *F*-test. The model should divide the total sample into two groups—failed and successful firms—maximizing the distance between the means of the two groups and minimizing the variance of observations within each group. The *F*-test is a measure of how well the resulting model achieves this objective. Altman's *F*-score was significant at the .01 level.

In a second test of the model, Altman calculated the misclassifications of sample individual observations from data one year before failure. He multiplied individual data from sample firms by model coefficients to produce a *Z*-score. (The *Z*-score measures standardized deviation from the mean.) Altman classified the firms by comparing each firm's *Z*-score with a benchmark *Z*-score. The accuracy in this test was quite high at 95 percent.

Altman further analyzed predictive ability three to five years prior to failure. His results indicated that predictive accuracy falls considerably after the second year before failure. In fact, predictive accuracy dropped to 48 percent, 29 percent, and 36 percent for the third, fourth, and fifth years before failure, respectively.

Ohlson (1980) used the logit model to analyze factors related to business failure: size and measures of financial structure, performance, and current liquidity. Ohlson matched failed and non-failed firms of similar size and industry, although uncertain what advantage matching provides. In fact, Ohlson found it more useful to use these factors as input variables rather than as selection variables. Ohlson collected data from industrial firms' balance sheets, income statements, funds statements, and accountants' reports for the three years before the firms' failures. His listing of failed firms began with the Wall Street Journal Index. Size, debt to assets, return on assets, cash from operations/total debt, a dichotomous variable representing net loss (0/1), and a dichotomous variable representing negative solvency (0/1) were significant predictors of failure. The current study uses all these variables as input factors.

Zavgren (1985) cited seven categories theoretically related to firm failure or non-failure: return on investment, capital turnover, inventory turnover, financial leverage, receivables turnover, short-term liquidity, and cash position. Zavgren found that each of the variables tested showed some degree of significance in explaining failure, although cash position and short-term liquidity were most significant in the short term. Return on investment was the least significant of the explanatory variables.

Zmijewski (1984) identified two methodological problems with failure-prediction studies. These are the data-collection problems of choice-based sample biases and sample

selection biases. Choice-based sample biases result when researchers select observations based on the dependent variable. Many researchers do this when one form of the dependent variable (i.e., failure) seldom occurs in the population sampled. Researchers use sample data sets with 50 percent failures and 50 percent successes even when failures in the population are less than 2 percent of observations. The study reported here includes all Chapter 7 and Chapter 11 firms in the time period studied for which data were available. Deleting observations with missing data may cause sample selection bias, if missing data is correlated with the dependent variable. Zmijewski's results "do not indicate significant changes in overall classification and prediction rates, nor do they indicate different qualitative results (statistical inferences) for the financial distress model tested" (Zmijewski 1984:63). Neither of the issues that Zmijewski addressed are problems for the logistic regression method used in this study.

In their 1999 study, Barney, Graves, and Johnson examined the predictive ability of 14 ratios on the ability of borrowers to make scheduled debt payments. The factors for the prediction model included twelve financial factors and two dichotomous variables representing previous debt trouble. The researchers examined ratios in the categories of liquidity (e.g., current ratio), solvency (e.g., asset turnover), profitability (e.g., return on assets), repayment capacity (e.g., cash debt coverage), and financial efficiency (e.g., asset turnover). The researchers found that nine ratios were correlated ( $p < .10$ ) with making scheduled debt payments and that six of those nine ratios were highly correlated ( $p < .01$ ) with making scheduled debt payments.

Researchers have addressed the importance of differentiating Type I and Type II errors. Type I error, as applied to bankruptcy studies, is the error of predicting bankruptcy for a successful firm. Type II error, generally considered the more costly of the two, is the error of identifying as successful a firm that subsequently files for bankruptcy. Because this study does not include a study of successful firms, only bankrupt firms, Type I error would be the prediction that a Chapter 11 firm files for Chapter 7. Type II error would be the error of predicting that a Chapter 7 firm filed for Chapter 11. Although this study does not address Type I and Type II errors, it is interesting to note that such errors still apply.

We anticipate that, when compared with traditional bankruptcy studies comparing bankrupt and viable firms, this study will identify fewer discriminatory factors of less significance in weaker predictive models. Still, identifying significant Chapter 7 versus Chapter 11 discriminatory factors will contribute to the relevant literature.

## **GOING CONCERN**

U.S. (and international) auditing standards require auditors to provide a going concern qualification with the audit report if auditors have doubts about a corporation's ability to continue functioning in its current form for the coming year. In other words, if the auditors expect the corporation to go out of business (Chapter 7) or undergo restructuring through bankruptcy proceedings (Chapter 11), the auditors should render a going concern opinion in their audit letter. The time frame for the auditors' going concern decision is one year from the date of the financial statement.

Prior to the passage of Sarbanes–Oxley Act, auditors—theoretically, at least—were more reluctant to issue going concern opinions. Issuance of such opinions could cost an auditor not only the auditing business of a particular client but also the much more lucrative consulting business. The Sarbanes–Oxley Act theoretically reduced (but did not eliminate) the conflict inherent in the auditor’s decision. According to section 201 of the act, auditors may not also engage in certain other work (notably some forms of consulting) with their publicly traded audit clients.

## **METHODOLOGY**

This study examined two sets of corporations: those that filed for Chapter 7 bankruptcy and those that filed for Chapter 11 bankruptcy as reported by the Securities and Exchange Commission (SEC). The data were analyzed using correlation analysis, *t*-test of means, OLS, and logistic regression.

### *Variables*

This study uses the variables identified conceptually by the Public Company Accounting Oversight Board (PCAOB), which were used in previous bankruptcy-prediction studies and are publicly available. According to the PCAOB, the auditors, when examining a client for possible bankruptcy, should consider “recurring operating losses, working capital deficiencies, negative cash flows from operating activities, [and] adverse key financial ratios” (PCAOB 1989). While the PCAOB statement on appropriate factors to consider is more recent than the works cited in the literature review, those seminal works are still relevant today and provide the foundation for variable selection in current bankruptcy studies. As expected, the PCAOB recommendations emulate factor selection from those previous studies. Table 1 lists the factors used in this study.

It is anticipated that Chapter 11 firms will be in stronger financial positions than will Chapter 7 firms, albeit in weaker financial positions than will be viable firms; therefore, it is anticipated that all input factors except going concern and debt to assets will be higher on average for Chapter 11 firms than for Chapter 7 firms.

### *Data*

The SEC lists financial (and other) data for all publicly traded companies. New Generation Research provides selected financial data for companies filing for bankruptcy. Data fields for the New Generation Research data list whether corporations filed for Chapter 7 or Chapter 11 bankruptcy, as well as dates of filing. SEC filings (Forms 10-K and 10-Q) include all the financial data and auditors’ letters needed for this study. The data collected for each corporation were from the last financial statements submitted to the SEC on form 10-K immediately prior to the bankruptcy filing date, but not more than two years prior to the bankruptcy filing date. The data set includes all publicly traded companies filing for bankruptcy from January 1, 2009, to February 1, 2013. Of the original 500 publicly traded firms filing for bankruptcy during this period, 75 did not provide a 10-K to the SEC for the



two years prior to their bankruptcy filing dates. This study includes the remaining 425 firms, which consist of 75 U.S. firms that filed for Chapter 7 bankruptcy and 350 that filed for Chapter 11 bankruptcy. Following are a few idiosyncratic financial facts about these companies from the final 10-K before the bankruptcy filings.

<b>Largest sales</b>	Lyondell Chemical	Chemical	\$22,674,000,000
<b>Greatest Loss</b>	Nortel Networks	Telephone	\$5,799,000,000
<b>Greatest Profit</b>	Idearc	Advertising	\$183,000,000
<b>Most Assets</b>	CIT Group	Finance	\$80,448,900,000
<b>Most Debt</b>	CIT Group	Finance	\$72,279,800,000
<b>Greatest Retained Earnings</b>	Eastman Kodak	Photographic	\$4,071,000,000
<b>Greatest Retained Deficit</b>	Nortel Networks	Telephone	\$42,362,000,000

**Table 1. Factors Included in This Study**

<b>Liquidity</b>	
CR	current ratio = current assets / current liabilities
CCDC	current cash debt coverage = cash from operations / current liabilities
<b>Activity</b>	
ARTO	accounts receivable turnover = net sales / average trade receivables
INTTO	inventory turnover = cost of goods sold / average inventory
ATO	asset turnover = net sales / average total assets
<b>Profitability</b>	
PM	profit margin = net income / sales
ROA	return on assets = net income / total assets
CFOA	cash flows on assets = cash from operations / total assets
<b>Coverage</b>	
DA	debt to assets = total debt / total assets
CDC	cash debt coverage = cash from operations / total debt
<b>Financial History</b>	
PP	past performance = retained earnings / total assets
RE01	retained earnings / deficit (0 = deficit, 1 = no deficit)
PNI01	previous year income (0 = NOL, 1 = NI)
<b>Other Factors</b>	
Total Assets at year end, stated in hundreds of millions of dollars	
GCAR	auditor report (0 = unqualified, 1 = going concern)
<b>Dependent Variable</b>	Bankruptcy (0 = Chapter 7, 1 = Chapter 11)

*Note:* NI=net income; NOL=net operating loss.

Of the 425 firms, 252 received going concern statements from auditors, although the period examined was a two-year window and auditors are required to consider only a one-year window.

Table 2 provides summary averages of all ratios. Not all ratios (e.g., inventory turnover) are applicable to all firms and were therefore not used in the calculation.

**Table 2. Summary of Data Characteristics**

<b>Factor</b>	<b>N</b>	<b>Mean</b>	<b>Median</b>
CR	418	2.02	0.68
CCDC	420	0.21	-0.06
ARTO	337	22.97	8.71
INTTO	193	23.63	6.24
ATO	393	0.91	0.66
PM	395	-12.23	-0.34
ROA	423	-6.23	-0.22
CFOA	423	-1.67	-0.22
DA	423	2.63	0.96
CDC	425	-0.17	-0.02
PP	423	-138.10	-0.78
RE01	425	15% of firms had positive retained earnings	
PNI01	425	24% of firms had a prior year net income instead of loss	
Total Assets	425	16.62 (in hundreds of \$millions)	
GCAR	425	59% of firms received going concern statements	
Bankruptcy	425	83% filed Chapter 11; 17% filed Chapter 7	

Financial ratios for firms undergoing financial stress can be quite different from ratios for viable firms. Financial stress may significantly affect the current ratio, for example. Of 418 observations, only 155 firms had current ratios above 1. Fifty-six (56) firms had current ratios less than 0.1. Of 420 observations, 245 firms reported negative current cash debt coverage, due to negative cash from operations. Similarly, 246 of 423 observations for cash flow on assets were negative. Most of these observations (200) were between 0 and -1. Accounts receivable turnover varied dramatically. Firms with minimal sales and accounts receivable balances had account receivable turnover near 0; one hundred ninety-two (192) firms had accounts receivable turnover less than 1. Firms nearing bankruptcy or contemplating bankruptcy may let inventory levels approach zero, even if they are retailers, resulting in large inventory turnover ratios. One-third of the 193 observations for inventory turnover were ratios in excess of 10.

Asset turnover ratio may be a strong indicator of financial distress. Asset turnover and profit margin were missing 30 observations because 30 firms had no sales. With the firms having no sales for the last 10-K before filing bankruptcy, one might expect that most or all of these firms would file for Chapter 7 bankruptcy. Actually, however, only 12 of these 30 firms (40 percent) filed Chapter 7. The other 18 (60 percent) firms without sales filed for Chapter 11, in anticipation of continuing operations. Of the 393 observations for asset turnover, 144 exceeded 1, and 50 exceeded 2.

The highest return on assets was 2.67. Four firms had return on assets greater than 1, and only 40 firms had a positive return on assets. Financially distressed firms do not make efficient use their assets. Too much debt gets firms into trouble, from which they cannot recover. Of 423 observations for debt to assets, 244 had debt-to-asset ratios less than 1, but 75 of these had debt-to-asset ratios between .9 and 1.0. Having a respectable debt-to-asset ratio did not guarantee that a firm would avoid bankruptcy. Seventy-nine (79) bankrupt firms had debt-to-asset ratios of less than .4 in the last 10-K filed before filing for bankruptcy. These firms often had at least two consecutive loss years.

A retained deficit was common among the firms. Of 423 observations, 358 had retained deficits. Of 395 reporting firms, 40 (10 percent) had positive net income in the last 10-K before filing bankruptcy. This compares with 24 percent filing positive net income the previous year. Apparently, some firms that had the potential to continue without bankruptcy were pushed over the edge by one (or more) bad years.

### *Data Analysis and Results*

To test our hypotheses, we have used several quantitative methods.

*t-Test.* The Pearson two-tailed correlation shows the level of correlation between the two examined variables, the direction of the correlation, and the significance of the relationship. The *t*-test, with assumed unequal variances, examines for significance the differences in means for each variable between Chapter 7 and Chapter 11 firms.

Results, displayed in Table 3, indicate that Chapter 11 firms look stronger than the Chapter 7 firms, and means are in the anticipated direction. Both sets of firms, especially the Chapter 11 firms, have respectable current ratio averages. While the current cash debt coverage ratio is negative for Chapter 7 firms, this ratio is positive for Chapter 11 firms, with a significant difference. Both sets of firms have very large accounts-receivable and inventory-turnover ratios immediately prior to filing for bankruptcy. The financial statements show that firms tend to have low levels of inventory and accounts receivable compared with what might be expected in their industries. Asset turnover varied significantly between the two sets of firms, and for neither set did this ratio average breach 1. Profit margin averaged negative for both sets of firms and did not differ significantly between Chapter 7 and Chapter 11 firms.

Return on assets and cash flows on assets were, on average, negative for both Chapter 7 and Chapter 11 firms. Debt to assets was at distressing levels for both Chapter 7 and Chapter 11 firms. With debt-to-asset ratios of 3.21 and 2.51 for Chapter

7 and Chapter 11 firms, respectively, it is not surprising that these firms are applying for bankruptcy.

Cash debt coverage varied significantly between Chapter 7 and Chapter 11 firms but averaged negative for both. Financial history of the firm (in the form of past performance, retained-earnings dichotomous variable, or previous-year income) did not vary significantly between Chapter 7 and Chapter 11 firms. Assets were significantly larger for Chapter 11 firms than for Chapter 7 firms. This may be due to Chapter 11 firms being larger initially than Chapter 7 firms or, as was seen in numerous cases, due to Chapter 7 firms selling off assets in efforts to save the businesses. Chapter 7 firms were significantly more likely to receive going concern statements from auditors than were Chapter 11 firms, with 76 percent of Chapter 7 firms receiving going concern statements and 56 percent of Chapter 11 firms receiving going concern statements.

**Table 3. *t*-test Results for Chapter 7 and Chapter 11 Bankruptcies**

<b>Factor</b>	<b>Chapter 7 Mean</b>	<b>Chapter 11 Mean</b>	<b><i>t</i>-value</b>
CR	1.21	2.20	-.92
CCDC	-1.34	.53	-1.68 <sup>+</sup>
ARTO	33.47	21.51	.50
INTTO	27.60	23.24	.23
ATO	.69	.96	-1.73 <sup>+</sup>
PM	-25.97	-9.74	-1.66
ROA	-28.57	-1.47	-1.00
CFOA	-7.46	-.56	-1.03
DA	3.21	2.51	1.00
CDC	-.68	-.06	-1.83 <sup>+</sup>
PP	-751.31	-9.91	-1.01
RE01	.14	.16	-.43
PNI01	.219	.25	-.57
Assets	6.14	18.83	-2.94 <sup>**</sup>
GCAR	.76	.56	3.49 <sup>**</sup>

\*\**p* < .01      <sup>+</sup>*p* < .10

Although none of the correlations (Table 4) were greater than .2, this was expected, as it is difficult to discriminate between Chapter 7 and Chapter 11 bankruptcies. Still, the results are impressive because they show that although difficult, it is possible to identify some distinctions between Chapter 7 and Chapter 11 bankruptcy filings using financial data.

All significant correlations were in the anticipated direction. Of the significant correlations, asset turnover is the least correlated (.094) with type of bankruptcy, but the correlation is significant (*p* < .10). As asset turnover increases, so does the likelihood that

a firm will file for Chapter 11 versus Chapter 7 bankruptcy. Likewise, return on assets and cash flow on assets positively correlated ( $p < .05$ ) with bankruptcy type. Like asset turnover, a better return on assets or cash flow on assets indicates greater likelihood that a firm will plan to continue operations after bankruptcy proceedings.

Debt to assets is negatively correlated with bankruptcy type, as expected. As the debt-to-asset ratio increases, a firm becomes more likely to select Chapter 7 bankruptcy and cease operations.

Past performance of the firm is a significant ( $p < .05$ ) correlate of the type of bankruptcy filing, but the correlation is perhaps not as strong as anticipated. Current performance, in contrast, did not provide a significant relationship. Going concern explanation by the external auditors was the most significant ( $p < .01$ ) predictor of bankruptcy filing and provided the most explanatory power. The negative correlation indicates that a firm filing for Chapter 7 bankruptcy is more likely to receive a going concern explanation in its auditor letter. This is rational, as firms filing Chapter 7 a priori would have worse ratios and would therefore garner more auditor attention.

**Table 4. Correlations of Factors Used**

<b>Factor</b>	<b>Correlation with Bankruptcy Type</b>
CR	.02
CCDC	.04
ARTO	-.06
INTTO	-.01
ATO	.10 <sup>+</sup>
PM	.08
ROA	.11 <sup>*</sup>
CFOA	.11 <sup>*</sup>
DA	-.11 <sup>*</sup>
CDC	.05
PP	.11 <sup>*</sup>
RE01	.02
PNI01	.03
Assets	.08
GCAR	-.15 <sup>**</sup>

<sup>+</sup> $p < .10$     <sup>\*</sup> $p < .05$     <sup>\*\*</sup> $p < .01$     <sup>\*\*\*</sup> $p < .001$

*Ordinary Least Square Regression.* We used the OLS model (Aldrich and Nelson 1984:10) to predict the factors affecting Chapter 7 or Chapter 11 bankruptcy filings. The objective of the OLS model is to select coefficients ( $b_k$ ) to minimize the sum of the

squared differences between the observed outcomes and the predicted outcomes. The OLS model is

$$Y_i = \sum b_k X_{ik} + u_i$$

where  $b_k$  is a vector of unknown coefficients,  $X$  is the observed independent variable, and  $u$  is the error term. In this context ( $Y_i$  is either 0 or 1), the model is a “linear probability model.” The observed outcomes are either 0 or 1: Chapter 7 or Chapter 11 bankruptcy. Because the methodology does not place bounds on the predicted outcomes, the resulting OLS model may yield probabilities greater than 1 or less than 0. The logit model, which we will discuss next, theoretically improves on OLS by restricting the predicted probabilities from 0 to 1.

We ran two different OLS models (Table 5). First, using all the input variables above, we identified two variables as significant components in the model: asset turnover and going concern. Model 1 provided an adjusted  $R$ -square of .037 ( $p < .10$ ). Although the model was significant at predicting bankruptcy type, the overall model did not have much explanatory power. This result is consistent throughout the statistical methods used above and was anticipated.

**Table 5. OLS Results**

<b>Dependent Variable: Bankruptcy Type</b>				
<b>Independent Variables</b>	<b>Model 1</b>		<b>Model 2</b>	
	<b>B</b>	<b><i>t</i></b>	<b>B</b>	<b><i>t</i></b>
CR	-.08	-1.08	-.05	-.69
CCDC	.03	.34	.08	1.01
ARTO	-.10	-1.48	-.09	-1.38
INTTO	-.01	-.19	-.02	-.29
ATO	-.13	-1.88 <sup>+</sup>	-.13	-1.89 <sup>+</sup>
PM	.07	.93	.05	.68
ROA	-.05	-.32	-.06	-.15
CFOA	-.04	-.33	-.004	-.04
DA	-.04	-.28	.19	.48
CDC	.11	1.27	.10	1.19
PP	.18	1.61	.31	1.94 <sup>+</sup>
RE	.07	.98	.10	1.40
PNI	-.01	-.08	.01	.08
Assets	.05	.77	.05	.80
GC	-.13	-1.66 <sup>+</sup>		

<sup>+</sup> $p < .10$       \* $p < .05$       \*\* $p < .01$       \*\*\* $p < .001$

Because the auditors develop the going concern audit report after examining the other financial factors, it is useful to examine the significance of other factors without going concern audit report as an input factor; we therefore ran a second OLS model without going concern (Model 2). The removal of the going concern audit report resulted in the significance of past performance as an input factor. The overall fit of the model, however, dropped to an adjusted *R*-square of .035 (with a significance of .293), which means the model has no explanatory power without going concern audit report.

*Logistic Regression.* Researchers cite the advantages of logistic regression models in studies with dichotomous dependent variables because logistics regression does not assume linearity between the dependent and independent variables (Stone and Rasp 1997). Accounting researcher studies show that OLS can perform as well as logistic regression (Gessner et al. 1988). OLS assumes that the relationship between the dependent and independent variables is linear. OLS also identifies the regression line fitting the data as the line that minimizes the sum of the squares of the errors of the predictions from the observations.

On the other hand, researchers use logit in many dichotomous output models, including failure-prediction models. Stone and Rasp (1997) noted a preference for logit over OLS in accounting-choice studies, even in studies using small sample sizes. Articles in the accounting research literature provide results of comparisons of OLS and logistic regression (logit and probit).

Noreen (1988) compared probit and OLS using samples of 50 and 100 observations—sizes he describes as average for accounting classification studies—with several ratios and at least one dummy variable as independent variables. Stone and Rasp identified and researched the tradeoffs between OLS and logit, stating that researchers can expect logit “to be more powerful whenever the relationship being modeled is nonlinear” (1997:184).

The logit model assumes a logistic relationship between the inputs and output. This model is

$$P(Y = 1 | X) = \exp(\sum b_k X_k) / [1 + \exp(\sum b_k X_k)]$$

where *b* represents the coefficient estimates of the model and *X* represents the observed values (Aldrich and Nelson 1984).

The objective of logistic regression is to select coefficients (*b<sub>k</sub>*) that maximize the likelihood of predicting the observed outcome (0/1). Maximum likelihood estimation seeks to maximize the logit likelihood function (Aldrich and Nelson 1984):

$$L(Y | X, b) = \prod_{i=1}^N \left[ \frac{\exp(\sum b_k X_{ik})}{1 + \exp(\sum b_k X_{ik})} \right]^{y_i} \left[ \frac{1}{1 + \exp(\sum b_k X_{ik})} \right]^{1-y_i}$$

The logit model provides probabilities of success or failure but, unlike the OLS model, limits the output from 0 to 1.

We ran stepwise logistic regression using input variables in a forward integration logit model with .09/.10 probabilities and 411 observations. The results of the analysis, shown in Table 6, indicate that the model had a Cox and Snell *R*-square of .057.

**Table 6. Results of Logistic Regression**

		<b>B</b>	<b>SE (B)</b>	<b>Wald</b>	<b>Sig.</b>	<b>OR</b>
Step 1	GC	-1.39	.57	5.84	< .05	.25
	Constant	3.18	.51	38.78	< .001	24.00
Step 2	ATO	-0.36	.19	3.67	< .10	.70
	GC	-1.55	.59	6.92	< .01	.22
	Constant	3.77	.63	35.83	< .001	43.42
Step 3	ATO	-0.38	.19	4.15	< .05	.68
	PP	0.02	.01	2.61	.11	1.02
	GC	-1.37	.61	5.08	< .05	.25
	Constant	3.83	.64	36.16	< .001	46.26

The above models show that going concern audit report is the strongest determinant of bankruptcy type. This is logical, given that the auditors will incorporate the other factor information (e.g., debt to assets, return on assets, past performance) in their going concern audit report decisions. Because the auditors develop the going concern audit report after examining the other financial factors, it is useful to examine the significance of other factors without going concern audit report as an input factor.

**Table 7. Logit Stepwise Regression without GCAR**

	<b>Variable</b>	<b>Model Log Likelihood</b>	<b>Change in -2 Log Likelihood</b>
Step 1	CCDC	-71.95	4.04*
Step 2	CCDC	-71.02	5.60*
	ATO	-69.97	3.51 <sup>+</sup>
Step 3	CCDC	-67.84	4.59*
	ATO	-67.45	3.81 <sup>+</sup>
	RE	-68.44	5.78*

<sup>+</sup>*p* < .10

\**p* < .05

\*\**p* < .01

\*\*\**p* < .001



Without going concern audit report, logit included three factors in the model: current cash debt coverage, asset turnover, and retained earnings (dichotomous variable). The model without going concern audit report had a Cox and Snell *R*-square of .055. As the results shows (Table 7), results were slightly different once we removed going concern from our model.

Table 8 outlines the factors determined with each method to have a significant relationship with bankruptcy type.

**Table 8. Summary of Findings**

Factor	<i>t</i> -test	Correlation	OLS with GCAR	OLS without GCAR	Logit with GCAR	Logit without GCAR
CR						
CCDC	X					X
ARTO						
INTTO						
ATO	X	X	X	X	X	X
PM						
ROA		X				
CFOA		X				
DA		X				
CDC	X					
PP		X		X	X	
RE01						X
PNI01						
Assets	X					
GCAR	X	X	X		X	

Asset turnover was a significant factor in every statistical method differentiating Chapter 7 and Chapter 11 firms. Apparently, efficiency of operations focusing on use of assets is a strong determining factor in planned corporate continuity. The going concern audit report was also a significant determining factor in all statistical methods in which it was available. This is not surprising, as the auditors have access to all the data analyzed here, and more.

Past performance in the form of retained earnings over assets was identified three times as significant. The three factors directly involving current assets—current ratio, accounts receivable turnover, and inventory turnover—did not differ between Chapter 7 and Chapter 11 firms and were not significant determining factors in any statistical

method. Firms nearing a bankruptcy decision see dramatic changes to their current-asset and current-liability positions. This may well cloud the picture for these firms.

Profit margin in the current year and whether the firm was profitable the prior year did not differ significantly between Chapter 7 and Chapter 11 firms, nor were these two factors identified in any statistical model as significant input factors. It is possible that the question of whether to file for Chapter 7 or Chapter 11 hinges more on the longer-term perspective than recent operations of results, based on the lack of significance of the ratios using current assets and current liabilities and the ratios of current and past-year profit performance.

## **CONCLUSION**

Previous research has identified key factors separating bankrupt corporations from viable corporations, but this work has taken the previous research one step further, by differentiating between corporate bankruptcy types and examining factors explanatory of bankruptcy type (Chapter 7 or Chapter 11). Both Chapter 7 and Chapter 11 bankruptcy filings are indicators that firms have serious financial trouble. Although, based on prior studies, there is a distinct financial contrast between viable firms and firms filing for bankruptcy, the financial contrast between firms filing for Chapter 7 versus Chapter 11 bankruptcy is not as distinct. Still, there are significant financial differences between firms filing for the two types of bankruptcy. This study identified and discussed some of those financial differences, and the results of this research will help auditors, corporate management, corporate creditors and investors, and the FASB.

Corporate management and public auditors must make going-concern decisions about corporations' abilities to remain in business for the coming year. A model differentiating Chapter 7, Chapter 11, and viable firms can help corporate management make a decision or can help reinforce a decision already made. The model can also serve as an additional warning of impending bankruptcy. Such a warning can provide an impetus for management to make needed changes in time to save the corporation.

The FASB may well be the greatest beneficiary of this research. The FASB has issued an ASU requiring corporate management to render going concern letters. Such required letters could have more than one form of wording; they could include phrasing to indicate that the corporation plans to liquidate (Chapter 7) versus undertake financial restructuring (Chapter 11). Corporate management would therefore decide whether to issue a going concern letter, and, if so, whether that letter incorporates Chapter 7 or Chapter 11 wording.

Corporate creditors will also benefit from this research. Previous research has examined bankrupt corporations versus viable corporations. Chapter 11 financial reorganization changes the dynamics of creditor positions in the corporation yet may allow creditors to maintain a financial position, as opposed to the Chapter 7 bankruptcy.

There is a similar benefit for investors. Chapter 7 bankruptcy means the cessation of business and often means that investors receive little, if any, remuneration. Chapter 11 bankruptcy may provide the opportunity for investors to maintain some financial position in the corporation, depending on the terms of reorganization.

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***Advancing Communities of Learning:  
A Collaborative Project between Local Universities,  
Funding Agencies, and Nonprofits  
to Develop a Subsidized Senior-Transportation Plan \****

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**ABSTRACT**

The growing population of seniors in the United States poses both interesting and challenging transportation policy issues that demand research on alternatives to current transportation systems. This study was motivated by a local foundation's interest in senior quality-of-life issues in the communities served. The aim of this study was to assess senior transportation needs and systems as a means to move policy makers and funders closer to providing high-quality senior transportation services. The localized nature of senior transportation needs is best examined as a case study. In this article, one mid-sized Indiana community is examined using focus group interviews and individual surveys of senior citizens. In addition, a survey of the literature on senior-transportation models provided critical information relevant to formulating best-practice recommendations for community-level senior-transportation systems. To design effective senior-transportation systems, five critical factors are evaluated. Finally, the article presents a case study highlighting the importance of multisector collaboration in addressing the challenges and

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opportunities associated with critical senior-transportation issues in upcoming decades.

**KEY WORDS** Community of Learning; Community of Practice;  
Senior Subsidized Transportation Plan

It is well known that with rising life expectancies, the largest generation in America's history will also be the oldest ever (Transportation for America 2011). Members of this baby-boomer generation, unlike those of earlier generations, tend to live in suburban areas with limited public transportation and thus are reliant on automobiles and roads to connect them to the services they require as well as to work and recreational opportunities. According to 2010 census data, the number of Americans over age 65 is expected to reach 71.5 million by 2030. This is twice the number of seniors reported in the year 2000 census. By 2030, one in every five people will be an older adult. As the percentage of seniors in the US population rises, the needs of this aging population, including the increasing demand for senior-transportation services, become of increasing relevance and concern.

The needs for senior-transportation services were recently recognized in "The Maturing of America," a 2005 report published by the National Association of Area Agencies on Aging. Specifically, the report detailed the need for communities to assess if their existing transportation systems are available, accessible, affordable, and adaptable. The need for such services to address senior needs is pressing because of the aging population in the United States.

The population trends observed at the national level will also be seen at the local levels. In Lake County, Indiana, specifically in the city of Hobart, for example, the aging of the population is becoming increasingly more evident. As of 2010, Lake County was home to more than 124,000 seniors aged 55 and over. If the county follows the national trend, this population will double and approximately 250,000 seniors will be living in the county in 2030. These seniors are faced with significant obstacles that limit their ability to move through the community and to receive services. The recession and local economic conditions have placed an increased burden on the budget of seniors. Seniors who need to limit or stop their driving can experience drastic declines in mobility and are thereby placed at higher risk of poor health, isolation, and loneliness. A senior-transportation program provides seniors with the option to maintain their mobility and independence.

While the needs of a senior-transportation program is not debatable, it may be a challenge for city or municipality policy makers to develop plans for such a program on their own. They may not have the funds and/or the expertise needed to develop such a plan. Thus, a better option is to combine their available resources with those of community partners such as universities, funding agencies, other government agencies, and service providers. A public policy model such as community of practice (CoP), for example, may be suitable for this purpose. According to the CoP model, learning takes place in social contexts that emerge and evolve when people who have common goals

interact as they strive toward those goals (Wenger 1998). For organizations, learning is an issue of sustaining the interconnected communities of practice through which an organization knows what it knows and thus becomes effective and valuable as an organization. (See Wenger [1998] and Smith and McKeen [2003] for more details on the CoP model. For a nonprofit or government organization, the CoP model is highly relevant because it enables the organization to collaborate with other community organizations such as universities, funding agencies, and service providers. In this article, we illustrate how the CoP model is applied to develop a senior-transportation solution for a mid-sized town in Indiana.

The city of Hobart, Indiana, faces the same challenges as other communities serving seniors. Transportation services connect the individual to the community where they can fulfill their basic needs such as food, medical care, family visits, and recreation. Effective and efficient service delivery today will serve as the foundation for service programming and delivery well into the future when needs will be even more extreme. Assessing the transportation needs of seniors in the city of Hobart and designing a transportation service program will significantly increase the likelihood that seniors will receive the required services and that public and nonprofit agencies will work to effectively improve the quality of life of the region through transportation programming.

Researchers from a leading public university in the Midwest worked with the Legacy Foundation, a major nonprofit funding agency, to evaluate the current senior transportation in Hobart. This community-level perspective is critical to informing not only local policy but also state and national policy. The number of seniors seeking community-based services is growing while the number of informal supports, such as those provided by family members and friends, is shrinking (American Institutes for Research 2016). The complexity of issues and problems facing seniors of all income levels, racial and ethnic backgrounds, and other demographic characteristics suggests that local, community-based approaches, as opposed to national and state-level approaches, will grow in importance.

In this article, we begin to examine the complexities of senior transportation systems at the local level. First, we present a survey of existing types of community-level senior-transportation systems. From this survey and a review of the literature, we develop five criteria for evaluating the effectiveness of senior-transportation systems. This is followed by a detailed description of a set of transportation models that best satisfy the five evaluation criteria and that should therefore be considered by policy makers and funders as viable options for community-level senior transportation. Simultaneous with the development of a framework for evaluating senior-transportation models, we undertook a senior-transportation needs assessment. In the third section of this article, we detail the results from the Senior Needs Assessment survey conducted in an Indiana community. Combining the results of the two surveys (i.e., the survey of models and the Senior Needs Assessment survey), we then propose a local senior-transportation model for the case-study community. The policy variables relevant to the selection of the senior-transportation model (e.g., availability of funds, manpower, and other resources) are presented, with a set of strategic program alternatives.

## **REVIEW OF LITERATURE ON SENIOR-TRANSPORTATION MODELS**

The state of current knowledge about existing senior-transportation models is limited; thus, our research began with a survey of the extant literature on senior-transportation models or systems from cities around the country (Placer County Transportation Planning Agency 2007; Seniors' Research Center 2013; Walter 2012; West Group Research 2007) . (In this article, we use the terms "transportation model," "transportation program," and "transportation system" interchangeably.) We searched several databases, including ABI/Inform and Google, using key words such as "senior transportation models," "subsidized senior transportation models," "urban transportation systems," and so on. The search generated a plethora of transportation models, including from large cities such as New York City and Los Angeles. We narrowed our search using more specific key words such as "senior subsidized transportation systems in mid-sized cities" and "transportation systems for seniors in small towns." As a result of this systematic search, we identified and reviewed approximately 12 transportation systems that are similar to the Hobart program in terms of size, scope, or region. For example, we reviewed senior-transportation programs from a number of cities and towns, including Des Plaines, Illinois (City of Desplaines 2013); the village of Homewood, Illinois (Village of Homewood 2013); Hilo, Hawaii (County of Hawai'i 2012); Hebron, Indiana (City of Hebron n.d.); Lisle, Illinois (Village of Lisle 2013); Albuquerque, New Mexico; Deerfield, Illinois (Village of Deerfield 2013); and Randolph, New Jersey (Township of Randolph 2013).

The review of existing policy and academic literature revealed a number of research papers describing and evaluating existing senior-transportation systems. For example, a study undertaken by the National Center for Transit Research (NCTR) at the University of Southern Florida (Foreman et al. 2003) reviewed extant senior-transportation models across the country. A 2002 report from the American Public Transportation Association (APTA) identified a number of small nonprofit agencies offering senior-transportation facilities in cities such as Des Moines, Iowa. These services are generally provided in conjunction with larger public-transportation systems because, as studies revealed, many seniors are unable to access ordinary forms of public transportation. Thus, our systematic search generated a rich combination of models from Midwestern towns as well as from other parts of the country.

## **TYPES OF SENIOR-TRANSPORTATION SYSTEMS**

Based on the literature review of senior-transportation systems across the country, we have identified five major models of subsidized or free transportation available to senior citizens in most of the transportation systems we reviewed:

- Taxi subsidy programs
- Community transit services
- Dial-a-ride services
- Paratransit services (as per the Americans with Disabilities Act [ADA])
- Volunteer drivers

**Table 1. Categorization of Different Transportation Services for Senior Citizens**

<b>Type of Service</b>	<b>Description of Service</b>	<b>Strengths</b>	<b>Weaknesses</b>
Taxi subsidy	Independent taxicab companies provide services directly to the users.	<ul style="list-style-type: none"> <li>• Services can be available 24/7.</li> <li>• Costs can be shared with the users.</li> </ul>	<ul style="list-style-type: none"> <li>• Taxicabs may not be ADA-compatible.</li> <li>• The sponsoring agency may not have full control of how and where the services are provided.</li> <li>• Taxicab companies may deny services to users with disabilities.</li> </ul>
Community transit	The sponsoring community runs a transit service mostly through buses; services are generally offered in several neighborhood communities.	<ul style="list-style-type: none"> <li>• The sponsoring agency has flexibility in selecting how and where the services will be provided.</li> <li>• Easy to provide ADA-compatible services</li> </ul>	<ul style="list-style-type: none"> <li>• Services may not be available around the clock.</li> <li>• Home pick-up and drop-off services may not be offered.</li> </ul>
Dial-a-ride	Users call in to get services to specified destinations.	<ul style="list-style-type: none"> <li>• Services are generally offered free of cost.</li> </ul>	<ul style="list-style-type: none"> <li>• Services may not be available around the clock.</li> </ul>
Paratransit	Users with physical disabilities call in to get services.	<ul style="list-style-type: none"> <li>• ADA compatible</li> <li>• Home pick-up and drop-off services are offered.</li> </ul>	<ul style="list-style-type: none"> <li>• Services may not be available around the clock.</li> </ul>
Volunteer	Volunteers are trained to offer services, using their own or agencies' vehicles.	<ul style="list-style-type: none"> <li>• Some programs offer riders flexibility to choose their own drivers.</li> </ul>	<ul style="list-style-type: none"> <li>• Service may not be ADA compatible.</li> <li>• High liability to sponsoring agencies because of volunteers</li> </ul>



In general, most programs offer a combination of services, with the subsidized taxi services cited as the most common service provided. Table 1 provides an outline of the strengths and weaknesses of each of the five service models based on cost, client outreach, financial sustainability, volunteer involvement, and ADA compatibility. A summary assessment for each type service is provided below.

In general, **taxicab services** are available around the clock and users share the cost with the nonprofit or government agency providing the service. The sponsoring agency has little control over how and where the services are provided by the taxicab companies, however. Many taxicabs are not ADA compatible, and drivers may not agree to provide service to seniors with disabilities. (See Johnson and Gettinger 2012 for a detailed review of local partnerships with taxicab companies.)

**Community transit services** are generally offered when services are needed over a large area. Typically, these services are offered across several communities. These types of services offer flexibility to the sponsoring agencies to design services according to the specific needs of the communities. Because buses are the most used, it is easier to offer transportation via ADA-compatible vehicles with community transit services. Unfortunately, these services are offered in specific routes; hence, home pick-up and drop-off are not included. In addition, services are not offered around the clock. Because the overhead and maintenance costs for these services are substantial, they are suitable mostly for larger communities.

Many communities offer **dial-a-ride services** to their senior citizens. From a user's perspective, a dial-a-ride service provides more flexibility than a community transit service but less than a taxicab service. Here, a user calls in advance, between 2 and 24 hours before the service, to request transport to specific destination possibilities such as hospitals, shopping malls, doctor offices, and the like. The service is generally offered free of cost to users but is not available around the clock.

**Paratransit services** are meant for seniors with disabilities. The vehicles are ADA compatible, and users are generally provided door-to-door service. Again, these services require specially designed ADA-compatible vehicles; hence, larger or richer communities are able to offer this type of service.

Finally, many communities incorporate **volunteer services** to provide transportation to their citizens. Some communities let volunteers use their own vehicles, while others require volunteers to use agency vehicles to provide service. Several programs even let the users select their own volunteer drivers (e.g., a spouse or child). Because of the inbuilt flexibility of this program, it is difficult to offer ADA-compatible services, and the liability to the sponsoring agency for the volunteer drivers as well as the users is substantial. To circumvent this liability, volunteers must be properly trained before they become eligible to render this service.

## **KEY CRITERIA TO EVALUATE SENIOR-TRANSPORTATION MODELS**

It is important to identify a set of evaluation criteria to evaluate the myriad senior-transportation models across the country. Foreman et al. (2003) identified four important criteria for any senior-transportation model: cost to participants, client outreach, external

funding opportunity, and volunteer involvement. We also believe that every transportation model should provide ADA-compatible services to citizens with physical disability, which was considered a critical element by Hobart seniors who responded to our survey. We thus evaluated more than 12 senior-transportation systems based on the following criteria:

- Cost to participants—Does the program offer the services to participants free or at a reasonable price?
- Client outreach—Does the program reach out to the seniors with information and service?
- External funding opportunity—Does the program avail funding from external sources?
- Volunteer involvement—Does the program involve volunteers providing various services to seniors?
- ADA compatibility—Does the program offer ADA-compatible transportation services?

We identified five local senior-transportation systems that employed all five best-practices criteria and that were relevant to the needs of the senior population in the case-study community:

- Shepherd's Center of the Northland (SCN); Kansas City, Missouri
- Coordinated Services for the Elderly; Hilo, Hawaii
- I CARE, Inc.; Decatur, Georgia
- Senior Taxi Voucher Program; Homewood, Illinois
- Call-A-Ride, Inc.; Hebron, Indiana

We selected the first three systems because they were identified as “best practices” by the NCTR based on the evaluation criteria (except ADA compatibility) outlined above (Foreman et al. 2003). We also selected the Homewood, Illinois, and Hebron, Indiana, systems based on the five criteria. In addition, both Homewood and Hebron are similar in size to Hobart and are located in the Midwest. Although these five systems are from different regions of the country, the areas offering them are similar in size and scope to Hobart and at the same time can serve as model programs for Hobart with respect to one or more of the criteria listed above. For example, the Hilo, Hawaii, program is located in a different part of the country but is similar to the Hobart program in size and scope. Similarly, like the Hobart program, the Kansas City program is sustained by private funds instead of involving any government support. It also has an efficient client-outreach program and an active fundraising agenda. The Call-A-Ride program of Hebron, Indiana, is an effective volunteer-run bus service for seniors. The Homewood, Illinois, program provides a subsidized taxicab service similar to that in Hobart. The I CARE program in Decatur, Georgia, exemplifies an efficient volunteer-run program that offers free transportation and is also successful in attracting grants from several private sources.

Table 2. An Outline of Best Cases of Subsidized Urban Transportation Systems for Senior Citizens

Evaluation Criteria		Best Cases				
		Shepard's Center of the Northland, Kansas City, MO (Case No. 1)	Coordinated Services for the Elderly, Hilo, HI (Case No. 2)	ICARE, Inc., DeKalb County, Georgia (Case No. 3)	Senior Taxi Voucher Program, Village of Home wood, IL (Case No. 4)	Call-A-Ride, Inc., Hebron, IN (Case No. 5)
<b>Cost to participants</b>		No cost to participants	No charge to seniors	Free to all participants	\$2.00 per voucher; 20 vouchers can be purchased each month.	No cost to participants
<b>Client outreach</b>		Newsletter	"Information and Assistance" publications providing the area's senior population with telephone numbers and contact information for senior centers, social agencies, and other senior support services.	Online access and word of mouth.	Local newspaper, media, and business directory	Monthly Chamber of Commerce newsletter
<b>External funding opportunity</b>		Does not receive any direct governmental funding; has been sustained by private grants and through active fundraising	State, county, and federal funding	Nonprofit 501(c)(3) tax-exempt organization; has received funds from United Way of Metropolitan Atlanta, the Green Fund, the Robert Wood Johnson Foundation, the Community Foundation for Greater Atlanta, the state of Georgia, AT&T, and Eckerd	Subsidized transportation funds and grants	No data available
<b>Volunteer involvement</b>		Both internal and external; volunteers use their own vehicles	Both internal and external	Both internal and external	No data available	Run completely by volunteers
<b>ADA compatibility</b>		No	Yes	No	No	Yes

Note: HI=Hawaii; IL=Illinois; IN=Indiana; MO=Missouri; No.=number.

Table 2 presents a summary of best cases. Below, we describe the characteristics of each system in detail.

#### *Shepherd's Center of the Northland (SCN)*

This program in Kansas City, Missouri, offers limited services, but its advantage is that it is surrounded by complementary transportation programs. Some of these programs are for seniors only, whereas others serve particular areas or groups. For example, the Clay County program does not accept Medicaid patients, and participants must live in Clay County. The Clay County program also charges \$5.00 for each trip. This can be costly for someone who does not have Medicaid to help pay for health coverage.

The SCN client-outreach program consists of a monthly newsletter. The SCN does not receive any direct governmental funding and has been sustained by private grants and through active fundraising. There is an active volunteer program, and volunteers use their own vehicles as transportation sources. SCN does have a van, but it is used only for ambulatory participants. Other programs in Clay County have ADA involvement.

The SCN would be a good fit for a small community within a larger community (like Hobart) that has alternatives to any transportation services outside of the immediate service area. This program can serve as a good template for the Hobart program for effective client outreach through newsletters and publications.

#### *Coordinated Services for the Elderly*

Located in Hilo, Hawaii, this program serves a large senior community. The population of Hilo is 43,263, 18 percent of which is aged 65 years or older. There is no charge to seniors for transportation. This program offers "Informational and Assistance" publications that provide the area's elderly population with telephone numbers and contact information for senior centers, social agencies, and other senior-support services. The program is funded by county, state, and federal funds and has an open volunteer program. It includes services under ADA guidelines.

This program is successful because it appears to be well planned and adequately funded to service the needs of seniors. It can serve as an aspirational program for Hobart because it is able to attract external funds and to involve volunteers effectively.

#### *I CARE, Inc.*

I CARE, in Decatur, Georgia, provides trained volunteers/companions to take seniors to medical appointments. The usual client of I CARE has a serious physical, mental, emotional, or financial problem preventing him or her from driving, using public transportation, or getting help from friends or family. The transportation program for this community of seniors does not have ADA involvement and is limited to seniors who do not have ambulatory issues. I CARE provides transportation free to participants. Even though Decatur is a large community, only 9.4 percent of the population is aged 65 or older.

The only client outreach service is online. This program is funded by several nonprofit 501(c)(3) grants from United Way of Metropolitan Atlanta, the Green Fund, the Robert Johnson Woods Foundation, the Community Foundation for Greater Atlanta, the state of Georgia, AT&T, and Eckerd. This program is an exemplary program in volunteer involvement.

#### *Senior Taxi Voucher Program*

This program in Homewood, Illinois, is a transportation program for seniors in the community. The cost to the participant is \$2.00 for each voucher, and participants can purchase up to 20 vouchers each month. Passengers traveling with a voucher user (entering and exiting with the voucher user) are charged a fare of \$0.50 each. To date, the program offers 24-hour travel seven days a week. Currently, only two cab companies provide transportation services for this program.

Client-outreach efforts of this program are effective and consist of using local media such as the daily newspaper and a business directory. The program uses subsidized funding and grants. There is no data on volunteer or ADA involvement. This program is pretty similar to Hobart's.

#### *Call-A-Ride, Inc*

This program, offered in Hebron, Indiana, provides transportation for seniors going to medical offices and the hospital for treatment. There is no cost to clients, and there is ADA involvement where wheelchair-accessible vans are used.

The population of Hebron is 3,730, with 10.7 percent of citizens aged 65 and older. There is no external funding, and the program is run completely by volunteers. The only client-outreach source is the monthly newsletter from the local Chamber of Commerce. This program can serve as an exemplary model for volunteer involvement for the Hobart program.

Besides these five programs, we reviewed programs from other cities such as Lisle, Illinois; Des Plaines, Illinois; Randolph, New Jersey; Warren, Michigan (Czarnik 2012); and Deerfield, Illinois. All these programs have several strengths as well as limitations, but the information available on their websites is inadequate to allow an accurate judgment of their effectiveness.

### **COMMON CHARACTERISTICS OF EFFECTIVE TRANSPORTATION PROGRAMS FOR SENIOR CITIZENS**

Overall, all but one of the above programs are free of cost to the seniors, but the cost of that one is low. All the programs have some type of outreach method for the seniors, some better than others. For example, Coordinated Services for the Elderly's "Information and Assistance" publication is very informative for the seniors.

Most of these programs, with the exception of Call-A-Ride, Inc., received some type of external funding, and only two of the programs have ADA compatibility.

In addition to examining the models outlined above, it is important to identify the specific needs of Hobart seniors. Accordingly, we conducted a survey and focus-group interview of Hobart seniors and a number of key service providers. Details of the survey and the focus-group interview are given below.

## **CASE STUDY OF LOCAL SENIOR-TRANSPORTATION NEEDS**

The purpose of this survey was to assess the transportation needs of the seniors aged 55 and over who reside in Hobart, and to provide the location-specific information required to develop a model of transportation services for the community. Furthermore, the survey serves as a vehicle to engage policy makers and funders in policy decisions regarding high-quality senior services. With the population of Americans aged 65 and over expected to reach 71.5 million by 2030, the number of older individuals living in suburban areas with limited access to public transportation will increase. This phenomenon will lead to older individuals' reliance on alternative forms of transportation. Our scan of literature shows that limited knowledge exists regarding transportation models addressing the needs of the aging population. Furthermore, there is no consistency in the models or transportation systems across the nation.

The city of Hobart, Indiana, with limited public transportation and a growing senior population, is no exception to seniors' growing needs for and reliance on alternative forms of transportation. Working with the Legacy Foundation, we used the Hobart community to conduct our initial study of senior-transportation needs. Hobart was chosen because (1) it has a growing aging population; (2) it has several established senior communities; (3) it has a senior center with more than 1000 members; and (4) that senior center is housed in one of the main municipality buildings and gets some of its funding from the Legacy Foundation. The setting provided for a rich case that will further the discussion on senior-transportation needs in Indiana and in communities similar to Hobart.

### *Data Collection and Analysis*

A survey was administered to a sample of 117 individuals at various locations, including the Maria Reiner Senior Center, which services more than 1000 seniors in the community. Seniors from three of the senior-housing units in the city were also given the opportunity to complete the survey. The sampling method was a combination of both purposive sampling and snowballing techniques. These methods allowed us to reach other eligible individuals as recommended by the survey participants. The questionnaires were hand-delivered by the researchers to the four sites, and all were completed on the spot.

A focus group comprised of seven key individuals familiar with seniors' needs and the transportation landscape of the Northwest Indiana region was also conducted. The focus-group participants were asked to individually complete a five-question open-ended questionnaire before the focus-group discussion started. This was followed by a group discussion using those questions as a lead-in to the conversation. The focus-group

discussion was followed by open-ended follow-up interviews with some of the focus-group participants in addition to other key informants who did not take part in the focus-group discussions. This was done to gain insight about their perceptions regarding senior-transportation needs and the different services that can be made available to seniors. These interviews lasted about 60 to 90 minutes. The follow-up interviews with participants ensure the validity of results. Yin (2009) and Gibbs (2007) suggested several strategies to ensure reliability of results. Transcripts and codes were checked by multiple team members for consistency and accuracy. Informed consent was obtained from all participants.

Data analysis involved both qualitative and quantitative approaches. Descriptive statistics were utilized to summarize the senior survey data to ensure ease of presentation and comprehension. Data gathered from the focus groups and open-ended interviews were transcribed and coded. We then used this data to synthesize, search for patterns in responses, and identify key themes.

### *Findings*

The survey assisted us in identifying the current and future needs of the participants. Identifying these needs is a central component of effective policy and planning. We considered the survey results to inform policy decisions in designing service pricing plans, vetting and tracking strategies, and in future, developing informational materials for participants. The information from the survey could also be used by the senior center and its donors to develop strategies for ensuring financial stability of the program. The survey encompassed key factors:

- Demographic data on the senior population of Hobart
- The current transportation situation, including needs and challenges, of the seniors
- Future transportation needs of the seniors

### *Focus Group*

An hour-long focus-group meeting was conducted with seven key stakeholders with expertise in senior services and transportation. Participants were asked to complete a short questionnaire, followed by a group discussion. Participants' key areas of concern are presented below.

*Positive attributes/characteristics of the current senior-transportation system.* When asked about the positive attributes and characteristics of the current transportation system, the majority noted that the taxicabs operating on a 24-hour schedule have made the service convenient and accessible to users. The consensus was that the seniors who use the service are satisfied with the service providers, especially the taxi companies, who have been known to go out of their way to help the seniors. The seniors also echoed a sense of safety while using these services. Furthermore, the cab service was reported to be reliable and inexpensive. Participants stated that the program offers direct service

without having to stop multiple times for other riders. This means that the travel time is kept to a minimum. The seniors are also able to “ride share,” which lowers the cost of transportation. The participants like that the taxi service, which can be used for only a 10-mile radius, is complemented by South Lake County Community Services’ (SLCCS) on-demand transportation services. SLCCS offers long-distance transportation at a fixed cost as long as it is within its transportation jurisdiction, and the vehicles are ADA accessible.

*Areas where the delivery of senior-transportation services can be improved.* When asked what areas can be improved, the seniors identified the absence of outreach, and a need to increase awareness about the program. The group felt that the voucher program was not well advertised and that seniors in real need of the services did not have their needs met. Overall, there needs to be better community awareness coupled with improvement in program utilization and administration.

Currently, each individual can purchase up to 30 vouchers at \$1 (true value \$10, subsidized by Maria Reiner Funds) monthly with no stated expiration. Participants stated that they would like to see a more concrete needs-based system for the service utilization. “Eligibility” and “need” must be well defined to ensure long-term sustainability of the program. Some participants stated that the vouchers should be restricted in number and should be destination-specific.

Additionally, participants agreed that the vouchers needed to be easier to access. One participant identified that the seniors wait for a long time for cabs to arrive. Additionally, the cabs can service only independently mobile seniors. Those seniors requiring disability services must rely on SLCCS, but SLCCS operates from 8:30 a.m. to 3:30 p.m. Monday through Friday, with no weekend service. Another with SLCCS is that it services other townships and all reservations for trips must be made at least 48 hours in advance. This works well for trips to medical appointments but usually not very well for trips for entertainment and shopping. Participants agreed that vans or buses with ADA accessibility for the seniors would be beneficial. Some of the discussions centered on the implementation of a fixed-route circular bus system within the city of Hobart and its immediate surroundings.

These findings from the focus group will augment both those of the senior survey and the literature scan of regional and national best practices.

### *Follow-up Interviews*

Results from the follow-up interviews mirrored those from the focus-group session. Some things to be highlighted include the fact that the key stakeholders are cognizant that although a fixed-route bus service would be great for the city, the current realities from funding and need priorities would be better served by effectively restructuring the on-demand-type service that is currently in place.

Currently, the administration of the voucher system is housed at the Hobart YMCA and run on a volunteer basis. The group’s view is that the volunteer system is not working well. The group believes that this program should be administered by a paid staff and housed in a strategic location that seniors frequent and that is accessible to them.



Though much cannot be expected from state and federal transportation funding currently, stakeholders want to consider the future use of CMAQ (Congestion Mitigation and Air Quality) funds as a way of implementing a transit system in the city. Furthermore, the city of Hobart could potentially work with the Legacy Foundation (administrator of the Maria Reiner Funds) on a collaborative bus service.

### *Key Findings from the Senior Survey*

Using purposive and snowballing sampling methods, we administered surveys to 117 seniors aged 55 and older. These were conducted at the Maria Reiner Senior Center (MRC) and the three senior-housing facilities (Linden House, Kirby Manor, and Brentwood) located in the city of Hobart. Because of time limitations, potential users who did not reside in one of the senior housing options or go to the MRC were not interviewed.

Of the 117 senior surveys, 113 were useable for our analysis. With 108 responding, 91 (85 percent) identified their race as white, 9 (8.4 percent) black, and 7 (6.5 percent) as Hispanic. There were 92 (85.2 percent) females and 16 (14.8 percent) males. As Table 3 indicates, many of the survey participants were aged 80 years and older, and the lowest number of participants were those aged 55–59.

**Table 3. Ages of Surveyed Seniors ( $n = 109$ )**

<b>Age Range (years)</b>	<b>Number</b>	<b>Percentage</b>
55–59	5	4.6%
60–64	8	7.3%
65–69	13	11.9%
70–74	24	22.0%
75–80	12	11.0%
80+	47	43.1%

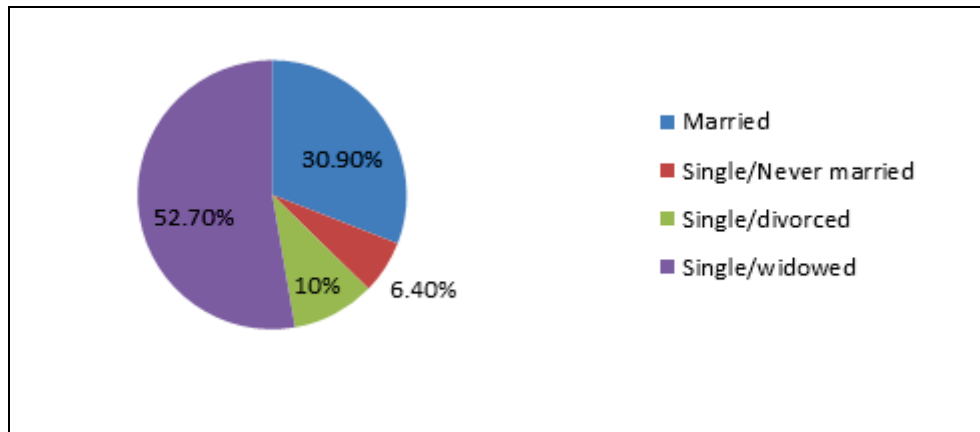
Ninety-nine (99) percent percent of the respondents were retired, and 87.5 percent reported income levels below \$40,000 per annum. (Table 4 shows the income distribution as reported on the survey.)

**Table 4. Income Distribution of Surveyed Seniors ( $n = 80$ )**

<b>Income Range</b>	<b>Number</b>	<b>Percentage</b>
20,000 or less	46	57.5%
20,000–40,000	24	30.0%
40,000–60,000	9	11.3%
60,000+	1	1.3%

Ninety-one (91) percent of seniors surveyed were licensed to drive a vehicle. The majority (62.4 percent) reported living alone, 32.7 percent reported living with one other individual, and 5 percent reported living with three or more people. The majority were single (widowed), as illustrated in Figure 1.

**Figure 1. Marital Status of Surveyed Seniors (n = 110)**



#### *Current Modes and Availability of Transportation*

When asked to rank the likelihood (1 = very likely, 2 = somewhat likely, 3 = unlikely, 4 = would not use) of using a once-weekly public transit system in both Lake County and the city of Hobart, participants' responses were split evenly across the categories. In the case of a transit system in Lake County, 28 percent would very likely use the service, 24.5 percent were somewhat likely to do so, 28.2 percent were unlikely to do so, and 21.8 percent would not use. The same trend was found for using a transit system within the city, with 32.7 percent, 19.4 percent, 22.7 percent and 25.5 percent respectively. (See Figure 2 for more details.)

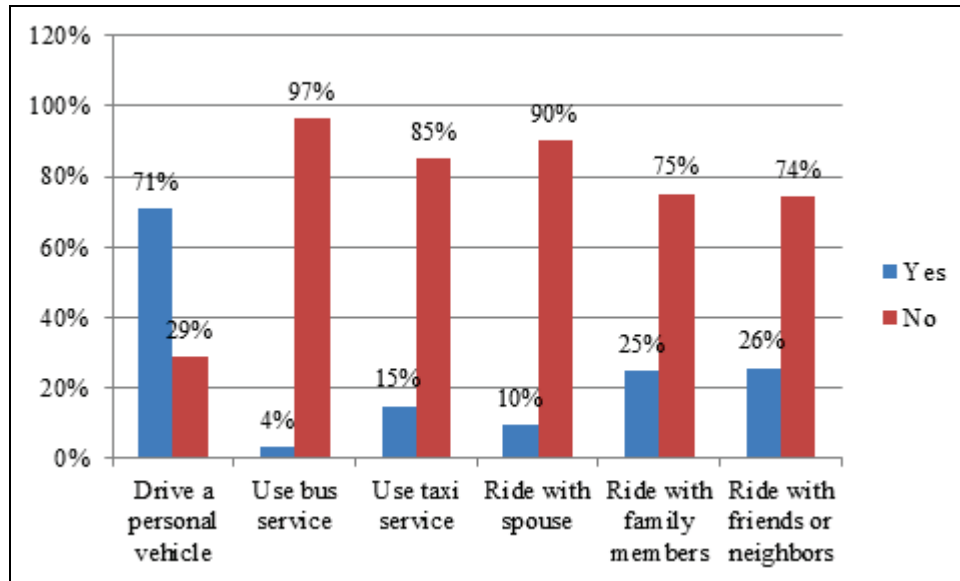
#### *Places Seniors Need to Travel*

The seniors identified some areas they travel frequently and will need transportation to visit if service is made available. All these locations are within a 10-mile radius from the city center. Below, they are ranked in order from most frequent to least frequent.

1. Medical appointments
2. Shopping
3. MRC
4. Church/religious services

5. Entertainment
6. Food pantry
7. Other places

**Figure 2. Modes of Transportation Used by Surveyed Seniors**



How often the seniors went to these places was of interest. More than half of the respondents ( $n = 40$ ) reported going to the MRC two or three times per week; 43 seniors have medical appointments, 30 of them having weekly appointments; 56 need to go shopping occasionally, 44 of them needing to shop at least once per week; 30 seniors occasional required transportation for entertainment, 15 (50%) of them needing such transportation once per week; and 34 would like to attend church services, with 28 wanting to go weekly.

### *Voucher Usage*

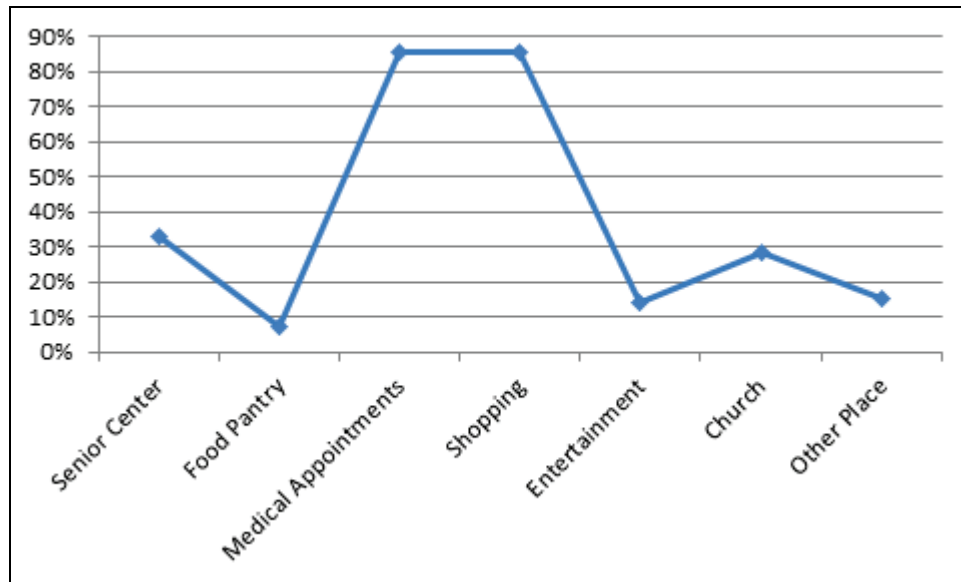
Of 112 seniors reporting, only 16 (14.3 percent) currently used the transportation vouchers offered through the Maria Reiner Fund. Thus, 95 seniors (84.8 percent) did not use the transportation vouchers. Of the 16 who reported using the vouchers, 11 used vouchers at least twice per week, and the rest 3–6 times per week.

Figure 3 shows the locations reported as destinations by current voucher users. This distribution indicates that voucher usage is currently limited to a few individuals; thus, there is a need to institute a program that has a wider reach and usage.

All of the voucher users reported using taxi services to go to the different areas identified by the respondents. Five (31.3 percent) of the 16 users reported that the taxi

service was always on time; 9 (56.3 percent) mentioned that they usually had to wait for service; and 2 (12.5 percent) noted that the taxi service was always running late. Nine (9) seniors mentioned providing tips to the driver, but 7 did not. Overall, 11 (78.6 percent) spent \$5 or less per trip, compared to 3 (21.4 percent) who spent more than \$5 per trip.

**Figure 3. Locations Traveled to Using Vouchers**



*Preference of Seniors Using Other Modes of Transportation*

Although the majority (57) reported that they prefer to drive their personal cars, they realize there will be a time when they will no longer be able to drive their personal cars because of age or health-related issues. Forty-three (43) ranked a senior van as their next choice of transportation, followed by 34 preferring a car driven by a family member or friend. Of the remaining seniors, 19 mentioned a city bus service as their preference and 15 would use taxi service. This is an indication that although the current voucher users use the cab services, as mentioned earlier, if the program were to expand, in the absence of personal car usage, the long-term preference of the seniors seems to be a senior van.

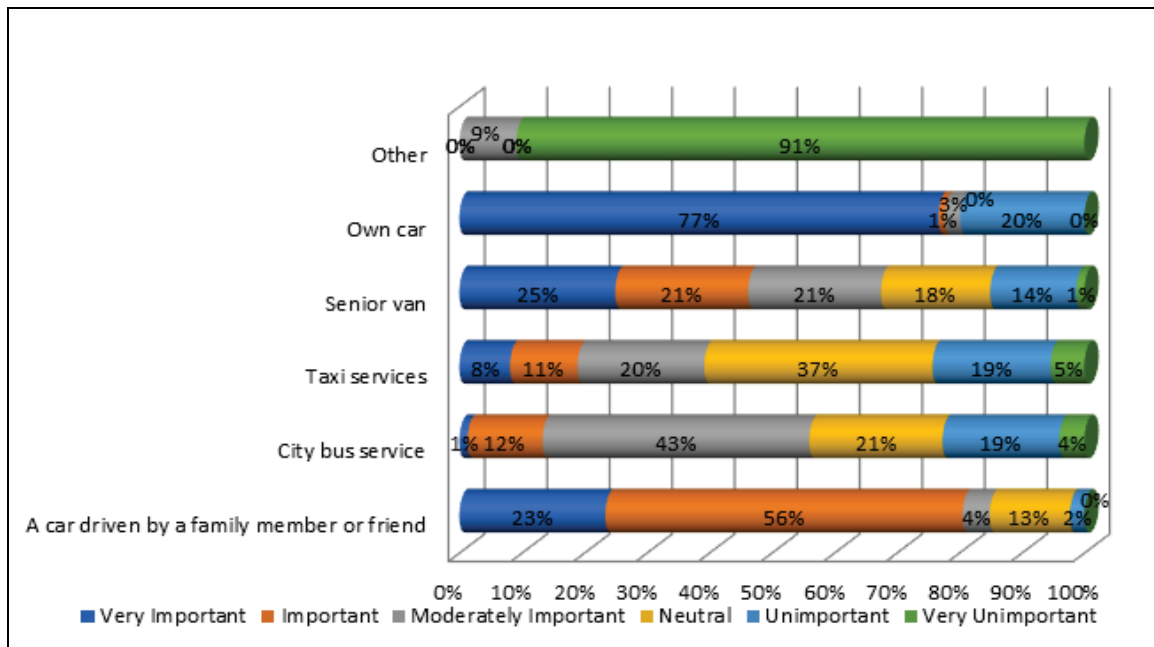
*Importance of the Different Forms of Transportation Available to the Seniors*

As expected, seniors ranked driving their own cars to be most important, followed by a car driven by a friend or a family member. Figure 4 shows the distribution of their responses. Commercially, it seems that a senior van that accommodates physical impairment would be the option to benefit most respondents.

*Program(s) That Will Be Most Suitable for Hobart Senior Citizens*

Based on our review of senior-transportation models, we believe that the best fit for the Hobart program will be a combination of features from the programs in Kansas City, Missouri; Hilo, Hawaii; and Homewood, Illinois. All these programs offer services at no cost or at a very reasonable cost; all have effective outreach programs (newsletters, news directories, etc.) to senior citizens; and all receive external grants to support their services. Grants for these programs are obtained from government (federal, state, and county) as well as private sources (e.g., fundraising events). Programs at Kansas City and Hilo use volunteers extensively to offer services to the seniors. Volunteers could be internal (i.e., actively involved with the program) or external (not involved with the program regularly).

**Figure 4. Importance of Various Forms of Transportation as Ranked by Respondents**



*Feedback from Hobart Seniors about Existing Transportation Services*

The best possible transportation system for senior citizens in Hobart will be the one that incorporates the strengths of successful programs across the country as well as addresses the specific requirements of Hobart senior citizens. The findings of our need-assessment survey of the users of the existing transportation are expected to thus be very useful. It is evident from the survey that the users like the following features of the existing Hobart services:

- 24-hour cab service
- Cheap and reliable cab service

- Opportunity to “ride share,” which lowers the cost of transportation
- Direct 1:1 service that does not stop to pick up multiple riders
- Availability of SLCCS services for long-distance transportation

The users also identified a few areas that need improvement:

- More hours serviced by SLCCS buses
- Availability of vouchers (They currently have to call to purchase vouchers but prefer the option of buying vouchers at a fixed location.)
- Utilization of vouchers (Vouchers should be nontransferable, should be destination-specific, and should have an expiration date.)
- Marketing and communication. (The program is not marketed and communicated effectively to all senior citizens of Hobart.)
- ADA-compatible service for seniors who are not independently mobile

## **PROPOSED MODEL FOR TRANSPORTATION FOR HOBART SENIOR CITIZENS**

Considering the best examples of senior-transportation models across the country, as well as the feedback from Hobart senior citizens, we believe that a redesigned senior-transportation plan for Hobart should have the following features

### *Subsidized price*

The service should be free or priced very reasonably (not more than \$2 per voucher for cab services). This is the case for almost all programs we surveyed. Moreover, more than 57 percent of our survey respondents reported an annual income of \$20,000 or less; hence, many seniors will find it difficult to afford a higher voucher price. The vouchers could be made specific to individuals and/or to destinations to ensure that the vouchers are used by the people they are meant for and the purposes they are meant for. Additionally, SLCCS services should be incorporated into the system more imaginatively to offer a cost-effective service option for transportation of more than 10 or 15 miles. Table 5 provides a recommended pricing structure for the available services, based on the results of the needs assessment.

### *Client Outreach*

The program should devise a better outreach program to inform as many as senior citizens as possible about the variety of transportation services available. Currently, the program’s marketing and communication efforts are very limited. This is exemplified by the fact that only 40 or so seniors regularly use the subsidized transportation program. A cost-effective integrated marketing and communication strategy must be implemented if

more seniors are to be reached. A monthly newsletter, an automated telephone message system, and advertisements at the MRC and local hospitals, healthcare facilities, supermarkets, and the like will be effective in reaching more seniors.

**Table 5. Recommended Pricing Structure for Available Transportation Services**

<b>Price</b>	<b>Taxi Cab</b>	<b>SLCCS</b>
Up to \$10.00	1 voucher	1 voucher per trip
\$10.01–\$15.00	3 vouchers	1 voucher per trip
\$15.01–\$20.00	4 vouchers	1 voucher per trip
\$20.01–\$25.00	5 vouchers	1 voucher per trip

*External Funding Opportunity:*

Currently, the program is funded solely by the Maria Reiner Fund. The program must look for external funding for long-term sustainability. Funding from different levels of government (federal, state, and county) as well as from private sources (e.g., United Way, Robert Wood Johnson Foundation) should be actively explored. The support from local nonprofit agencies (e.g. Northwestern Indiana Regional Planning Commission, or NIRPC) in attracting external funds should be actively considered.

*Volunteer Involvement*

The current Hobart program does not currently have the provision to involve volunteers. An effective volunteer-involvement strategy must be designed in order to widen the services. Volunteers may be involved in client-outreach activities; for example, volunteers can be recruited from the residents of three senior homes in Hobart to make their fellow residents aware of the subsidized transportation program. Other volunteers can make phone calls, send out informational brochures, and help in other methods of communicating with Hobart seniors. In the long term, the program can consider a volunteer driver program similar to that of the I CARE program in Georgia (I CARE, Inc., 2012).

*ADA Compatibility*

The Hobart program must provide ADA-compatible services to any senior citizen who needs them. Because ADA-compatible services are not offered by the taxicabs, these services offered by buses and vans from SLCCS should be utilized more extensively. If SLCCS were to offer its services over longer periods than currently available, it would be possible for Hobart seniors to have access to comprehensive ADA-compatible services.

### *Specific Characteristics of the Hobart Program*

In addition to the above characteristics common to national models, the Hobart program should also have a few other specific characteristics.

*Size of the program.* According to the management of the MRC, the current annual budget for the program is \$25,000–\$30,000. This limited budget is not enough to serve all senior citizens of Hobart who need free or subsidized transportation. Currently, the program serves approximately 40 seniors regularly. According to the 2010 census, there were 8,090 seniors aged 55 or older in Hobart; hence, the program served less than 0.5 percent of the population. In our needs-assessment survey, 28 percent of seniors indicated that they would very likely use available transportation services. If we use assume the same proportion for the entire senior population, the number amounts to 2265 seniors; thus, Hobart’s system currently serves approximately 2 percent of seniors who would be likely to use the service. The current budget allocation does not allow service to a larger population. The services therefore need to be redesigned, keeping in mind the following questions:

- Should the services be offered to only low-income (e.g., less than \$20,000) seniors?
- Should the services be offered only for specific purposes (e.g., visiting medical facilities only)?
- Should the price for vouchers be increased (from \$1 to \$2 or more)?
- Should the pricing strategy be redesigned (e.g., limiting the maximum distance traveled)?

Because Hobart does not have a public transportation program, it is our view that the senior-transportation services should be offered to all seniors irrespective of their income. For the same reason, we also believe that the services should not be restricted to specific destinations. Our survey showed that the majority (more than 80 percent) of the trips cost \$10 or less. In order to encourage seniors to avail themselves of the taxicab services for shorter trips, we recommend that the \$1 voucher price be maintained but that the number of vouchers for longer trips be increased.

*Administration of the program.* The program is currently administered by the Hobart YMCA. Because of the ongoing challenges faced by the program (e.g., lack of awareness of the program among Hobart seniors, limited use of the program by Hobart seniors), Table 6 outlines three short-term and two long-term strategies. We sought the feedback of all members of the advisory committee of the Hobart transportation program. Members who provided detailed feedback preferred the short-term strategy Horses for Courses, which calls for a collaborative administration of the program by the YMCA and the MRC. Specifically, this strategy recommends that the YMCA continue the voucher-administration program and that the MRC take the lead in client-outreach initiatives.



**Table 6. Template for Strategic Alternatives for Subsidized Transportation for Hobart Seniors**

Strategy	Overview	Length	Reason	Challenges
<b>Maintain status quo</b>	Continue with YMCA, with a few strategic modifications <sup>a</sup>	Short term	<ol style="list-style-type: none"> <li>1. The YMCA has experience running the program.</li> <li>2. The YMCA maintains a rich database of users.</li> <li>3. Users are familiar with the YMCA call-in number.</li> </ol>	<ol style="list-style-type: none"> <li>1. Limited resources available (1 administrator and 1 part-time help)</li> <li>2. Limited outreach effort to inform seniors about the services</li> </ol>
<b>Chart a new path</b>	Assign administration of the program to MRC	Short term	<ol style="list-style-type: none"> <li>1. MRC director is keen to run the program.</li> <li>2. It may be convenient to provide services to many seniors who visit the MRC regularly.</li> <li>3. The MRC has the manpower and volunteers to run the program.</li> <li>4. The MRC has the capability to reach more seniors.</li> </ol>	<ol style="list-style-type: none"> <li>1. The MRC does not have experience in running the program.</li> <li>2. The MRC needs to invest in developing and maintaining a user database, and in outreach efforts.</li> </ol>
<b>Horses for Courses</b>	Let YMCA run the voucher program, and assign the outreach efforts to MRC	Short term	<ol style="list-style-type: none"> <li>1. This is perhaps the least disruptive strategy.</li> <li>2. This strategy leverages the strengths of the YMCA and MRC.</li> </ol>	<ol style="list-style-type: none"> <li>1. There could be potential lack of coordination between the YMCA and MRC with limited prior collaboration experience.</li> </ol>
The long-term strategic alternatives below are recommended in addition to one of the short-term strategies outlined above.				
<b>Rope in the City</b>	Assign administration to MRC; collaborate with the city of Hobart to initiate a dial-a-service for users. (The city may be interested in investing in a couple of buses.)	Long term	<ol style="list-style-type: none"> <li>1. It is possible to provide a dial-a-service to seniors to a few key destinations (e.g., hospitals, shopping mall, and MRC).</li> <li>2. It is possible to offer ADA-compatible services.</li> </ol>	<ol style="list-style-type: none"> <li>1. Approach requires capital investment as well as an operating budget.</li> <li>2. Approach may need substantial external funding.</li> </ol>
<b>Build upon current system</b>	Collaborate with SLCCS to offer a dial-in service using SLCCS's existing fleet of buses	Long term	<ol style="list-style-type: none"> <li>1. Approach does not need any capital investment.</li> <li>2. It is possible to provide dial-in services to seniors to a few key destinations (e.g., hospitals, shopping mall, and MRC).</li> <li>3. It is possible to offer ADA-compatible services.</li> </ol>	<ol style="list-style-type: none"> <li>1. Services may not be available for long hours.</li> <li>2. MRC has limited control in running the programs</li> </ol>

*Notes:* <sup>a</sup> The modifications will include (but not be limited to) a revised pricing structure for taxi vouchers, as well as an increased use of SLCCS services.

MRC=Maria Reiner Senior Center; SLCCS=South Lake County Community Services.

A limitation of this strategic option is that it has the potential for lack of coordination and even for dysfunctional conflict between the YMCA and the MRC. In the event that the Horses for Courses strategy is finally implemented, we therefore strongly recommend that a subcommittee consisting of members of the advisory committee be formed to clearly delineate the tasks for each organization and to regularly monitor the administration of the program.

## **CONCLUSION**

This study provides a good example of how different entities of a community (viz., university researchers, a nonprofit funding agency, and a nonprofit senior center) collaborate with one another to develop an implementable solution to a community problem. Each group contributed its unique expertise to the project. University researchers designed the survey, and collected and analyzed the results. The Legacy Foundation provided the resources to conduct the study, and the MRC helped administer the needs-assessment survey. The project could not be completed without the active participation of each group.

A community-of-learning approach to addressing the increased demand for senior transportation is valuable. Using this approach, community partners bringing different levels and types of expertise can share that expertise to help address the complex issues associated with senior-transportation needs. By sharing knowledge and expertise, the community can more easily identify and implement best practices that support regional needs. The network of partners is also uniquely suited to moving from assessment to action as each partner brings its strengths to the network and the partners together create solutions that would not be possible if only one or two entities attempted to address the problem. The learning in this case involved acquiring a better understanding not only of senior-transportation needs but also of the social capital required to facilitate collaboration among the partners.

Our study has several limitations. The subject pool contained only 117 respondents. A larger sample size would have enabled us to undertake data analysis that was more comprehensive. It has been a challenge to reach out to more seniors. We also collected data from seniors who visited the MRC or resided in the three senior homes in Hobart. Although these participants provided a representative sample of seniors, it is possible that seniors living in private homes would have provided a unique perspective to the issue of senior transportation. Despite these limitations, we hope our study will serve as a template for a successful community-of-learning project.

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***Structural and Contextual Frameworks: Distinguishing Literal  
from Metaphorical Depictions of Exaggerated Size\****

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**ABSTRACT**

In 2016, the authors proposed the Contextual Framework and Structural Framework for understanding pictorial metaphors. These two dichotomous frameworks are especially useful for assessing the apprehension by viewers of pictorial devices that can be used either literally or metaphorically. One such pictorial device is *exaggerated size*—that is, depicting objects as being overly large. This pictorial device can be used metaphorically (e.g., to indicate importance) or literally (e.g., to depict a giant). We analyze three comic book covers from the Silver Age of American comic books using both frameworks to illustrate how observers distinguish metaphoric pictorial devices from literal ones.

**KEY WORDS** Pictorial Metaphor; Exaggerated Size; Psychology of Art; Cognition; Comics Theory

Metaphor is pervasive, existing contemporarily as an inextricable component of artistic and commercial media. A linguistic metaphor, such as those in textual media, occurs when two different terms (A and B) are shown to be the same (A is B). For example, the linguistic metaphor “John has a heart of stone” uses two different terms (“heart” and “stone”) and shows them to be the same (the heart is stone; Kennedy 1982). Thus, when a linguistic metaphor is created, the proposed equivalence of the separate terms creates a categorical error (e.g., hearts do not belong to the category “stone”). The goal, then, of the individual interpreting the metaphor is to attempt to remedy this categorical error by applying traits from the source term (A) to the target term (B) in order to conceptualize their likeness (Feinstein 1982).

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Whereas once it was thought that metaphor was solely a linguistic device, cognitive metaphor theory proposes that metaphor is a function of human cognition (Lakoff and Johnson 1980). Building from that premise, cognitive metaphor theory proposes that human cognition categorizes and understands disparate concepts in regard to their metaphoric similarities of meaning. This proposition provides motivation and validity to inquiries about metaphor in nonlinguistic mediums, such as pictorial art (including fine art, commercial art, photography, etc), as it follows that if metaphor can be nonlinguistic then it can be present in nonlinguistic mediums. This is especially prevalent in our current society, with visual language becoming extensively used in our communications (in social media platforms such as Instagram and Snapchat, for example), and as a result, pictorial metaphors more and more pervade modern life (in road signs, works of art, diagrams in instructions or labels, etc.). As such, an understanding of the mental processes by which they are identified and interpreted has the potential to serve in various domains. Though cognitive metaphor theory has resulted in a surge of research about pictorial metaphor in the past 30 years, with a resultant expansion in the body of extant literature, there is still no consensus on how pictorial metaphors are apprehended by viewers (Cohn 2013; El Refaie 2003). Particularly, there is still little consensus on (1) how a viewer determines if a picture is metaphorical as opposed to literal, and further contention as to (2) how individuals arrive at an interpretation of a given pictorial metaphor.

In an attempt to provide a basis for consensus and to unify competing theories, earlier research from the current authors hybridized extant theories to construct two heuristic frameworks—contextual and structural—which outline how an individual identifies and interprets pictorial metaphors (Crawford and Juricevic 2016). The Contextual Framework proposes that individuals, using top-down, knowledge-driven processing, utilize several layers of external contextual knowledge to identify and arrive at a single interpretation of a pictorial metaphor, while the Structural Framework proposes that viewers, using bottom-up, stimulus-driven processing, identify and build up multiple interpretations for a possible pictorial metaphor via an analysis of structural pictorial elements within the depiction (Table 1). In this way, each of the two frameworks represents a syncretism of similar sensibilities on metaphor in cognitive psychology, and together, they form two diametric arms of a singular theory.

**Table 1. Contrasting the Contextual and Structural Frameworks**

	<b>Contextual Framework</b>	<b>Structural Framework</b>
Possible Number of Interpretations	singular	multiple
Type of Processing Utilized	top-down	bottom-up

Crawford and Juricevic (2016) utilized these frameworks to investigate the metaphoric and literal usage of exaggerated size (i.e., depictions of a figure as abnormally large) in comic book depictions from multiple eras of American comic books. Exaggerated size was the chosen pictorial device because it can be used both literally and

metaphorically. The domain of comic book depictions was chosen for analysis because there is no broad preference for utilizing this pictorial device to depict primarily literal or primarily metaphoric figures. For that reason, the usage of exaggerated size in comic books provides a unique opportunity to test these frameworks. The authors' past research analyzed one metaphoric comic book cover from the Golden Age of American comic books (c. 1938–c. 1950), one literal cover from the Silver Age (c. 1956–c. 1970), one metaphorical cover from the Bronze Age (c. 1970–c. 1985), and one metaphorical cover from the Modern Age (c. 1985–present). In our previous research, we chose comic book covers as exemplars that articulated the more nuanced ways in which the frameworks arrive at concordant or discrepant interpretations when analyzing the same comic book image. In contrast, it is the goal of the current analysis to illustrate the universality of the frameworks by allowing history (i.e., popular consensus of historical significance) to provide the set of covers. Specifically, we were able to identify three covers that were consistently present in 18 lists, indicating that they are three of the most iconic comic book covers to feature exaggerated size.

## **TESTING THE FRAMEWORKS WITH COMIC BOOK DEPICTIONS**

### *Analysis Criteria*

To test the function of the two frameworks, the present research will look at three of the most iconic and historically important comic book covers that use exaggerated size either metaphorically or literally. For this research, Marvel Comics covers rather than DC Comics covers were chosen because Marvel Comics employed the Marvel method. The Marvel method gave artists much greater freedom in the creation of their images because artists worked from a writer's plot rather than from a full script (Potts 2013:426; Talon 2007).

By limiting our selection to Marvel Comics, we were able to analyze how artists well practiced in visual language communicated literal and metaphorical information, unhindered by the story authors, who might not be as fluent in visual language. These three covers were chosen from the available Marvel covers because they employ the pictorial device of exaggerated size and are widely considered to be among the most iconic cover images of all time, based on aggregated results from 18 separate lists (Table 2). Though this research focuses exclusively on comic book covers for practicality's sake, this is not meant to imply that the Cognitive and Structural Frameworks are useful only in this context or that a given comic book reader would be reliant solely on a cover image in apprehending metaphorical and literal pictorial devices therein. Additionally, the frameworks are presented and articulated separately for the sake of delineation and to highlight the nuanced differences between their functional processes rather than to propose that the frameworks work independently and without the possibility of reciprocal influence.

**Table 2. Aggregated List Results**

List Title	List Ranking			Source
	<i>Amazing Spider-Man #50</i>	<i>Avengers #57</i>	<i>Fantastic Four #1</i>	
100 Favorite Comic Book Covers—Part I	—	—	45	Thompson (2009)
The Real Top 70 Marvel Covers: The Master List	15	10	43	Harris (2010)
Top 150 Covers of the Silver Age	47	5	21	Krakoia (2011)
Some of the Most Iconic Comic Book Covers Ever	11	—	18	Guff (2015)
60 Greatest Ever Marvel Comic Book Covers	11	7	26	Opie (2014)
The Top 50 Most Memorable Covers of the Marvel Age: #25-1	5	13	2	Cronin (2011)
The Top 20 Coolest Comic Covers	—	18	—	CoverBrowser (N.d.)
10 Most Iconic Comic Book Covers of All Time	3	—	4	Cronin (2012)
The 200 Most Iconic Comic Covers Ever	32	79	8	Listal (2016)
Greatest Comic Book Covers: The Sincerest Form of Flattery	—	—	Yes	Morrison (2004)
The Greatest Superhero Comic Book Covers of All Time	6	36	46	Ranker (N.d.)
The 15 Best Superhero Comicbook Covers	—	—	2	Evry (2016)
50 Comic Books That Explain the Comics Industry Today	—	—	5	Abad-Santos (2015)
The 100 Greatest Silver Age Comic Book Covers of All Time!	2	16	—	Brady (2009)
Find out the 75 Greatest Marvel Comics of All-Time	43	50	14	Morse (2014)
What Is the Best Comic Book Cover of All Time?—Ricardo Melo	1	—	—	Melo (2013)
What Is the Best Comic Book Cover of All Time?—Robert Frost	7	—	—	Frost (2015)
What Is the Best Comic Book Cover of All Time?—Mark Hughes	—	—	5	Hughes (2011)
Marvel Comics: 75 Years of Cover Art	Yes	Yes	Yes	Cowsill and Granov (2014)
The Greatest Comic Book Covers of All Time	4	—	Yes	Frankenhoff and Thompson (2012)
Total	12 (66.7%)	9 (50.0%)	14 (77.8%)	



Following the methodology used in previous research (Crawford and Juricevic 2016), as initially proposed by Forceville (2002:2), this analysis comprises a series of four analytical questions:

1. Is the image metaphorical?
2. Which are the two terms of the metaphor, and how do we know?
3. Which is the metaphor's target domain (the subject of the metaphor); which is the metaphor's source domain (the concept/attributes/features metaphorically applied to the target); and how do we know?
4. Which features can/should be mapped from the source domain onto the target domain, and how is their selection decided upon?

These questions follow a set sequence and cumulatively describe how a pictorial metaphor is apprehended and interpreted; thus, if either framework identifies an image as literal (rather than metaphorical), the analysis stops, as the later questions are pertinent only to the interpretation of a pictorial metaphor.

#### **ANALYSIS #1: *THE AMAZING SPIDER-MAN*, VOLUME 1, NUMBER 50**

The first analysis of exaggerated size is for the cover of *The Amazing Spider-Man* Volume 1, Number 50 (Lee, Romita, and Demeo 1967). This cover uses the pictorial device of exaggerated size when depicting Spider-Man in the background, with his back turned to a significantly smaller human figure (Peter Parker).

In this cover by John Romita (available at [http://marvel.com/comics/issue/6869/the\\_amazing\\_spider-man\\_1963\\_50](http://marvel.com/comics/issue/6869/the_amazing_spider-man_1963_50)), the figure of Spider-Man is depicted using exaggerated size. The depiction shows a downtrodden Peter Parker walking away from a giant visage of his alter ego, Spider-Man. The two figures have their backs to one another and appear to be moving in opposite directions, with Spider-Man looking back over his shoulder at Peter Parker, and Peter Parker looking down at the ground. The depiction is intended to be metaphorical.

#### *Contextual Framework Analysis*

*Is the image metaphorical?* To begin the analysis, one must first assess if the image is metaphorical. The Contextual Framework is built from the base presumption that all artwork is inherently metaphorical; this image would thus be considered metaphorical (Feinstein 1982). To be understood as a metaphor, however, the image must be *referentially adequate*, such that the presence of the metaphor is cued to the observer (Feinstein 1982). In this cover, the representation of the Spider-Man figure as both particularly salient and incompletely formed (as the figure's hands and legs are omitted

from this depiction) provide adequate visual cues for the apprehension of the present metaphor. In this way, the salience of the figure indicates its importance, and the partial representation of the figure indicates that it is not meant to be interpreted literally.

The Contextual Framework proposes that viewers must understand the various contextual levels in which a pictorial metaphor arises in order for the metaphor to be appreciably understood. As mentioned previously, the context of the cover image may provide sufficient information to cue viewers to the presence of the metaphoric use of exaggerated size in the depiction of Spider-Man. The content of the comic book itself provides a second contextual layer that is further indicative of the metaphoric nature of the cover depiction, as the character of Spider-Man is never depicted therein as being of significantly larger size in comparison to other human figures. As a tertiary level of support, the context of the comic book's content reveals that the human figure on the cover is Peter Parker, the civilian identity of Spider-Man. As Peter Parker is Spider-Man, the presence of both figures on the cover thus violates the standard rules of depiction for the Spider-Man character, as he is not known to be capable of creating copies of himself.

*What are the two terms of the metaphor, and how do we know?* After determining that the picture is metaphoric in nature, one must defensibly determine the two terms of the metaphor. Via the Contextual Framework, Spider-Man is one term of the metaphor, as his rules of depiction have been violated, and this violation itself represents the other term of the metaphor. Thus, if represented verbally, the metaphor could take either the form "Spider-Man (target) is giant (source)" or "giant (target) is Spider-Man (source)."

*What is the metaphor's target domain; which is the metaphor's source domain; and how do we know?* Having identified the two terms of the metaphor, one must make certain that the source and target have been correctly identified and must thus determine the direction of the metaphor (i.e., "Spider-Man is giant" or "giant is Spider-Man"). According to the Contextual Framework, one can rely on various levels of context to indicate the metaphor's direction. The contextual level of the inner pages of the comic book itself (i.e., the story context) would indicate that as Spider-Man is the titular character and the protagonist in the comic, it follows that by virtue of his importance, he would be the target of the metaphor. Secondarily, the world context of the developing Spider-Man canon indicates that Spider-Man's giant size is a violation of the standards for his depiction, and as such, it follows that Spider-Man would be the target of the metaphor. As there is no abstract giant character who appears in the comic book or the broader Marvel Comics universe who could have the traits of Spider-Man applied to him, we know (from that contextual knowledge) that Spider-Man is not the source domain for the metaphor. Spider-Man must therefore be the metaphor's target and his exaggerated size (i.e., "giant") must therefore be the source. In this way, the target and source domains are identified by the various contextual levels in which the pictorial metaphor arises.

*Which features can/should be mapped from the source domain onto the target domain, and how is their selection decided upon?* Now that one has deduced the target and source domains, one must subsequently decide which features can or should be mapped

from the source domain onto the target domain. According to the Contextual Framework, the context provided by the comic book and culture will provide the necessary information. In the world context of American culture, exaggerated size can denote many characteristics, such as strength, power, importance, danger, menace, vigilance, and so on (Schubert, Waldzus, and Giessner 2009; Zanolie et al. 2012). Secondly, at this time in the series, the story context and developing canon make clear to readers that Peter Parker's role as Spider-Man represents a hugely important problem in his life. In this example, both the story and world contextual levels suggest that Spider-Man is important but also has strength and power (and not vigilant-ness, dangerousness, or menace). Thus, in this pictorial metaphor, the features of strength, importance, and power from the source domain are meant to be applied to the target domain of Spider-Man.

*Conclusion.* In sum, the Contextual Framework leads to an understanding of the cover as a metaphoric depiction of exaggerated size wherein the giant figure of Spider-Man (the target) is seen simultaneously as powerful, strong, and important, as the story and cultural contexts provide the association between these traits and giant size (the source). Importantly, note that the Contextual Framework, because of its reliance on a shared cultural context, came to a single interpretation of the metaphoric image.

#### *Structural Framework Analysis*

*Is the image metaphorical?* Analyzing this image via the Structural Framework similarly begins with the question of whether the image is metaphorical. Note that to answer this question, the Structural Framework cannot rely on the context brought to the image; rather, whether the image is metaphorical or literal is determined by the structural elements of the image. Accordingly, the Structural Framework cannot use the information that Spider-Man is a normal-sized human or that he is depicted beside his alter ego (Peter Parker) to indicate that the image is metaphorical, as that information is not contained in this depiction. Given that Spider-Man is not fully formed in this depiction, as his legs and hands seemingly disappear into the background, it follows that an uninformed viewer would presume this image to be metaphorical, as opposed to literal, via an analysis of the structural components of the figure.

*What are the two terms of the metaphor, and how do we know?* If the viewer takes the image to be metaphorical, the viewer must then ask, "Which are the two terms of the metaphor, and how do we know?" The Structural Framework suggests that an analysis of the structure of the image would yield an understanding of the metaphor therein; hence, the structure of the image must identify the metaphor's target as well as its source. In this case, the exaggerated size of the Spider-Man figure in the background makes it the most salient component of the cover. Further, there are no other structural violations to cue the presence of other pictorial devices. Taken together, these alert the viewer that the Spider-Man figure contains both the target and source of this metaphorical depiction.

*What is the metaphor's target domain; which is the metaphor's source domain; and how do we know?* Having identified the two terms of the metaphor, one must make certain that the source and target have been correctly identified and must thus establish the direction of the metaphor. The Structural Framework identifies the figure of Spider-Man as the target of the metaphor, as the structural standards of depiction have been violated (i.e., the figure is incomplete), and utilizes a visual grammar proposed by Feng and O'Halloran (2013) to propose a multiplicity of meanings implied by various structural components of the character's depiction. For this image, according to Feng and O'Halloran's visual grammar, (1) the size of an object reflects that it is important, (2) the elevated location of the object with respect to the viewer reflects that it is powerful, (3) the large distance of the object with respect to the viewer reflects that it is socially distant (i.e., unlike the viewer), and (4) the elevated location of the object with respect to the ground indicates that it is ideal. Because there are no specific visual grammar rules regarding Spider-Man, the Structural Framework indicates that the target of the metaphor is Spider-Man; the source is the exaggerated size, elevated position (from the viewer and from the ground), and large distance from the viewer; and the source domains are respectively importance, power, idealness, and social distance.

*Which features can or should be mapped from the source domain onto the target domain, and how is their selection decided upon?* The final step in the analysis is to determine which features from the various established source domains should be mapped onto the target domain. The Structural Framework relies on pictorial components to actualize pictorial metaphors, and on the social semiotic visual grammar to define their meaning. No component within the framework proposes that a viewer will apprehend every potential metaphor, nor does a component describe how the interpreter may selectively apprehend and ignore particular pictorial metaphors. Thus, the Structural Framework proposes that any combination of the features of importance, power, social distance, and idealness may be defensibly mapped onto Spider-Man.

*Conclusion.* In sum, the Structural Framework predicts that the image may be understood as being metaphorical, with various potential permutations of meaning therein. For example, some observers may conclude that Spider-Man is a powerful and ideal individual, while others may conclude that Spider-Man is important and socially distant. Note that this is in stark contrast to the Contextual Framework, which proposed only a single metaphoric interpretation of this image.

## **ANALYSIS #2: *THE AVENGERS*, VOLUME 1, NUMBER 57 (1968)**

The second analysis of exaggerated size is for the cover of the Silver Age comic book *The Avengers*, Volume 1, Number 57 (Thomas et al. 1968). This cover uses the pictorial device of exaggerated size when depicting the Vision in the foreground, towering over several smaller figures (the Avengers) caught in smoke.

In this cover by John Buscema (available at [http://marvel.com/comics/issue/7307/avengers\\_1963\\_57](http://marvel.com/comics/issue/7307/avengers_1963_57)), the figure of the Vision is depicted using exaggerated size. The Vision is shown to be towering over several members of the Avengers, who appear to be only as tall as the Vision's knees. They seem distressed by the Vision's grandiosity. The depiction is intended to be metaphorical.

### *Contextual Framework Analysis*

*Is the image metaphorical?* The analysis begins with an assessment of the potentially metaphoric nature of the image. The Contextual Framework holds that all artwork is inherently metaphoric; however, a given artistic work must be referentially adequate, such that the metaphor could be readily apprehended by an uninformed viewer. Although the image could appear ambiguous to an uninformed viewer, the Contextual Framework utilizes the contextual levels of the developing Marvel comic book universe and of the interior comic book pages in its assessment of this cover image. Though the Contextual Framework can utilize information from the developing canon of the Marvel comic book universe, the developing canon would not be relevant in this case, as this comic book marks the Vision's first appearance and thus the entirety of the body of knowledge about the character (Thomas et al. 1968). In the context of the comic book itself, the Vision, though giant on the cover, is never shown to be appreciably taller than any of the other normal-sized characters. Thus, the Contextual Framework correctly concludes that this image is meant to be understood metaphorically.

*What are the two terms of the metaphor, and how do we know?* Once it has been determined that the image is metaphorical, the terms of the metaphor must be determined. As the character of the Vision is the most salient image on the cover, and the context of the comic book itself reveals that his standards of depiction have been violated, he must be either the source or the target of the metaphor. Accordingly, the size violation must also be either the source or the target of the metaphor. Represented verbally, the form the metaphor would take would be either "the Vision is giant" or "giant is the Vision."

*What is the metaphor's target domain; which is the metaphor's source domain; and how do we know?* Once the two potential terms of the metaphor have been identified, the direction of the metaphor must be established. One term must be the target, and the other term must be the source. As stated previously, if one were to verbally represent the pictorial metaphor present in the cover, it would take the form of either "the Vision is giant" or "giant is the Vision." As there is no abstract giant character to whom the attributes of the Vision could be applied, the only logical direction for this metaphor to take is for the Vision to be the target and the character's exaggerated (giant) size to be the source.

*Which features can/should be mapped from the source domain onto the target domain, and how is their selection decided upon?* Once the direction of the metaphor has been determined, the next step is to determine which traits from the source domain (exaggerated size) can and should be applied to the metaphor's target (the Vision). As

mentioned previously, in American culture, exaggerated size can denote a multitude of characteristics, such as strength, power, importance, danger, menace, vigilance, and others. (Schubert et al. 2009; Zanolie et al. 2012). As the character of the Vision is shown on the cover as towering over the Avengers (who are known contextually to be the heroes of the series) while they are in defensive postures (arms up, shielding themselves) or are fleeing, it can be inferred that the Vision's exaggerated size is meant to convey his menace, danger, importance, and power.

*Conclusion.* In sum, the Contextual Framework leads to an understanding of the cover as a metaphorical depiction of exaggerated size wherein the giant figure of the Vision (the target) is seen simultaneously as menacing, dangerous, important, and powerful, as the cultural context provides the association between these traits and giant size (the source). Importantly, note that the Contextual Framework, because of its reliance on a shared cultural context, once again came to a single interpretation of the metaphoric image.

#### *Structural Framework Analysis*

*Is the image metaphorical?* An analysis of this comic book cover must begin with the question of whether the image itself is metaphorical. As the central figure of the Vision is shown nearly complete (the exception being those parts that are obscured by smoke) and is shown to be interacting with the environment (e.g., he is occluded by the smoke and seems to be affecting the other figures in the scene), the structural components of this image indicate that the image is meant to be interpreted literally. Though incomplete depiction of a giant figure is often a pictorial cue that the image is meant to be interpreted metaphorically (as with Spider-Man in the first analysis), the information in the picture indicates that the Vision is actually a complete figure who is partially occluded by smoke. Further, perspective geometry indicates that the Vision is standing on the same plane as the other figures; thus, even though his feet are obscured by smoke, he is still interacting with the environment and may be interpreted literally.

*Conclusion.* As the Structural Framework has interpreted this image literally, the analysis stops and the remaining questions for pictorial metaphor analysis are not considered. In sum, the Structural Framework would interpret the comic book cover as depicting a literal gigantic figure. Note that, unlike in the case for the first analyzed metaphoric image, the Structural Framework came to a single, albeit incorrect, interpretation of this metaphoric image.

#### **ANALYSIS #3: *FANTASTIC FOUR*, VOLUME 1, NUMBER 1 (1961)**

The final analysis of exaggerated size is for the cover of the Silver Age comic book *Fantastic Four*, Volume 1, Number 1 (Lee et al. 1961). This cover uses the pictorial device of exaggerated size in depicting a giant green creature bursting from the ground and engaging the Fantastic Four in battle.

In this cover by Jack Kirby (available at [https://marvel.com/comics/issue/12894/fantastic\\_four\\_1961\\_1](https://marvel.com/comics/issue/12894/fantastic_four_1961_1)), the Fantastic Four are shown fighting an enormous green figure known as Giganto. Giganto is depicted using exaggerated size, large enough to hold the Invisible Girl in a single hand. The depiction is intended to be literal.

### *Contextual Framework Analysis*

*Is the image metaphorical?* Analysis of this cover image begins with the question of whether the image is metaphorical. The Contextual Framework contends that all artwork is inherently metaphorical, and it relies on pictorial cues to signal the presence of the metaphor to viewers based on their prior understanding of the context around the metaphor. A given pictorial metaphor must therefore be referentially adequate to cue this process and to be apprehended by the viewer; however, this cover image is replete with pictorial cues indicating that the image is meant to be understood literally (e.g., Giganto is grasping the Invisible Girl, while the Thing and Human Torch are shown to be interacting with Giganto either directly or indirectly). As Giganto is continuously depicted to be of the same exaggerated size throughout the comic and the figure is shown both on the cover and throughout the comic to interact with the real world (thus implying that he is a corporeal creature), it can be inferred that this character is a literal giant.

*Conclusion.* As this image is understood to be literal, the analysis stops and the remaining questions are not considered. In sum, the Contextual Framework has utilized the contextual level of the comic book pages (i.e., world knowledge) to conclude that the use of exaggerated size in depicting Giganto on the cover is meant to be understood literally. Note that the Contextual Framework has proposed a singular interpretation of the image based on the context in which the image has arisen.

### *Structural Framework Analysis*

*Is the image metaphorical?* The Structural Framework's analysis also begins with the question of whether the character depicted in the cover image is metaphorical or literal. As opposed to the Contextual Framework, the Structural Framework must answer this question based solely upon information contained in this image. The image contains a preponderance of pictorial cues indicating that it is meant to depict a literal giant figure: (1) Giganto interacts with the Invisible Girl, as she struggles to escape his grasp; (2) the Invisible Girl is saying, "How can we stop this creature, Torch?" and thus establishes Giganto's realism verbally; and (3) Giganto occludes elements of the picture and is similarly occluded by pictorial elements, thus implying his corporeal nature and realism. Together, these pictorial elements lead to the conclusion that this image is meant to be understood literally.

*Conclusion.* Once again, as the framework has arrived at a literal interpretation of the cover image, the analysis ends and the remaining questions pertaining to analysis of

metaphoric images are not considered. In sum, the Structural Framework has arrived at an interpretation of the cover image as being literal. Note that, contrary to metaphoric images, wherein the Structural Framework proposes a multiplicity of potential meanings, this framework has proposed a singular interpretation of the image.

**CONCLUSION**

On completion of the analyses of these three historically important comic book covers (which happened to all be from the Silver Age of American Comics), all of which use the pictorial device of exaggerated size, using both the Contextual and Structural Frameworks, several important conclusions regarding function have been suggested. Specifically, the analyses have indicated that the Contextual Framework (1) can accurately interpret literal depictions of exaggerated size, (2) can accurately interpret metaphoric usages of exaggerated size, and (3) produces a single shared interpretation for an image. Contrastingly, the Structural Framework (1) can accurately interpret literal uses of exaggerated size; (2) may or may not accurately interpret metaphoric usages of exaggerated size, depending on the realism in the structure of the image; and (3) produces a multiplicity of possible interpretations for metaphoric images. (See Table 3.)

**Table 3. Cover Analyses of the Frameworks**

<b>Issue</b>	<b>Contextual Framework</b>	<b>Structural Framework</b>
<i>The Amazing Spider-Man</i> , Vol. 1, No. 50	single metaphorical interpretation	multiple metaphorical interpretations
<i>The Avengers</i> , Vol. 1, No. 57	single metaphorical interpretation	single literal interpretation
<i>Fantastic Four</i> , Vol. 1, No. 1	single literal interpretation	single literal interpretation

The results of these analyses yield interesting implications about the frameworks. The Contextual Framework functions when analyzing an image via application of multiple levels of contextual knowledge that exist outside of the analyzed image itself. In this way, this framework utilizes top-down processing to apply this preexistent knowledge in its interpretations. This contextual knowledge may either be world knowledge,—comprising the content of the comic book itself as well as the developing canon in the comic book universe (i.e., a character’s norms of depiction)—or cultural knowledge—comprising cultural associations and connotations of pictorial elements (i.e., large size represents importance). Accordingly, this framework may be illuminative of an artist’s creative method employed in the creation of a pictorial metaphor, as when creating a metaphoric image, an artist may rely on both world knowledge and cultural knowledge to define the parameters whereby a given pictorial metaphor may be referentially adequate so as to be apprehended by an observer.



The Contextual Framework may best represent how comic books are interpreted by informed viewers familiar with the standards of comic book depictions. This is because the contextual world knowledge of a comic book universe dictates the requirements for what makes an image referentially adequate (e.g., the standard size of characters, a character's ability to change size). Thus, only viewers familiar with the standards of depiction of a given comic book series would be able to use the strictures of the Contextual Framework to identify metaphorical depictions. For viewers who are unfamiliar, however, the metaphorical image may be misinterpreted as a literal depiction (such as with the second analysis above).

Similarly, an individual may arrive at erroneous interpretations of pictorial metaphors when utilizing the Contextual Framework to analyze images produced in a culture outside of his or her own. Were an individual to be devoid of the cultural knowledge that the artist relied upon in making an image referentially adequate, this uninformed viewer either would be unaware of the presence of a pictorial metaphor or could perhaps misinterpret a pictorial metaphor by associating the source of the metaphor with something unique to his or her own cultural lexicon (presuming that the cultures differ regarding associative connotations for pictorial elements).

Both of these examples indicate how varying levels of contextual knowledge may affect the interpretation of a pictorial metaphor. The Contextual Framework holds that interpretation is mediated by contextual knowledge. As such, differences in contextual knowledge can be expected to change the feasibility of a given interpretation. This could provide a way of understanding how novices interpret images differently than experts do, as well as how cross-cultural misunderstandings could occur.

In contrast to the Contextual Framework, the Structural Framework builds potential metaphoric meanings from an analysis of the structures of pictorial elements. In this way, both the target and source of the metaphor are found within the image itself, and their relationship is proposed in various permutations via bottom-up processing to yield a multiplicity of potential meanings. As the framework functions in this way, it may identify and interpret metaphors that do not align with the artist's intent, as an uninformed viewer would necessarily lack the basic contextual knowledge defining the parameters by which a depiction is referentially adequate. For an image to be referentially adequate it is, by definition, reliant upon the referencing of knowledge that exists outside of the metaphorical depiction. Thus, the Structural Framework may best represent how an uninformed viewer, who is wholly unreliant upon outside knowledge, attempts to decipher a comic book image. Rather than these frameworks being mutually exclusive ways of interpreting an image, a hierarchy of the frameworks may be implied, whereby an individual's ability to utilize contextual knowledge dictates which framework the individual would utilize. Specifically, the Structural Framework may describe how new viewers attempt to understand metaphor in depiction, while the Contextual Framework may describe how experienced viewers interpret images. Accordingly, the two frameworks are neither incommensurable nor mutually exclusive with respect to either observers or images.

The scientific analysis of metaphor has yielded a preponderance of competing theories, sensibilities, data, and schools of thought (Forceville 2016). The Contextual Framework and the Structural Framework add to this growing body of work by proposing two separate approaches through which metaphor in art can be apprehended and analyzed. Further, by separately focusing on the context and structure of the metaphoric image, and by establishing a pragmatic hierarchy to their use based on the viewer's experience, the two frameworks unify what were previously separate focuses of inquiry (i.e., context and structure).

Note that nothing in the Contextual and Structural Frameworks limits their application to comic book art. Both frameworks have the potential to illustrate how viewers apprehend metaphoric and literal information in *any* image. Future research must focus on utilizing the Contextual and Structural Frameworks in the analysis of pictorial metaphor in other forms of art, such as classical, abstract, commercial, and so on. The universality of these frameworks will thus be further defensible, as the function of these frameworks would be shown to not be dependent upon tropes of depiction within the domain of comic books. Additionally, experimental work would be necessary to determine how the two frameworks interact. For example, when the two frameworks disagree on an interpretation of an image, how does the cognitive system process this disparate information?

Importantly, the work reported here provides an illustration of how the Contextual and Structural Frameworks can be applied to an analysis of literal and metaphorical images. It is hoped that these two frameworks can provide a structure for the further research of our understanding of metaphoric images in general.

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***Willingness to Pay for Reducing Global and Local Air Pollution:  
Evidence from Terre Haute, Indiana\****

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**ABSTRACT**

This article examines results from a survey of Indiana State University (ISU) students on the level of concern and willingness to pay for improving the environment on local and global levels using the contingent valuation methodology. On the local level, the environmental issue presented was a local air-quality problem associated with the “Terre Haute smell” and the proposed funding would reduce odors from the sewage treatment process. A survey of students has the potential to bring a new perspective because many students are not originally from Terre Haute and, unlike longtime residents, may not be accustomed to living with these odors. The global environmental scenario involved climate change from greenhouse gases, and the proposed funding would achieve climate neutrality by purchasing offsets for university travel.

Students were sensitive to the price of the proposals, and more support was found for reducing greenhouse gases than for reducing the local air-pollution odor problem. Support for reducing the local odor problem increased among students who reported noticing the smells more often and who were concerned about the potential health effects. Political affiliation is related to the support for reducing greenhouse gases, but not to the local air-quality problem.

**KEY WORDS** Local Air Pollution; Smells or Odors; Global Climate Change; Willingness to Pay; Contingent Valuation Survey

This article presents the results of a survey of ISU students conducted in November and December 2007. The purpose of the study is to examine student concern about both local

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air quality and global climate change. Both were well-known issues during this time, the “Terre Haute smell” on the local level and the effect of greenhouse gases on global climate change at the national and international levels. The contingent valuation method, with a referendum format, is utilized to estimate the willingness to pay (WTP) for local and global pollution reduction. This allows a comparison of support for reducing pollution with local versus global impact. This article contributes to the contingent valuation literature with examination of the experience of odors related to the WTP for air-pollution reduction, in addition to perceived health effects. Odors are often one of the obvious aspects that people directly notice in their experience of air and water pollution. Analyzing student concern about pollution may be interesting to the local area but also to the university, as the experience of the local area contributes to the university’s ability to attract students. In addition, use of student surveys serves as an excellent teaching tool, as students can compare their own opinions and responses to the survey questions.

## **BACKGROUND ON LOCAL AIR QUALITY ISSUES**

Terre Haute, Indiana, has had problems with odor for decades. In the past, even people who had never been to Terre Haute had heard of the city’s odor problems. The smell originated from an industrial corridor along the Wabash River on the city's southwest side, where various industries have operated over the years. Most recently, the corridor was home to an International Paper mill, a Railworks railroad-tie treatment facility, and the municipal wastewater treatment plant. Although Terre Haute has other industries with a variety of emissions, the “Terre Haute smell” has been identified with this geographic area, partly because of the extent of residential and commercial activity in this area and the proximity to Interstate 70, making these the most widely observed and complained-about smells in the city at the time. Rose–Hulman students studied the smells in 2002, also identifying these three sources (AP State & Local Wire 2002). Of these three sources, two remained at the time of this survey, as the International Paper mill had closed down a few months earlier in 2007. The Railworks railroad-tie treatment facility has since closed but was still functioning at the time of this survey. The focus of the survey on the wastewater treatment plant, which is the remaining source of the odors, continues to be relevant today.

The City of Terre Haute continues to implement improvements in wastewater treatment, with increased sewer charges to residents. Although the survey data are from more than a decade ago, they demonstrate the extent of interest of Indiana State students in both local and global environmental issues at that time. Particularly because many Indiana State students remain in Indiana, these former students may continue to influence the direction of environmental action in Indiana. Universities with similar local disamenities may also be interested in the survey results showing the extent that students show concern for eliminating air pollution associated with unpleasant odors.

Odors per se are not regulated at the federal or state level unless they are associated with regulated air pollutants that have odors. The odors themselves may be subject to regulation at both the city and county levels, to the extent that they are classified as public nuisances. For example, Terre Haute’s previous mayor, Kevin Burke,

expressed concern about the odors and their negative effect on the city's image, particularly because of the proximity of the odors to Interstate 70; however, Burke also stated that the City of Terre Haute must first tackle its contribution to the odor problem, which comes from the sewage treatment plant (Greninger 2004).

The offensive odors in the Terre Haute air have become a major issue of contention in recent years as the city has tried to remake itself into something other than a depressed industrial city. More recently, in a 2014 interview for *Business Wire*, Terre Haute City Engineer Chuck Ennis was quoted as saying, "In the minds of many who pass through here the image of Terre Haute is that it smells; that it is 'a dirty little Midwestern town.' The industries have been closed for several years now, making the sewage odor the last offensive smell left." Because not all students are longtime residents of Terre Haute, a survey of students has the potential to bring a new perspective to this problem, as longtime Terre Haute residents may have become accustomed to living with the odors.

### **ESTIMATING WILLINGNESS TO PAY FOR REDUCING POLLUTION**

Both contingent valuation (CV) and hedonic modeling studies may be used to value the benefits of reducing negative externalities of many types of environmental goods. When both use and nonuse values are involved, stated-preference surveys, such as contingent valuation, are the only methods available to estimate nonuse values. [See Mitchell and Carson (1989) for a thorough discussion of CV survey methods.]

Smith and Huang (1995) provide a meta-analysis of hedonic property-value studies valuing air quality using particulate matter as the pollution measure. Similarly, Vassanadumrongdee, Matsuoka, and Shirakawa (2004) provide a meta-analysis of CV studies that value reduction in morbidity risks from air pollution. Studies of valuing air-pollution reduction do not necessarily focus on the issue of odors, however. Odors may be viewed simply as a nuisance rather than as having health effects, raising similar issues as noise pollution and visual/scenic effects.

Hedonic property-value studies have examined the effect of proximity to large-scale livestock operations on property values (Herriges, Secchi, and Babcock 2005; Palmquist, Roka, and Vukina 1997; Ready and Abdalla 2005). To the extent that the major negative externality related to large-scale livestock operations is the smell, hedonic property-value studies incorporating these effects may capture the willingness to pay for odor reduction. In fact, Herriges et al. find that living downwind of a livestock operation increases the negative impact on property values, suggesting a link to odors. Saphores and Aguilar-Benitez (2005) note a statistically significant 3.4 percent reduction in property values for homes near odorous polluters in several California cities.

When using CV methods for evaluating annoyance reduction, the difference between subjective and objective measurement can indicate value. Barreiro, Sánchez, and Viladrich-Grau (2005), in a CV study of people's WTP to reduce noise, note that people believed there was a greater difference in noise levels between a standard workday and a Sunday morning than between a standard workday and a standard evening, even though there was no objective difference. For an issue like odors, this is important to consider,

because CV studies focusing on odor likely rely more on subjective valuations than objective valuations because of the relative lack of available data.

Caplen (2000) noted that survey respondents' WTP for reduced airport noise intrusion was directly related to their belief that the airport was an important source of jobs for the community. This is particularly applicable in Terre Haute, because many residents are reluctant to impose restrictions on industry, fearing that any new restrictions may become catalysts for industry to leave town. Thomson and Kempton (2018) examine visual and auditory amenities and disamenities of a wind turbine and a coal plant utilizing a CV survey, similar to this study for its emphasis on the local aspect.

The second emphasis of the current study is on examining willingness to pay for reducing greenhouse gases that lead to climate change. Others have surveyed university students on this global issue. The question used in this study is the one used by Steele (2008b) in surveying Berea College students in 2006. In his paper examining whether a gender gap existed in environmental concern, he did not find statistically significant differences by gender in willingness to pay for reducing global climate change. He did find that students with higher GPA and those who had taken at least one Sustainability and Environmental course were more likely to be willing to pay to reduce global climate change. He also found a price effect: As the price of the proposal increased, students were less likely to support the proposal. In a multiuniversity study examining student support for climate-change mitigation policy from a 2001 survey of 1,770 students at 92 universities, Cai, Cameron, and Gerdes (2010: 448) found that "women derive more utility from any kind of climate change mitigation policy and self-identification as a conservative is associated with less utility from climate change mitigation." In a nationally representative survey for the United States conducted in 2010 and 2011, Kotchen, Boyle, and Leiserowitz (2013) examined willingness to pay to reduce domestic greenhouse gas emissions by 17 percent by 2020 utilizing different mechanisms of cap and trade, carbon tax, and greenhouse-gas regulation. They found that Republicans and those with no party affiliation have a lower WTP than Democrats for all of these mechanisms. They generally found that WTP increases with education, decreases with age, and increases with income. They also did not find a statistically significant gender effect on WTP for any of these mechanisms.

### *Data Collection*

A survey of ISU undergraduates was conducted with questions about local air-pollution issues and about attitudes toward the environment as part of the stated-preference study about willingness to pay to reduce greenhouse-gas emissions and improve local air quality. This combination allows for a comparison of concern on the local and global levels.

The CV question on the Terre Haute smell focused on the willingness to pay to reduce the odors from the wastewater treatment plant. This was chosen as a vehicle because it seemed the most believable scenario in which the university could decide to contribute to improving the wastewater treatment plant and reducing the odors. The exact wording and scenario are given in Figure 1.



**Figure 1. Terre Haute Smell Contingent Valuation Scenario and Survey Question**

**THE POLICY PROPOSAL**

Suppose you were told that a primary source of the "Terre Haute" smell was the municipal wastewater treatment plant, and that the City of Terre Haute had a plan to change the sewage treatment process in order to eliminate the smell. Suppose that a vote or referendum were held today in which University students could vote to advise the President and Board of Trustees of Indiana State University to support or oppose a policy that would help fund these proposed changes.

Given this information, how would you vote on the following referendum question, Yes or No?

A Yes vote supports the new policy change and would result in an additional charge of \$100 per semester on your term bill. Keep in mind that \$100 spent on your term bill would not be available for your other spending.

A No vote indicates you are against the proposed policy change.

Yes

No

The policy proposal for reducing greenhouse gases was to purchase offsets to reduce the impact of university travel on global warming. The scenario for the climate neutrality question is given in Figure 2, and the wording of the question is in Figure 3.

This CV question on climate change and many of the general questions about environmental behaviors and attitudes are from a questionnaire developed by Scott Steele at Berea College. [See Steele (2008a) for information on his use of surveys as an undergraduate research tool in his classes.]

Both proposals are presented in a referendum format, as recommended by the NOAA panel that evaluated the CV method after the Exxon Valdez oil spill (Portney 1994). Students should have found the possibility of funding an initiative through a referendum believable, as during fall 2006, Indiana State students voted on a referendum to fund mass transit in Terre Haute, in return for free bus passes for students. Five different per-semester term bill increases of \$5, \$25, \$50, \$75, and \$100 were randomly assigned to respondents. Each respondent faced the same price for both the local and the global CV scenario. Random assignment of prices is common practice in the CV literature in order to generate price variation while preserving the referendum format. [Kling, Phaneuf, and Zhao (2012) discuss a variety of issues about CV research, using an example survey that also presents randomly assigned prices.]

Before students were presented with the local air-quality CV scenario, they were asked about their experiences of the "Terre Haute smell," where they believed it came from, and the extent of their concern about the smell. For the global issue, after responding to the climate neutrality CV referendum, students were asked about their attitudes and actions on a variety of environmental issues, including their opinions about ISU's commitment to environmental sustainability and whether they had seen *An Inconvenient Truth*, the Al Gore film on climate change .

**Figure 2. Climate Neutrality Contingent Valuation Scenario**

Please consider the following:

Scientists now believe that global climate change is affected by the amount of carbon dioxide and other "greenhouse gases" which are emitted during travel and electricity generation. Many scientists believe that these greenhouse gases are trapping heat and raising the temperature of the earth.

The increase in global temperatures is expected to result in other climate changes including rises in sea level and changes in the amount and pattern of precipitation. Such changes may increase the frequency and intensity of extreme weather events such as floods, droughts, heat waves, and hurricanes, change agricultural yields, or contribute to biological extinctions. Although warming is expected to affect the number and magnitude of these events, it is difficult to connect any particular event to global warming.

In response to this problem, suppose there was a student-initiated referendum aimed at leading Indiana State University towards **climate neutrality**. To become a climate neutral organization the University would need to dramatically reduce its emissions of greenhouse gases or--and this is the policy proposed below--provide resources to reduce the amount of greenhouse gases released elsewhere.

To do this the University would purchase "offsets" that support, for example, reforestation (to reduce greenhouse gases in the atmosphere) or the development of renewable energy sources built to displace existing traditional sources of power generation.

**THE POLICY PROPOSAL**

Suppose that a vote or referendum were held today in which University students could vote to advise the President and Board of Trustees of Indiana State University to support or oppose a policy of requiring the University to purchase "offsets" in sufficient quantity to eliminate any net increase in greenhouse gases resulting from any University-sponsored travel. Under such a policy, each unit of carbon released by University-sponsored travel would be "offset" so that, in aggregate, University-sponsored travel would be climate neutral in the sense that it would not result in a net increase in greenhouse gases [this policy is presented diagrammatically below].

Money is transferred to develop alternative energy sources—the new energy source generates the same energy with less greenhouse gasses. Policy goal is to generate reductions in greenhouse gasses *equivalent* to our production of greenhouse gasses (from college-sponsored transportation).

### Figure 3. Climate Neutrality Contingent Valuation Survey Question

At the moment, University-sponsored travel is extensive, including study-abroad programs, domestic travel by car and by plane, travel associated with athletic participation, service learning, student teaching, nursing practicums and the like.

In addition, it is important to recognize that the reduction in greenhouse gases that would be achieved if the University were to adopt such a policy would be so small as to have a nearly zero overall impact in slowing climate change. At the same time, such a policy would be consistent with other University actions such as switching from a coal-burning to a natural gas powered power plant and the campus recycling program.

Given this information, how would you vote on the following referendum question, Yes or No?

A Yes vote supports the new policy change and would result in an additional charge of \$100 per semester on your term bill. Keep in mind that \$100 spent on your term bill would not be available for your other spending.

18. Given a yes vote, the student body advises the President and Board of Trustees of Indiana State University to purchase "offsets" in order to eliminate any increase in greenhouse gases from University-sponsored travel.

A No vote indicates you are against the proposed policy.

Yes  
 No

#### *Data Description*

The survey was web-based, with students receiving an email invitation to complete the survey. The initial email was sent out November 26, 2007, with two reminders, the first on December 5 and the second on December 12. A random sample of 1,700 ISU undergraduates had been selected from a population of 7,382 full-time undergraduate students in fall 2007. Separate subsamples were also included of all students in married student housing (184 students) and all students from Kentucky, Ohio, and Tennessee. The first was chosen to explore whether marital status has an impact, by oversampling married undergraduates. The second oversampling was designed to allow comparison with a study of Berea College students on the climate-change topic by including more students from the states that Berea College primarily serves.<sup>1</sup> The response rate for the general sample was 11.7 percent, for the married student housing subsample was 10.3 percent, and for the Kentucky, Ohio, and Tennessee subsample was 12.7 percent. The total number of responses was 226, for an overall response rate of 11.6 percent. Because of some missing responses, the sample size for the multivariate statistical analysis is somewhat smaller. Although conducting a similar survey again would have the advantage of reflecting current student opinions and WTP, the advantage of examining these 2007 data is to capture the attitudes when the odor problem was even more pronounced than under current conditions and before climate change had become as politicized.

Although the response rate was disappointing, the observable characteristics match fairly well with the characteristics of the ISU undergraduate student body (Table 1). (The figures might not exactly correspond to the students used to draw the sample, part-time students are included in the ISU percentages.) The sample has a higher percentage of seniors and a lower percentage of first-year students, which may also be a

result of higher student attrition toward the end of the fall semester among first-year students.<sup>2</sup> Also, the sample has a lower percentage of African Americans and a higher percentage of females.

**Table 1. Comparison of Sample to population of Indiana State University Undergraduate Students, Fall 2007**

	Sample % ( <i>N</i> = 198)	ISU % ( <i>N</i> = 8,493) <sup>a</sup>
Indiana	80.3	79
Female	52.53	50.96
First-year	19.19	36.87
Sophomore	14.14	18.82
Junior	25.76	18.73
Senior	40.91	25.59
International students	1.52	1.30
African American, non-Hispanic	6.06	13.00
Asian or Pacific Islander	1.01	0.99
Native American/Native Alaskan	1.52	0.38
Hispanic	0	1.37
Other race/ethnicity	4.04	3.78
White, non-Hispanic	87.37	79.45
College of Arts & Sciences	44.44	46.06
College of Business	16.16	15.47
College of Education	13.13	9.02
College of Nursing, Health and Human Performance	15.66	17.38
College of Technology	10.61	12.06

*Note:* <sup>a</sup> *N* = 7,403 for college percentage calculation because students in open-preference, nondegree, and conditional admission are not included in a college.

*Source:* Author's calculations from sample and OSPIRE information from ISU fall 2007 undergraduate enrollment.

## EMPIRICAL METHODS

First, some descriptive statistics are presented on the extent of the willingness to pay for reduction of both local odor and greenhouse gas emissions. Each stated-preference scenario is then examined separately to better understand the basis for the votes on these issues. Finally, a multinomial logit model is estimated to compare those who either (1) voted no on both or (2) voted yes on only one of the referenda questions, to those who voted yes on both.

## RESULTS

Examining the responses on local odors, it is interesting to note that of the 170 respondents who were not from Terre Haute, 54.7 percent had noticed the odors before deciding to attend ISU. Reducing these odors may be of interest from a university admissions perspective, as these were the students who decided to attend ISU anyway, whereas other prospective students' admissions decisions may have been negatively affected by the odors.

Of all respondents, approximately 70 percent thought that the odors were very unpleasant. For reducing greenhouse gas emissions, when the price is only \$5 per semester, 75 percent of students support the measure, whereas at \$100 per semester, support falls to about 48 percent (Table 2). The percentage voting yes was never as high for reducing local odors, although the percentages voting yes in the \$25 and \$50 scenarios were quite similar. Support for local odor reduction fell to 25 percent voting yes at the price of \$100 per semester.

**Table 2. Percent of Yes Votes by Willingness-to-Pay Amount**

<b>\$/term</b>	<b>Local Odor Reduction</b>	<b>Climate Neutrality</b>
5	53.3	75.0
25	53.1	53.9
50	63.6	64.7
75	45.0	54.8
100	25.0	47.8

Placement in the survey might lower the WTP for the second scenario (local odors) relative to climate neutrality. This would be expected to affect those with a higher price more than those with a lower price, and there is some evidence of this at the highest price in Table 2, although this would not explain the higher percent difference at the lowest price, relative to the mid-range prices. The perceived costs should be the same for both scenarios, by design. The time frame was not specified for completion of the odor reduction, however, at least by implication, the climate-neutrality scenario stipulated that the funding would be sufficient to achieve climate neutrality for the university.<sup>3</sup> This could have the effect of lowering the perceived benefit for the local odor reduction. In addition, given the global nature of the benefits of the climate-neutrality scenario, even students who would not remain in Terre Haute after graduation would expect to get the benefits of ISU's commitment to climate neutrality. This also could contribute to a lower WTP for local odor reduction.

Table 3 describes the variables, and Table 4 includes means for the variables utilized in the multivariate analysis. The probit model estimation results for the local odor initiative are included in Table 5. The marginal probabilities are reported instead of the parameter estimates in order to see the magnitude of the effects. The estimated standard errors are robust to heteroscedasticity. The results show that as price rose, the probability

of a yes vote declined (an increase of \$10 associated with a decline in support of approximately 3 percentage points). The income-related question of how students perceive themselves relative to other students in terms of their levels of “spending money” suggests that students classifying themselves as having less spending money than their peers were less likely to vote yes on the initiative (by a large difference—21 percentage points). No statistically significant differences in support for this initiative were found by college, gender, race, marital status, or class standing, or whether students had children. None of the geographical variables were found to make a difference on student votes. Students from Terre Haute, or Indiana in general, did not show different levels of support than did students from elsewhere, nor were there differences for students coming from coal-producing counties or rural areas. Party identification and political persuasion also were not significantly related to the vote on local odor control.

**Table 3. Variable Names and Descriptions**

<b>Variable</b>	<b>Description</b>
WTP amount (\$)	WTP amount presented in referendum scenario
College of Business	1 = College of Business, 0 = Other college
College of Education	1 = College of Education, 0 = Other college
College of NHH	1 = College of Nursing, Health and Human Performance, 0 = Other college
College of Technology	1 = College of Technology, 0 = Other college
Female	1 = Female, 0=Male
African American	1 = African American, non-Hispanic; 0 = white or other race/ethnicity
Other race/ethnicity	1 = Asian, Pacific Islander, Native American, Native Alaskan, or other; else 0
Have children	1 = had one or more children, 0 = no children
Single	1 = single, 0 = married or divorced/separated
Grew up in rural area	1 = selected only rural; 0 = all other combinations of rural, urban, suburban
More to spend than peers	1 = More or significantly more spending money than peers, 0 = otherwise
Less to spend than peers	1 = Less or significantly less spending money than peers, 0 = otherwise
Senior	1 = senior; 0 = junior, sophomore, or first-year student
Junior	1 = junior; 0 = senior, sophomore, or first-year student
Sophomore	1 = sophomore; 0 = senior, junior, or first-year student
International student	1 = international student, 0 = not international student
Indiana	1 = from Indiana, 0 = not from Indiana

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**Table 3. Variable Names and Descriptions, concl.**

<b>Variable</b>	<b>Description</b>
Coal-producing county	1 = from a coal-producing county, 0 = not from a coal-producing county
Democrat	1 = Democrat; 0 = Independent, Republican, or other party
Independent	1 = Independent; 0 = Democrat, Republican, or other party
Other party	1 = other party; 0 = Democrat, Republican, or Independent
Moderate	1 = moderate; 0 = liberal, moderately liberal, conservative, or moderately conservative
Liberal	1 = liberal or moderately liberal, 0 = conservative or moderate
ISU Sustainability Commitment weaker than should be	1 = Believes ISU's commitment to environmental sustainability is either weaker or significantly weaker than it ought to be; 0 = believes commitment is about appropriate, is stronger, or is significantly stronger than it ought to be
Saw Al Gore film <i>An Inconvenient Truth</i>	1 = saw film, 0 = did not see film
Terre Haute	1 = from Terre Haute, IN; 0 = not from Terre Haute, IN
Unpleasant odor	1 = agree or strongly agree that odors in Terre Haute are extremely unpleasant; 0 = no opinion, disagree, or strongly disagree
Very or extremely concerned about health effects	1 = very or extremely concerned about potential health effects of air pollution in Terre Haute; 0 = a little or not at all concerned, or don't know
A little concerned about health effects	1 = a little concerned, else = 0
Averting behavior	1 = agree or strongly agree that odors in Terre Haute make me spend less time outside than I would otherwise, else = 0
Harmful health effects	1 = agree or strongly agree that odors probably have harmful health effects
Smell odors daily or several times a week	1 = yes; 0 = never, almost never, several times a year or month
Noticed odor past week	1 = yes, 0 = no

*Note:* IN=Terre Haute; WTP=willingness to pay.

**Table 4. Variable Sample Means**

<b>Variable</b>	<b>Mean</b>	<b>Std. Err.</b>
WTP amount (\$)	49.3182	2.4907
College of Arts & Sciences	0.4444	0.0354
College of Business	0.1616	0.0262
College of Education	0.1313	0.0241
College of Nursing, Health and Human Performance	0.1566	0.0259
College of Technology	0.1061	0.0219
Female	0.5253	0.0356
African American, non-Hispanic	0.0606	0.0170
White, non-Hispanic	0.8737	0.0237
Other race/ethnicity	0.0657	0.0176
Have children	0.2374	0.0303
Single	0.7576	0.0305
Grew up in rural area	0.5000	0.0356
More to spend than peers	0.2727	0.0317
Same to spend as peers	0.3535	0.0341
Less to spend than peers	0.3737	0.0345
Senior	0.4091	0.0350
Junior	0.2576	0.0312
Sophomore	0.1414	0.0248
First-year student	0.1919	0.0281
International student	0.0152	0.0087
Indiana	0.8030	0.0283
<b>N = 198 (variables in multinomial logit model)</b>		
Coal-producing county	0.3252	0.0327
Democrat	0.2961	0.0319
Independent	0.2282	0.0293
Other party	0.2039	0.0281
Republican	0.2718	0.0311
Moderate	0.3641	0.0336
Liberal	0.2816	0.0314
Conservative	0.3544	0.0334
ISU Sustainability Commitment weaker than should be	0.4223	0.0345
Saw Al Gore film <i>An Inconvenient Truth</i>	0.2282	0.0293
<b>N = 206 (variables in Climate WTP probit model)</b>		

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**Table 4. Variable Sample Means, concl.**

<b>Variable</b>	<b>Mean</b>	<b>Std. Err.</b>
Terre Haute	0.2000	0.0295
Unpleasant odor	0.7135	0.0333
Very or extremely concerned about health effects	0.3459	0.0351
A little concerned about health effects	0.4703	0.0368
Averting behavior	0.2486	0.0319
Harmful health effects	0.5622	0.0366
Smell odors daily or several times a week	0.4811	0.0368
Noticed odor in past week	0.5081	0.0369
<b><i>N</i> = 185 (variables in Terre Haute Smell WTP probit model)</b>		

*Note:* Std. Err.=standard error; WTP=willingness to pay.

Of the questions specifically about the experience of the odors, those who smell the odors either daily or several times per week are more likely (by about 19 percentage points) to vote yes. Experiencing the odors as unpleasant is not significantly related to the vote, although increasing concern about the potential health effects of air pollution is associated with voting yes. Those who were either very concerned or extremely concerned about these health effects were much more likely to vote yes than were those who were not at all concerned (43 percentage points), and those who were a little concerned were about 23 percentage points more likely to vote yes than those who were not at all concerned.

**Table 5. Probit Estimation for Referenda on Local Odor Reduction and Climate Neutrality**

<b>Vote on Local Odor Reduction</b>			<b>Vote on Climate Neutrality</b>		
<b>Variable</b>	<b>Marginal effect</b>	<b>s.e.</b>	<b>Variable</b>	<b>Marginal effect</b>	<b>s.e.</b>
WTP amount (\$)	-.0034 **	.0013	WTP amount (\$)	-.0025 *	.0011
College of Business	.0077	.1337	College of Business	-.0100	.1186
College of Education	.0752	.1437	College of Education	-.0460	.1279
College of NHH	-.0150	.1203	College of NHH	-.0847	.1186
College of Technology	-.0797	.1673	College of Technology	-.2053	.1285
Female	.0246	.1007	Female	.0050	.0897
African American	-.1539	.1942	African American	-.0226	.1874
Other race/ethnicity	-.2457	.1481	Other race/ethnicity	.3008 *	.1002

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**Table 5. Probit Estimation for Referenda on Local Odor Reduction and Climate Neutrality, concl.**

Vote on Local Odor Reduction			Vote on Climate Neutrality		
Variable	Marginal effect	s.e.	Variable	Marginal effect	s.e.
Have children	-.1469	.1547	Have children	-.0267	.1237
Single	-.1608	.1611	Single	.0050	.1211
Grew up in rural area	-.1061	.0973	Grew up in rural area	.0036	.0818
More to spend than peers	.1062	.1158	More to spend than peers	-.0624	.0994
Less to spend than peers	-.2154 *	.0951	Less to spend than peers	-.2017 *	.0896
Senior	-.1239	.1207	Senior	-.1609	.1169
Junior	-.0017	.1356	Junior	-.0699	.1294
Sophomore	-.0536	.1455	Sophomore	-.1379	.1437
Terre Haute	-.0171	.1127	Indiana	-.1624 <sup>+</sup>	.0916
Indiana	-.0429	.1194	Coal-producing county	.0336	.0904
Coal-producing county	-.0666	.0942	Democrat	.0191	.1277
Democrat	-.1483	.1347	Independent	.0631	.1107
Independent	-.0954	.1276	Other party	-.0602	.1338
Other party	-.2243	.1363	Moderate	.1193	.0974
Moderate	.0972	.1126	Liberal	.1809	.1061
Liberal	-.0118	.1289	ISU Sustainability Commitment less than should be	.3053 **	.0693
Unpleasant odor	-.1371	.1186	Saw Al Gore film <i>An Inconvenient Truth</i>	.0942	.0895
Very or extremely concerned about health effects	.4257 **	.1282			
A little concerned about health effects	.2324 <sup>+</sup>	.1217			
Averting behavior	.0550	.1119			
Harmful health effects	.0785	.1104			
Smell odors daily or several times a week	.1888 <sup>+</sup>	.0971			
Noticed odor past week	-.0012	.1055			
<b>Log Likelihood: -103.40</b>			<b>Log Likelihood: -114.04</b>		
<b>N = 185</b>			<b>N = 206</b>		

Notes: NHH=Nursing, Health and Human Performance; s.e.=standard error.

<sup>+</sup>p < .10      \*p < .05      \*\*p < .01

Those who report changing their behaviors to spend less time outside because of the odors do not differ from others in their vote on reducing odors. This is interesting because the impact could be thought to go either way—if people are successful at utilizing averting behavior to avoid the smells, they may feel less compelled to pay to reduce the odors; in contrast, the fact that they change their behavior suggests that the odors impose a cost on them. Perhaps the finding of no effect is a canceling-out of these two opposing forces.

The results analyzing the vote for reducing greenhouse gas emissions also are presented in Table 5. Similar to the results for local odor reduction, price has a negative effect on the yes vote. Having less spending money than their peers was negatively related to a yes vote, as it was for local odor reduction. However, for reducing greenhouse gases, students from Indiana were less likely to vote yes than were students from elsewhere.<sup>4</sup> Students who felt that ISU's commitment to environmental sustainability was weaker or significantly weaker than it ought to be were much more likely to vote yes. Similar to the local odor initiative, no statistically significant differences in support for this climate-neutrality initiative were found by college, gender, marital status, class standing, or for those with children; however, although no statistically significant difference was found between support by African American and white students, students reporting other race/ethnicity (including Asian, Pacific Islander, Native American, Native Alaskan, and other) were more likely to vote yes than were white students.

**Table 6. Sensitivity Analysis of Party and Political Identity**

	<u>Climate Neutrality</u>		<u>Local Odor Reduction</u>	
	<b>Marginal Effect</b>	<b>s.e.</b>	<b>Marginal Effect</b>	<b>s.e.</b>
Democrat	.1638	.0985	-.1583	.1081
Independent	.1243	.0985	-.0608	.1205
Other party	.0492	.1061	-.1851	.1246
Moderate	.1109	.0871	.0352	.1040
<u>Liberal</u>	.1734 *	.0887	-.1011	.1032

*Notes:* Probit models same as in Table 5, except including either party or political persuasion, not both together.

s.e.=standard error.

Some sensitivity analysis was done to examine the impact of political-party and political-persuasion variables. The parameter estimate on liberal is not significantly different from the omitted category of conservative at the 10 percent level but is at the 11 percent level in the climate-neutrality probit estimation. As seen in Table 6, however, if only the political-persuasion variables are included (political-party variables omitted), liberals are more likely to vote yes on WTP for climate neutrality than are conservatives

(significantly different from zero at the 6 percent significance level). This same sensitivity analysis was examined for the local odor scenario and did not make a difference. One might actually expect to find more of a difference based on political persuasion, but it is not surprising that it would be stronger for climate change, which has been more highly politicized than a local odor issue would be.

**Table 7. Multinomial Logit Results Comparing Votes on Reducing Local Smell and Achieving Climate Neutrality (N = 198)**

	No Votes		Yes, Local Smell		Yes, Climate	
	Par. est.	s.e.	Par. est.	s.e.	Par. est.	s.e.
WTP amount (\$)	.0155 **	.0057	.0083	.0090	.0046	.0064
College of Business	.3623	.5706	-.2345	.9493	-.6321	.6433
College of Education	.6004	.5808	-.2430	.9337	-1.5640 +	.8959
College of NHH	.3231	.5456	-.6795	.9952	-.9633	.7042
College of Technology	1.6522 *	.7268	.8173	1.0887	.0283	.8714
Female	.0163	.4150	.4098	.6675	-.4398	.4699
African American	.2341	.8405	-.2522	1.2146	.5019	.8266
Other race/ethnicity	-1.4603	9.70e-01	-3.76e+01	9.96e+07	.2810	.8087
Have children	.3520	.6340	.6071	1.0823	.0038	.8445
Single	.1572	.6389	1.3800	1.1616	.2864	.8313
Grew up in rural area	.4174	.3976	-.5736	.6242	.4016	.4732
More to spend than peers	-.0440	.4969	.2269	.8501	.2484	.6052
Less to spend than peers	.8476 +	.4484	1.1596	.7245	1.0131 *	.5141
Senior	1.0734 *	.5882	.9973	.8352	.0936	.6180
Junior	-.8069	.6083	-.4359	1.0341	-.0274	.6696
Sophomore	.6582	.6964	.8692	.9901	.2576	.7391
International student	-36.7411	1.73e+08	-3.64e+01	3.49e+08	2.2257	1.5352
Indiana	.7190	.5128	1.6162	1.1146	-.0722	.5334
Constant	-3.3800 **	1.1575	-5.3783 **	2.0572	-1.3638	1.2348

Notes: Log likelihood = -216.6288

Base is yes vote for both Local Pollution and Climate Neutrality.

Percentages in the data for the dependent variable: both no = 32.8 percent; yes only for odors = 8.1 percent; yes only for climate neutrality = 18.7 percent; both yes = 40.4 percent.

NHH = Nursing, Health and Human Performance; s.e. = standard error.

+*p* < .10      \**p* < .05    \*\**p* < .01

The results for the multinomial logit models allow a more direct comparison of support for the two different measures (Table 7). The base case is voting yes on both referenda, so the parameter estimates are in relation to the difference of (1) a yes vote on one but not the other or (2) a no vote on both relative to the yes on both. Comparing those who voted no on both to those who voted yes on both, the price is again seen to deter yes votes, and those with less to spend than their peers were more likely to vote no. Students from the College of Technology were more likely to vote no on both.

Seniors were also more likely to vote no than yes on both than were first-year students, although there was not a statistically significant difference between seniors and either juniors or sophomores. This is in contrast with the separate estimations for the local-odor and climate-neutrality votes, in which seniors were not statistically different from other students in their support. Seniors would be less likely to receive the benefits from the local smell reduction than from the climate-neutrality proposal but would have lower costs than other students because they would not be in school for as many semesters. This would suggest that seniors would be more likely to support the climate-neutrality proposal than the local odor reduction, but this was not found to be the case.<sup>5</sup> Those who voted yes on climate neutrality and no on reducing local smells appeared to be affected by their budget constraints, as the parameter estimate on less to spend than peers is also statistically significant and positive. This greater income effect could also reflect the position of the local-odor WTP question after the climate-neutrality question in the survey. Those from the College of Education were more likely to vote for both initiatives rather than only for the climate-neutrality initiative.

## CONCLUSIONS

Students were found to be sensitive to the price of the proposals. This is similar to the result found in Steele (2008b) with the same climate-neutrality WTP question. Also similar to Steele (2008b), no gender difference was found in WTP. Students having less spending money than their peers were less likely to vote to support either the referendum for reducing local odors or climate neutrality. Overall, more support was found for reducing greenhouse gases than for reducing the local air-pollution odor problem. Support for reducing the local odor problem did increase among students who reported noticing the smells more often and who were concerned about the potential health effects. Political affiliation was related to the support for reducing greenhouse-gas emissions, but not to the local air-quality problem.

Results suggest that up to a price of \$50 per semester, a majority of students were willing to vote yes for reducing the local odor problem, whereas a majority of students voted yes for reducing greenhouse-gas emissions up to a price of \$75 per semester. The concern about local pollution may be of particular interest to universities located in areas with noticeable pollution problems. The results suggest support for environmental improvement over a broad spectrum of students, and interesting differences between support for reducing local versus global pollution.

## ENDNOTES

1. Even with the oversampling, because of the low response rate from the Ohio, Kentucky, and Tennessee subsample, a detailed comparison with the Steele (2008b) results using this subsample was not possible.
2. In the multivariate estimation, class standing is always included as a control variable, so the higher percentage of seniors should not affect the results.
3. The issue of difference in time frame for the realized benefits between the two scenarios was mentioned by a referee and would be a good point of clarification in future surveys.
4. Indiana students might be thought to have greater concern than out-of-state students for the local odor reduction. The fact that there is a strong negative effect of Indiana students for climate neutrality but *not* for the local odor suggests this may be the case. The percentage of students from Indiana voting for the climate-neutrality referendum was 56 percent, compared to 70 percent of those not from Indiana, whereas for the local odor, the percentages were very similar to each other: 47 percent for those from Indiana and 50 percent for those not from Indiana.
5. Seniors were not asked about their postgraduation plans. As suggested by a referee, this would have been an interesting addition to the survey because seniors might be more likely to consider the environment-employment tradeoff, or there might be differences between those who planned to remain in Terre Haute versus those leaving the area.

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# *The (Lack of) Gender Dynamics of Gubernatorial Executive Orders\**

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## **ABSTRACT**

How do governors utilize state executive orders to effect policy changes? Are there differences between male and female governors? Though various works have examined the dynamics of presidential executive orders, few have examined how governors employ executive orders at the state level. We present results of a pilot study on how gender influences use of gubernatorial executive orders. Contrary to much of the literature on gender dynamics, we find minimal differences in the ways that female and male governors use gubernatorial executive orders. Female governors do not appear to rely more or less on unilateral orders than do their male colleagues. Although we do find some evidence that female governors are less likely to issue cultural and economic executive orders than social-issue and public-health executive orders, the difference between female and male governors across most issue areas is minimal. These results have important implications on studies of gender dynamics, the unilateral executive, and gubernatorial behavior.

**KEY WORDS** Gender Dynamics; Executive Orders; Gubernatorial Decision Making

Despite recent advances in electing female candidates at the federal and state levels, the number of states led by female governors remains small. As of April 2017, only four states had governors who were female: New Mexico, Oklahoma, Oregon, and Rhode Island. Overall, a total of 37 women have served as governors in 27 states. By comparison, Congress had a total of 104 female members in 2017, with 21 in the U.S.

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Senate and 83 in the U.S. House of Representatives. Surprisingly, although multiple works examine how gender affects elite behavior across a variety of contexts (Anzia and Berry 2011; Dolan 2000; Dolan 2011; Taylor-Robinson and Heath 2003), scant attention has been given to the differences between male and female governors. (For an exception, see Heidbreder and Scheurer 2012.) To help address this gap in the literature, we will report the results of a pilot project on how gender affects the dynamics of gubernatorial executive orders.

A better understanding of how governors employ unilateral actions at the state level is important. A review of gubernatorial actions suggests that uses of state executive orders are expansive. Governors have issued executive orders to address a variety of issue areas, including healthcare policies (Gakh, Vernick, and Rutkow 2013; Schneider 1989), consensus building and dispute resolution (Carlson 2000), antidiscrimination policies in the workplace (Colvin 2000), gay rights (Klawitter and Flatt 1998), and policies that affect state agencies (Ryan 1978; Woods 2004). Moreover, various studies suggest not only that female governors prioritize certain policy areas more so than do male governors (see, for instance, Heidbreder and Scheurer 2012; Taylor-Robinson and Heath 2003) but also that females tend to be more collaborative and to sponsor and cosponsor significantly more legislation than do their male colleagues (Anzia and Berry 2011).

To determine whether gender influences gubernatorial behaviors, we examine executive orders across seven states, limiting the period to 1959–2017 because of data constraints. Contrary to existing literature on gender differences, our findings suggest that even after controlling for situational, political, and economic factors, female governors are not more or less prone to unilateral activity than their male colleagues. Moreover, although we do find some evidence that female governors are less likely to issue cultural and economic executive orders than social-issue and public-health executive orders, the difference between female and male governors across most issue areas is minimal.

## **GENDER AND THE GOVERNORSHIP**

Our main goal in this article is to examine whether female governors use executive orders differently than do their fellow male governors. Though most studies on executive orders and unilateral actions have focused on U.S. presidents (see, for instance, Bolton and Thrower 2016; Howell 2003; Ouyang and Waterman 2015; Warber 2006), a small number of works on gubernatorial executive orders has begun to accumulate. For example, McLaughlin et al. (2010) reported a massive data-collection effort to create a comprehensive public-policy database for the State of Pennsylvania, which includes state executive orders since 1979. Similarly, Rivera and Wagner (2010) examined the tendency of New Jersey governors to use executive orders as policy instruments. Although insightful, these studies remain limited in that they speak to only a single state's propensity for executive orders.

Taking a more comprehensive approach to the study of governors and state executive orders, Ferguson and Bowling (2008) provided an initial examination of executive orders across 49 states from 2004 and 2005. Although they did not subject the data to rigorous empirical tests, Ferguson and Bowling nonetheless found that executive

orders are frequently used by governors for a variety of policy areas. More recently, Barber, Bolton, and Thrower (2016) proposed a theory of executive unilateral policy-making that highlights inter- and intra-branch ideological conflicts. Their work suggests that while ideological disagreements between the executive and legislative branches can constrain unilateral actions, this constraint is contingent on low levels of legislative polarization and a party's ability to overcome supermajority barriers.

Surprisingly, while gubernatorial executive orders have received greater interest in the literature, to our knowledge, no study has examined the degree to which female governors employ unilateral authority differently than male governors. As the chief executive of her state, a female governor is in a unique position to advance policies for her female constituents, acting as an advocate. Moreover, by strategically using executive orders when possible, female governors are able to overcome the many legislative barriers that often limit policy-making. The question, however, is do they?

Scholars have devoted considerable energy to the study of gender across a mix of contexts. The ability to take on such executive positions comes at a cost. First and foremost, women face unique challenges in the workplace. Such women, especially those in executive positions, are much more likely to sacrifice their personal lives in order to maintain such positions. Compared to men in high positions, female executives are more likely to forsake having children and are less likely to sustain personal relationships, despite their desire to have such (Hewlett 2002). In addition, in high executive marketing positions, females have been proven to have higher levels of ethical judgment than their male counterparts (Akaah 1989). This possibly limits female growth within companies, depending on their individual morality.

Second, various studies indicate that women behave differently than men. For example, female legislators tend to prioritize different policies than do male legislators. They tend to place higher priority on women's rights issues, depending on their representation in the legislature, but not on legislation that is central to the benefit of children and families (Taylor-Robinson and Heath 2003). Men and women have different leadership styles, and when they go against stereotypical gender-related leadership strategies, they are ineffective as leaders (Eagly and Johannsen-Schmidt 2001). Women suffer some disadvantages from prejudicial evaluations of their competence as leaders, especially in masculine organizational contexts if they are unable to produce masculine traits on policies that are perceived as male-dominated. Women do have some advantages in typical leadership style, however; for example, they are more likely to communicate and understand as well as to provide a strong sense of community for those who are their subordinates (Eagly and Carli 2003).

Why might female legislators emphasize different issue priorities than their male counterparts? Works in the psychology of gender differences suggest that one reason may be the varying level of empathy expressed by females, compared to males. In their study of adolescents, Van der Graaff et al. (2014) found that girls are consistently more empathetic than boys throughout their life-spans. Boys' empathy levels, however, fluctuate as they develop from childhood into adolescence.

Behavioral science literature also suggests further differences between females and males. According to Juvrud and Rennels (2017), two stereotypical pathways

influence help-seeking behavior among both men and women: the attitudinal pathway and the personally endorsed pathway. The attitudinal pathway is the idea that an individual's beliefs about others influence that person's own gender identity. The personally endorsed pathway represents the notion that an individual experiences interest in a person, object, or event before the individual's gender identity is set in stone. Results indicate that the personally endorsed gender stereotype predicts the extent to which women seek help, whereas both attitudinal and personally endorsed gender stereotypes predict male help-seeking behaviors.

Perhaps reflecting the innate differences between genders, the public—via the media—perceive important gender differences between men and women. For one, gender gap is especially prominent in the media coverage of female candidates: Women are more likely to receive more gender-related coverage, especially when running for high offices (Meeks 2012). This indicates that female politicians running for high office have less salient issue-dominated media coverage, because the media focuses on their gender; however, women gain a strategic advantage when they run “as women,” stressing issues that voters associate favorably with female candidates and targeting female voters (Herrnson, Lay, and Stokes 2003).

Gender perceptions also affect both peer and self-evaluations of female managers. Men rate themselves as more effective than women rate themselves (Paustian-Underdahl, Walker, and Woehr 2014). Women and older managers are less inclined to define career success in terms of hierarchical and financial progression, as they are more likely to have individual value-based ideas about what success in a career amounts to (Sturges 1999). Ratings by subordinates within various companies indicate that female and male executives engaged in greater amounts of leader behavior valued by top management than by the typical employee. Female middle managers and executives were rated higher when compared to their male counterparts in interpersonal, goal-driven, and task-oriented leadership styles (Bartol, Martin, and Kromkowski, 2003).

Gender stereotypes affect how voters search for information of female and male candidates for office. Voters seek more competence-based information about female candidates than they do for male candidates, in addition to seeking increased information related to “compassion issues.” Statistical analysis provides evidence that female candidates are disadvantaged in the Democratic Party; Republican women are still at a disadvantage in elections, however. Overall, voters seek out more competency-based information on female candidates, especially Republicans (Ditonto, Hamilton, and Redlawsk 2014).

Although many studies indicate that females behave differently than their male counterparts, some suggest otherwise. Using analyzed speeches, Herrera and Shafer (2011) have found evidence that there is no difference in policy agenda between male and female governors, although their study did find that male governors are slightly more likely than females to address education in speeches. They also found that male governors were covered more by the media in social and welfare issues than were female governors. In contrast, Ferrara (2012) found that there is no difference in the policy agenda of male and female governors. This may imply that the greater the office, the less divergent the agendas because of institutional restraints.

Analysis controlling for gender and political party again found that female Democratic governors prioritize some policy areas differently than their male counterparts do but that in other areas, their policy agendas are identical; however, there were no identifiable policy differences based on gender among Republican governors (Shafer and Herrera 2010). Female governors in general perceived a double standard applied to their leadership: They received less support from their colleagues within their political parties, as well as more criticism and inequitable coverage from media. All women in another study reported an inability to discuss gender-related leadership issues for fear of handicapping their administrations and being perceived as lesser leaders (Havens 2012).

Debate on whether, and the extent to which, gender differences exist also extends to work in psychological sciences. In neuropsychology and cognitive development, for instance, scholars remain conflicted about whether a gender gap exists. According to Ardila et al. (2011), only minimal, statistically insignificant, gender differences exist during cognitive development. These cognitive differences that result from gender show up in only a small number of tests and account for a low percentage of score variance. In comparison, Yeo et al. (2016) suggest that women display higher verbal ability, which entails understanding commands, language expression, and language comprehension; meanwhile, men have a higher spatial ability, which entails being able to comprehend verbal-spatial terms, such as directions, and recognizing objects at various angles. These results overall are statistically insignificant, however, meaning that there is little psychological difference.

Taken together, it is not immediately clear whether female governors will utilize unilateral actions differently than men will. Although scholars note that female governors have different policy interests and emphasize policy agendas in their State of the State addresses (Heidbreder and Scheurer 2012), there is evidence that women in executive leadership positions tend to govern and behave similarly to men in the same positions. To this point, a statement by Bev Perdue, North Carolina's first female governor, is illustrative: "Although I will go down in history as North Carolina's first female governor, I want to make history as a governor who faced the challenges and made the right decisions to position North Carolina for a competitive global future" (Quoted in Heidbreder and Scheurer 2012). As Governor Perdue's statement makes clear, although she recognizes the importance of being the state's first female governor, she intends to govern as the chief executive first and as a female second. The important question here is whether these sentiments are unique to Governor Perdue or are common among other female executives. Specifically, we ask, "Are female governors more active unilaterally than male governors? Do they prioritize different policies unilaterally?" In the following sections, we explore these questions.

## **DATA AND METHODS**

To explore the differences, if any, between male and female governors and their uses of unilateral authority at the state level, we collected data on gubernatorial executive orders for Arizona (Jan. 1965–Jan. 2017), New Hampshire (Jan. 1991–Dec. 2016), New Mexico

(Jan. 2011–Dec. 2016), Oklahoma (Nov. 1959–Nov. 2016), Oregon (Feb. 2003–ept. 2016), Rhode Island (Jan. 1973–Jan. 2017), and South Carolina (Mar. 1973–Oct. 2016). The appendix provides greater details on the states and governors within the data set. Although these seven states represent only a small portion of all gubernatorial executive orders in the 50 states, they were selected to maximize variations in state contexts.

First, in all seven states, a female either was the sitting governor or had recently served as governor at the time of the study. Currently, four states have female governors: Rhode Island (Gina Raimondo–D), New Mexico (Susana Martinez–R), Oregon (Kate Brown–D), and Oklahoma (Mary Fallin–R). Margaret “Maggie” Hassan–D (New Hampshire) left the governor’s office to become a U.S. senator, and Nikki Haley–R (South Carolina) was appointed by President Trump to the post of U.S. Ambassador to the United Nations.

Second, authorization for executive orders differs across states. Although governors in all 50 states are authorized to issue executive orders, the basis for those gubernatorial orders may vary. For instance, based on an October 2015 survey of governors’ offices by the Council of State Government (Council of State Government 2016), whereas governors of Arizona and Oregon are authorized to issue executive orders based on implied powers, the governors of New Hampshire and South Carolina have statutory authorizations for executive orders. The governor of New Mexico can issue orders on the basis of the state constitution and state statutes. Oklahoma governors are granted the authority by the state constitution to issue executive orders, and Rhode Island governors can issue executive orders based on state statutes, implied powers, and case laws.

The main dependent variable in this study is the number of executive orders issued monthly. In addition to gender (our main variable of interest), we also account for a number of factors that may affect the level of unilateral activities at the state level. First, we include a set of variables to account for differences across governors and the transitions across administrations. Studies in executive unilateralism at the federal level have long recognized that Democratic and Republican presidents utilize executive orders differently (see, for instance, Howell and Lewis 2002; Ouyang and Waterman 2015). We thus include a dummy variable for whether a Democratic governor is currently in office. We also add dummy variables for whether the governor is in the first six and the last six months of her term, as transition periods and the first several months of a new administration mark critical junctures as the state transitions from one administration to another (Sherwood and Chackerian 1988).

The extent to which governors use executive orders may depend on political contexts. In his formal treatment of executive orders, Howell (2003) suggests that presidents are more likely to act unilaterally when seeking to preempt legislature actions or when Congress is poised to enact policies that diverge considerably from the presidents’ preferences. Scholars find similar results at the state level. For instance, Clarke (1998) finds that divided government and polarization affect budgetary conflicts between governors and legislatures. Thus, we include variables for party polarization in the lower (house) and upper (senate) chambers of the state legislature, divided government, and the percentage of legislators within the governor’s party.

Third, we account for the extent to which state economic conditions may affect unilateral actions by governors. Studies on vote intentions indicate that voters may employ a retrospective evaluation of the state's economic conditions when casting votes for the governor's office (Partin 1995). To the extent that governors recognize the importance of the economy on vote choice during election time, they may be apt to employ unilateral strategies during economic downturns. To account for such possibility, we include controls for gross state product and state unemployment rate. Last, we control for total state population to account for variations in size of the states.

## **STATISTICAL FINDINGS**

Table 1 presents the results of random effects negative binomial regression models, which account for the hierarchical structure and over dispersion in the data. The dependent variable in each case is the number of executive orders issued monthly. Each model contains a binary variable for gender, as well as the lagged total number of executive orders to account for autocorrelations. In addition, each model also includes fixed indicators for states to account for further state variations not included in the model. The Governors Model (Model 1) is the simplest model and includes variables to indicate whether a Democratic governor is currently in office, the last six months of the governor's administration, the first six months of the administration, and the total months that the governor has served in office. The Political Model (Model 2) adds controls for political divisions and polarization in state legislatures. The State Model (Model 3) adds controls to account for state economic conditions. Finally, the Full Model (Model 4) combines all variables from Models 1–3.

Overall, we find no differences in the use of gubernatorial executive orders by female vs. male governors (Model 4). Our main variable (a binary indicator for female) is statistically significant in only the Governors Model. Controlling solely for whether a Democratic governor is currently in office, for their first and last six months office, and for how long the governor has been in office, we find that female governors issue a greater number of executive orders than their male counterparts; however, this relationship between gender and the level of executive orders disappears when we include additional controls for state political and economic contexts.

Use of executive orders also relates to the timing of an administration. Governors are especially active during the beginning of administrations, issuing about four times as many executive orders during the first six months, compared to all other moments of their administrations. This is consistent with studies in the unilateral presidency, which suggests that presidents may issue a greater number of executive orders during the first and last years of their administrations as they seek to undo and change actions by their predecessors (for incoming presidents) or to further solidify their policy agendas before leaving office (for outgoing administrations). Although we find evidence that governors are more active unilaterally during the beginning months of their administrations, we find no evidence that governors make last-ditch attempts at unilateral behavior as they prepare to leave office.

**Table 1. Models for “Female Governors Do Not Issue a Greater Number of Executive Orders”**

	<b>Governors (1)</b>	<b>Political (2)</b>	<b>State (3)</b>	<b>Full (4)</b>
Female	.37*** (.06)	-.05 (.16)	.09 (.10)	.05 (.17)
Democratic governor	-.13* (.05)	.28* (.11)	.05 (.05)	.27* (.13)
Last 6 months	.14+ (.08)	.12 (.13)	.16+ (.09)	.12 (.13)
First 6 months	1.43*** (.09)	1.48*** (.12)	1.44*** (.09)	1.40*** (.12)
Months in office	-.03*** (0.00)	-.03*** (0.00)	-.03*** (0.00)	-.03*** (0.00)
Party polarization (house)		-1.05** (.41)		-.61 (.55)
Party polarization (senate)		.84* (.34)		.88* (.39)
Divided government		-.26+ (.15)		-.12 (.15)
% of legislators in governor’s party		-.01 (.01)		0.00 (.01)
State population (log)			-.75** (.27)	-4.43** (1.64)
Gross state product (log)			.47*** (.07)	.88* (.38)
% state unemployment			-.01 (.01)	.04+ (.02)
New Hampshire	.47 (.45)	-1.08+ (.61)	-.28 (.57)	-6.01** (2.00)
New Mexico	-.51+ (.30)	.82 (.70)	-1.03* (.41)	-3.01+ (1.58)
Oklahoma	-2.17*** (.20)	-2.84*** (.45)	-2.46*** (.23)	-3.78*** (.54)

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**Table 1. Models for “Female Governors Do Not Issue a Greater Number of Executive Orders,” concl.**

	<b>Governors (1)</b>	<b>Political (2)</b>	<b>State (3)</b>	<b>Full (4)</b>
Oregon	.73* (.34)	.30 (.52)	.26 (.42)	-1.22+ (.69)
Rhode Island	.28 (.20)	-.07 (.61)	-.36 (.36)	-4.95** (1.88)
South Carolina	-.26 (.18)	.13 (.37)	-.27 (.19)	-.28 (.39)
# of EOs issued (lag 1)	.13*** (.01)	.07*** (.01)	.12*** (.01)	.07*** (.01)
Constant	-2.41*** (.15)	-.54 (.77)	.68 (3.06)	49.88* (19.85)
<hr/>				
ln( <i>r</i> )				
Constant	1.20* (.58)	1.68* (.72)	1.22* (.60)	1.65* (.73)
<hr/>				
ln( <i>s</i> )				
Constant	1.23* (.60)	1.33+ (.71)	1.17+ (.62)	1.29+ (.72)
<hr/>				
Obs.	2901	1089	2688	1089
# of Groups	7	7	7	7
Min. group obs.	71	11	47	11
Max. group obs.	684	228	612	228
Log-likelihood	-4081.07	-1615.14	-3690.21	-1608.89
AIC	8192.15	3268.29	7416.42	3261.78
BIC	8281.74	3363.16	7522.56	3371.63

Notes: Random effects negative binomial models fitted.

The dependent variable in all four models is the number of gubernatorial executive orders issued (monthly).

Standard errors in parentheses.

Arizona omitted.

AIC=Akaike information criterion; BIC=Bayesian information criterion; EO=executive order; obs.=observation.

+*p* < 0.1    \**p* < 0.05    \*\**p* < 0.01    \*\*\**p* < 0.001

Consistent with results from study of the unilateral presidency (Ouyang and Waterman 2015), we find that the level of executive unilateralism is related to ideology. We find that Democratic governors issue more executive orders than do Republicans.



Controlling for variations in political and economic contexts, the Full Model indicates that, on average, Democratic governors issue nearly twice as many executive orders than do Republican governors.

We find only weak relations between political contexts and unilateral behavior. Results from the Full Model suggest that the presence of divided government is not related to the number of executive orders issued monthly. Although party polarization in the legislature is related to executive actions by the governor, it is limited to polarization in the senate, excluding the house. This is somewhat surprising, given that model-fit statistics indicate that the Political Model (not including controls for economic conditions) does nearly as good a job in predicting monthly executive orders activity as the Full Model does. Although fully assessing the relationship between political polarization and executive orders is beyond the scope of this article, recent evidence from other works suggest that the extent to which ideological polarization relates to exercise of executive order is more nuanced than presented here (Barber et al. 2016).

Regarding the effect of economic conditions influencing executive orders at the state level, there are mixed results. Based on studies of economic retrospective evaluations and vote intentions, we suspected that governors may attempt to use unilateral directives to act quickly during economic downturns in the face of legislative gridlocks. All else being equal, we find that governors issue a greater number of executive orders as the gross state product increases *and* as state unemployment rate raises, respectively. This is perplexing, as it suggests that governors issue more executive orders when economic conditions in the state improve *and* when the economy worsens.<sup>1</sup> Although we cannot fully ascertain why this is the case, we suspect that one possible explanation is the limited number of states included in our data set.

It may be the case that gender differences and executive orders become apparent only when we examine across policy areas. For instance, (Heidbreder and Scheurer (2012) find that female governors prioritize social-welfare policies in their State of the State speeches, compared to male governors. Using data on all Rhode Island executive orders from 1973 to 2017, we examine whether female governors use executive orders to emphasize certain issues areas more than others.

Rhode Island executive orders present a unique case suitable for assessing executive orders across policy areas. In addition to making all executive order publicly available via the Secretary of State's website, Rhode Island codes each executive order in relation to the policy it addresses. For our purpose, the original policy areas provided are too specific: Rhode Island provides coding for a total of 98 policy areas, with some policy areas containing only one or two executive orders. We recoded these 98 issues into seven more-manageable areas of policy focus: (1) state government and administration, (2) transportation and infrastructure, (3) environment and natural resources, (4) law and public safety, (5) economy, (6) social issues and public health, and (7) culture. For example, executive orders dealing with airports, boats, bridges, and highways were recoded into a single category that we denote as transportation and infrastructure.

Table 2. Variations in Unilateral Activism across Issue Areas

	Multinomial Logistic Regression						
	Social Issues & Public Health	Culture	Economy	Environment	Law & Order	Government	Infrastructure
	(5)						
	(6)						
Raimondo	0.05 -0.17	-13.65*** -1.35	-1.18*** -0.23	0.17 -0.14	-0.05 -0.3	0.07 -0.21	0.47 -0.37
Democratic governor	-0.09 -0.19	-0.84 -0.84	0.04 -0.22	0.07 -0.43	0.13 -0.34	0.11 -0.15	0.31 -0.31
Last 6 months	.48* -0.2	0.35 -0.44	-0.32 -0.4	-0.06 -0.58	-0.43** -0.17	-1.78* -0.73	-15.38*** -0.78
First 6 months	-0.34 -0.43	-14.57*** -0.92	0.12 -0.49	-0.40 -0.41	0.37 -0.54	1.04+ -0.6	0.34 -0.64
Constant	-0.79*** -0.17	-3.19*** -0.42	-0.71*** -0.21	-0.51 -0.36	-0.65* -0.33	-0.89*** -0.06	-2.03*** -0.23
N	811						811
pseudo R <sup>2</sup>	0.006						0.015
AIC	999.36						2749
BIC	1018.16						2781.89

Notes: Baseline category for the multinomial regression is social-issues and public-health executive orders. Standard errors in parentheses.

AIC=Akaike information criterion; BIC=Bayesian information criterion.

+ p < 0.1      \* p < 0.05      \*\* p < 0.01      \*\*\* p < 0.001

Before discussing the results of our examination, we want to acknowledge one limitation of the data and results presented here. Although executive orders presented here span 1973–2017 and were issued by a mixture of both Democratic and Republican governors, only a single female governor, Gina Raimondo, is in the data set. In essence, then, we compare whether Governor Raimondo prioritized different policy areas in her executive orders in relation to her male predecessors. Although this limits our ability to generalize to other cases, we nonetheless find some evidence that female governors do prioritize some policy areas more than others.

Table 2 presents the results of two models assessing the gubernatorial executive orders across different policy areas, including social issues and public health, culture, economy, environment, law and order, government, and infrastructure.<sup>2</sup> The unit of analysis here is a single executive order. Model 5 reports the results of a logistic regression model. The dependent variable is coded 1 if the executive order relates to social issues and public health; otherwise, it is coded 0. Model 6 reports the results of a multinomial regression. The omitted baseline comparison category is social issues and public health.

Overall, we find that Governor Raimondo was not more likely to issue more social and public-health executive order than were her male counterparts (Model 5), though she was less likely to use her unilateral authority to address cultural and economic issues than on social issues. Contrary to existing works, we find no evidence that female governors are more likely to issue social-issue executive orders (Model 5). Although governors in general are more likely to issue social-issue executive orders during the last six months of their administrations (as they prepare to leave office), female governors overall are *not* more active in this policy area. Comparing our results to those indicating that female governors will devote more attention to social issues in their State of the State addresses (Heidbreder and Scheurer 2012), this suggests that political rhetoric does not necessarily translate into policy action.

Compared to social-issue executive orders and her male predecessors, however, we found that Governor Raimondo issued significantly fewer executive orders on cultural and economic issues. For instance, Governor Raimondo was three times *less* likely to issue an economic executive order than social and public-health executive orders. In sum, though we find some evidence that Raimondo prioritized certain issues less than social issues (cultural and economic), the results overall suggest minimal differences between Raimondo and fellow male governors when it comes to social policies.

## CONCLUSION

Over past decades, the number of females holding the highest executive offices in states has steadily increased, and women are now regularly in contention for governors' mansions. This rise of females in the chief executive offices across states has not resulted in a similar increase in research on female governors, however. Furthermore, although existing studies point to how gender affects the behavior of female legislators, it is unclear whether gender affects governors and gubernatorial executive orders.

To fill this gap in literature about state politics and governors, our research addresses whether gender affects unilateral policy-making at the state level. Contrary to much of the existing work on gender dynamics, we find little to no evidence that female governors use their unilateral authority differently than do their male colleagues. Female governors do not issue more executive orders, nor do they seem to use executive orders for traditionally women's-rights issues.

Our analysis indicates the importance of additional work in this area. Given the amount of literature indicating that female political elites differ from their male colleagues in important ways, we are surprised that we find no gender differences. As females continue to become more competitive in elections for top executive positions in the states, it is essential that we better understand the extent to which gender influences gubernatorial policy-making.

Our pilot study is an important first step in understanding the nature of state-level executive orders and gender differences in the governor's office. Of course, as with many studies, our results also raise many questions. For example, why do we find that governors issue more executive orders both as the gross state product increases and as state unemployment rate increases? One possibility is that the static measures of economic performance that we used in the models are too general to pick the subtleties of the relationship between gubernatorial orders and the economy. A second potential explanation is that although both gross state product and state unemployment rate measure economic conditions, they are fundamentally different concepts. It is possible that governors utilize executive orders both to grow the state's economy during times of distress (unemployment rate) and to continue to invoke their executive authority to further expand the economy as conditions improve (gross state product). Although fully assessing this issue is beyond the scope of this article, we will explore these possibilities in future projects.

More intriguing is the null relationship that we find between gender and executive authority. In contrast to multiple studies showing that female political elites exhibit different policy preferences and behaviors compared to their male counterparts, we find little evidence suggesting that female governors employ executive authority differently than male governors do. One potential explanation is the limited number of female governors included in this study. Though we made a concerted effort to include governors (both female and males) from states with diverse political and economic conditions, our data set includes data from only seven states. In a follow-up study, we intend to expand our data set to include all 50 states.

An alternative explanation is that gender is not a meaningful explanation for how governors utilize executive orders—, our results from a limited sample of states is generalizable to gubernatorial executive power in general. Instead, the extent to which governors employ executive orders is a function of state-level variations in gubernatorial power. In a later project, leveraging new developments in measuring gubernatorial power (see Krupnikov and Shipan 2012), we plan to assess how the scope of the governor's formal power affects unilateral decision making at the statelevel.

## ENDNOTES

1. It is possible that had we used dynamic measures of economic performance, such as the growth of the gross state product and of unemployment rate, rather than the static versions in the analyses, we would have found a stronger relationship between economic variables and the use of gubernatorial executive orders. As the effect of economic factors on unilateral executive behavior is not the main focus of this article, however, our static measures of the economy are sufficient for a pilot project such as this. In any case, we do elaborate on these possibilities and on our next steps in this research agenda in the conclusion section.
2. Because of data limitation, the analyses reported in this section contain executive orders only from Rhode Island. Also because of limited data, we cannot include any of the additional control variables shown in Table 1 here in the logistic and multinomial logistic models.

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## APPENDIX

**Table A1. Descriptions of Variables in Analyses**

Variable Name	Description	Source
Female	Coded 1 if governor is female	Compiled by authors
Democratic governor	Coded 1 if governor is a Democrat	Compiled by authors
Last 6 months	Coded 1 for a governor's last 6 months in office	Compiled by authors
First 6 months	Coded 1 for a governor's first 6 months in office	Compiled by authors
Months in office	# of months a governor has been in office	Compiled by authors
Party polarization (house)	Ideological distance between party medians (lower chamber)	Shor and McCarty (2011)
Party polarization (senate)	Ideological distance between party medians (upper chamber)	Shor and McCarty (2011)
Divided government	Coded 1 if all three institutions of state government are not controlled by same party	Klarner (2013)
% of legislators in governor's party	Average percent of legislators across the two chambers of the legislature who are members of the governor's party	Klarner (2013)
State population (log)	Log of total state population	Klarner (2015)
Gross state product (log)	Log of gross state product (in thousands)	Klarner (2015)
% state unemployment	State unemployment rate	Klarner (2015)

**Table A2. Arizona Governors in Date Range Covered (Apr. 1965–Jan. 2017)**

Governor	Party	Female	Entered Office	Left Office
Samuel P. Goddard	Democrat	No	January 4, 1965	January 2, 1967
Jack R. Williams	Republican	No	January 2, 1967	January 6, 1975
Raul H. Castro	Democrat	No	January 6, 1975	October 20, 1977

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**Table A2. Arizona Governors in Date Range Covered (Apr. 1965–Jan. 2017), concl.**

<b>Governor</b>	<b>Party</b>	<b>Female</b>	<b>Entered Office</b>	<b>Left Office</b>
Wesley Bolin	Democrat	No	October 20, 1977	March 4, 1978
Bruce Babbitt	Democrat	No	March 4, 1978	January 5, 1987
Evan Mecham	Republican	No	January 5, 1987	April 4, 1988
Rose Mofford	Democrat	Yes	April 4, 1988	March 6, 1991
Fife Symington	Republican	No	March 6, 1991	September 5, 1997
Jane Dee Hull	Republican	Yes	September 5, 1997	January 6, 2003
Janet Napolitano	Democrat	Yes	January 6, 2003	January 21, 2009
Jane Brewer	Republican	Yes	January 21, 2009	January 5, 2015
Doug Ducey	Republican	No	January 5, 2015	<i>Incumbent</i>

**Table A3. List of New Hampshire Governors in Date Range Covered (Jan. 1991–Dec. 2016)**

<b>Governor</b>	<b>Party</b>	<b>Female</b>	<b>Entered Office</b>	<b>Left Office</b>
Judd Gregg	Republican	No	January 4, 1989	January 2, 1993
Ralph D. Hough	Republican	No	January 2, 1993	January 7, 1993
Stephen Merrill	Republican	No	January 7, 1993	January 9, 1997
Jeanne Shaheen	Democrat	Yes	January 9, 1997	January 9, 2003
Craig Benson	Republican	No	January 9, 2003	January 6, 2005
John Lynch	Democrat	No	January 6, 2005	January 3, 2013
Margaret Hassan	Democrat	Yes	January 3, 2013	January 2, 2017

**Table A4. New Mexico Governors in Date Range Covered (Jan. 2011–Dec. 2016)**

<b>Governor</b>	<b>Party</b>	<b>Female</b>	<b>Entered Office</b>	<b>Left Office</b>
Susana Martinez	Republican	Yes	January 1, 2011	<i>Incumbent</i>

**Table A5. Oklahoma Governors in Date Range Covered (Nov. 1959–Nov. 2016)**

<b>Governor</b>	<b>Party</b>	<b>Female</b>	<b>Entered Office</b>	<b>Left Office</b>
J. Howard Edmondson	Democrat	No	January 12, 1959	January 6, 1963
George Nigh	Democrat	No	January 6, 1963	January 14, 1963
Henry Bellmon	Republican	No	January 14, 1963	January 9, 1967
Dewey F. Bartlett	Republican	No	January 9, 1967	January 11, 1971
David Hall	Democrat	No	January 11, 1971	January 13, 1975
David L. Boren	Democrat	No	January 13, 1975	January 8, 1979
George Nigh	Democrat	No	January 8, 1979	January 12, 1987
Henry Bellmon	Republican	No	January 12, 1987	January 14, 1991
David Walters	Democrat	No	January 14, 1991	January 9, 1995
Frank Keating	Republican	No	January 9, 1995	January 13, 2003
Brad Henry	Democrat	No	January 13, 2003	January 10, 2011
Mary Fallin	Republican	Yes	January 10, 2011	<i>Incumbent</i>

**Table A6. Oregon Governors in Date Range Covered (Feb. 2003–Sept. 2016)**

<b>Governor</b>	<b>Party</b>	<b>Female</b>	<b>Entered Office</b>	<b>Left Office</b>
Ted Kulongoski	Democrat	No	January 13, 2003	January 10, 2011
John Kitzhaber	Democrat	No	January 10, 2011	February 18, 2015
Kate Brown	Democrat	Yes	February 18, 2015	<i>Incumbent</i>

**Table A7. Rhode Island Governors in Date Range Covered (Jan. 1973–Jan. 2017)**

<b>Governor</b>	<b>Party</b>	<b>Female</b>	<b>Entered Office</b>	<b>Left Office</b>
Philip W. Noel	Democrat	No	January 2, 1973	January 4, 1977
J. Joseph Garrahy	Democrat	No	January 4, 1977	January 1, 1985
Edward D. DiPrete	Republican	No	January 1, 1985	January 1, 1991
Bruce Sundlun	Democrat	No	January 1, 1991	January 3, 1995
Lincoln C. Almond	Republican	No	January 3, 1995	January 7, 2003
Donald Carcieri	Republican	No	January 7, 2003	January 4, 2011
Lincoln Chafee	Democrat	No	January 4, 2011	January 6, 2015
Gina Raimondo	Democrat	Yes	January 6, 2015	<i>Incumbent</i>

**Table A8. South Carolina Governors in Date Range Covered (Mar. 1973–Oct. 2016)**

<b>Governor</b>	<b>Party</b>	<b>Female</b>	<b>Entered Office</b>	<b>Left Office</b>
John West	Democrat	No	January 19, 1971	January 21, 1975
James Edwards	Republican	No	January 21, 1975	January 10, 1979
Richard Riley	Democrat	No	January 10, 1979	January 14, 1987
Carroll Campbell	Republican	No	January 14, 1987	January 11, 1995
David Beasley	Republican	No	January 11, 1995	January 13, 1999
Jim Hodges	Democrat	No	January 13, 1999	January 15, 2003
Mark Sanford	Republican	No	January 15, 2003	January 12, 2011
Nikki Haley	Republican	Yes	January 12, 2011	January 24, 2017

# *Hypergrowth of the Hispanic Population in Indianapolis, 2000–2010\**

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## **ABSTRACT**

Indianapolis experienced a 300 percent increase in Hispanic population between 1990 and 2010. This article examines the change in the composition of census tracts in Indianapolis between 2000 and 2010. Hispanic-white tracts and Hispanic-black-white tracts increased between the two censuses while majority-white tracts declined. Regression analysis revealed that number of Hispanics by tract in 2010 was negatively associated with percentage of black population and positively associated with number of Hispanics as of 2000. Hispanics were attracted to tracts with a higher percentage of median housing value (\$50,000–\$100,000), tracts with a high level of turnover between 1995 and 2000, and tracts that had a greater percentage of new dwellings built between 1990 and 2000. These results indicate that Hispanics avoid low-income tracts and have intensified their location in the core Hispanic tracts as well as advanced into the outer tracts of the city.

**KEY WORDS** Hispanics; Indianapolis; Ethnic Enclave

The ethnic/racial diversity of the United States has changed dramatically since the 1970s, a result of high levels of immigration from Latin America and the younger age structure and higher fertility rates of the Hispanic population. Between 1980 and 2010, the Hispanic population in the United States increased by 227.4 percent (U.S. Bureau of the Census 1980, 2010). In 2010, Hispanics comprised 16 percent of the U.S. population and were the largest minority population in the country. (U.S. Bureau of the Census 2010).

Since the 1990s, Hispanic immigrants and U.S.-born Hispanics have moved into states in which they have previously been underrepresented (Saenz 2010). Costs of living and job competition in urban areas of California, as well as a downturn in California's economy in the 1990s, led to a secondary migration pattern to the interior of the United States (Light 2006). Much of this Hispanic population growth has occurred in rural and small towns in the Southeast and the Midwest, a result of employment opportunities in enterprises such as meat processing, farming, and retailing, as well as low costs of living in these areas (Barcus and Simmons 2013; Haverluk and Trautman 2008).

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Medium and large metropolitan areas such as Atlanta, Georgia; Washington, DC; Portland, Oregon; and Indianapolis, Indiana, however, have experienced what Singer (2004) refers to as hypergrowth, which is defined as a growth rate exceeding 300 percent between 1980 and 2000. In each of the hypergrowth metropolitan areas, the population of non-Hispanic whites, non-Hispanic blacks, and Asians also increased through internal migration, immigration, and natural increase. Most of the hypergrowth metropolitan areas represent the new economy of finance and services and are less dependent on manufacturing. These cities have a dual-economy that requires a highly skilled population of mostly Asians and non-Hispanic whites as well as a low-skilled population overrepresented by blacks and Hispanics to provide services for the affluent populations. This dual economic structure may not be the sole reason for spatial segregation in metropolitan areas, but it likely affects the early settlement patterns of new arrivals to the city.

Numerous studies have examined changes in the racial and ethnic composition of America's largest metropolitan areas. Recent examples include Clark et al. (2015) for Los Angeles, Flores and Lobo (2013) for New York, and Onesimo Sandoval (2011) for Chicago. Others focus on a cross-section of metropolitan areas over several decades (Iceland and Sharp 2013; Reibel and Regelson 2011; Wright et al. 2014). Our understanding of racial/ethnic change in the nation's largest metropolitan areas is thus quite extensive, but processes in smaller metropolitan areas that have experienced a tremendous amount of racial/ethnic change are underrepresented. Recent studies that have examined ethnic/racial change in smaller metropolitan areas include Brown and Chung (2006) for Columbus, and Sharma (2012) for Knoxville.

This article examines changes in racial/ethnic composition for Indianapolis, a midsized metropolitan area in the Midwest that has undergone rapid growth in its Hispanic population since 1990. Specifically, three questions are addressed: (1) How has Hispanic population growth in Indianapolis between 2000 and 2010 affected the racial/ethnic composition of census tracts in Indianapolis? (2) What factors determined the growth of the Hispanic population by tract in Indianapolis between 2000 and 2010? (3) How does the economic status of the Hispanic population in Indianapolis compare with the non-Hispanic black and non-Hispanic white populations?

The article begins with an overview of segregation and ethnic/racial change in cities and provides a short overview of the demographics and economics of Indianapolis. A modified version of the typology of Poulsen, Johnston, and Forrest (2001) is used to examine racial/ethnic tract changes between 2000 and 2010, with a focus on Hispanic population change, non-Hispanic white population change, non-Hispanic black population change, and total change in population. The second part of the analysis examines determinants of the change in Hispanic population by tract from 2000 to 2010. Discussions and conclusions are provided in the final section.

## **URBAN SUCCESSION AND SEGREGATION**

Neighborhood change in cities has long been studied by social scientists. As early as the 1920s, Park, Burgess, and McKenzie (1925) proposed the invasion-and-succession theory of neighborhood change, which predicted that newly arrived residents would replace the

previous residents as cities expanded outward and housing matured. In most cities of the early 20th century, the most dilapidated housing was found in the central city. As one moved away from the central city, a zone of working-class and middle-class neighborhoods with new housing was found. This arrangement allowed higher-class (later white) residents to be spatially separated from lower-class (later nonwhite) residents. In other words, a natural outcome of urban succession was the segregation of certain populations.

By the 1960s, white flight to the suburbs spawned an outpouring of literature on the tipping point and racial segregation of blacks. These studies assumed that whites sought to avoid blacks and would move away once a certain percentage of a neighborhood became nonwhite. By the 1960s, segregation levels in the large cities of the manufacturing belt hovered around 80.0 according to the dissimilarity index (Denton and Massey 1991).<sup>1</sup> “Chocolate City, Vanilla Suburbs” (Farley et al. 1978) is illustrative of this process in Detroit and speaks to the high levels of segregation that were found in cities in the manufacturing belt that received large numbers of blacks after the 1940s. Studies of segregation have found that the percentage of the minority group in a metropolitan area has a strong influence on segregation levels (Iceland and Sharp 2013; Reibel and Regelson 2011). Lower percentages of a minority group tend to be more tolerated by the non-Hispanic white population, as the majority population is expected to feel less threatened from the presence of nonwhites. In this sense, non-Hispanic whites who feel threatened can opt for relocation to another census tract.

Studies on segregation became more detailed in the 1980s as researchers began to include Hispanics and Asians instead of just the black population in their analyses. These studies revealed that blacks in U.S. cities had higher levels of segregation than their Hispanic and Asian counterparts (Frey and Farley 1996; Massey and Denton 1987; Timberlake and Iceland 2007). This suggests that non-Hispanic whites were less concerned about sharing neighborhoods with Hispanic and Asian individuals and that these groups provided a buffer that was more acceptable to non-Hispanic whites (Parisi, Lichter, and Taquino 2015). Hispanic and Asian segregation levels have remained stable or, in some cases, increased over the past three decades while white-black segregation levels have declined, however. These increased levels of Hispanic and Asian segregation can be attributed to high immigration during the past two decades, particularly in smaller metropolitan areas that have only recently experienced increased Hispanic and Asian settlement (Allen and Turner 2012; Hall 2013). Lichter, Parisi, and Taquino (2015) examined the segregation of Hispanics with non-Hispanic whites and non-Hispanic blacks for blocks in metropolitan and nonmetropolitan areas between 1990 and 2010. The authors concluded that Hispanics were integrating more readily with blacks than with whites as evidenced by greater declines in the dissimilarity index for black-Hispanic segregation than for white-Hispanic segregation.

Although the urban-succession model was popular in the mid-20th century, other models of settlement were advanced in the latter part of the 20th century. Immigrants and minorities since the 1970s have not necessarily been settling in the central cities of large metropolitan areas. Much of the recent settlement has gone directly to the suburbs (Smith and Foruseth 2004; Timberlake, Howell, and Staight 2011). Metropolitan areas have

undergone tremendous expansion over the past several decades, and housing availability and employment opportunities are more likely to be found in the suburbs than in the inner cities. Transportation innovations since the mid-20th century have also changed the accessibility of residence on the outskirts of the urban core. Farrell (2008) thus proposes that segregation studies take a hierarchical approach, which examines the central city and the suburban areas. He examined 97 metropolitan areas between 1990 and 2000 and found declines in segregation in the inner cities, but increased bifurcation between white and nonwhite populations in the suburbs. In contrast, Lichter, Parisi, and Taquino (2015) found that segregation levels for Hispanics were lower in the suburbs than in the central cities.

### **THEORIES ON SEGREGATION**

Three theories on racial/ethnic segregation are generally adopted by researchers. The first theory is spatial assimilation theory, which posits that over time, newcomers will assimilate to their environment and settle among the majority population. At the beginning of the 20th century, Eastern and Southern European immigrants settled in the poorest regions of cities and over time moved farther from the city centers and became mixed with the majority native-born white population, hence ending segregation (Lieberson 1963). With changes in immigration laws in the 1920s, immigration from Europe was curtailed and ethnic neighborhoods in U.S. cities were cut off from new arrivals, but changes in agricultural technology in the American South forced blacks to explore employment opportunities in the northern cities, thus replacing the pool of low-skilled laborers from Europe (Kirby 1983). These newcomers from the southern states also settled in the poorest regions of the cities and became segregated from the white majority population. Unlike their European counterparts, who could blend in with the dominant population after a period of social and economic adjustment, blacks were visually different and faced barriers to movement within the city.

The second theory—the place stratification model—proposes that the white majority population will distance itself from populations that it considers to be a threat (Logan, Alba, and Leung 1996). Schelling (1972) introduced the theory of the tipping point, which proposes that whites will tolerate only a token percentage of racial/ethnic “otherness” before they begin to leave and cease to settle certain areas. Thus, over time, neighborhoods will become completely nonwhite. This avoidance by whites became institutionalized through such processes as redlining, steering, and restrictive policies which traditionally excluded nonwhites from white tracts. These policies are illegal today, but it is likely that they still occur discreetly.

The third theory proposes that racial preferences are an important determinant of the location of certain ethnic/racial groups (Clark 2002). Some groups prefer to reside among individuals who share the same culture and the same racial/ethnic characteristics as themselves, even if they can afford to move to white-majority areas. An example are Cubans who are of higher socioeconomic status than their Mexican and Puerto Rican counterparts but choose to reside in ethnic enclaves (South, Crowder, and Chavez 2005). Another example are the Chinese ethnoburbs in suburban metropolitan areas (Li 1998).

## **TRACT CONVERSION STUDIES**

Many contemporary studies have focused on the transition of tracts from one ethnic/racial group to another as minority populations have increased in metropolitan areas. These studies compare the percentage of a tract's population that is a certain race/ethnicity in time one and then again in time two.

Wright et al. (2014) examined racial/ethnic change in metropolitan areas between 1990 and 2010. At the national scale, white-dominant tracts declined from 84 percent to 74 percent. Farrell and Lee (2011) examined changes in tract type and segregation for the 100 largest metropolitan areas between 1990 and 2000. Latino (Hispanic)-dominant tracts increased by 50 percent while Latino (Hispanic)-shared tracts doubled. Not surprisingly, the white-dominant tracts had the greatest level of decline in white percentage population. Holloway, Wright, and Ellis (2012) examined high-, medium-, and low-diversity census tracts for 16 large metropolitan areas for 1990 to 2000. Low-diversity white tracts made up 48 percent of tracts in 1990, but by 2000, they were 32 percent of the total. Although there was some stability in low-diversity white and low-diversity black tracts, low-diversity Hispanic tracts declined significantly. Most of this transition occurred as Hispanics moved into white-dominant tracts instead of remaining in established Hispanic enclaves.

Reibel and Regelson (2011) examined tract conversion in the 50 largest metropolitan areas from 1990 to 2000 and found that tract diversity and resegregation were occurring concomitantly. The authors identified slow-integrating and moderately integrating tracts as tracts that lost a minimal percentage of non-Hispanic white population (5.8 and 18.8 percent, respectively) while gaining in Asian, black, and Hispanic populations. White-to-black succession tracts were ones in which white flight and limited growth in Asians and Hispanics resegregated blacks. The authors further concluded that this is evidence that Asians and Hispanics provide a buffer zone for non-Hispanic whites.

## **THE STUDY AREA: INDIANAPOLIS**

In 1970, Marion County and the city of Indianapolis were consolidated, thus expanding the spatial extent and population of the city (Wachter 2014). This consolidation was an attempt to incorporate the inner suburbs of the Indianapolis metropolitan area and to provide needed revenue to the city; thus, the entire county of Marion serves as the city limits of Indianapolis and is the area of interest.

During the 1940s and 1950s, a few Mexican agricultural workers settled in Indianapolis on the east side (Valdes 2000), which can be considered the establishment of a Hispanic enclave. These individuals were employed in the railroads and construction. By the 1990s, Mexicans were still settled in the Near Eastside and worked in construction, hotels, and manufacturing, but the Near Eastside is no longer the epicenter of the Hispanic enclave. Since the 1990s, many small businesses owned by Hispanics have been opened in western Indianapolis, which this is a new area of Hispanic growth (Baer 2012).



Marion County, Indiana, experienced a growth of 294.0 percent in its Hispanic population between 1990 and 2000 and of 153.7 percent between 2000 and 2010 (U.S. Bureau of the Census 2010). Hispanics made up 1.1 percent (8,450) of the county's population in 1990, 3.9 percent (33,290) in 2000, and 9.3 percent (84,466) by 2010.

Between 1990 and 2010, the non-Hispanic white population in Marion County declined by approximately 77,100 (12.5 percent) and the Hispanic population grew by 76,016 (899.6 percent) while the black population grew by 68,800 (40.6 percent). Note that the growth of the Hispanic and the black population in Indianapolis was twice the decline in the non-Hispanic white population (+144,816 versus -77,100). It is possible that the non-Hispanic black population and the Hispanic population are vying for housing opportunities in Marion County, given that the overall population in Marion County increased between 1990 and 2010 even though the non-Hispanic white population declined.

Table 1 shows the change in population for 1990–2000 and 2000–2010 for the different racial/ethnic groups. The two decades show a steady decline in the non-Hispanic white population, a slight increase in the non-Hispanic black population, and a large increase in the Hispanic population.

**Table 1. Population Change in Indianapolis by Ethnic/Racial Group, 1990–2010**

	1990		2000		2010		Percent Change
	N	%	N	%	N	%	
Total Population	797,159		860,454		903,393		13.3
Non-Hispanic white	615,039	77.2	592,540	68.9	537,905	59.5	-12.5
Non-Hispanic black	169,654	21.3	215,273	25.0	238,454	26.4	40.6
Hispanic	8,450	1.1	33,290	3.9	84,466	9.3	899.6

*Source:* U.S. Bureau of the Census (1990, 2000, 2010).

## DELIMITATIONS

Given the relatively small number of Hispanics found in Marion County, this article does not disaggregate data by immigrant versus native-born Hispanic population. Nor will it disaggregate by Hispanic subgroups such as Mexican, Cuban, Puerto Rican, and other Hispanic.

**DATA**

The U.S. Census population counts for 2000 and 2010 were used for this analysis. I used ProximityOne ([proximityone.com/tracts.htm](http://proximityone.com/tracts.htm)) to match tracts in 2010 with those of 2000, given that many tracts were subdivided over the decade (Table 2).

**Table 2. Tract Type by Number in 2000 and 2010 for Marion County, Indiana**

<b>Tract Type</b>	<b>2000</b>	<b>2010</b>
White	98	57
Black	31	31
White-Hispanic	4	35
White-black	66	52
Black-Hispanic	0	9
White-black-Hispanic	11	27
<b>Total</b>	<b>211</b>	<b>211</b>

*Source:* U.S. Bureau of the Census (2000, 2010).

**CHANGES IN HISPANIC CONCENTRATION, 2000–2010**

The Poulsen et al. (2001) typology classified isolated host-community neighborhoods as ones in which at least 80 percent of the population was non-Hispanic white. Non-isolated host communities contained between 50 and 80 percent non-Hispanic whites, while mixed communities had less than 30 percent white and no minority group exceeding 60 percent. Polarized communities contained one minority group with more than 60 percent of the population. Given that Hispanic settlement is recent in Indianapolis, the presence of polarized Hispanic tracts is expected to be minimal. The following terminology, modified from Poulsen et al. (2001), is used in this classification scheme:

- White-dominant:  $\geq 80.0$  percent white,  $< 10$  percent Hispanic
- Black-dominant:  $\geq 60.0$  percent black,  $< 10$  percent Hispanic,  
 $< 20$  percent non-Hispanic
- White-Hispanic: 50–80 percent white,  $\geq 10$  percent Hispanic
- White-black: 50–80 percent white,  $\geq 20$  percent black
- Black-Hispanic:  $\geq 20$  percent black,  $\geq 10$  percent Hispanic,  
 $< 20$  percent non-Hispanic white
- White-black-Hispanic:  $\geq 20$  percent white and black,  $\geq 10$  percent  
Hispanic

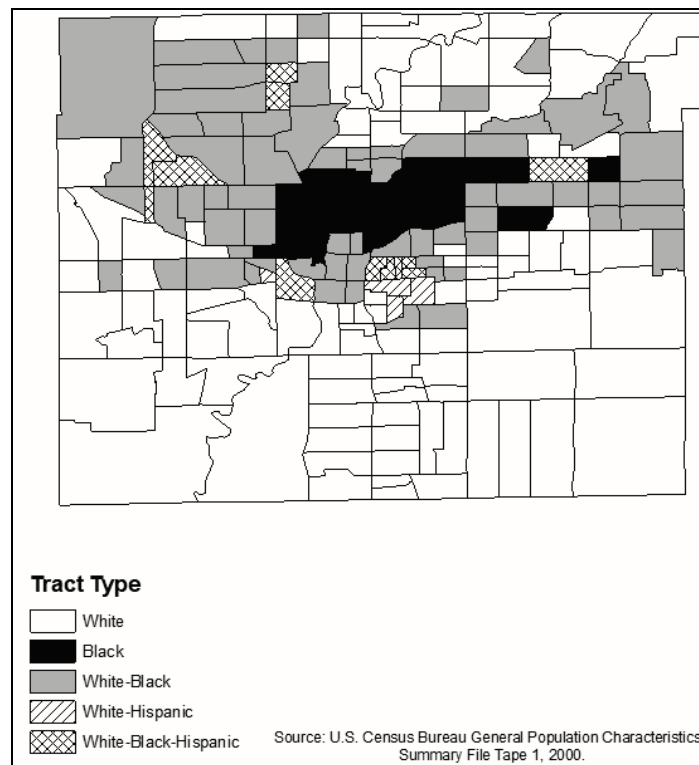
A tremendous amount of tract conversion occurred between 2000 and 2010. Only 57 out of 98 of the white-dominant tracts of 2000 remained so by 2010. Black tracts remained unchanged (31 tracts in both 2000 and 2010). Thirty-five tracts were White-Hispanic in 2010, versus only four in 2000. White-black tracts declined from 66 to 52

over the decade while White-Black-Hispanic tracts increased from 11 to 27. A new tract type evolved by 2010: the black-Hispanic tract, containing nine tracts. For the most part, black-Hispanic tracts converted from black-white tracts and were not from the movement of Hispanics into already predominantly black tracts in the central city. Most of the movement of Hispanics appears to be directed at white-dominant tracts outside of the central city. What is unclear is whether Hispanic presence is causing non-Hispanic whites to move out of these tracts.

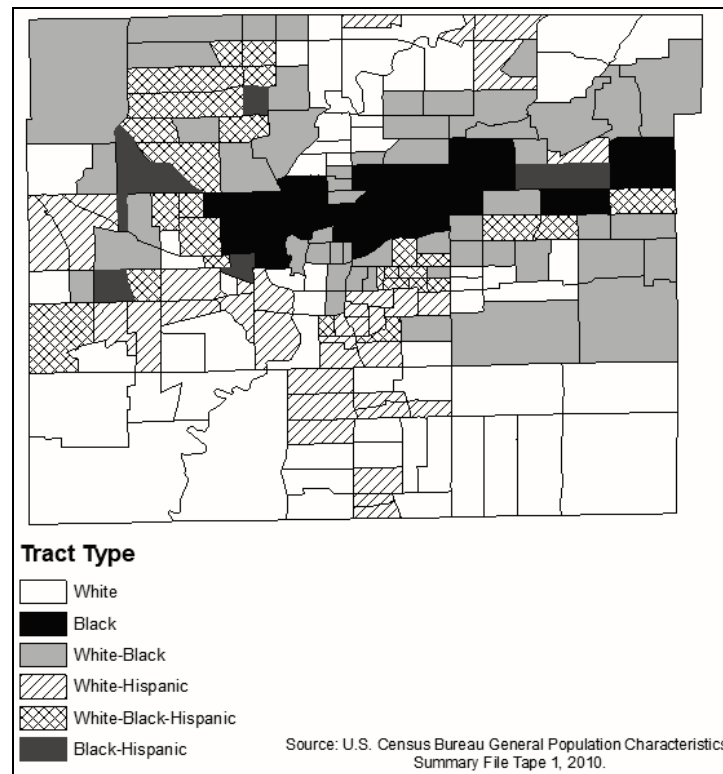
Figures 1 and 2 display tract type for 2000 and 2010. Note that black tracts are concentrated in the central city. White tracts are found in the northern part of the county as well as the southern part of the county. In 2000, white-black tracts were found to the northwest of the central city. It is this area where the growth of white-Hispanic-black tracts occurred between 2000 and 2010. White-Hispanic tracts were concentrated in the south-central part of the county in 2000 but had expanded southward by 2010. These white-Hispanic tracts provide a buffer between a dominant-black central city and the predominantly white tracts in the south.

Another area of white-Hispanic transition is found in the northeastern section of Marion County. This concentration is interesting, given that a swath of white-dominant tracts is located between the white-Hispanic tracts and an area of black-dominant tracts. A reasonable explanation for this lack of Hispanic presence in the white-dominant tracts is that this area is too expensive.

**Figure 1. Tract Type for Marion County, Indiana, 2000**



**Figure 2. Tract Type for Marion County, Indiana, 2010**



## **ANALYTICAL PROCEDURE AND METHODOLOGY**

Regression analysis is applied in this study to determine the variables that have had an impact on the change in Hispanic population by tract level in Indianapolis between 2000 and 2010. Unfortunately, the statistical packages of SPSS and SAS cannot be used for this analysis, as these programs assume that each unit in the analysis is not affected by neighboring units—a condition that is rarely experienced in geography. GIS (Geographic Information Systems) is a computer program that allows a researcher to analyze spatial distributions. Geographers are interested in space and thus, it is unlikely that two variables with proximity to each other would not exert some type of influence on one another. Tobler’s (1969) First Law of Geography states that all things are related to one another but things closer to one another are more closely related. Thus, a procedure that accounts for this spatial bias needs to be incorporated into our models through a process known as geographically weighted regression (GWR). There is very good reason to believe that the dependent variable (number of Hispanics) is not random across the study area; thus, GWR is the appropriate choice for this analysis.

Several demographic and economic characteristics thought to be good predictors of Hispanic population change were selected from the U.S. Census. These variables were examined to determine if they had a normal distribution. If not, the

variable was subjected to a square-root or log transformation. Exploratory regression within ArcGIS was then utilized to narrow the variables to five significant variables and variables that passed the Jarque–Bera test. This test is important for GWR because the residuals from the equation must be randomly distributed or the regression equation is considered mis-specified.

### *Dependent Variable*

(*Hx*): The number of Hispanics residing in a census tract in 2010 (log transformation). Dalecki and Willits (1991) suggested that the best way to measure change between two periods of time is to use the time-two variable as the dependent variable and to include time-one variable as a control variable.

### *Independent Variables*

Five independent variables are used in this analysis:

- (*T*) Percentage of tract population that moved into current housing between 1995 and 2000 (larger number of Hispanics predicted to be positively related to higher percentage of turnover in housing)
- (*NH*) Percentage of housing units built between 1990 and 2000 (unsure of relationship)
- (*MH*) Percentage of tract population in median housing price in the second-lowest category (\$50,000–\$100,000) (log) (larger number of Hispanics predicted to be positively related to availability of housing in lower- to middle-income areas)
- (*B*) Percentage of population that is black (square root) (no prediction)
- (*H*) Number of Hispanics in 2000 (log) (positive association predicted)

The following equation measures the change in the number of Hispanics by census tract between 2000 and 2010 by determining how much explanatory power can be extracted from the five independent variables described above:

$$Hx = T + NH + MH + B + H + e$$

where *e* is the percentage in Hispanic population change that is not accounted for by the five independent variables.

## RESULTS

For ordinary least squares, the independent variables explained 75 percent (adjusted  $R^2 = .755$ ) of the variance in change in the number of Hispanics by tract between 2000 and 2010 (Tables 3 and 4). The percentage of new housing units was highly significant at the 0.001 level and showed that Hispanic population change was greater for tracts with newer housing. This does not mean that Hispanics are moving directly into new housing units. These units are mostly in the tracts bordering suburban counties where land area is more able to accommodate growth. There may be a process of vacancy chains in which better-off residents move out of older housing, allowing an influx of the Hispanic population, who then filter into the older housing units of the tract. Surprisingly, Hispanics were not attracted to tracts with a high percentage of residential turnover between 1995 and 2000 (not significant). These tracts likely have a high percentage of rental units, which should encourage settlement of the Hispanic population, but there could be other undiagnosed processes occurring in these tracts (to be addressed below). Hispanics were attracted to tracts with 2000 housing values between \$50,000 and \$100,000 (the second-lowest median housing category). Many of the properties in these tracts may be in a process of rehabilitation and have benefitted from an influx of Hispanics. This is strong evidence that Hispanics avoid the poorer tracts as well as the very wealthy tracts.

**Table 3. Ordinary Least Squares Regression for Change in Hispanic Population in Marion County, Indiana**

	<b>Coefficient</b>	<b>Standard Error</b>	<b>Significance Level</b>
Intercept	1.240	.249	0.000***
Number of Hispanics, 2000	.895	.042	0.000***
Percent black	-.041	.015	.004**
Median housing value	.048	.018	.007**
Percentage of new housing, 1990–2000	.013	.002	0.000***
Percent movers, 1995–2000	-.002	.002	.609

*Note:* \*\*\* $p > 0.0001$       \*\*  $p > 0.001$

Hispanics avoided tracts with a high percentage of black population. This avoidance may be a result of competition for housing opportunities, antagonism between the groups, or the inability of the Hispanic population to successfully integrate with the non-Hispanic black population. It is likely that percentage of black population and residential mobility are correlated, which thus may explain why Hispanics avoid tracts with high percentages of mobile population. Not surprisingly, tracts with a greater number of Hispanics in 2000 experienced larger increases in Hispanic population by 2010, undoubtedly an effect of chain migration and social networks.

**Table 4. Comparison of Ordinary Least Squares and Geographically Weighted Regression Statistics for Change in Hispanic Population in Marion County, Indiana, 2000–2010**

	OLS	GWR
Adjusted $R^2$	0.755	0.803
Akaike’s (AIC)	383.2	361.2
Moran’s I	0.129	-0.020

*Note:* AIC= Akaike information criterion; GWR=geographically weighted regression; OLS=ordinary least squares.

It is likely that the non-Hispanic white population would be more open to Hispanic infiltration than to black infiltration, which may explain the movement of Hispanics into tracts that were predominantly white in 2000. The southwestern part of Marion County contains the airport, and this area may be easier to penetrate, given the disamenities associated with airports, namely noise and congestion. The growth of the enclave to the south of the central part of the city is concentrated around University Heights, and it may be that residents in this area are more accommodating to Hispanics. It may also be that the recent housing crisis affected settlement patterns in these tracts by opening up more housing. This would seem unlikely given the small window of opportunity between the onset of the housing crisis in 2007 and the census count in 2010, but is certainly worth a further look.

**DISCUSSION AND CONCLUSION**

The results of this analysis reveal that Hispanics in Indianapolis are not necessarily an economically disadvantaged minority group. Hispanics are able to move into lower- to middle-income housing tracts and to mix with both non-Hispanic white and middle-income non-Hispanic black populations.

The map of tract types in 2010 also provides strong evidence that Hispanics are providing a buffer zone between a black inner city and a white outer city in Indianapolis. These conclusions agree with numerous studies that found Hispanics to provide buffer zones (Parisi et al. 2015; Reibel and Regelson 2011). This movement into the suburban tracts is found in several other studies discussing rapid Hispanic population growth since the 1980s. Flippen and Parrado (2012) examined the development of Hispanic enclaves in Durham, North Carolina, and found that Hispanics originally settled in dilapidated African American neighborhoods in the early 1990s but expanded into white-dominant areas by the early 2000s. Smith and Furueth (2004) found in their study of Hispanics in Charlotte that Hispanics bypassed the city and settled in the inner ring of suburbs of the central city with the availability of rental housing.

This settlement in the suburbs can be understood better with examination of the housing and economic characteristics for the three racial/ethnic groups in Marion County (Table 5). It is likely that by pooling economic resources, Hispanics can enter tracts with

higher incomes, higher housing values, and higher median rents. Note that Hispanic household income, median value of housing, and median rent in 2000 were between those of non-Hispanic whites and non-Hispanic blacks. Also note that average household size was higher for Hispanics than for the other two groups. The average number of members in Hispanic households is about one more than whites and blacks. While these numbers probably include children, it is also likely that relatives and friends have cohabited to take advantage of economic resources.

**Table 5. Household Economic Characteristics of Marion County by Race/Ethnicity as of 2000**

	Median HH Income (1999)	Total HHs	Average HH Size	Sex Ratio of over-18 Pop.	Owner- Occupied Housing (%)	Housing Median Value (by HoH Race/ Ethnicity)	Median Rent
Non- Hispanic white	\$43,798	255,956	2.29	90.6	69.9	\$103,300	\$585
Non- Hispanic black	\$30,446	78,990	2.57	80.8	47.0	\$75,900	\$532
Hispanic	\$35,354	8,999	3.47	1.63	28.5	\$87,500	\$568

*Note:* HH=household; HoH=head of household; Pop.=population.

*Source:* U.S. Bureau of the Census (2015).

The sex ratio of the population over the age of 18 for the three groups shows a great difference. While non-Hispanic whites and non-Hispanic blacks had sex ratios that favored females (90.6 and 80.8, respectively), Hispanic households had a sex ratio of 1.63, indicating a much higher number of males than females. Given that males are more likely to immigrate to the United States than are their female counterparts, these results should not be surprising. Connecting with family and friends is a technique used by new arrivals to a city to combine and conserve scarce monetary resources.

Another major difference between Hispanics and their non-Hispanic white and non-Hispanic black counterparts is the percentage of the population in owner-occupied housing. Only 28.5 percent of Hispanics reside in such housing compared to 69.9 percent for non-Hispanic whites and 47.0 percent for non-Hispanic blacks. This is most likely explained by the recent arrival of Hispanics in Indianapolis.

Is Indianapolis becoming more racially/ethnically integrated or more segregated? Unfortunately, this study does not answer that question. Marion County, the central city county of Indianapolis, has become more integrated as measured by tract conversion, from predominantly non-Hispanic white in 2000 to a variety of racial/ethnic categories in 2010. However, Orfield and Luce (2013) found in their study of the 50 largest



metropolitan regions in the United States that inner suburbs of most large cities that were integrated in 2000 became more segregated by 2010 as the non-Hispanic white population retreated to the outer suburbs. Given the decline in Marion County's non-Hispanic white population from 2000 to 2010, it is likely that these individuals have retreated to the suburbs in the surrounding counties.

Future research could extend the study area to the entire Indianapolis metropolitan area. Questions to be addressed could include (1) Where are Hispanics settling in the Metropolitan Area? (2) Are there multiple Hispanic enclaves in the metropolitan area, or are Hispanics diffusing throughout the adjacent counties? (3) Is the non-Hispanic white population in a process of succession to adjacent counties as a result of Hispanic settlement in Marion County? (4) How are these settlement patterns in the Indianapolis metropolitan area affecting segregation levels of Hispanics and other racial/ethnic groups?

## ENDNOTE

1. This index is based on a scale of 0 to 100, with metropolitan areas closer to 100 being more segregated. In the above example, 80 percent of blacks would have to have moved to other locales in their respective metropolitan areas to be integrated with the non-Hispanic white population.

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***Chief Justice Leadership: A Brief Sketch  
of Its Landscape, Structure, and Operation\****

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**ABSTRACT**

This article examines chief justice leadership of the United States Supreme Court during the judicial decision-making process and develops a model of such leadership in three distinct parts: landscape, structure, and operation. The landscape consists of five interactive stages in the judicial decision-making process: certiorari, oral argument, conference, majority opinion assignment, and opinion drafting. Structurally, three prevailing conditions on the Court create a “democratic default”: life tenure, equal vote, and free voice. In terms of operation, the office employs small-group leadership and its twin pillars of task and social leadership in conjunction with behavioral leadership and its three types of leadership (autocratic, laissez-faire, and democratic). To highlight both small-group and behavioral leadership in action, case studies on Chief Justices Marshall, Stone, and Warren are briefly described. While no one leadership style is exclusively employed, the contours of chief justice leadership are chiefly social and democratic, making these leadership forms dominant. As such, the key finding of this paper is that, in order to successfully lead the court, the chief justice must be just as good a political negotiator as a competent legal judge.

**KEY WORDS** Chief Justice; Supreme Court; Leadership; Small-Group Leadership; Task Leadership

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Since the United States Supreme Court established the power of judicial review in *Marbury v. Madison* (1803), the chief justice has led a powerful institution of constitutional import. The office has played a crucial role in the pressing issues of the times, from the establishment of national supremacy in *McCulloch v. Maryland* (1819) to the question of slavery in *Dred Scott v. Sandford* (1857), racial segregation and “separate but equal” in *Plessy v. Ferguson* (1896), economic recovery during the Great Depression in *National Labor Relations Board v. Jones & Laughlin Steel Corp.* (1937), racial desegregation in public education and beyond in *Brown v. Board of Education* (1954), abortion and reproductive rights in *Roe v. Wade* (1973), electing the president in *Bush v. Gore* (2000), and comprehensive healthcare reform in *National Federation of Independent Businesses v. Sebelius* (2012). In each of these cases, which represent only a small portion of the landmark decisions handed down by the court, the chief justice has served as the institution’s leader and namesake.

But how, exactly, does the chief justice lead the court? Is she simply a task master distributing responsibilities and deadlines and overseeing the judicial decision-making process? Does she concern herself with the justices’ social relationships? How much control does she wield in the judicial decision-making process—all, none, or some?

Despite the office’s central role on the court and its institutional impact on constitutional law, questions such as these concerning its leadership remain severely understudied in the judicial literature. Rather than investigating them with a vigor commensurate to the office’s power and efficacy, when looking at chief justice leadership, the academy has typically done little more than zero in on analyses of aggregate majority opinion assignment patterns, neglecting the deeper thread of the office’s leadership. Consequently, little research investigates the office’s central role in the execution of its chief function to guide the court through the judicial decision-making process, making such an inquiry a valuable endeavor in the scholarship. As such, identifying the landscape, structure, and operation of chief justice leadership sets a robust base on which to build a solid model.

Danelski (1960) lays out a landscape by identifying five interactive stages of the judicial decision-making process: certiorari, oral argument, conference, majority opinion assignment, and opinion drafting. Given the amount of attention paid in the judicial literature to the chief justice’s assignment of majority opinions at the expense of the other four stages, Danelski’s schema provides an untapped institutional foundation to develop a more thorough model of chief justice leadership.

Building on the sturdy landscape provided by these five interactive stages, the model of chief justice leadership advanced here next adds a structural level of conditions that prevail on the court and create what can be called the democratic default. These conditions include life tenure, equal vote, and free voice. Each of these conditions influences how the chief justice leads the court, by creating a unique atmosphere of judicial independence, equality, and autonomy.

Finally, from the leadership literature, small-group leadership and behavioral leadership provide two concurrent lenses with which to view chief justice leadership in operation. As the leader of nine justices on the court, the office exercises Verba’s (1961) twin towers of small-group leadership: task leadership and social leadership. Using these

twin towers as animating forces during each stage of the judicial decision-making process, this model of chief justice leadership examines Lewin, Lippitt, and White's (1939) three-way behavioral leadership typology of autocratic, laissez-faire, and democratic leadership.

Combining the democratic default, small-group leadership, and behavioral leadership in assessing the court's progression through the five interactive stages of the judicial decision-making process, the model sketched here identifies the office as chiefly democratic in structure and operation. This makes democratic leadership the dominant behavioral form. Meanwhile, for the small group of justices, social leadership plays an outsized role in the chief justice successfully leading the court across the landscape of making decisions and issuing opinions. Taken together, they point to the key finding: *In order to successfully lead the court, the chief justice must be just as good a political negotiator as a competent legal judge.*

### **SKETCHING A MODEL OF CHIEF JUSTICE LEADERSHIP: SOURCES, THEORIES, AND METHODS**

In sketching this model of chief justice leadership, the formative research centers on four categories of sources that provide theories and methods that have yet to be applied to organize the office and study its leadership: justices' papers and effects, biographies, judicial scholarship, and leadership scholarship. In particular, the model advanced here relies heavily on the judicial and leadership scholarships to supply the theoretical, analytical, and methodological components of investigating chief justice leadership, while the justices' papers and effects and biographies supply much of the empirical data.

#### *Justices' Papers and Effects*

A number of justices have left papers, notes, and other writings concerning their time on the bench (e.g., Douglas 1981; Frankfurter 1980; Stevens 2011; Story 1851). As such, they offer primary source accounts of the judicial decision-making process that otherwise may have remained hidden inside the court's secluded halls, chambers, and conference room. Justice Story, who served for more than two decades with Chief Justice Marshall in the 19th century, provides candid and lucid insights on the leadership of the great chief justice. Meanwhile, Justices Frankfurter, Douglas, and Stevens are fruitful sources to draw from regarding the premodern and modern eras. Their combined service of more than 100 years coincides with seven chief justices from the late Hughes Court of the 1930s (Frankfurter and Douglas) through 2010, to the current Roberts Court (Stevens). In addition to providing observations from the bench, each justice also knew chief justices who served before they did, consequently expanding their coverage to include the whole of the 20th century and approximately 10–15 years on each bookend, beginning with Chief Justice Fuller (1888–1910) and concluding with Chief Justice Roberts (2005–present). Working from these justices' base, other justices' writings—some from chief justices—supply additional examples of chief justice leadership and insights (e.g.,

Brennan 1974; Curtis 1864; Rehnquist 1986; Roberts et al. 2005; Taft 1925; Warren 1977; White 1914).

### *Biographies*

Biographical works about the chief justices offer additional empirical information augmenting the primary source accounts provided by various justices' papers and effects. Much of this biographical work is drawn firsthand from the chief justices' backgrounds, training, professional experiences, and personalities that drove their leadership. For instance, significant works have been produced about the three chief justices briefly investigated in this sketch: Marshall (autocratic), Stone (laissez-faire), and Warren (democratic). [See, for example, Beveridge (1919) for Marshall, Cray (1997) for Warren, and Mason (1956) for Stone .] In doing so, biographies offer qualitative pictures of who these men were rather than focusing narrowly on behaviors such as majority opinion assignment that can be numerically coded, mathematically quantified, and formulaically analyzed. In particular, these sources inform scholars of the chief justices' personal views and what specific influences and motivations affected their leadership—considerations that go far beyond what is contained in the current judicial literature. Additionally, biographies provide the views and perspectives of the biographers, which add further depth to the chief justices as both persons and leaders.

### *Judicial Scholarship*

Danelski (1960) and Steamer (1986) offer two valuable studies within the judicial literature that provide theoretical and methodological bases from which to sketch a sturdy model of chief justice leadership. As highlighted above, Danelski's 1960 work provides the institutional foundations that supply the landscape of chief justice leadership, namely the five interactive stages of the judicial decision-making process. Utilizing his basic institutional foundation, and appreciating its fundamental character as establishing the terrain upon which chief justice leadership traverses, this model goes further by adding considerations of structure and operation to chief justice leadership that Danelski does not address.

Steamer (1986), meanwhile, highlights a methodological route to thoroughly study chief justice leadership. Specifically, his analysis divides chief justices into transformative and transactional leaders according to performance along the lines of Burns's seminal 1978 work regarding transformative and transactional leadership. In such efforts, Steamer classifies chief justices into four categories in a 1 + 3 fashion. First and foremost, inspirational chief justices who possess conviction—Chief Justices Marshall, Hughes, and Warren—are transformative leaders who revolutionize the court's impact on constitutional law. The rest of the chief justices, all inferior to inspirational justices, fall into three categories of transactional leaders bearing various stripes. These include persuasive and exemplar chiefs (Chief Justices Waite, Fuller, and White), chief justices involved with political and extra-court activities (Chief Justices Taft and Burger),



and chief justices minimized by short tenures Founding Era Chief Justices Jay, Rutledge, and Ellsworth and War Era Justices Chase, Stone, and Vinson).

The methodology employed here is similar to that used in Steamer's (1986) work, applying classic concepts from the leadership literature to the chief justice in order to examine the office and its leadership in new ways. Building from Steamer's work, the argument here appreciates Steamer's facility in adapting leadership concepts to study the office but differs on which concepts are selected and how they are applied. Where Steamer used Burn's 1978 transformational and transactional leadership and evaluated efficacy of leadership, this paper uses Verba's 1961 twin concepts of small-group leadership combined with Lewin et al.'s 1939 three-way behavioral typology to investigate execution of leadership. In this way, the focus of this work seeks to provide a closer view of the leadership that the office employs in carrying out the day-to-day functions involved in the judicial decision-making process, rather than concentrate on evaluative claims of performance (although some consideration of performance cannot be severed from the analysis of different behavioral leadership styles). By focusing on execution of leadership rather than on effectiveness of leadership, this work distinctly differs from Steamer's.

### *Leadership Scholarship*

The leadership scholarship offers work wholly independent of the court that can be adapted to illustrate the office's leadership in operation. Importantly, this work comes from outside of the judicial literature. By doing so, it provides objective concepts and ideas from which can be drawn an analytical model of chief justice leadership.

As mentioned above, the two main leadership studies applied in this model of chief justice leadership consist of Verba's small-group leadership (1961) and Lewin et al.'s the three-way behavioral leadership typology (1939). The two key takeaways from this leadership scholarship highlight (1) the importance of social leadership over task leadership and (2) how the democratic default on the court makes democratic leadership the dominant form of chief justice leadership. A more thorough accounting of these leadership styles is provided below.

## **LANDSCAPE: THE FIVE INTERACTIVE STAGES OF THE JUDICIAL DECISION-MAKING PROCESS**

Before highlighting the democratic default, small-group leadership, and behavioral leadership, this section provides a brief description of each interactive stage involved in the judicial decision-making process, to set the landscape of where such leadership occurs.

### *Certiorari*

Since Chief Justice Taft's leadership in bringing about the enactment of the Judiciary Act of 1925 and its expansion of certiorari (or "cert"), the court possesses complete discretion

in deciding which cert petitions it will grant oral arguments to dispose of the merits of the case. This decision consists of two steps. First, to be considered by the justices at conference, cert petitions must be placed on the “discuss list.” Generally, the chief justice dominates the selections for the discuss list, but her determinations are not exclusive, as the associate justices can also suggest cert petitions to be included and all such suggestions are accepted for discussion.

Second, at conference, the justices briefly discuss whether to grant or deny a cert petition. The chief justice introduces each petition and frames the issues to be discussed and considered, for which each petition normally receives about five minutes. In this process, the court has developed and adopted an internal “Rule of Four” that requires only four justices to agree to grant cert. Nonetheless, despite requiring fewer than half of the justices to approve of a hearing, roughly only 2 percent of the approximately 10,000 cert petitions filed each year receive one.

### *Oral Argument*

Following certiorari, oral argument constitutes the hearing in which counsel for each party highlights the arguments made in their filed briefs and all of the justices are free to participate in asking questions. This is the first time the justices engage collectively on the merits of a case and is the only public stage in the judicial decision-making process. As a matter of function, the chief justice presides over the hearing, which lasts for one hour with each side receiving thirty minutes to present its argument, although the chief justice can grant additional time in any given case (but this happens only infrequently). Most justices actively engage in asking questions, and the chief justice must monitor the proceeding to ensure that it moves along timely and that both sides are given their fair day in court, as well as maintain a bench that presents itself civilly and judiciously.

### *Conference*

At the heart of the judicial decision-making process sits the conference, or the private meeting of the justices to discuss and vote on the merits of argued cases (and whether to grant cert petitions). Following the chief justice’s opening summary, comments, and framing of each case, each associate justice contributes his or her comments and viewpoints in descending order of seniority, starting with the senior associate justice. During this portion of the discussion, tradition forbids the justices, including the chief justice, from interrupting the speaking justice. After the first round of comments concludes, the justices take an initial vote, beginning with the junior associate justice and working their way back up to the chief justice, who votes last. If the initial vote does not result in unanimous agreement, the discussion opens up and the justices fully debate until all comments and viewpoints are expressed. In these instances, the chief justice must exercise astute democratic and social leadership, as well as timely task leadership, to maintain a healthy atmosphere and move the court along in its business.

### *Majority Opinion Assignment*

Following conference, opinions are assigned by the senior justice in the majority, which by custom is always the chief justice when in the majority. In such cases, the chief justice may assign the opinion to any majority justice, including herself, but must be perceived as doing so fairly—meaning even distribution of both important and mundane cases. As the judicial scholarship has made clear by its overwhelming concentration on this stage, this decision constitutes the most—perhaps only—concrete lever of power that the chief justice possesses in the judicial decision-making process. This power results from the fact that this decision plays a critical role in determining what direction the court’s final opinion will take as well as influences the judicial legacies of each justice.

### *Opinion Drafting*

After an opinion has been assigned, the process of drafting it can take a variety of paths, whether one of smooth sailing as the justices in the majority largely agree on the decision’s outcome and its reasoning, or one that may require several rounds of negotiation with justices joining and abandoning the majority. During the ebb and flow of these internal transactions, the chief justice sits at the center of the court’s information network, meaning that although she cannot dictate that certain positions or arguments be advanced or eliminated, she does maintain a soft social presence in the process. Additionally, and importantly, each justice may write a concurring or dissenting opinion in every case, which again the chief justice may influence one way or another but possesses no formal power to include, shape, or prevent.

## **STRUCTURE: THE DEMOCRATIC DEFAULT ON THE COURT**

As noted above, three conditions combine to create the democratic default on the court: life tenure, equal vote, and free voice. Life tenure means that the justices cannot lose their seats because of the decisions they make. They have a lifetime job. This provides them with judicial independence, an important underlying characteristic that allows the court to constitutionally function to the full extent that judicial review intends it to.

Equal vote means that each justice, including the chief justice, has only one vote in the judicial decision-making process. Nine members means nine votes, one per justice. Consequently, in the final tally, each justice operates under the condition of judicial equality. Additionally, this makes the chief justice *primus inter pares*, or first among equals. The chief justice may lead the court, but she is not the court.

Lastly, free voice means that each justice, when not drafting the majority opinion, remains free to write a concurrence or dissent in every case. Coupled with life tenure, this gives the associate justices the ability to write with complete judicial autonomy, as the chief justice possesses no formal authority to influence their decisions whether or not to write a concurrence or a dissent, nor possesses any control over what such opinions might say.

Each of these three conditions of the democratic default significantly influences the structure in which the chief justice operates, making it vitally important that she

appreciate how they affect the way she leads the court. In terms of both small-group and behavioral leadership, the chief justice must exercise sagacious social leadership within the ambit of democratic leadership. That may sound ironic for the court, especially because such conditions intentionally remove its members from the political process, but like any human group charged with executing responsibilities, the court remains a political animal.

### **OPERATION: SMALL-GROUP AND BEHAVIORAL LEADERSHIP**

In assessment of chief justice leadership of the court, small-group and behavioral leadership provide two lenses with which to judiciously examine the office. Small-group leadership encompasses task and social leadership, which supply the everyday actions and considerations of guiding the court through the judicial decision-making process. Importantly, they animate the behavioral leadership styles of autocratic, laissez-faire, and democratic leadership. These behavioral styles, in turn, systematically provide analytical frameworks illustrating consistent patterns in how the chief justice leads the court, thereby also supplying the model's methodology.

#### *Small-Group Leadership*

As the leader of nine justices on the court, the office exercises Verba's (1961) small-group leadership. Task leadership focuses on producing group outcomes, while social leadership concerns the individual well-being of each member as well as group cohesion. Unlike the typical small-group leader who leans toward either task or social leadership, however, during the judicial decision-making process, the associate justices expect the chief justice to exercise both task and social leadership. Consequently, the office demands comprehensive small-group leadership.

On the task side, such leadership consists of choosing which cert petitions to place on the discuss list, presiding over oral argument, leading the conference discussion on argued cases (and cert petitions), assigning opinions when in the majority, and overseeing opinion drafting. Similar to those of most small-group leaders, the chief justice's task leadership responsibilities are relatively straightforward; nonetheless, they cannot be ignored or neglected because they must be competently completed in order for the court to fulfill its essential function of deciding cases and issuing opinions. If the chief justice fails to lead the court in executing the responsibilities incumbent of the judicial decision-making process, the associate justices will jockey with each other to fill the leadership void, which will produce a disproportionate amount of social strife relative to the number of opinions handed down. In this way, the court will never go without a task leader, but this does not solve its small-group leadership calculus.

The key to solving this calculus is social leadership, for which the chief justice must work to ensure court cohesion, solidarity, and harmony by navigating the complex web of considerations intensified by the three conditions that create the democratic default. She must attempt to establish a healthy atmosphere on the court by seeking to reach broad agreement among the justices in decided cases. She does so by undertaking

efforts to minimize disagreements and cool tensions during oral argument, conference (both on cert petitions and argued cases), and opinion drafting. During oral argument and particularly conference, defusing disagreements often requires the chief justice to enter into the fray and evenhandedly mediate the argument as an impartial referee, a responsibility that involves immense emotional muscle and restraint alongside social adroitness and personal wisdom. In this capacity, as well, when assigning majority opinions, the chief justice must consider the justices' workload, feelings, and aspirations in order to evenly disperse the court's work and be perceived as fair in doing so, taking into account each justice's various interests and expertise—including her own—and balancing them against each other.

In addition to being a neutral referee during the various stages of the judicial decision-making process, at all times—and unlike the associate justices—the chief justice must maintain a heightened level of judicial decorum that not only commands formal deference but also, more importantly, engenders personal respect. Consequently, one thing a chief justice can never do is slight her colleagues in written opinions, even ones she vehemently disagrees with, which some associate justices are wont to do. The chief justice must rise above such temptation, both professionally and personally, for the social good of the court.

Bringing all of these considerations together, the chief justice must exercise competent task leadership in order for the court to execute its essential function, but, more importantly, for the court to function efficiently and effectively, social leadership constitutes the key to successful chief justice leadership no matter which behavioral form it may take.

### *Behavioral Leadership*

*Autocratic Leadership.* Classically defined as command-and-control leaders, autocratic leaders make all of the decisions for the group and seek no opinion, counsel, or votes from group members. Such a leader is the principal, while group members are the agents. This makes an autocratic leader a dominant task leader and one who may or may not exercise social leadership.

While Chief Justice Marshall employed a sweeping autocratic hand in leading the court during its formative years, particularly in oral argument, conference, majority opinion assignment, and opinion drafting (cert did not exist on the Marshall Court), this form of chief justice leadership is antiquated to his time on the bench. Nonetheless, even though autocratic leadership finds only limited application on the modern court in composing the discuss list in the cert stage (i.e., task leadership) and, while technically in task operation but not social cohesion, majority opinion assignment, looking at Marshall's leadership remains valuable in considering each of the classic types of behavioral leadership.

During oral argument, an autocratic chief justice would simultaneously exercise task and social leadership either in silence or by exclusively questioning counsel. The latter route has never been employed; Chief Justice Marshall set a silent tone in leading his bench. In

either case, without meaningful verbal participation by any of the associate justices, an autocratic chief justice may command the associate justices to singularly function as note-takers for the chief justice in helping to reach the court's decision. In this capacity, the chief justice would not request any associate justices' opinions but rather would instruct each of them to simply keep track of important items that arise in oral argument.

At conference, the Great Chief Justice dominated the justices' nightly discussions that took place in their boardinghouse accommodations, where they lived together during the annual winter term in Washington, DC, when the court sat in session. These boardinghouse arrangements played a crucial role in Marshall's autocratic leadership by creating physical conditions conducive to it. From this base of the home hearth, his command of the cases, their issues, and the applicable law were complete and, coupled with his eloquently simple turns of phrase and the endearing force of his personality and temperament, his task and social leadership blended together and proved to be an instrumental spearhead in determining the court's decisions and opinions.

As a result, the majorities he commanded were formed through astute social leadership. Marshall found ways to speak to each associate justice and comfortably persuade all on correct (his) outcome in the case. When he could not convert associate justices to his view, he found ways to roundly criticize them around the boardinghouse, making their daily lives uncomfortable until they acquiesced to his position. With Marshall leading in such fashion, his majorities were usually unanimous, particularly in seminal constitutional cases such as *Marbury v. Madison* (1803), *McCulloch v. Maryland* (1819), and *Gibbons v. Ogden* (1824).

He recognized that unanimity must be the norm to transform the court from a weak institution of only passing and nominal governing import into one that would grow into a constitutional force. To achieve this goal, along with plying an autocratic hand at conference, he also exercised autocratic task leadership by eliminating the old English practice of *seriatim*, in which each justice wrote a separate opinion in every case, replacing it with one in which a single justice spoke for the majority. Moreover, he established the tradition that, whenever in the majority (which Marshall usually was), the chief justice would assign the opinion to its author. Naturally, he frequently assigned the opinion to himself, writing 47 percent of Marshall Court decisions and 58 percent of constitutional ones. In landmark constitutional cases, he wrote every opinion except for *Martin v. Hunter's Lessee* (1816), in which he recused himself because his brother possessed a significant interest in the case.

In drafting opinions, meanwhile, Marshall demonstrated simple logic and clear prose, coupled with flashes of majestic and sweeping phrases for rhetorical effect. He set a strong tone for the associate justices that when drafting opinions, the court would speak clearly and forcefully. Frequent unanimous opinions also added to this clarity and forcefulness. In instances when justices sought to write concurrence or dissent, Marshall stoutly discouraged such behavior on account of damaging the court's credibility.

Marshall maintained an acute awareness of the institutional statecraft in which he was engaged. Consequently, he intentionally made an attempt—and succeeded—at building up the court to be a powerful institution of the national government and a coequal branch with the president and Congress. This, in turn, enhanced the prestige of

the court and the justices, which gave Marshall additional leverage to autocratically command his court.

*Laissez-Faire Leadership.* Laissez-faire leadership is classically defined as hands-off leadership, in which the group leader is uninvolved with group members and participates very little, if any, in decision making. Consequently, such leaders make no policies or group-related decisions (i.e., no task leadership), nor are they involved with their members (i.e., no social leadership). Instead, group members are responsible for all tasks, processes, and decisions, along with creating and maintaining group cohesion. As a result of such complete group governance, laissez-faire leaders generally hold little to no authority within their groups.

As Chief Justice Stone's tenure dramatically demonstrated, laissez-faire leadership as a dominant form is not appropriate on the court. The chief justice, although not an autocratic command-and-control leadership position, nevertheless has clearly defined tasks that are required to be completed for the court to competently function, and the associate justices expect the chief justice to execute these tasks. This is the first aspect of leading the court at which the chief justice must succeed if the office is to lead the institution in any way.

Equally important on the social side, while the associate justices are highly intelligent, ambitious, and self-motivated individuals, they operate in an institutional setting that demands personally attentive leadership from the chief. Leaving the associate justices to man the bench without social direction, discipline, and diplomacy, as Stone did, leaves the court in institutional tatters as the associate justices fight each other for leadership in every stage. [See, e.g., *Ex parte Quirin* (1942), for which Justices Roberts and Black controlled the certiorari process; *Smith v. Allwright* (1944), for which Stone accepted Justice Jackson's majority opinion assignment advice concerning the public's reception of the court's controversial ruling in a racially charged voting rights case arising from Texas; and *Jewell Ridge Coal Corp. v. United Mine Workers of America* (1945), for which Justice Jackson's concurrence sparked an internal war with Justice Black over the latter's lack of recusing himself for a conflict of interest.]

When selecting cert petitions to place on the discuss list, and like his laissez-faire leadership in majority opinion assignment, Stone allowed far too much leeway to the associate justices in its composition. He did not decisively control the process, which resulted in numerous petitions for discussion and thus irritated the justices in terms of frivolous petitions being given time for assessment and evaluation. Moreover, at conference, and like his leadership on argued cases, Stone's laissez-faire leadership allowed discussion to ramble on lengthily without decisive decision making. Thus, the justices spent an unreasonable amount of time working through a largely procedural matter rather than disposing of it in a preferred, rote manner. This failure of both task and social leadership during a mundane stage of the judicial decision-making process raised the ire of the justices and set the tone from the beginning that fostered antagonism and discord among them.

This rancor and division easily made their way into oral arguments on the Stone Court. Although Stone led for only five years, the derisive voices of opinion tore his court

apart in open air, free for the nation and world to see, as the associate justices chided each other freely on the bench. A tit-for-tat mentality among intelligent men rapidly descended into childish slights and barbs designed not to unravel the deeper issues of the cases but instead to insult and humiliate judicial enemies seated on the same supreme bench. Meanwhile, Stone exercised no task leadership aiming to quell the justices' pointed attacks at each other, soiling their social relationships and leaving the court to look like a pack of wild dogs ravenously foaming at the mouth for each other's demise.

Unsurprisingly, this caused the associate justices to more deeply cascade at conference into their petty skirmishes of personal rifts and slights. Stone fostered such hostile relations by allowing the associate justices to extensively debate in a freewheeling fashion, one that strongly resembled an upper-level law-school seminar course seeking not to arrive at any definite decision but rather to analyze all of the possible positions that a case presented. Coupled with the social characteristics of hyper-egotistical justices appointed by President Franklin D. Roosevelt beginning in the late 1930s—namely Justices Black (1937), Frankfurter (1939), Douglas (1939), and Jackson (1941)—this unguided task leadership proved to be too much for seating a bench capable of civil disagreement. As a result, conferences on the Stone Court exhausted and strained the associate justices physically, mentally, psychologically, and socially. The justices also frequently failed to conclude on time, often being held over until well into the following week, which further grated on them. In each of these ways, Stone lost control of the conference and thereby lost the ability to corral the Roosevelt justices. This, in turn, disaffected his leadership of the court in all five stages.

Moreover, Justice Stone allowed the social acrimony of the conference to spill over afterward, most notably by allowing the associate justices far too free a rein in majority opinion assignment by being a frequent dissenter. In exercising this negative task leadership, he abdicated influence over opinions' content, tone, and language, which are important for steering the general course of the court. When he did find himself in the majority, Stone would entertain assignment suggestions from the associate justices, thus creating social competition and jealousy among them.

During opinion drafting, meanwhile, the associate justices began to express themselves more stridently in majority opinions and more frequently (and stridently) in concurrences and dissents. This converted poor task leadership into poor social leadership. In terms of task leadership, it slowed down the ability to timely produce opinions, which brought groans from both the associate justices and the public. Socially, and published in print that history continues to encounter with discomfort, the associate justices wrote with a fevered pitch of animosity and division never before seen on the court. It was a bench at war with itself, producing written opinions that detailed the various battlefields and their casualties. The result spoke poorly for the court, its eminent status as the nation's high bench, and Chief Justice Stone, who otherwise enjoyed a sterling and highly celebrated judicial record as an associate justice (in which he sat in all eight seats, including senior associate justice).

In addition to difficult personalities and their acrimonious expressions in writing, Stone also attempted to lead the court from home while the associate justices established their chambers in the new Supreme Court Building, completed in 1935. When the court



first moved into its new home, Stone, then an associate justice, growled about its grandiose size and ornate architecture, which, he complained, made the justices look like nine black beetles scuttling about the Temple of Karnak. He hated the new facility and continued to work from home even after being appointed chief justice in 1941. By the end of his tenure in 1946, only he continued working from home. Thus, he exercised laissez-faire task and social leadership not only in terms of failing to lead during the judicial decision-making process but also as an absent leader in terms of physical presence. It is difficult to lead a small group of ambitious and egotistical men and mass them together into a productive and cohesive unit when they assemble daily without the leader's presence, particularly when they do so by the leader's own choosing.

*Democratic Leadership.* Democratic leadership concerns a balance between task and social leadership in which leaders follow structures to ensure that decisions are made and objectives achieved (i.e., task leadership) while at the same time taking into account group members' needs, thoughts, and feelings (i.e., social leadership). Such leaders lead in the decision-making process and may exercise influence, but they do not singularly make decisions like autocratic leaders nor allow the group to make decisions without any leadership from them like laissez-faire leaders.

In exercising task leadership as a first among equals, a democratic leader leads and initiates discussion in which decisions are reached through a participatory process followed by a democratic vote that results in either a unanimous, consensus, or majority agreement. As a social leader, meanwhile, a democratic leader looks at all group members in terms of responsibilities rather than status or rank and therefore equally consults others in decision making. Such leaders find ways to involve everyone in the group in reaching the group's decision. In other words, each member contributes input into the group's discussion and exercises a vote in its final decision. This makes each group member feel like an integral part of the decision and take some level of ownership in that decision, at least when they are in the majority. When members are in dissent, a democratic leader seeks to assuage their rejection by assuring them that their ideas were fully considered.

Democratic leadership constitutes the primary form of leadership employed by modern chief justices. As a result, and unlike Marshall, the chief justice must work with the associate justices rather than dictate her own opinions as those for the court. She may lead the conference discussions on cert petitions and argued cases, as well as preside at oral argument, assign majority opinions when in the majority, and oversee opinion drafting, but she cannot demand that the associate justices approach cases, decide them, or draft their opinions in one way or another. Rather, chief justice leadership is closely tied to participation and influence, which are tools of democratic leadership best deployed through skillful social leadership, far from command and control as exercised by autocratic leaders.

The chief justice also cannot rely on laissez-faire leadership, even though this form may often arise in conjunction with democratic leadership. The chief justice must exercise competent task leadership, which requires plying a steady hand at the judicial till to ensure that quality opinions are produced. More importantly, though, she must be a

constant social presence among the associate justices and around the court. She must function like a social thermometer, constantly taking the temperature of the associate justices and making sure passions do not rise to explosively hot levels or descend to irretrievably cold depths. Within the confines of the democratic default, democratic leadership emphasizes social leadership over task leadership by making the associate justices integral contributors to the court's opinions. This means that, unlike an associate justice, to effectively lead the court in its essential function, the chief justice must be just as skilled a political negotiator as a competent legal judge. She must allow discussion and debate to prevail at oral argument, at conference (cert petitions and argued cases), and in written opinions but, unlike Stone, not to a laissez-faire extent that results in unproductiveness at best and bitter personal warfare at worst. Instead, the chief justice must be able to tread the middle ground between producing opinions on the task side, and handling the justices' personalities, partisanship, and judicial philosophies on the social side, all while remaining comfortable with the mediating effects that democratic leadership often espouses on the court.

As a prime example of such skillful democratic leadership, Chief Justice Warren led a carousel court of numerous justices that—at base—continued to consist of a core of Roosevelt justices held over from the Stone Court (and through the Vinson Court). As a former governor of California, Warren politically understood the court's mediating tendencies and allowed the justices to express their individuality and predilections. At the same time, Warren fashioned strong agreement and even unanimity in some of the most controversial cases in the court's history (e.g., *Brown v. Board of Education* 1954). He worked daily with the associate justices one on one, exercising skillful social leadership in the justices' chambers and the court's hallways that converted task outputs into a constitutional revolution in several areas, including racial desegregation, political reapportionment, and criminal justice. He gave the associate justices free rein to express themselves but kept a lid on that expression in oral argument, in conference, and during opinion drafting in their majorities, concurrences, and dissents.

When composing the discuss list for cert petitions, Warren exercised a fair amount of single-handed autocratic leadership, but this did not upset the associate justices, who accepted his decisions without much, if any, push back. Moreover, when an associate justice wanted to add a petition to the list, Warren not only never refused but also never expressed any verbal disagreement to its inclusion. As such, he skillfully led in terms of both task and social leadership by composing the list, keeping the associate justices content with his selections, and including theirs without question when suggested. At conference discussing cert petitions, as well, Warren proved adept at letting all of the justices speak their views about whether to grant oral argument, while keeping comments limited so as to move the process along.

At oral argument, Warren combined both task and social leadership with laissez-faire and democratic leadership to create a well-behaved bench. Often quiet but not silent, the chief justice allowed the associate justices plenty of time to talk and ask questions of counsel, thus using task leadership to demonstrate social leadership and allowing laissez-faire leadership to couple with democratic leadership. When an associate justice threatened the civility that Warren worked hard to cultivate on the bench, however, he would step in

and redirect the discussion to avoid rising tensions. In this way, Warren interjected at oral argument when he had to, in order to keep the justices functioning peacefully.

Warren applied democratic task and social leadership most impressively at conference. Working with an intensely egotistical and caustic core of Roosevelt justices, he subdued them into a professionally working team even as their personal fissures continued to split them apart. He led at conference by framing the cases in his desired direction but also exercised patience in allowing the associate justices to present their views and form their alliances. The reasons for deciding a case a certain way mattered little to Warren. Instead, he was much more interested in reaching a certain decision, however that may be done. As such, his task leadership to reach certain decisions created significant space to exercise social leadership in allowing the associate justices to democratically participate and influence one another. At the same time, however, Warren exercised the leadership prerogatives of the chief justice and made sure that his colleagues kept on task and off each other.

Warren also democratically spread his assignments of majority opinions across the associate justices and himself, sometimes using such assignment to entice a justice into the majority (task leadership), and at other times seeking to maintain a healthy balance of opinion writers on the court (social leadership). Moreover, only in the truly landmark of landmark cases (e.g., *Brown* or *Miranda v. Arizona* 1966) did Warren consistently assign the opinion to himself. Otherwise, he spread desirable opinions equally among the associate justices, although he had his favorites, such as Justice Brennan, and his not-so-favorites, like Justice Frankfurter. Usually in the majority, Warren made good use of this concrete lever of power held by the chief justice.

Similar to his ambivalence to the reasoning of how a decision was reached at conference, Warren displayed a significant amount of deference as to the shape and form of an opinion during its drafting. He kept track of the development of an opinion but largely delegated its course to the assigned author. In this way, both his task and social leadership during this phase resembled a combination of *laissez-faire* and democratic leadership, but with a much more democratic tilt, as he empowered the author to take control but did not completely abdicate authority and oversight in its direction. Also in terms of democratic leadership, he recognized the necessity of concurrences to bring justices into the majority—which differed significantly from an autocratic Marshall and cannot be compared to an absent Stone—thereby achieving, through the exercise of open and inclusive democratic task leadership, many significant results that otherwise would not have been socially possible.

In essence, Warren understood how democratic participation and decision making were required to make the court function to its greatest institutional capability. Following his leadership, which marks the beginning of the modern chief justice, each of his successors—Chief Justices Burger, Rehnquist, and Roberts—has followed to varying degrees Warren's example in making democratic leadership his dominant form of guiding the court during the judicial decision-making process.

## **CONCLUSION: LEADING THE THIRD COEQUAL BRANCH OF AMERICAN GOVERNMENT**

In brief summation, the mixture of landscape, structure, and operation of chief justice leadership in the judicial decision-making process emphasizes social and democratic leadership. This does not, however, foreclose the inquiry from further investigation. Quite the opposite; it provides a baseline from which to build more sophisticated models of how the chief justice leads the court in its essential function of hearing and deciding cases. Nonetheless, it highlights a key finding: *To successfully lead the court, the chief justice must be just as good a political negotiator as she is a competent legal judge.* While standing as the third coequal branch of American government, and the one of legal and constitutional import, the court remains a political animal that must be tamed by skillful chief justice leadership.

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***“Putting Money Where My Mouth Is”:  
Motivations and Experiences among Food Co-op Members\****

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**ABSTRACT**

Of the variety of alternative grocery stores that offer natural, organic, local, and health foods in the United States, food co-ops are one of the more unique business models for alternative foods. Unlike traditional retailers, they are collectively owned and democratically operated. Prices tend to be higher in co-ops because they carry high-quality foods that are generally fresh, locally sourced, or artisanal in nature. What motivates people to join co-ops and spend more money for their membership and foods compared to other stores? This article provides ethnographic and interview data with member-owners at a relatively new co-op in South Bend, Indiana. Eighteen students enrolled in an Undergraduate Qualitative Research Methods class in the spring semester of 2017 spent two months as participant observers at a co-op and collaboratively conducted 45 semistructured interviews with its member-owners. Several noneconomic issues factored prominently in the member-owners' decisions to invest in the co-op. The majority viewed their decision to join the co-op and shop there out of a sense of responsibility for the economy and environment in their region, and to participate in and strengthen the community.

**KEY WORDS** Food Co-ops; Ethical Consumerism; Responsibility; Community; Undergraduate Research

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In our global food landscape dominated by corporate agribusiness giants, the food cooperatives that dot towns and cities across the United States provide opportunities for regional farmers and the public to reclaim a portion of ownership and control over the food that is grown and distributed in communities. Although the cooperative model has existed for well over a century, co-ops continue to function as decentralized organizations at local levels and serve the interests of community members who seek alternative governance and countercultural influence over foodways (Cox 1994). Unlike most grocery stores and food markets, co-ops are managed and operated through democratic ownership among employees and individuals in their communities (Deller et al. 2009; Knupfer 2013; Restakis 2010). They are organizations that are collectively owned by members of the community who buy shares, all earning equal votes in decisions about the stores' operations. Profits are distributed back into the business and sometimes as dividends to members. Furthermore, co-ops are usually "alternative economic spaces" organized around a set of political ideas about markets and moral concerns with how markets should operate (Zitcer 2017:182). More narrowly, food co-ops are often organized around goals related to healthy and safe foods (such as organic foods, fresh fruits and vegetables, and non-GMO produce), transparency (particularly regarding information of origin and growing methods), consumer education, community strength, and social and economic justice (fair pay for employees and local farmers) (Knupfer 2013; Zitcer 2014; Zitcer 2017). Co-ops typically attempt to meet these goals today by offering natural foods and establishing economic connections with local farms and businesses in ways that equitably disperse economic rewards.

Although the overall market for food co-ops is relatively small compared to sales in conventional grocery stores and supermarkets, new food co-ops continue to emerge. People are drawn to membership and shared ownership in co-ops for many reasons. In general, members of co-ops want access to natural and organic foods. Food available in co-ops is often procured fresh from small-scale local farms, regional artisanal bakeries, and health-conscious producers who specialize in natural alternatives and quality foods (Knupfer 2013). The definition of what constitutes local is debatable, but food is generally understood to be local if it has been grown approximately 60–100 miles from point of purchase. Artisanal foods are grown or produced using more traditional methods, with a focus on smaller quantities of production, unique tastes and characteristics, and personal handcrafted touches. Co-op members also tend to be environmentally conscientious and to make efforts to support their local economies (Spaniolo and Howard 2011).

Foods embodying each of these characteristics can easily be purchased from a growing number of supermarkets and grocery stores, and an expanding number of farmers markets in America's current food economy, however. For example, more than 6,000 community-supported agriculture (CSA) programs and 8,000 farmers markets currently operate across the United States (McFadden 2012; USDA Economic Research Service 2017). Today, co-ops also face tough competition in the natural foods market as organic options and health-food stores proliferate (Haedicke 2014). Furthermore, it is likely that access to foods like this will become easier and more widespread after Amazon's purchase of Whole Foods in August of 2017 (Wingfield 2017).

Despite the overlap in food types and selection between co-ops, farmers markets, CSAs and health food stores, food co-ops differ mainly in that they are owned by members who have direct votes in sourcing and store inventory. This distinction provides members with a degree of collective agency and mobilization that is unavailable from other alternative food markets. Additionally, as competition in food markets expands and grocery stores implement efficiencies, many co-ops reject the pressure to operate on larger economies of scale or to compromise their “mission-driven” business practices (Haedicke 2012). This affords co-ops more freedom from larger enterprises and allows them to uphold noneconomic goals in their organizational function, but it also means that prices in co-ops tend to be higher for many food items compared to those in larger supermarkets, and co-op locations remain unequally distributed across the landscape. Moreover, consumers in America find the convenience of one-stop shopping at larger supermarkets appealing, especially when pressed for time and money when balancing jobs and families. For some families, making a separate trip to a co-op to obtain select goods could be difficult to fit in with their full schedules and budgets. The extensive amount of time and work required to plan for meals, purchase groceries, and prepare foods for a family—responsibilities shouldered largely by women—means that many shoppers are likely reticent to incorporate additional tasks into their established food-buying habits and busy routines (DeVault 1991:59–70).

Even with these challenges, food co-ops are expanding, with new start-ups every year. Today, there are at least 10 distinct co-op grocery stores in Indiana, and more than 300 in the United States, with a growing market of more than \$2 billion in annual sales revenue (Co-op Directory Service 2013; Deller et al. 2009:19–22). People continue to join these alternative organizations as a variety of natural, health, and organic food markets multiply across the economy. From a sociological perspective, an important consideration is which additional social and cultural qualities co-ops provide that motivate people to join. Part of the allure of co-ops for many members is that co-ops often operate in niche spaces of the food market. They provide unique environments and specialty food items, serve as community spaces in which to share ideas and visions, and often incorporate education to the public about agriculture, food, and cooking. According to Haedicke (2014), members join this type of alternative business platform because “co-ops strive to promote a democratic, environmentally sustainable, and socially just food system” in ways that truly counter the industrial food system (p. 36). Haedicke continues, “Co-op members and staff devise strategies to challenge consumerist individualism and engage their customers in critical discussions about the structure of the contemporary food industry” (pp. 36–37). In this regard, many members see ownership in and shopping at co-ops as a form of economic activism and political resistance; therefore, on a social level, an additional key concern that drives many people to invest and participate in the viability of the cooperative model is a desire to forge and reestablish community around a sense of local identity and values in neighborhoods and cities that have been destabilized by economic forces at play for decades.

This paper analyzes a small and relatively new food co-op called Riverfront<sup>1</sup> in South Bend, Indiana, as a case study of the unique qualities that entice individuals to become member-owners. As both alternative foods and ethical consumption continue to



establish their presence in the economy, we ask the following questions about the role that co-ops play in these changes in the worlds of food production and consumption: Why do member-owners join a co-op and shop there when they can get similar foods elsewhere that are less expensive? What does a co-op provide its members that they cannot acquire from other food markets or sources?

Specifically, we seek to understand why members and customers choose to shop at the co-op despite these costs.

## **DESCRIPTION OF RIVERFRONT CO-OP**

The Riverfront co-op is the first and only in its city. It is housed in a relatively small space of approximately 1000 square feet but includes a café, grocery section, and outdoor farmers market. The co-op contains a fresh produce section, refrigerated and frozen goods, bulk items, an assortment of packaged foods, a coffee and hot salad bar, and kombucha on tap. Riverfront opened its doors in 2014 and currently has more than 1,000 member-owners, of whom at least 500 are active shoppers. Riverfront is smaller than most food co-ops in the United States, which have an average 6,400 members per co-op store (National Cooperative Grocers Association 2012). Despite its smaller size, Riverfront operates using a standard cooperative model. One-time equity shares of \$200 are available for purchase to individuals and families in the public. Once a person or family becomes a member-owner of the co-op, the member is entitled to a 10 percent grocery discount once per month, price specials, a patronage refund if the store makes a profit, and a vote at the annual meeting. There are no defined responsibilities attached to member-ownership other than the initial capital investment and a voice in the co-op's policies and inventory. Because there are no responsibilities attached to membership, only 20–30 attend the annual meeting to vote. This co-op is also open and welcoming to people who are not member-owners, however. Anyone can shop, eat, and attend the farmers market at Riverfront.

The co-op is located in the downtown region of South Bend, a city of a little more than 100,000 people. It is the only grocery store located in this section of the city and therefore provides a unique and convenient opportunity for people in the city to buy a variety of foods. The location and open-access nature of the co-op align with its mission to provide a space for community gathering and access to healthy foods in the downtown region. Riverfront co-op promises to uphold environmentally friendly practices, to support the local economy by sourcing small businesses and family farms, and to develop relationships with Fair Trade producers. Like other co-ops, Riverfront encourages its member-owners to become educated about the structural problems in today's industrial food systems as well as to become consumer activists for food justice and community revitalization (Knupfer 2013).

## **METHODS**

The data collection for this study was conducted through a Qualitative Research Methods course at Indiana University South Bend with undergraduate students during the spring

semester of 2017. Eighteen students were enrolled in the course, and each spent two months as coinvestigators making ethnographic observations at Riverfront co-op and conducting semistructured interviews with a sample of its member-owners. We wanted to know why people joined, what their experiences were with the co-op, and what distinguished it from the new health and natural foods stores that had opened nearby. This project was also an opportunity for student investigators to learn how to collect and analyze qualitative data. Each investigator visited the co-op on three separate occasions for 90 minutes and observed shoppers in the grocery and café. The co-op is open daily and coinvestigators found different times in the morning and afternoon throughout each day of the week to make observations. Coinvestigators would make jottings of their observations and interactions and developed a full set of fieldnotes after each visit (Emerson et al. 1995). The co-investigative students spent approximately a combined 75 hours in the store making ethnographic observations and writing fieldnotes. The purpose of these fieldnotes was to find a unifying set of patterns and social activities and advance further inquiry around new questions. Therefore, the fieldnotes were collaboratively used to create an interview guide with focused open-ended questions with primary individuals in this social setting. After we created the interview guide, coinvestigator conducted three separate semistructured interviews with a total of 45 member-owners of the Riverfront co-op. Our interviewees were predominately white and self-identified as middle-class, and most had college degrees. Thirty-two (32) of these members were women, and 12 were men. We contacted all member-owners by email and invited them to participate in the study. In an effort to recruit people to interview, we also placed a flyer and sign-up sheet with information about the study in the co-op for members to read when they visited the store. The length of interviews varied, but they averaged about 25 minutes. Some were as short as 15 minutes, whereas others lasted 45 minutes to an hour. Each coinvestigator transcribed the interviews he or she conducted.

This research project was exploratory and was navigated without a hypothesis. We approached the ethnographic data collected in this case study with grounded theory methodology, and the interview transcriptions with qualitative content analysis (Charmaz 2006; Warren and Karner 2009). During the initial stage, we amassed field notes from all coinvestigators and searched for emergent patterns as we simultaneously collected and analyzed our data. As we read through the collection of field notes, we constructed analytic codes through iterative coding procedures. After assessing emerging themes in field notes, coinvestigators generated an interview schedule with questions designed around initial observations. In the second stage, we conducted semistructured interviews until all the key issues we could uncover were saturated (Berg and Lune 2012; Guest, Bunce, and Johnson 2006).

We transcribed all the interviews and then applied qualitative content analysis to our total body of transcripts in two additional phases. First, we reviewed and compared all transcript data with an open-coding process. Essentially, we assigned every line or paragraph of each transcript a definition or label for its main attributes. This allowed us to capture prominent issues and experiences shared across all interviews and to develop a coding rubric to identify established patterns. With this coding rubric, we then fine-coded the transcript data once more and isolated prominent concepts regarding member-owner

motivations and experiences. In this second phase, we sifted through the data and identified transcript text with codes, then sorted the coded text into separate files. The purpose of this method is to develop inferences of shared attributes across all the texts in our interview sample.

In our study of Riverfront, we sought to understand who the co-op primarily served, why people became members, what types of items in the store were most enticing to members, and what the shared experiences of membership were. Our research team collectively found key concepts in the transcripts of 45 semistructured interviews with the member-owners who were willing to meet individually with us. These findings were emergent and embedded within larger themes related to ethics and responsibility in consumer choices, desire for noneconomic benefits such as community building and interpersonal bonds in market settings, and an awareness and willingness to pay additional costs that are typically externalized in traditional or corporate food markets.

## **FINDINGS**

Nearly all the members we spoke to in our study claimed that the quality of the food and the local or specialty items in the store were important features of the co-op<sup>2</sup>. At the same time, the clear majority also shared a deeper set of beliefs and values that motivated them to become members and shop at the co-op. After interacting with shoppers conducting our interviews, we would generally describe the population of Riverfront co-op member-owners as ethical food consumers (Carrier and Luetchford 2012; Hinrichs and Lyson 2009; Williams-Forson and Counihan 2011). These are consumers who are conscious about how food practices interact with and affect people along multiple social dimensions. Confronted with food choices and markets that many felt were harmful to the local economy, the environment, and their personal health, members described a sense of duty to support the co-op once the opportunity had presented itself. The mind-set that most of the members shared with one another and during our interviews was of taking responsibility for establishing and funding a more sustainable food system in their city. Members made it clear that they “owe something to their community” and wanted to demonstrate their commitments to this process of supporting and protecting the alternative food model that Riverfront co-op embodied.

After coding all our transcript data, we also found that members in our study greatly valued the community connections and social atmosphere that were central to this co-op. Beyond its function as a grocery store, Riverfront served as a centrally located meeting place for conversation and as an educational setting where people could learn about the local food system and cultural events. It is in this capacity as a hub for social engagement that the co-op uniquely provided special experiences for its members and shoppers in ways that other grocery stores did not. In our findings, we describe two key themes that emerged in our analysis for why people join and financially support the co-op: (1) the motivations to support local farmers and protect their community against the often hidden and harmful industrial food system, and (2) the experience of community connections and interpersonal bonds that form in this setting.

*Motivations: Responsibility to Protect and Support the Local Food System*

“Put Money Where My Mouth Is”. The primary way that Riverfront co-op members in our study claimed and acted upon a sense of responsibility was in their reported use of money when making consumer choices. On several occasions, our interviewees explained that their memberships were a direct way to “put money where [their] mouth is” and tangibly act on their values. Five (5) of the 45 member-owners we interviewed used this specific refrain when asked why they initially decided to become co-owners of the co-op. An office manager in his 50s put it this way:

I decided I better put my money where my mouth is and join. I just know that it helps them financially and I felt like I wanted to become part of something. I am a vegan and believe in wholesome food and sustainability and supporting my local people. It is a part of the community coming together to support one another.

A registered nurse in her early 30s correspondingly stated the following:

I wanted to help them get their start because I thought what they were doing was really neat and good for the community. And I just wanted to be part of it because I always talk about what we need to change. Instead of just talking about it, here I can put my money in that direction. I’m part of a community that not only cares about their food but about their neighborhood and their environment in general. And I know my money is supporting something really positive.

Here, these members reflected on their use of money to buy into and prop up this cooperative grocery store because it provided a place for good food and people to come together. It was also a decision to act financially to promote a business they felt was of value to the community. A 28-year-old member used similar terms when explaining his choice to be part of the co-op:

I guess I like putting my money where my mouth is. A big reason why I care about the co-op is because I feel like it’s more about the social aspect of things and a little bit heavier on the side of helping. The co-op interacts between a lot of small producers in this area. Riverfront right now is kind of seen as a business that supports other small businesses, and those small businesses are producers within the area. So that’s the big draw for me is that in some small way I get to support financially what I want to see more of in our community.

For the members quoted above, their responsibility amounted to something bigger than themselves; it was an opportunity to inject money into an emerging network in the community. These members' motivations also reflect a desire to protect and support local control over the food system that is dominated by industrial agribusiness. The co-op builds direct relationships with nearby small family farms and businesses that are much more community-oriented than large food corporations. Their money therefore helps redirect control and influence away from corporations in ways that more immediately help families and farmers in the surrounding region.

This line of thinking was shared with a retired lab technician in her late 60s who had been a member for more than two years. She described the impact she could make with her food purchases:

My husband and I have belonged to various food co-ops throughout the years. And I just like the idea of the co-op, in the sense that you know the members are kind of, well, they have some say in how it is run and the philosophy. Co-ops are fun because you get to know the people. It is not just like you go in and buy something and give your money. You have a relationship with the other people in the co-op. I get to put my money where my mouth is. Maybe it is partly wishful thinking on my part, but it is sort of a little tiny bit of not buying into the corporate culture.

Similarly, John, an engineer we interviewed, explained that he preferred to shop at Riverfront even if it meant spending more on comparable foods that he could find at a corporate location. Even though other health-food stores such as Whole Foods are located in this city, his reasoning for shopping at the co-op instead was that it promoted self-sufficiency and would be of greater benefit to the independence of the local economy:

Riverfront co-op is pretty similar to Whole Foods in terms of what it carries. I mean, Whole Foods carries a ton more, but I would rather shop here because it is local. I have nothing against Whole Foods, but big corporations are not exactly in tune with this country right now. I like the idea of the smaller, co-op, member-owned, local, regional, organic experience. So, yeah, I would rather support this organization than anyone who has a similar lineup. Sometimes Whole Foods may be a little cheaper, but to the extent that I am able to afford it without it being way out of line again I would rather support this place. I like the idea of becoming more dependent on ourselves and independent from the big corporations.

Using money this way denies corporations profits and supports regional agricultural autonomy. It also helps to build interpersonal connections and strengthen relationships with other people who utilize the co-op. People meet each other while shopping or at various market events hosted at Riverfront. For example, during our observations in the store, we witnessed constant chatting in the aisles and conversations among customers in the café section adjacent to the register. Members and shoppers utilized the space to meet over coffee with friends, share a quick meal and talk about work and family, or work together on class and business projects. Parents with small children would meet at the co-op to get out of the house and to shop for groceries and get snacks. These connections are often experienced as more impactful and meaningful to members because they help to forge associations around a common alternative goal. Investing money into the co-op and then getting to meet and form relationships with the people who are being supported with that money can be a very positive social feature of co-op membership.

*Supporting the Alternative Food Movement, Local Farmers, and Sustainability.* A similar theme that surfaced in conversations with Riverfront co-op members was that they wanted to jump on opportunities to support and help an alternative food model in their city. Many described the significance of coming together to provide unified support for a new co-op and for farmers in the region in moral terms to ensure economic support and social connectivity.

As Jane, a female member who works as a faculty member at a nearby university, stated:

It's important to invest in our community and we like to support that. We put our money where our hearts are. I love going in on market nights and meeting the farmers, which is huge. Getting to know farmers as real people and not just “farmers and hicks or rednecks” or whatever people think of them; they are real people and very intelligent and very skilled at what they do. Also, the small signs that say how much of the money actually goes to the farmers every month makes me feel really good.

Here, Jane illustrates the unique contributions and roles that farmers bring to the co-op. Unlike most grocery stores, co-ops can forge relatively direct and interpersonal relationships with the farmers who supply food to their stores. Several farmers and suppliers visited Riverfront and participated in weekly events that served as hybrid farmers markets and community events. Members of the co-op could meet and talk with farmers and learn a little about their experiences and farming operations. Most of the foods in the store were also labeled with information regarding their farm origins, so it was relatively easy for a shopper to get a sense of where everything came from; therefore, both in interaction and through information provided in the store, many members reported that their experience with the co-op was enhanced by the sense that their

financial commitments to the store connected and extended into their desire to know more about, integrate into, and support their community.

Paul, an IT director in his early 60s, also saw his membership as an opportunity to support the local economy and farmers, and to indirectly build interpersonal connections with farmers. Although there were other perks associated with becoming a co-op member, Paul focused on the hope that his financial contribution could help safeguard the store's long-term viability:

There are very small discounts, but the discount is the smallest reason that I continue to support it. I like to be a member of the community and to sustain the market. I like to support the local businesses and the natural food providers as well as meet the vendors. They sometimes have a farmers market once a week where you can meet and talk with the vendors about their products and the way they make or produce their goods. It's unique in our downtown, and it gives residents a stake in the food market since it is a co-op. So it's giving the community a chance to be part of a local change as well as a larger community change.

Like others in our interview sample, Paul was suggesting that being a customer at Riverfront involved much more than the typical grocery-shopping routine. Because members like Paul and Jane viewed their membership fee and monetary support for the co-op as a small part of a larger investment into community empowerment and a transformation of the food system, the feelings of commitment that the above members described is unlikely to be transferred to other grocery stores in the surrounding area. Whereas most food purchases at supermarkets are utilitarian in nature, Paul viewed his investment as a member at Riverfront, as well as the sustained relationships he could create with vendors at the co-op, as part of a larger goal of helping the city to transform and thrive in positive dynamic ways.

Paul believed that supporting a co-op provided broader benefits than just strengthening community cohesion. Further into our interview, he also envisioned his support as extending into preventing agricultural practices that are harmful for the environment. His concerns with food justice and sustainability also influenced his wish to support Riverfront because the store transparently demonstrated actions it had taken to reduce environmental damage associated with industrial agriculture:

The manure lagoons and the spillages and the environmental damage, it really bothered me. I thought, I'm just not going to support that, you know. So, when I met a farmer at Riverfront, they have pictures of their pigs and how they take care of them and what they do to

manage, you know, all the manure and stuff. It is so much more sustainable. I thought, "I want to support that." One thing I've become aware of is that a lot of people who come here have very deep engagement on a personal level because they believe in food justice or sustainability, you know, any number of things. The co-op allows them to abide by these personal beliefs.

Other members viewed their support of this co-op in similar terms, in which Riverfront became a tangible way to pursue sustainability and environmental causes through the food economy. Ann is a paralegal and a self-described baby boomer who is deeply concerned about both local and global environmental impacts of agriculture. She met with us one afternoon to discuss her involvement with Riverfront and shared parallel thoughts about the desire to invest and be directly engaged in an organization that is working against many harmful trends:

I absolutely appreciate and support the co-op idea and ideology, but maybe even more important to me is the notion of regional agricultural. And I have been very involved in the Sierra Club and the Organic Consumers Association. It is very clear that with global warming and things like that affecting our planet, that shipping fruit from California is not sustainable. I really want to do whatever I can to support and encourage regional agriculture. And that is basically voting with your dollars, you know not just talking about it, or marching in a protest, but actually putting your money in it. So that's the biggest thing. I buy almost all my food from here or the farmer's market. I only eat organic to the extent that I can do that.

It was not unique for Riverfront members to express a desire to financially support the co-op as a business. What Ann and many others communicated with us as they reflected upon the meaning of their membership with the co-op is that they have made a priority to connect food purchases and eating to a larger set of concerns related to the environments and social fabrics of the places they live. In fact, this mind-set was nested within a larger perspective shared by many member-owners that supporting the co-op and "voting with your food dollars" or "putting your money where your mouth is" naturally entailed spending more money compared to other locations. The sense of responsibility in supporting the co-op was so strong for many members that one person named Erika even told us that she makes an extra effort to shop at Riverfront and feels guilty spending money for foods at other stores. "That level of commitment here is personal," she exclaimed. "I mean I would just feel terrible if another member saw me shopping at Meijer [a large Midwestern chain]."



*Experiences: Community and Social Atmosphere*

*Forging Connections with Like-Minded People.* According to 23 of the 45 members we interviewed, the primary quality distinguishing Riverfront from other grocery stores in the region was its emphasis on community and on strengthening interpersonal bonds through the food economy. Some members spoke about Riverfront as an ideal place to find new acquaintances and forge connections. One member told us, “We have a lot of new residents, and this co-op gives them the opportunity to meet new people.” For people interested in a variety of alternative economic and agricultural organizations in society, a place like Riverfront served as a hub where like-minded people could come together even if they did not know one another. This was very important for members when they realized that there was unmet shared demand in their community for local and alternative foods from independent sources. Others described Riverfront as an essential location for mobilizing and strengthening a new consumer voice. For example, Catherine, a professor at a nearby public university, described Riverfront as a “secular church” that “provides community” around gardening and food security.

Members found these connections with others who supported and shopped at the co-op to be enriching and empowering. Building something new with other people who share similar concerns can be a rewarding experience. When it comes to food and support for local agriculture, our interviewees reiterated the importance of being part of an organized and committed business like Riverfront. Mary, a senior citizen who had lived in town for a long time, told us about her work with the city and the need to be proactive in making positive changes with other people of the same mind-set in the community:

I believe in eating in a healthy way that tries to eliminate harmful substances. I like having free-range and grass-fed foods and just the whole concept of wellness and supporting small businesses in a way. And I believe in citizen participation and citizen responsibility and any initiative that incorporates that. So, this co-op really brings healthy and well-thinking people together. The people are wonderful. They are like-minded people and are often young. I assume that you're a certain type of person if you work here. That you have a basic understanding and appreciation and commitment to equity and social justices.

According to Mary, the push for social justice is deeply connected to the food system and the co-op is a natural place where a community can mobilize to work toward effective changes.

This outlook was largely shared with other members and shoppers at Riverfront, which served as a tacit anchor in the region for progressive goals. People in the city who held the same opinions regarding community problems and solutions in America found solidarity in this atypical grocery store.

Another female, named Debbie, who was a case manager at a hospital, shared similar thoughts about the value of being part of an organization with people who share interests and work toward a common cause:

I feel that community is very important to me and my family. I like being surrounded by people who feel the same way I do about food. I feel it is important to be a sustaining member. We like to walk to most places, and Riverfront supports sustainable farming. We like to know the farmers and appreciate having a connection to them. I feel it is important to help our farmers and have a relationship with them.

*Social Interaction.* The ambiance at the co-op is also vibrant with music and conversation, and the layout is designed that makes it difficult to avoid social interaction. People visit with one another and mingle before and after purchasing items or enjoying lunch. “Sometimes I’ll come to shop and not leave for an hour because I’m chitchatting with people,” one member told us. “I just love coming here and meeting people.” On more than one occasion, interviewees expressed that Riverfront felt like an extension of their families. An older man described this as a feeling of deeper interpersonal connection to people at the co-op: “It’s great to come in here and have people walk up to me and say, ‘I think I went to school with your kid.’ At other stores they’re just anonymous shoppers. That’s the difference.” A different member, who was a recent college graduate, stated, “Sometimes I joke that I kind of live at Riverfront because I’m there so often. But it really does feel like coming to family because everybody is so incredibly friendly and helpful.”

During our observations, we noted that many members shopped as families with their children at Riverfront and enjoyed bumping into other families. When we spoke to Beth, a parent in her mid-40s who does economic-development work in the city, she described a warm relationship, with Riverfront as a comfortable place for her to visit with her children:

In my opinion what they do well is create a community. It’s a hub for people to meet, have conversations and interactions with people you know. It enriches your life. It is also a place where I feel comfortable for my children to go. As a parent, I can feel comfortable with sending my children in for errands. I don’t always have to be with them. I can send them in with a list and some money to go shop. I feel like it is safe and it is nice to let them grow. The other thing that it does is that it provides a market for the local food economy. Overall, my general experience is excellent and I always look forward to going there. I always run into people that I know. There’s a personal connection with the workers.

Nearly every member of our interview sample described Riverfront as a comfortable, rewarding, and enriching environment that was ideal for families and community involvement. In this way, the co-op resembled a “third place” that functions as an extension beyond home and work where people could come together to enjoy a place and company in a relaxing and informal setting but also contribute to the vitality of the community (Oldenburg 1999).

A key reason that the social and community aspects of the co-op are important to most members is reflected largely in the fact that most retail stores are now organized by large centralized corporate chains disconnected from the ebb and flow of local settings. A sense of disconnection, anonymity, and isolation is common within many commercial spaces in America today, and co-ops offer an inverse logic to this development. This sentiment was shared by a member named Eileen, who is retired and had been with Riverfront from the beginning, when she explained how much she valued the personal connection that she and her husband had with the co-op:

Our membership is important to us and we like coming here frequently. They even know us by name! When we come in they're very friendly with us, the people that work here, and it doesn't feel rehearsed. They even remember our membership ID number, because we come here so much.

Being recognized and being on a first-name basis is likely to enhance a person's sense of purpose and commitment to the Riverfront. It demonstrates that the person is valued by the co-op and is considered an integral part of the co-op's viability. It also helps change the mentality of the members about what it means to support the store and shop there.

Unlike in other grocery stores, a key mission of Riverfront is to build community and strengthen collective bonds. In turn, many members feel that the co-op is an extension of their identity and place in the surrounding community. Instead of just shopping at a store that belongs to someone else, members feel a strong link and sense of ownership with Riverfront. Diane, who had lived in South Bend for more than 50 years, explained it this way:

I feel comfortable shopping here. Also, I don't consider the co-op “they” but think of it as “we.” Whenever I come in I ask, if I want to find a product, I say, “Do ‘we’ have ... “ whatever we have today instead of “do you have” because I feel like I'm a member and I was instrumental in getting the store open, so I'm very much a part of it so it's not a “we” and “them” kind of thing. What I like is that sense of community.

## CONCLUSION

As neighborhoods and cities around the country see citizens becoming active in revitalization efforts, food co-ops continue to serve as a demonstration and symbol of

mobilized communities interjecting ideas of independence, autonomy, and control in the economic and cultural landscape. They are also often hubs for organic and high-quality foods and ingredients, fresh local produce, and specialty items from artisan purveyors. The Riverfront co-op was a unique food purveyor in its city, with a broad variety of local, organic, health, and natural options. Riverfront's goals reflected an interest in environmental stewardship, revitalization of the city economy and culture, and bolstering independent growth beyond the dictates of corporate agribusiness.

As a cooperatively owned business, however, Riverfront also sought to be a different type of place where people could shop, meet, and organize. Members were attracted to the co-op for additional reasons unrelated to food, environmental, or economic issues. In fact, more than half of our interviewees told us that one of the most important reasons they joined was to be part of the social fabric woven into the co-op. The social atmosphere in the co-op was one of the most valuable experiences that members reported in their relationship with and dedication to Riverfront: People could share conversations while shopping, and parents with small children could meet and socialize; occasionally the co-op organized events with music, food trucks, farmers markets, and craft beer from local breweries. This co-op established a community space with a sense of collective ownership that typically does not exist at other grocery stores.

Broadly speaking, Riverfront has become a center for community and education for the alternative food economy and progressive social issues in the city. Like other cooperatively owned grocery stores, it has the capacity to respond flexibly to the concerns and desires of the local farmers and consumers it serves. Our findings suggest that member-owners of co-op food stores are willing to pay a premium for this alternative arrangement for a variety of environmental, economic, and social reasons. The self-reported benefits, both direct and indirect, that they derive from a local co-op reflect a strong desire to strengthen local food networks, prevent environmental damage associated with industrial agriculture, and establish stronger interpersonal bonds with other people in their community who are interested in transforming the structures of the economy. The members we interviewed in this study believed the co-op was the most effective way they could secure these benefits, primarily because of the unconventional way the co-op established alternative orientations toward community, the food economy, and business ownership.

In the contemporary food economy dominated by corporations, co-ops continue to be an organizational method for communities to reclaim ownership of and protect regional food systems. As communities confront a growing set of broad and deep structural problems in society— from community fragmentation and political polarization to environmental degradation and climate change—concerned individuals want to enter new roles as consumers and citizens. Many want to take on new responsibilities and make conscientious adjustments in their living as a way of practicing ethical consumerism (Barnett et al. 2011; Lewis and Potter 2011). By challenging the status quo of the agricultural system, the co-op members we interacted with described a moral duty to be active and engaged with the political economy of food. Acting locally and spending a premium on foods at a co-op served as a direct and effective way to make a difference in the immediate world they inhabited.

This study was limited in time and in its ability to access a broader range of member-owners of the co-op. Because it was conducted in the duration of a one-semester class, we were unable to extend our data collection over a longer time and to gather more insights as the seasons changed. Although we were able to conduct a substantial number of semistructured interviews, we would have liked to have contacted a larger number of member-owners. A little more than 10 percent of the active member-owner population responded to our emails or signed up to schedule interviews. We asked for information regarding age, income, and occupation, but many of our respondents did not want to reveal this information. Furthermore, we did not have access to the demographic composition of the member-owner registry for this co-op. With our relatively small sample size and limited demographic data, we are therefore unable to state how representative our interview sample is of the total member-owner population.

Our respondents appear to have been very active members and to hold many shared interests with the mission of food co-ops, but with more time, we would have sampled a larger number to identify a broader set of patterns among member interests or experiences. Although we found key themes to become saturated with our sample, it is always possible that members who did not respond or who were less active in the co-op may have held different opinions that are worth investigating.

Additional research into food co-ops in America is warranted. As co-ops continue to grow, it is important to assess the extent to which the co-op model can substantially alter the food system. Future studies should analyze who benefits most from co-ops, and which consumer groups are not helped by or are uninterested in co-ops.

What do co-ops need to accomplish to be successful and to attract new members in the future? How will they compete with new food giants like Amazon, which purchased Whole Foods and promised to reduce prices substantially by transforming the financial model of a grocery store into that of a tech start-up? Questions such as these will need to be addressed so food co-ops can move forward to foster social change and capture a larger segment of the market without undermining their values and goals.

## ENDNOTES

1. This is a pseudonym.
2. We use pseudonyms for all respondents. All subjects involved in the study were promised confidentiality and anonymity to the greatest extent possible. Field-note data was secured in a locked file in the office of the primary investigator, and all audio recordings of interviews were destroyed after transcription. We include age, gender, and occupation of respondents only if they volunteered this information.

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***Does Money Matter? The Impact of State Political Context  
on the Relationship between Race/Ethnicity and Campaign Finance***\*

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**ABSTRACT**

Despite increasing campaign-finance legislation aimed at equalizing barriers in political campaigns, a fundraising gap persists across racial/ethnic lines. In the era of modern campaigning, with the expenses of advertising and polling, among others, ample funds are necessary but not accessible to all candidates. This study addresses the relationship between candidate race/ethnicity and campaign fundraising, and the possible moderating effect of three dimensions of the state political context: state legislative professionalism, state Republican party strength, and state culture (South vs. non-South). I evaluate fundraising totals across 15 states for more than 3,000 candidates in the 2006 state legislative elections. Ultimately, the findings suggest that after controlling for other candidate characteristics, as well as for district and state context, there is a negative statistically significant relationship between candidate race/ethnicity and fundraising. In addition, the effect of race/ethnicity is moderated by two features of the state context: legislative professionalization and state culture. This study finds that nonwhite candidates continue to fundraise less than their white counterparts and that state context is important in understanding the race/ethnicity gap in campaign finance.

**KEY WORDS** State Legislature; Elections; Campaign Finance; Race; Professionalization

The role of money in politics has long been an issue of debate for scholars and candidates alike, and as fundraising thresholds climb with each subsequent election, money's impact continues to merit conversation. In the 2008 presidential campaign, Democratic nominee Barack Obama outraised Republican hopeful John McCain nearly twofold through cultivating small donations online. Almost two years to the day after Obama's inauguration, the Supreme Court announced a landmark decision in *Citizens United v. Federal Election Commission* (2010). The controversial decision resulted in a partial strike-down of the McCain-Feingold Act (2002), allowing corporations and labor unions

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to fund independent communications (Dionne 2012; Liptak 2010). With every election year escalating the total funds raised, the significance of money in campaigns will likely continue to grow as well (Boatright 2013).

Given the significance of fundraising, the difficulty of raising enough money to conduct a competitive campaign and be a viable candidate is not experienced in the same way by all candidates. Social groups that have historically been oppressed and continue to be economically marginalized can witness more challenges in their pursuit of elected office. This effect can be most debilitating for underrepresented racial and ethnic groups, who generally are less educated, make less money, and hold lower occupational positions (occupying service roles more than managerial posts) than the white majority.

Racial and ethnic minorities have made great strides in seeking and winning elected offices in the United States. The first African American president, Barack Obama, was elected in 2008. Sonia Sotomayor became the first Hispanic American Supreme Court justice in 2009. The membership of the National Black Caucus of State Legislators has increased from only 18 members in 1977 to more than 600 by 2008 (King-Meadows and Schaller 2007). On the whole, government is more diverse in the United States at every level than ever before.

Though these numbers represent improvement over recent decades, however, they still lag in proportion to the overall population. African Americans are most prevalent in political positions in the South, which is also where they are more highly concentrated, but the percentage of African American officials falls short in comparison to their share of the citizenry. Mississippi, for example, has an African American population of 40 percent, but only 21 percent of the seats in the state legislature are occupied by African American officials (NCSL 2013; U.S. Bureau of the Census 2010b).

Arguably the most underrepresented demographic in American politics, Hispanic Americans have recently become the largest minority group in the nation but hold few elected offices. Concentrated in the Southwest, they exhibit even larger disparities in representation, such as in California, where they hold 19 percent of seats though they are 38.2 percent of the total population (NCSL 2013; U.S. Bureau of the Census 2010b). On the whole, Hispanic Americans occupy a national average of just 3 percent of state legislative seats in spite of comprising 16.9 percent of the overall population (NCSL 2013; U.S. Bureau of the Census 2010b).

A number of barriers exist in mounting a modern campaign: visibility, mobilization, and name recognition, to name a few. Each of these necessitates substantial funds to surge into advertising and outreach, and although each component of a campaign warrants acknowledgement, without enough money to fund these endeavors, the outcome is bleak. Previous research (Abbe and Herrnson 2003; Breaux and Gierzynski 1991; Gierzynski and Breaux 1991; Overton 2004; Sorauf 1992) has determined repeatedly that most of the time, the candidate who raises the most money garners the most voters. The financial challenges of running for office are compounded by the well-known incumbency advantage. Given the fact that fewer racial and ethnic minorities currently hold elected office and therefore cannot enjoy the benefits of incumbency, their need for fundraising is all the more imperative.

As inequities that manifest socially are replicated and even magnified within the realm of campaigning, examining the role of race and ethnicity in fundraising is critical to furthering our understanding of the race/ethnic gap in elected office. In this article, I evaluate the relationship between race and campaign fundraising at the legislative level across a sample of 15 states. First, I review the current literature in the field. As I detail below, there has been very little research on the role of candidate race on fundraising, particularly at the state legislative level. I then detail the hypotheses that fuel the study, which are rooted in a large literature that suggests that black and Latino candidates may face significant obstacles to successful fundraising. Additional hypotheses consider the role of partisanship, institutional professionalization, and region in mitigating or perpetuating the gap. Next, I explain the data and methodology employed, culminating with a discussion of the results yielded in the statistical models. Finally, I summarize my overall findings about the relationship between race and campaign finance, and suggest additional approaches for future research.

## **LITERATURE REVIEW**

The literature about the influence of a candidate's race and his or her ability to fundraise is surprisingly scant. Much of what has been studied centers on the effects of voter attitudes and candidate characteristics and how those interact to effect election outcomes. Early studies focusing specifically on black or female candidates yielded no evidence of significant voter bias (Eckstrand and Eckert 1981; Leeper 1991; Sigelman and Sigelman 1984; Terkildsen 1993); however, more recent studies demonstrate that the race of a candidate plays into a voter's decision (and a donor's decision), much like daily stereotypes guide individual impressions.

Particularly in political races for which relatively little information is available, the larger demographic group to which the candidate belongs can be influential in garnering voters' support. Gender identity is often easier to assess through a candidate's name (as "Hilary" and "Nancy" are more likely female names, while "John" and "Harry" are more likely male names); however, colloquial names and surnames can conjure a candidate's race (such as "Fredrica" or "Jose"). Even black candidates who have names that are considered racially distinctive can be subject to voter biases because of racial stereotypes (Fryer and Levitt 2004). Ethnic surnames, particularly for Hispanic candidates, can provide an important cue. Matson and Fine (2006) determined that name recognition enabled voters to make educated guesses about candidates' gender and ethnicity and that these were enhanced with increased spending. Fundraising can be particularly important for Hispanic candidates in low-information elections, as it can allow candidates to distinguish themselves and make their own names more recognizable (Bullock, Gaddie, and Ferrington 2002; Lieske 1989). The challenge of correctly ascribing race and gender is evident and underscores the problematic reliance of cues, but the use of such shortcuts is nonetheless prevalent.

Easily accessible and identifiable traits of candidates can play a larger role in low-information elections, as the less- and even moderately informed seek such criteria as a basis for their decision. McDermott's (1998) foundational study on the effect of race and

gender suggested that candidate demographic cues, such as race and gender, also offer cognitive shortcuts for voters through the candidates' presumed (and rather stereotypical) association with being more liberal than white male candidates. The influence of race is not independent of partisanship, voting, and representation but is rather intersectional, conglomerating into one major informational cue (Hutchings and Valentino 2004). Donors consider far more than simply a candidate's race when deciding to give the candidate contributions; partisanship denotes an imperative indicator for support, but policy platforms, voting records (for incumbents), candidacy viability (for challengers and open-seat seekers) merit consideration as well.

Although race and gender can be utilized as cognitive shortcuts, in a race in which a particular candidate perceives his or her race or gender to be an electoral disadvantage among voters, campaign fundraising and strategic spending can help (Matson and Fine 2006). Spending campaign funds to promote one's positions and to educate voters beyond their limited information cues so they are actually familiar (and, hopefully, agree) with the candidate's platform can provide the ability to transcend potential race or gender stereotypes that could prove detrimental at the polls.

The effect of money in campaigns has been well documented through a litany of research, and its focal point within this study only further reiterates the importance of fundraising in campaigns. To be sure, seats cannot be bought, and money has a finite influence that cannot rectify unpopular or unclear platforms, or repair a tarnished reputation or poor character, yet securing enough funds to conduct a formidable campaign is critical in the modern arena of politics. Among the classic literature, Gierzynski and Breaux (1991) argued that money can have a substantial impact in state legislative races, depending particularly on whether the candidate is an incumbent or a challenger, as the former need not spend nearly as much as the challenger to gain the votes necessary for victory. The implications of incumbency advantage, challenger status, and open seats have been central in electing candidates from underrepresented groups to public office. Because incumbents can boast impressive benefits, having already served and courted constituencies, the advantage can serve as a barrier to prospective challengers; as the majority of state legislative seats are held by white men, there is a great likelihood that in most elections, that demographic will also dominate the incumbent positions.

The direct influence of race in statewide elections was originally evaluated through empirical studies more than 20 years ago through a few seminal pieces that served as foundational work in the field. Arrington and Ingalls (1984) demonstrated that on the local level, black candidates and campaign donors vary from their white counterparts. They noted that in their Charlotte, North Carolina, study, black citizens were every bit as likely to contribute to campaigns as white citizens but donated fewer dollars per capita and, further, donations were "substantially aligned by race" (582–83). Given this observation, the study concluded that no obvious financial discrepancy existed between black and white candidates, as the fewer black donors corresponded proportionately to fewer black candidates.

Applying these findings to the state level, Sonenshein (1990) analyzed support for black candidates at state offices through a normative assessment. The impermeable aspect

of race required black candidates address this identity, but the need to mount a majority of electoral support forces them to simultaneously expand their voting base. The study found that with the numerous challenges facing black candidates, the quest for more black leaders (including president, which Sonenshein singled out) would require a major shift within the political atmosphere and a less-stigmatized perspective of the nonwhite candidate. This question was later revisited on the eve of the landmark 2008 presidential election, and it was concluded that racial tensions had eased and acceptance of minorities in high political offices had increased considerably since the earliest days of black candidates (Wilson 2008).

Less research has been dedicated solely to Hispanic fundraising outcomes, but the cultural differences in terms of language and community can play an important role in Hispanic candidates' political behavior. The prominence of the Spanish language in Hispanic culture was historically attributed to diminished political participation (Calvo and Rosenstone 1989; MacManus and Cassel 1982). Revisionist studies, however, have found that more recently, being bilingual can actually increase political participation (Johnson, Stein, and Wrinkle 2003). Hispanic contributors behave differently from white donors, in both the cultural context for what it means to donate funds and in political expectations for contributions (Rivas-Vazquez 1999). They prefer in-person contact and emphasize family and community influences as motivators for contributions.

In addition to a potential language difference, members of different ethnic groups have historical experiences and cultural differences that may change their perspectives on campaigns (Leighley 2001). The way in which a candidate approaches fundraising likely varies across ethnic lines and also with regard to how long one has resided in the country. A first-generation Hispanic immigrant's understanding and perspective of the political process, including fundraising, would likely be different from that of a third-generation immigrant.

While all of these studies offer potential implications, none conducts a systematic, candidate-level analysis to determine if a disparity exists between white and nonwhite candidates. Smith (2005) argued that black candidates are hindered by their ability to pursue their own agenda (one which, presumably, would incorporate race-based politics) because they are dependent on "white money" (p. 736). His analysis focused on the substantive representation of black candidates and elected officials, however, and he failed to definitively illustrate whether the fundraising experiences and outcomes of black candidates were different, merely noting that employing an entirely black fundraising base is difficult in its execution and ineffective in its outcome. Likewise, Rivas-Vazquez (1999) charged that the cultural framework for fundraising and donating "has different meaning and expression than it does in Anglo culture" (pp. 115–116). She did not apply this concept to state elections, and so its applicability for Hispanic candidates at that level remains unclear.

Together, racial and ethnic minorities face barriers that make running for public office and fundraising more challenging. Both black and Hispanic Americans lag behind whites with regard to job opportunities, mean wages, average household income, and educational attainment (Glaser 1994; Lichter 1989). The cost to participate in politics is high, but it is not the same for everyone. This literature indicates that the experience in fundraising and the resulting outcome may be different for candidates based on their

racial/ ethnic background, and this study aims to identify if a gap exists and, if so, how political, institutional, and regional features affect it.

## **THEORY AND RESEARCH QUESTION**

Underlying this study is the belief that voters and donors view nonwhite candidates differently from white candidates and, to an extent, make decisions about those candidates based on candidates' perceived racial/ethnic identities. Voters want a candidate who represents their interests, and though individuals from racial/ethnic minority groups are acclimated to representation by a white public official (as has historically been the norm), the opposite is not necessarily true. The "black" or "Hispanic" agenda is often seen as a distinctive way in which nonwhite candidates utilize identity politics to press issues unique to their communities (Reingold 2012).

Donors are slightly more sophisticated than voters, yet their approach in selecting a candidate could be more simplistic: they want to support a candidate whom they believe will win. Naturally, donors are also invested (literally as well as figuratively) in the candidate's agenda and want someone who will represent their interests. Campaign contributions derive from nearly every economic sector and reflect varying sums, but large corporate interests and niche interest groups dominate the donor population. As most of these are operated by a homogenous collection of elites comprised primarily of highly affluent and educated white men (and some women), their interests are not likely to align with a perceived racial minority "agenda." Coupled with the reality that nonwhite Americans suffer an economic disadvantage that would make it more difficult for them to mount effective campaigns or enjoy the expendable income to finance or contribute to another's campaign, a clear racial/ethnic divide in campaign contributions is likely to emerge.

The literature review demonstrates a clear disadvantage for minority candidates in political campaigns, and I believe the impact of fundraising may exacerbate this disparity, yet there is good reason to suspect that the magnitude of racial disparities in campaign fundraising may vary significantly across institutional and cultural settings. How do race and ethnicity (used here in a simple dichotomous white-vs.-nonwhite measure) influence campaign fundraising totals? How do certain state features, including institutional, partisan, and regional differences, affect this relationship? The hypotheses elaborated below outline the objectives upon which this analysis will concentrate.

To better understand the racial/ethnic variation in fundraising, this study will test four primary hypotheses using data about state legislative elections. First, following the trajectory of the previous literature, I believe that, on average and everything else equal, white candidates garner more in fundraising compared to nonwhite candidates. Coupled with differences in education, wage earnings, political participation, and incumbency advantage—which benefits the primarily white incumbency—it follows that nonwhite candidates will fail to fundraise as much as their white counterparts. This gap, however, is hypothesized to vary depending on the level of institutional professionalization, the strength of the Democratic party's presence, and the geographic location of the states. These additional hypotheses are explained below.

Merging the literature about race and campaign finance with the work about professionalization and candidate occupation, my second hypothesis is rooted in the assumption that candidates will be more attracted to a professionalized state legislature (compared to an amateur legislature) because of the increased accessibility of resources (Fiorina 1994). Following the imagery established by Blair (1988) and reemphasized by Fiorina (1994) that certain professions are more conducive to enabling individuals to run for office in these less-professionalized states, and adding that these positions are usually occupied by white men, it would follow that less-professionalized legislatures draw fewer racial/ethnic minority candidates to compete. A more professionalized legislature enables one to work solely as a legislator because of the (generally) higher salary and, with the power and prestige that accompany such a position, encourages competition for these desirable seats. The effect of increased competition in turn is likely to weed out less-viable (and poorly funded) candidates early in the primaries to ensure a higher-quality pair of candidates for the general elections and more overall homogeneity in the size of campaign fundraising totals statewide. I believe that candidates in states with more-professionalized legislatures will demonstrate fewer racial/ethnic candidate differences (if any) in campaign fundraising.

The presence and strength of the party is undoubtedly influential in election outcomes and can explain the propensity of certain states to prefer candidates from a particular party. Stemming from the notion that most racial and ethnic minority candidates vote for and run on the Democratic party ticket (though the Asian American and Hispanic American population diverge on this, pending the country of origin), I believe that nonwhite candidates running in Democratic-leaning states will exhibit fewer fundraising disparities compared to white candidates. Inversely, this suggests a more substantial gap between racial and ethnic minorities and whites in more Republican-leaning states. Especially with the increasing saliency of universal healthcare and immigration-reform issues in the past decade that may be a focal point for a racial/ethnic minority candidate, and given the Democratic party's positions in support of such policies, it would hold that partisanship would be influential in the relationship between the candidate's race/ethnicity and his or her fundraising totals; thus, the third hypothesis maintains that the gap will widen between white candidates and nonwhite candidates in Republican-leaning states compared to the same two groups in Democratic-leaning states.

The final hypothesis rests on the unique political culture of the South, which differs significantly from all other regions in the United States, particularly regarding race. Throughout American history, the racist history of the South has been demonstrated through the practice of slavery, participation in the Civil War, the institution of Jim Crow, and mass opposition to the Civil Rights movement. Although the South can boast the greatest numbers of black legislators respective to other areas of the country, those numbers are still far from proportionate to the population, and the conflation of racial and economic oppression can impede quality nonwhite candidates from funding and winning state-level political offices. In addition, the party politics that recently exhibited a realignment, swinging from just over 100 years of Dixiecrat dominance to full Republican control in most Southern states, reinforce the notion that distinguishes the South from the other areas in the United States. This distinctive social and political

climate signifies this separation from the other regions and seems indicative that a racial/ethnic-based gap in fundraising would be exaggerated within the South, compared to non-Southern states. Given the historical context of racism, economic equality, and partisan strength, I hypothesize that the fundraising gap between white and nonwhite candidates will be greater within the South than outside it.

## **DATA AND METHODOLOGY**

To examine the relationship between the candidate's race/ethnicity and amount of money raised for state legislative campaigns, I conducted a review of the public campaign-finance records. I chose 2006 as the year of study for a number of reasons. Most importantly, 2006 served as the off-year congressional elections between two presidential races, thus minimizing the effects of a national presidential race on state politics. Retrospective analyses noted that Democrats did slightly better (relating to President George W. Bush's declining popularity (Jacobson 2008)), but this had a marginal effect on state legislative seats. Thus, there is good reason to think that the 2006 election cycle was not affected by unique historical circumstances and the results are more likely to be generalizable to other periods.

Because of the labor-intensive nature of the data collection, it was not feasible to collect data for all 50 states. I therefore collected data for a sample of 15 states that were carefully selected to ensure variation in the level of state legislative professionalization, regional location, state partisanship, and current racial/ethnic composition. A full summary of the descriptive statistics within this sample is included in the appendix. Among the most important variables, however, are that the average dollar amount fundraised was \$129,050.50 and that nonwhite candidates comprised 16.49 percent of candidates. Table 1 provides the states used in this analysis, along with data for several relevant contextual variables.

Data were collected from the authentic ballots secured by the board of elections (at the state level) and from financial donor reports available in the databases of the Institute for Money in State Politics. Additional demographic information about individual candidates was gathered through research on independent candidates (via their campaign websites, party websites, and press releases). Every effort was made to confirm the accuracy of the data collected and the reputability of the sources from which it they originally derived. In some cases, a candidate's gender or race could not be verified and thus was not recorded. This conservative approach to ensure the accuracy of the data occasionally led to some observations (candidates) being dropped from the set for incomplete available information. The final data set consisted of a total 3,003 Republican and Democratic general election candidates running in 2,105 state legislative races and who raised at least \$1000 each. Third-party candidates were excluded because they rarely raise much money and, with rare exception, are not successful at the ballot box. Finally, the \$1,000 threshold for inclusion in the sample ensures that candidates who filed for the election but never truly conducted campaigns (and therefore were not serious or viable) were not part of this analysis; this cutoff is very conservative to ensure that no unnecessary eliminations were made (Vonnahme 2012).

**Table 1. States Selected for Sample**

State	Prof. of Legislature <sup>a</sup>	Campaign Finance Laws	Region	State Part. (%Republican) <sup>b</sup>	Race/ Ethnic Comp. in Leg. <sup>c</sup>	Race/ Ethnic Comp. in Pop. <sup>d</sup>
Alabama	moderate	open	South	56	23%	30%
California	high	moderate	West	47	33%	26%
Colorado	moderate	restrictive	West	49	15%	12%
Connecticut	moderate	restrictive	Northeast	46	13%	18%
Georgia	slightly low	restrictive	South	53	21%	37%
Illinois	slightly high	open	Midwest	45	24%	22%
Iowa	moderate	open	Midwest	51	3%	7%
Michigan	high	moderate	Midwest	49	17%	20%
Mississippi	slightly low	open	South	55	21%	40%
Nevada	slightly low	high	West	52	19%	23%
New York	high	restrictive	Northeast	41	26%	29%
North Dakota	low	open	Midwest	57	2%	10%
South Carolina	moderate	moderate	South	55	17%	32%
Wisconsin	slightly high	high	Midwest	51	6%	12%
Wyoming	low	moderate	West	62	3%	7%
<b>Average</b>	n/a	n/a	n/a	n/a	24%	78%

Notes: <sup>a</sup> as defined by the NCSL Legislatures (2013).

<sup>b</sup> the average of state presidential votes for the three previous elections, from data available from the Federal Election Commission (1996, 2001, 2005).

<sup>c</sup> percent of nonwhite legislators, from data available from the NCSL (2013).

<sup>d</sup> percent of nonwhite constituents, from data available from the U.S. Bureau of the Census (2010b).

Comp.=composition; Leg.=legislature; n/a=not applicable; Part.=partisanship; Pop.=population; Prof.=professionalization.

To test the hypotheses, ordinary least squares regression was used, establishing the individual candidate as the primary unit of analysis and utilizing the natural log of the total dollar amount raised as the dependent variable. The independent variables included in this analysis capture qualities at the individual candidate level, the individual election/district level, and the state level. The variables denoting difference at the individual candidate level include partisanship, incumbency, open seat, challenger, leadership position (within the assembly), and candidate quality. Partisanship can play a very substantial role in the involvement of racial/ethnic minorities, as the earlier literature review suggests (Hutchings and Valentino 2004), and can also be influential in fundraising (Smith 2001). As noted earlier, candidates identifying as independent or not running under either the Democrat or Republican parties were rare and were excluded for the purposes of the study.

Traditional variables noted for their relationship to fundraising were also incorporated. Incumbency and open-seat status were used individually as dichotomous



responses, as well as intra-assembly leadership, because of their relationship to fundraising (Biersack, Herrnson, and Wilcox 1993; Krasno, Green, and Cowden 1994). If the individual previously held a high position within that particular house, such as Speaker of the House, that was included as a control as well (Sorauf 1992). A candidate running for reelection who is the current Speaker might garner more campaign funds for his/her higher position of power, but it is possible that by attaining such status, that legislator has a long political legacy, which would diminish the need for excessive fundraising. Finally, the perceived viability of the candidate was assessed to determine if the candidate was a quality candidate (Bond, Covington, and Fleisher 1985; Jacobson and Kernell 1983).

An additional variable included the presence of opposition in the primary election, which was important to include in the data set. Whether an opponent existed (within one's own party in the primary competition or on the opposing party in the general competition) could affect the total amount of money raised (Jacobson 2004; Mutz 1995). Though this analysis looks strictly at the total amount of funds raised (disregarding the points of time in the campaign in which those funds were secured), the influence of competition on the overall total is worth consideration. Primary competition accounts for races in which the type of competition varied (again, affecting fundraising).

Data available from the 2000 U.S. Bureau of the Census reports provided variables for education, poverty levels, and minorities within the districts. District educational attainment was measured as the percentage of adults over age 25 who held a high school diploma; district poverty levels encompassed all adults over age 25 who were at or below the poverty level; and the minority variable incorporated the percentage of citizens within the district who self-identified as nonwhite citizens.

The economic-affluence and educational-attainment averages captured two important district characteristics that are influential in the relationship between race/ethnicity and fundraising. The district-level economic-affluence variable concerns how much money individuals within the district have, which would be influential in the amount they choose to give (as donors) and the amount needed to win (as candidates). A race in a poor rural district would likely require a lower threshold of fundraising to conduct a competitive candidacy, whereas a race in an affluent suburban or metropolitan area might require more. Likewise, the measure of educational attainment can be indicative of participation and also relates to economic affluence (through the positive relationship between education and income).

Finally, to capture differences among the states in the analysis, variables denoting state partisanship, level of professionalization, and regional location were noted. The partisanship of the state—that is, the way in which a state tends to lean—could be influential in fundraising outcomes. For example, a state that leans heavily Democrat is likely to yield candidates who are Democrat and may garner less in fundraising totals, as the cultural preference already favors that party. Alternately, in a one-party-slanted state, the propensity of Democratic voters likely corresponds to more generous donors, so those candidates may secure more funds. This measure was calculated as the average vote share for the Republican candidate from the three most recent presidential elections prior to 2006 (1996, 2000, and 2004).

The state-professionalization variable depicted the level of institutional professionalization of the legislature, following the categorizations established by the National Conference of State Legislatures (NCSL), and included differences such as salary, staff size, and number of days in office per session. This measure was divided into three categories denoting whether the state was “more professionalized,” “moderately professionalized,” or “less professionalized.”

Finally, the geographic locations of the states were noted by the boundaries established by the U.S. Bureau of the Census and were then accompanied by the dichotomous component, separating them into South and non-South groups.

## **FINDINGS AND DISCUSSION**

To estimate the effects of these variables on campaign funding, I utilized an ordinary least squares model, with standard errors adjusted for clustering at the state level. I first estimated an additive model, the results of which are displayed in Table 2. Because the dependent variable is measured as the log of total funds raised, the coefficients can be interpreted as the proportional change in the dependent variable given a one-unit increase in the independent variable.

The results in Table 2 reveal that the assembly of the race and the candidate’s quality both had statistically significant effects on fundraising. The assembly in which the candidacy was focused achieved a  $p > 0.000$  with a coefficient of .812. Because the dependent variable is measured as the log of the fundraising total, this coefficient indicates that candidates running for the state senate raised an average of 81 percent more compared to their counterparts running for the state house. The candidate’s quality (having won a political election in the past) yielded a  $p > 0.001$  with a coefficient of .546, which indicates that with more experience and better networks, quality candidates would out-raise political novices.

The measures encompassing the presence of competition in the general race, candidate’s leadership, and candidate’s challenger status achieved statistical significance as well. Candidates faced with competition in the primary election generally raised 41 percent more than those without competition ( $p > 0.002$ ). Those already holding leadership positions within the legislature also raised 114 percent more than those who did not ( $p > 0.004$ ). Candidates who ran for open seats not surprisingly raised 96 percent on the whole more than others ( $p > 0.000$ ). These findings correspond with expectations as established by previous literature (Hogan, 2000; Moncrief 1992; Thompson, Cassie, and Jewell 1994) and reaffirm the value of these control variables in this analysis.

I now move to the test of Hypothesis 1, which examines the relationship between the total funds raised and the race/ethnicity of the candidate. Consistent with the hypothesis, the candidate’s race/ethnicity exhibits a statistically significant impact, with a coefficient of  $-.469$  (Table 3). This suggests that nonwhite candidates raise an average of 47 percent less compared to white candidates, when all other mitigating factors are controlled. This relationship achieved statistical significance, generating a  $p > 0.001$ . The hypothesis that nonwhite candidates raised fewer funds than white candidates is thus supported.

**Table 2. Funds and Race/Ethnicity OLS Model**

<b>Coefficients</b>	<b>Estimate</b>	<b>Std. Error</b>	<b>t-Value</b>	<b>p Value</b>
(Intercept)	11.366	1.686	6.74	0.000***
Race	-.469	.109	-4.28	.001***
Gender	-.018	.073	-.24	.814
Assembly	.812	.092	8.80	0.000***
Quality	.546	.136	4.01	.001***
Primary competition	.413	.106	3.90	.002**
Leadership	1.135	.328	3.46	.004**
Incumbency	.268	.129	2.08	.056
Open seat	.959	.105	9.14	0.000***
Candidate party	-.040	.109	-.37	.719
District education	.045	.031	1.43	.176
District poverty	-.781	.617	-1.27	.226
District minorities	.411	.252	1.63	.125
Moderate professionalization	.695	.412	1.69	.114
High professionalization	1.562	.603	2.59	.021*
Southern states	1.410	.339	4.16	.001***
State partisanship	-.061	.029	-2.07	.057

Notes: Number of Observations: 2,611

Multiple  $R^2$ : .3893; root MSE: 1.1977

Standard error adjusted for 15 clusters in states

MSE=mean squared error; OLS=ordinary least squares; Std.=standard.

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

Additionally, interactional models were conducted to assess the impact of the individual hypotheses (Tables 3–5). The interactional effects for the state's partisanship and the institutional professionalization were marginal, but those for the state's region were notable.

Hypothesis 2 concentrated on the effect of legislative professionalization on the relationship between race/ethnicity and fundraising, asserting that a larger gap in fundraising would be found in states with the least-professionalized state legislatures and the smallest difference (if any) would be seen in states with the most-professionalized state legislatures. These results are reported in Table 3. Moderately professionalized state legislatures achieved a  $-.182$  coefficient with a  $p > .598$ , while highly professionalized state legislatures attained a  $.249$  coefficient with a  $p > .512$ . Relative to the least-professionalized states, nonwhite candidates in moderately professionalized states raised roughly 18 percent less, but those in highly professionalized states raised 25 percent more on average. This relationship was weak and failed to achieve statistical significance.

**Table 3. Funds and Race Model with Professionalization Interaction Effect**

<b>Coefficients</b>	<b>Estimate</b>	<b>Std. Error</b>	<b>t-Value</b>	<b>p Value</b>
(Intercept)	11.867	1.575	7.53	0.000***
Race & Moderate professionalization	-.182	.337	-.54	.598
Race & High professionalization	.249	.370	.67	.512
Race	-.519	.319	-1.63	.126
Gender	-.233	.069	-.34	.742
Assembly	.809	.093	8.71	0.000***
Quality	.546	.132	4.14	.001***
Primary competition	.417	.109	3.83	.002**
Leadership	1.146	.328	3.50	.004**
Incumbency	.270	.128	2.12	.052
Open seat	.957	.104	9.24	0.000***
Candidate party	-.031	.103	-.30	.772
District education	.044	.031	1.39	.186
District poverty	-.781	.588	-1.33	.206
District minority	.385	.244	1.58	.137
Moderate professionalization	.721	.412	1.75	.102
High professionalization	1.528	.597	2.57	.022*
State partisanship	-.060	.029	-2.07	.057
Southern states	1.431	.340	4.21	.001***

Notes: Number of Observations: 2,611.

Multiple  $R^2$ : .3911; root MSE: 1.1964.

Standard error adjusted for 15 clusters in states.

MSE=mean squared error; Std.=standard.

Hypothesis 3 stated that partisanship would be influential in a nonwhite candidate's ability to fundraise and that states that tended to lean Democrat would exhibit less disparity in race/ethnicity fundraising compared to those that tended to lean Republican. Results are shown in Table 4. Summarizing the three previous presidential elections in the state-partisanship measure, the findings noted a small negative relationship, with a coefficient of  $-.185$  and a  $p > .240$ . States tending to align with the Republican party denoted a negative influence, but this relationship was not statistically significant.

The results of the interaction between race and the state being in the South are shown in Table 5. The coefficient of  $-.638$  indicates that nonwhite candidates in the South raised, on average, nearly 64 percent less than do white candidates, which is highly statistically significant, with a  $p > .003$ . This finding is substantial and corresponds to the legacy of racial discrimination (in the political and economic sectors) that would influence the overall fundraising efforts of racial/ethnic minority candidates in the South.

**Table 4. Funds and Race Model with Partisanship Interaction Effect**

<b>Coefficients</b>	<b>Estimate</b>	<b>Std. Error</b>	<b>t Value</b>	<b>p Value</b>
(Intercept)	11.278	1.661	6.79	0.000***
Race & Party interaction	-.185	.015	-1.23	.240
Race	.406	.695	.58	.569
Gender	-.017	.072	-.23	.820
Assembly	.809	.094	8.65	0.000***
Quality	.543	.134	4.06	.001***
Primary competition	.416	.107	3.88	.002**
Leadership	1.135	.328	3.46	.004**
Incumbency	.274	.126	2.17	.048*
Open seat	.960	.106	9.09	0.000***
Candidate party	-.028	.104	-.28	.785
District education	.043	.032	1.31	.210
District poverty	-.809	.602	-1.34	.200
District minority	.389	.247	1.58	.137
Moderate professionalization	.689	.411	1.70	.111
High professionalization	1.557	.601	2.59	.021*
State partisanship	-.059	.029	-2.04	.061
Southern states	1.438	.342	4.20	.001***

Notes: Number of Observations: 2,611.

Multiple  $R^2$ : .3904; root MSE: 1.1969.

Standard error adjusted for 15 clusters in states.

MSE=mean squared error; Std.=standard.

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

Overall, the results are mixed. The candidate's race/ethnicity overall does prove to have a substantial effect on the total dollar amount fundraised. The effect of legislative professionalization suggests that there was a positive relationship between the professionalization level and the disparity between white and nonwhite candidates' fundraising totals (the higher the professionalization level, the less disparity between white and nonwhite candidates), but it failed to achieve statistical significance. State partisanship demonstrated a slightly negative relationship, indicating that nonwhite candidates raise fewer funds in Republican-leaning states. Perhaps most notably, Southern states demonstrated a negative relationship with candidate's race/ethnicity with regards to fundraising, as it was highly statistically significant that nonwhite candidates raised substantially fewer funds in Southern states. Though the state-level influences varied in magnitude, the race/ethnicity gap in campaign fundraising was consistently negative, demonstrating that the candidate's racial/ethnic background is influential in his or her fundraising.

**Table 5. Funds and Race Model with Southern Interaction Effect**

<b>Coefficients</b>	<b>Estimate</b>	<b>Std. Error</b>	<b>t-Value</b>	<b>p Value</b>
(Intercept)	11.776	1.550	7.59	0.000***
Race & South interaction	-.638	.179	-3.56	.003***
Race	-.211	.116	-1.82	.090***
Gender	-.016	.071	-.23	.820
Assembly	.808	.094	8.55	0.000***
Quality	.538	.131	4.12	.001***
Primary competition	.415	.109	3.81	.002**
Leadership	1.084	.273	3.97	.001***
Incumbency	-.284	.122	2.32	.036
Open seat	.953	.105	9.10	0.000***
Candidate party	-.015	.104	-.15	.885
District education	.038	.033	1.17	.263
District poverty	-.792	.569	-1.36	.186
District minority	.391	.252	1.55	.143
Moderate professionalization	.697	.407	1.71	.109
High professionalization	1.547	.593	2.61	.021*
State partisanship	-.059	.029	-2.07	.057
Southern state	1.511	.346	4.37	.001***

Notes: Number of Observations: 2,611.

Multiple  $R^2$ : .3949; root MSE: 1.1925.

Standard error adjusted for 15 clusters in states.

MSE=mean squared error; Std.=standard.

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

These findings demonstrate that a race/ethnicity gap in campaign finance does exist in state legislative elections, but the state-level differences varied. Overall, the first hypothesis, which maintained that nonwhite candidates would raise fewer funds than their white counterparts, was upheld, and the large coefficient of nearly 47 percent difference between the two was statistically significant. This finding illustrates not only that a race/ethnicity gap exists but also that the gap is substantial. What is undetermined in the scope of this particular study, however, is how this influences the elections. Though racial/ethnic minorities raise fewer funds, their campaigns may not necessarily need as much money. The focus of this study does not identify how the money is spent, but differences in campaigning and the districts (reliance on grassroots initiatives, co-ethnic voting, majority-minority districts, and the like) could signify that although nonwhite candidates raise less, this does not necessarily correspond to their underrepresentation. Further studies identifying the relationships between fundraising and campaigning would certainly be beneficial.

The professionalization of the institutions had no statistically significant impact on the race/ethnicity gap in fundraising, suggesting that the level of professionalization of a state legislature has no real impact on whether nonwhite candidates raise more or less than their white counterparts do. Partisanship likewise had no effect. Though the hypothesis predicted that states leaning Democrat would exhibit smaller gaps in fundraising for nonwhite candidates, primarily because most racial/ethnic minorities tend to run on and support the Democratic party ticket, this relationship was not upheld.

The regionalization theory, maintaining that nonwhite candidates running in the South would exhibit greater fundraising disparities, was both strong and sizable. Racial/ethnic minority candidates raised, on average, nearly 64 percent less than did white candidates, denoting a substantial gap that was exacerbated in the Southern state legislatures. Although this result is disheartening, it is not entirely surprising.

Rampant segregation and the historical means for excluding racial/ethnic minorities from politics in the South were legally dismantled only within the past 60 years. The largest populations of African American legislators are found in the Southern states, but this is due in part to the population density as well as the federal oversight through the Voting Rights Act of 1965, which mandated federal control over elections—a direct response to the discriminatory practices synonymous with Southern culture (Guinier 1991). These findings suggest that nonwhite candidates raise far fewer funds than White candidates in a staggering gap that emphasizes that while a racial/ethnic gap exists more generally in fundraising, it is even more prominent below the Mason-Dixon line.

## CONCLUSION

This study demonstrates the importance of race and ethnicity in campaign fundraising. As the only multistate analysis to examine this relationship, the findings show that in state legislative elections, the candidate's identity is still related to how much he or she raises in contributions. The effect is certainly not universal and varies based on differences across the states. The specific variations tested here (state partisanship, institutional professionalization, and region) yielded interesting results that reaffirm the disparities within and across states regarding race/ethnicity and campaign finance.

In spite of assumptions that a candidate's racial/ethnic background does not define his or her candidacy, the cost of fundraising and financing a campaign remains an inequitable burden. White candidates benefit from various economic and political advantages, and they are generally able to raise more funds than are their nonwhite counterparts. The findings from this study affirm that a fundraising gap still clearly exists across race/ethnic lines. Nonwhite candidates raise substantially fewer funds than white candidates, and in the era of the modern campaign, which necessitates expensive media markets and expansive campaign staffs, this can translate to a disadvantage for an already underrepresented population. Even though the racial/ethnic minority candidates tend to be higher quality, they fail to raise the same amount of money, revealing a challenge not easy to overcome.

The effect of state variation likewise proves to be substantial, as the hypotheses involving institutional professionalization and state-level partisanship were upheld. Overall, the more professionalized the legislature, the less of a gap in fundraising between racial/ ethnic minority candidates and white candidates. Democratic-leaning states also demonstrate a minimized disparity between race/ethnicity and fundraising. These results show not only that do state-level variations matter in explaining and understanding this relationship but also that professionalization and partisanship play particularly important roles.

What these results fail to suggest is a way to fully mitigate the fundraising gap. The election system in the United States is inherently unfair when it is obvious that, even with all other mitigating factors held constant, nonwhite candidates are unable to raise comparable amounts of money compared to white candidates. Fundraising is critical to paying for the advertising, staffing, and other necessities required in the modern campaign era. When the candidate with the most money wins most of the time, it is apparent that the playing field is far from level. As nonwhite candidates consistently raise less money in their campaigns, they are at a disadvantage for winning their races. Add this to the economic and education gap, and it seems dismally clear why so few racial/ethnic minorities serve in political office relative to the abundance of white officeholders.

Considering how fundraising plays a role in the election of candidates from underrepresented groups is critical to further understanding the complicated roles of money and race in politics. This study demonstrates that a race gap in campaign finance exists within state legislative elections. We should continue to identify other ways in which the race gap occurs in campaigns, and how funding can be used to exacerbate or minimize disparities. Determining inequities within the political system itself can prove to be challenging, but it is necessary for us to address why our representative democracy is not particularly representative and to decide what can be done about this.

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## APPENDIX

**Table A1. Summary of Descriptive Statistics**

<b>Variable Name</b>	<b>Variable Coding</b>
<b>DEPENDENT Variable</b>	
Fund	Total Dollar Amount (e.g., \$346,560)
<b>INDEPENDENT Variables</b>	
Candidate gender	Male = 0, Female = 1
Candidate race	White = 0, Nonwhite = 1
Candidate party	Republican = 0, Democrat = 1

Concluded next page

**Table A1. Summary of Descriptive Statistics, concl.**

<b>Variable Name</b>	<b>Variable Coding</b>
INDEPENDENT Variables, cont.	
Won	Lost = 0, Won = 1
Candidate quality	No elected political position = 0, Previous elected political position = 1
Primary competition	None = 0, Any = 1
Candidate race	White = 0, Nonwhite = 1
Candidate leadership	No high leadership position held = 0, High leadership position held = 1
Candidate incumbency	Not incumbent = 0, Incumbent = 1
Candidate open seat	Not open seat = 0, Open seat = 1
Race assembly	House = 0, Senate = 1
State partisanship	State average for Republican candidate in the 1996, 2000, and 2004 elections
District affluence/poverty	Percentage of individuals within the district at or below the poverty level
District minority	Percentage within district of any race or ethnicity other than non-Hispanic white
District education attainment	Percentage within the district who earned a HS Diploma or the GED equivalent
Institutional professionalization	Less professionalized = 1, Moderately professionalized = 2, More professionalized = 3
Geographic location	Non-South = 0, South = 1

*The Relationship between Media Portrayal of Schizophrenia  
and Attitudes toward Those with Schizophrenia\**

JULIA CRANT  
*St. Mary's College*

**ABSTRACT**

The aim of this study was to learn whether positive media portrayals of schizophrenia affect people's attitudes toward individuals with schizophrenia. Fifty (50) participants viewed one of two videos—either a control video showing a documentary about koalas or a treatment clip from the television show *Perception* that portrays a professor with schizophrenia effectively teaching a class. After viewing the video, participants rated their attitudes toward a person with schizophrenia on a dangerousness scale as well as on cognitive and behavioral attitudes scales. The participants who watched the treatment clip rated people with schizophrenia as significantly less dangerous and had significantly more positive cognitive attitudes toward them compared to those who viewed the control video. There was no significance in behavioral attitudes between the two groups.

**KEY WORDS** Schizophrenia; Media; Mental Illness; Stigma; Attitudes

Schizophrenia is an often misunderstood mental illness, in part because of what is shown in the media. Films often portray people with schizophrenia negatively, adding to the stigma against those with the disease; people with schizophrenia are viewed as being dangerous, unpredictable, and irresponsible (Penn, Chamberlin, and Mueser 2003). It would be helpful to learn more about people's reactions to positive and negative portrayals of people with schizophrenia to fight the stigma associated with the illness, in order to show that persons with schizophrenia are no different than any of us.

Several studies have shown that media clips have an effect on people's attitudes. A study done by Bateman, Sakano, and Fujita (1992) found that people who viewed a popular film called *Roger and Me*, which portrayed the car company

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General Motors in a negative light, had more negative attitudes toward General Motors and U. S. businesses in general compared to people who did not view the film. A study by Beattie, Sale, and Mcguire (2011) showed participants powerful excerpts from *An Inconvenient Truth* (a film about global warming) and measured their attitudes on different scales. These authors found that viewing the film clips did indeed affect the participants' emotions and attitudes toward global warming. Another study (Koordeman, Anschutz, and Engels 2014) examined the effects of positive and negative portrayals of alcohol use in movies and in attitude toward the movies. They found that participants were more engaged with and had a more positive attitude toward movie clips with alcohol portrayals compared to the same movie clips with no alcohol portrayals. There was a difference between the positive and negative portrayals.

A study done by Penn, Chamberlin, and Mueser (2003) examined whether viewing a documentary that depicts individuals with schizophrenia can reduce stigma. The findings showed that, compared to the other experimental conditions, viewing the documentary about schizophrenia resulted in more benign attributions about schizophrenia (e.g., viewers were less likely to blame individuals with schizophrenia for their actions) but did not change general attitudes about schizophrenia (e.g., perceived dangerousness). The film also did not increase participants' intentions to interact with persons with schizophrenia.

One of the more prevalent stereotypes about characters with severe mental illness found in movies is as dangerous and violent. For example, Penn, Kommana, Mansfield, and Link (1999:437) found that people who are diagnosed with severe mental illness are more likely to be shown as violent than are people without the same diagnosis. Owen's (2012) research supports a different viewpoint; she found that people with severe mental illness are more likely to be victims of violence than the perpetrators of the violence. Moviemakers tend to emphasize the grossly disorganized and bizarre behaviors, as well as the vivid hallucinations, of their characters with schizophrenia; however, the negative symptoms of schizophrenia, such as affective flattening and avolition, are more prominent in real life, and auditory hallucinations are far more prevalent than the grandiose visual hallucinations that filmmakers tend to use.

The experiment at hand investigates how media portrayals of people with schizophrenia affect other people's perceptions of those with schizophrenia. The dependent variables used are the dangerousness scale (Link et al. 1987) and the cognitive and behavioral section of the Multidimensional Attitudes Scale Toward Persons With Disabilities (Findler, Vilchinsky, and Werner 2007). (See Appendix A.) The primary independent variable is the type of clip that is shown (a positive depiction of schizophrenia or a control). It is hypothesized that those viewing the positive portrayal of schizophrenia will view a person with schizophrenia as less dangerous than will those viewing the control and will have more positive cognitive and behavioral attitudes toward a person with schizophrenia.

## **METHODS**

### *IRB Approval*

A proposal including all the relevant documents pertaining to the study was submitted to the Institutional Review Board of Saint Mary's College (Notre Dame, Indiana). The board reached a conclusion that the study was of minimal risk of harm to the participants involved, and thus, the study was approved.

### *Participants*

Fifty (50) people participated, with 27 in the control group and 23 in the treatment group. A link was posted to the author's private Facebook account, on the Saint Mary's Class of 2016 Facebook group, and on the John Adams High School (South Bend, Indiana) Alumni Facebook group. The link was also sent to the psychology professors at Saint Mary's College, who shared it with their classes.

### *Materials*

The videos used were a clip from a documentary about koalas (the control) and a clip showing a (fictitious) professor with schizophrenia giving a competent lecture (the treatment condition). Links to the videos are provided in Appendix B.

The survey consisted of a dangerousness scale and the Multidimensional Attitudes Scale Toward Persons With Disabilities (Appendix A). The dangerousness scale consists of six items about whether persons with mental illness are likely to be a danger to others, and are indicated on a 7-point scale (from 1 = strongly disagree to 7 = strongly agree), with higher scores indicating greater perception that the person is dangerous. (These questions pertained to people with schizophrenia in general, not just one person.) The individual items were summed, then divided by the number of items (taking the average) to get a score for this scale. A sample item, "I am less likely to trust this person," has a Cronbach's alpha of .810, indicating good reliability.

The Multidimensional Attitudes Scale Toward Persons With Disabilities comprises two categories: cognition (with a Cronbach's alpha of .878) and behavior (with a Cronbach's alpha of .802). The cognition category consists of four statements, and the behavior category consists of six statements. Responses are indicated on a 5-point scale, in which 1 = not at all and 5 = very much so. Some of the items were reverse-coded so higher scores on the scale indicate more positive attitudes toward a person with schizophrenia.

### *Procedure*

Participants did not receive any benefits from participating in this research, and there were no inclusion or exclusion criteria. After giving consent, participants indicated which month they were born in. Birth month was used as a way to split the participants into control and treatment groups. Those born from January through June watched the control

video, and those born from July through December watched the treatment video. Both video clips were short, about one minute and thirty seconds long. The control video was from a documentary about koalas. The treatment video was from the television show *Perception* and showed Dr. Pierce, a college professor who has schizophrenia and exemplifies a healthy adult living with the disorder, giving an effective lecture. The instructions informed the participants about the professor's schizophrenia.

Following the video clips, each participant completed a survey about his or her attitudes toward people with schizophrenia. Participants were first asked to indicate their level of disagreement or agreement with six statements about the perceived danger of people with schizophrenia. They responded to the six items on a scale from 1 to 7 (1 = strongly disagree; 7 = strongly agree). Participants were then asked to indicate their level of disagreement or agreement with several statements measuring attitudes about a person with schizophrenia. Cognitive and behavioral attitudes were measured on a scale of 1 to 5 (1 = not at all; 5 = very much so).

## **RESULTS**

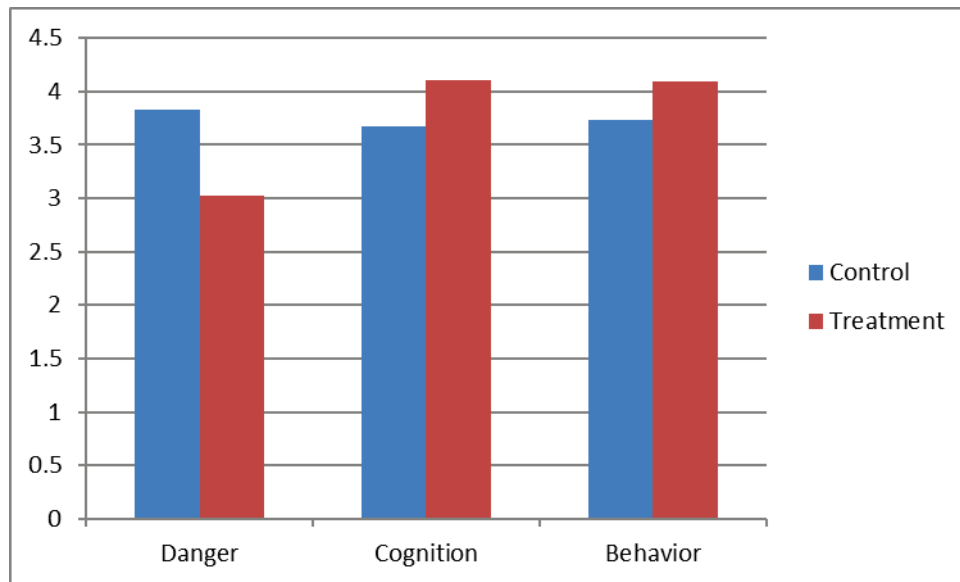
One-way ANOVAs were conducted on the three dependent variables (danger, cognition, and behavior). The independent variable in this analysis was the nature of the video clip: control or treatment. Two of the three ANOVAs were statistically significant. Participants who viewed the treatment video viewed the person with schizophrenia as significantly ( $F = 5.54, p < 0.05$ ) less dangerous (median 3.03) compared to those who viewed the control video (median 3.83) (Figure 1). Participants who viewed the treatment video had significantly more positive cognitive attitudes ( $F = 5.14, p < 0.05$ ) toward a person with schizophrenia compared to participants who viewed the control video (median 4.11 and 3.68, respectively). There was no significant difference in behavioral attitudes in the two groups ( $F = 2.89, p > 0.05$ ) toward a person with schizophrenia (median 3.74 for the treatment vs. median 4.09 for the control).

## **DISCUSSION**

Consistent with previous studies, the current research found that media clips affect people's attitudes. Participants who first watched a film clip showing a positive portrayal of a person with schizophrenia viewed a person with schizophrenia as significantly less dangerous when compared to those who had watched a control video. Those who viewed the positive film clip had more positive cognitive attitudes toward a person with schizophrenia compared to those who watched the control video, although they did not have significantly different behavioral attitudes. A potential explanation for the insignificant findings regarding behavioral attitudes is that watching one short video clip may not be sufficiently powerful to alter behavior intentions. Another explanation could be that the scale measured behavioral intentions rather than actual behavior, which are different processes.



**Figure 1. Participants' Views of Persons with Schizophrenia**



Penn et al. (2003) examined whether viewing a documentary that positively depicts individuals with schizophrenia can reduce stigma. Their findings showed that compared to the other experimental conditions, watching a documentary about schizophrenia resulted in more benign attributions about schizophrenia (e.g., less likely to blame individuals with schizophrenia for the disorder) but did not change general attitudes about schizophrenia (e.g., perceived dangerousness). The film also did not increase participants' intentions to interact with persons with schizophrenia. The current study extended those findings by indicating that a film clip showing a positive portrayal of a person with schizophrenia can change people's attitudes about perceived dangerousness of individuals with schizophrenia. The results of this study, consistent with the results of the earlier study, showed that watching the positive film clip did not increase the participants' intentions to interact with a person with schizophrenia.

The limitations of the current study should be noted. First, the sample size of 50 participants was relatively small, which may have contributed to the insignificant results for behavioral attitudes. Future studies should have larger sample sizes in order to enhance the statistical power of the results. Second, other variables that were not included may explain any differences in the results. For example, participants could have had prior knowledge or experience with individuals with schizophrenia. Finally, the manipulation portrayed only a positive version of a person with schizophrenia; a negative portrayal of a person with schizophrenia could also have been shown to come to better results.

Future research could address these and other limitations. Increasing the sample size would increase the confidence that can be placed in the results. Including an additional manipulation with a negative portrayal of schizophrenia would provide further insight into how media portrayals affect attitudes toward those with schizophrenia.

The results of this study offer implications for the portrayal of persons with schizophrenia in the media. It was found that those viewing schizophrenia in a positive light were more likely to view persons with schizophrenia as less dangerous and to have more positive attitudes toward persons with schizophrenia. Movie and television producers should appreciate the power they have in shaping people's attitudes and should be careful with how they portray those with schizophrenia and perhaps also those with other mental illnesses. A person reviewing this study could be more aware of his or her attitudes toward persons with schizophrenia and other mental illnesses by being aware that those attitudes are shaped at least partially by what they view in the media.

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## APPENDIX A

### *Dangerousness Scale*

Directions: Based on your views of people with schizophrenia, please indicate your reactions to the following statements. Indicate your response on a 7-point scale, from 1 = strongly disagree to 7 = strongly agree.

Dangerousness Scale

1. If this person lived nearby, I would not allow my children to go to the movie theater alone.
2. If this person applied for a teaching position at a grade school and was qualified for the job I would recommend not hiring him/her.
3. One important thing about this person is that you cannot tell what they will do from one minute to the next.
4. I am less likely to trust this person.
5. If this person lived nearby, I would hesitate to allow young children under my care on the sidewalk.
6. There should be a law forbidding this person the right to obtain a hunting license.

*Multidimensional Attitudes Scale Toward Persons With Disabilities (modified)*

Directions: Based on your views of people with schizophrenia, please indicate your reactions to the following statements. Indicate your response on a 5-point scale, from 1 = not at all to 5 = very much.

Cognition

1. He/she seems like an interesting guy/girl.
2. He/she looks like an OK person.
3. We may get along really well.
4. He/she looks friendly.

Behavior

1. Move away
2. Get up and leave
3. Continue what he/she was doing
4. Find an excuse to leave
5. Move to another table
6. Start a conversation

**APPENDIX B**

Control Clip (koalas): <https://www.youtube.com/watch?v=d3ozlzGsdEM>

Positive Clip (Perception): <https://www.youtube.com/watch?v=6gegXhNcuKo>

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## AUTHOR INSTRUCTIONS AND MANUSCRIPT SUBMISSION GUIDELINES

(Effective September 1, 2016)

The following statement provides an overview of the submission requirements and is designed to assist authors in the preparation of their manuscripts for possible publication in the *Journal*. It covers details of the review process and of the presentation and formatting style required for all paper submissions and that will be checked in copyediting if your manuscript is accepted for publication. To avoid delays in manuscript processing, all authors and coauthors who wish to have their papers considered for publication should review and observe the following submission requirements.

1. All manuscripts submitted for review must include a nonrefundable processing fee. The fee is \$10 for IASS members (waived for members who submit papers presented at the previous IASS Annual Meeting) and \$25 for non-IASS members. There is no cost for students or for associate members. Papers will not be processed without payment.

2. Make all checks payable to Indiana Academy of the Social Sciences (IASS) and attach to letter and manuscript submission. Payment may also be made online via PayPal and indicated in the submission letter.

3. Be sure to include a COVER LETTER, ABSTRACT with KEY WORDS, and PROFESSIONAL BIOGRAPHY with both e-mail/electronic and hard-copy submission of manuscripts. Failure to do so will delay processing of your paper.

- Authors must provide full and complete contact information as follows:  
(1) name, (2) status as faculty (including rank) or student (undergraduate or graduate), (3) discipline and department affiliation, (4) university and/or institution, (5) institutional mailing address, (6) e-mail address, and (7) work and alternate phone numbers.
- Cover letter should state that the author/coauthors is/are submitting the paper for review for possible publication in the *Journal of the Indiana Academy of the Social Sciences*. The author and/or coauthors must state that the work has not been published anywhere previously and must agree to comply with all requirements outlined in these guidelines, including a willingness to publish the paper in the *Journal* if it is accepted, and to assign full copyright to IASS should the paper be accepted.

4. Papers must be submitted electronically via e-mail as Microsoft Word document attachments to <editor@iass1.org>. One print (hard) copy of the manuscript must also be mailed to the editor:

**Dr. Kenneth Colburn**  
**Editor, Journal of the Indiana Academy of the Social Sciences**  
**Butler University, Jordan Hall 272-B**  
**4600 Sunset Avenue**  
**Indianapolis, IN 46208**

5. All papers submitted for publication must be prepared according to the *American Sociological Association Style Guide* (5th ed.) as modified below. Most university libraries have copies. Summaries are available online from many sources, and any current sociology journal (for example, *American Sociological Review*, *Sociological Quarterly*, *Sociological Focus*, *Sociological Inquiry*) may be consulted for examples. A summary review of the ASA style guide as modified for the JIIASS, in addition to other requirements, is provided below.

6. The senior editor in chief is responsible for making the final decision on all manuscripts and content for publication in the *Journal*. The senior editor's decisions on all publication matters and content are not subject to review by any other member, officer, or body of the IASS.

## **GUIDELINES FOR MANUSCRIPT PREPARATION** *(modified ASA style)*

**Paper length** should be limited to about 30 pages total, including title page, abstract, all text, graphs, tables, endnotes, and references.

All pages must be created using **Microsoft Word** in **12-point Times New Roman** only and must be **double-spaced** (including **endnotes** and **references**).

**All margins** (left, right, top, and bottom) must be 1.25 inches.

Use **normal settings** when word processing. Do not create special characters on the keyboard.

### *Biography*

Include a short professional biography (five or six lines) for each author, which should include the author's name, title, department, institution, and a brief description of current research interests, publications, or awards.

### *Abstract*

The abstract appears on a separate page headed by the title. It should be brief (one paragraph of 150 to 200 words), descriptive (a summary of the most important contributions in the paper), and accessible (jargon-free and clear to the general reader). A good test of the quality of an abstract is if it can serve as a press release for the research.

### *Title Page*

Include the full **title** of the article, the **author(s) name(s)**, **department and disciplinary affiliation(s)**, and **institution(s)** (listed vertically if there is more than one author), a

**running head** (60 characters or less), the **word and page count** for the manuscript, and a title footnote.

An asterisk (\*) by the title refers to the **title footnote** at the bottom of the title page. The title footnote must include the name and address of the corresponding author and may also include other contact information, acknowledgments, credits, and/or grant information.

### *First Page*

The first page of the text should start with the title page, and the running head should be on every subsequent page of text in the header with a page number. The first page of text would be page 3 (title page = 1; abstract page = 2).

### *Text*

*Length.* Papers should be limited to about 30 pages total, including all text, graphs, tables, endnotes, and references. *No* personal or institutional or other identifying information should be contained in the manuscript outside of the title page.

*Subheadings.* Generally, three levels of subheadings are sufficient to indicate the organization of the content. See recent *Journal* issues for subheading formats.

*Text Citations.* Include the last name of the author and year of publication. Include page numbers when you quote directly from a work or refer to specific passages. Cite only those that provide evidence for your assertions or that guide readers to important sources.

- If author's name is in the text of the sentence, follow the name with the year of publication in parentheses: "... Duncan (1959)". If author's name is not in the text of the sentence, enclose both the last name and the year in parentheses, with *no commas*: "... (Gouldner 1936)."
- Pagination follows the year of publication after a colon: "... (Ramirez and Weiss 1979:239–40)."
- Give both last names for joint authors: "... (Martin and Bailey 1988)."
- For works with three authors, list all last names in the first citation in the text; thereafter use "et al.": "... (Carr, Smith, and Jones 1962)" and later "... (Carr et al. 1962)." For more than three authors, use "et al." throughout: "... (Thompson et al. 2016)."
- Place a series of parenthetical references in alphabetical (not chronological) order, separated by semicolons: "... (Burgess 1968; Marwell et al. 1971; Smith 1843)."
- For material scheduled for publication, use "forthcoming" in place of a date. For dissertations and unpublished papers, cite the date; if no date is

available, use “N.d.” in place of the date: “... Smith (forthcoming) and Jones (N.d.)”

*Mathematical symbols and equations.* Use consecutive Arabic numerals in parentheses at the right margin to identify important equations. Align all expressions, and clearly mark compound subscripts and superscripts. Clarify all unusual characters or symbols. Use italic type for variables in equations and in the text; use bold type for vectors.

#### *Endnotes (No footnotes permitted)*

**Use endnotes only when necessary.** Notes (particularly long ones) can be distracting to the reader. As an alternative, consider stating in the text that further information is available from the author.

- Begin each note with the superscript numeral to which it is keyed in the text.
- Type notes (**double-spaced**) in a separate section titled “Endnotes” at the end of the document.

#### *References*

All references cited in the text and endnotes must be listed in the reference list, and vice versa. Double-check spelling and publication details—*the JlASS editor is not responsible for the accuracy of authors’ reference lists.*

- List references in alphabetical order by authors’ last names. Include full names of all authors; use first-name initials only if the author used initials in place of name in the original publication.
- For multiple authors, invert only the name of the first author (e.g., “Jones, Arthur B., Colin D. Smith, and Barrie Thorne”).
- For two or more references by the same author(s) or editor(s), list references in order of the *year* of publication. Give the author’s (or editor’s) full name in all subsequent references. Arrange references for the same single author from the earliest to the latest.
- All single-author references precede references by that author with coauthors, even though they may have been published earlier. References with multiple authors are arranged in alphabetical order of authors’ last names.
- To list two or more works by the same author(s) from the same year, distinguish them by adding letters (*a, b, c*, etc.) to the year or “Forthcoming” (e.g., 1992a, Forthcoming a) and list in alphabetical order by title.

A few examples follow. See recent ASA journal issues for further examples.

*Books*

Mason, Karen O. 1974. *Women's Labor Force Participation and Fertility*. Research Triangle Park, NC: National Institutes of Health.

*Periodicals*

Aseltine, Robert H. Jr., and Ronald C. Kessler. 1993. "Marital Disruption and Depression in a Community Sample." *Journal of Health and Social Behavior* 34(3):237–51.

*Collections*

Clausen, John A. 1972. "The Life Course of Individuals." Pp. 457–514 in *Aging and Society*. Vol. 3, *A Sociology of Age Stratification*, edited by M. W. Riley, M. Johnson, and A. Foner. New York: Russell Sage.

*Web Site (No Author)*

American Anthropological Association. 2006. "Race." Retrieved July 10, 2010 ([http://www.aaanet.org/\\_cs\\_upload/resources/14737\\_1.pdf](http://www.aaanet.org/_cs_upload/resources/14737_1.pdf)).

*Tables, Figures, Etc.*

Include tables and figures only when they are critical to the reader's understanding.

*Tables*

- Number tables consecutively throughout the text. Insert tables in the text as appropriate.
- Include a descriptive title for every table. (The title must *not* be part of the table itself but should be placed in the text *before* the table.)
- Include headings for all columns and rows (see recent *Journal* issues for examples).
- Always use the same variable names in tables as in the text.
- Include standard errors, standard deviations, *t* statistics, and so forth in parentheses under the means or coefficients in the tables.
- Gather general notes to tables as "Note:" or "Notes:" (or "Source:" or "Sources:") at the bottom of the table; use a, b, c, etc., for table footnotes.
- Use asterisks (\*, \*\*, and/or \*\*\*) to indicate significance at the  $p < .05$ ,  $p < .01$ , and  $p < .001$  levels, respectively; note if tests are one-tailed or two-tailed. Generally, only those results significant at the  $p < .0$  level or better should be indicated as significant in the tables or text.

*Figures and Other Artwork*

Number figures or illustrations consecutively throughout the text. Each should include a title. If the manuscript is accepted for publication, submit figures and illustrations

electronically. All labels on figures and illustrations must *precede* the figure. They must not be part of the figure itself.

***IMPORTANT:*** Before submitting a figure or illustration for publication, contact the *Journal* editorial office to discuss size specifications and/or disk and file formats. All artwork and type must be legible when sized to fit a 6" width.

Author(s) must secure permission to publish any copyrighted figure, illustration, or photograph.

#### *Appendices*

No appendices will be permitted without express permission from the senior editor.

#### *Review Your Manuscript!*

Although these functions may not always be reliable, run spelling and grammar checks on your manuscript from your word processing software. Also double-check that formatting conforms to ASA style.

Carefully read through the entire manuscript one final time before submitting, as no substantive changes in title or text will be permitted once the paper has been submitted and accepted for review.

Authors/Coauthors will be responsible for paying the cost of any excessive copy and/or proof editor fees that may be required because of a failure to observe these guidelines *prior* to their paper being published.







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