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Partisan Polarization of Trust in Societal Institutions: Causes and Effects

by

Thomas B. Kent

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

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in the

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University of California, Berkeley

Committee in charge:

Professor Henry E. Brady, Co-chair

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Abstract

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Partisan polarization spreads through more and more of American society over time. Republicans and Democrats held different opinions toward partisan-valenced institutions like the presidency and a few economic institutions (e.g. big business) in the 1970s, but today almost all societal institutions – whether governmental or ostensibly apolitical – are understood by many Americans as liberal or conservative, made up mostly of one partisan group or the other. As a result many partisans trust only institutions they believe are made up of people who are similar to them ideologically.

This dissertation uses attempts to answer these questions: When did this polarization of trust emerge in each institution? Why did this polarization occur? What effect does it have on regular Americans?

Chapter 1 documents trust in institutions using 50 years of existing public opinion data and original public opinion measurement. Chapter 2 uses campaign donation data and machine learning to establish a possible cause of polarization of trust: the real composition of institutions. Chapter 3 demonstrates one reason this polarization is important: if it is provided, Americans will use partisan information about doctors to make decisions about health care. There is already evidence of individual-level partisan differences in trust in doctors, as well as aggregate-level evidence of differential outcomes between Republicans and Democrats.

Acknowledgments

For me, the completion of a PhD has been a long journey. Many people have supported me in different ways over a long time. I hope I can remember them all.

One defining part of graduate school was cohorts; I was part of one at Michigan and one at Berkeley. At Michigan, I spent long nights working on problem sets and commiserating about grad school with Chris Skovron, Dustin Gamza, Geoff Lorenz, Hakeem Jefferson and Meredith Blank. At Berkeley, I did much the same with Chris Carter, Tanu Kumar, Matthew Stenberg, Madalyn Rilling, Emily Hertz and Konrad Posch. Outside my cohorts, Alton Worthington, Tyler Hughes, Neil O'Brian, Jenn Chudy, Sean Freeder, Catlan Reardon, Rob Sayre, Alex Stephenson, Alice Ciciora, Julia Raven, Julia Kamin, Anna Callis, Anna Weissman and Alexander Agadjanian have all been great academic compatriots. Together, they all shaped this dissertation by shaping me.

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Parts of this dissertation were written with Henry Brady (Chapter 1) and Neil O'Brian (Chapter 3). I thank them each again for their patience, curiosity and intelligence as partners in original research.

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I thank my extended family, who were mostly polite in their questions about when I might finish. Susan and Chuck Muenchow, who I suppose are technically my cousins but I think of as an aunt and uncle, functionally adopted me on the West Coast. I'm certain I will be unable to sufficiently thank them, but I know they'll both be very pleased that this dissertation (finally) came to fruition – this might be the greatest gift I can give them.

My brother Rob tried to give me good advice before I started graduate school, which I ignored. For that, but mostly for being the example to which I have always looked, I thank him and love him. He and his wife Irene welcomed me into their home more times than I can count during graduate school; they were part of what made moving to California and sticking it out bearable.

Finally, to my parents, I am so happy you will see me finish this. You have always been supportive and encouraging no matter what I've chosen to do; I am so lucky to have you. Thank you, thank you, thank you.

Introduction

Partisan polarization in the public's evaluation of government institutions with a clear partisan valence is commonplace; for example, all scholars of American politics are familiar with the ever-widening gap between Democratic and Republican ratings of the job performance of the president¹. More troublingly, emerging partisan polarization in evaluations of non-governmental, ostensibly apolitical institutions has become evident in recent years. Prominent media organizations, public opinion firms and think tanks consistently publish new findings on the differences between Democratic and Republican opinion on major societal institutions like the press,² the police, and the military. Much of the work of any society takes place in exactly these ostensibly apolitical institutions.

Does it matter if partisans of different political parties have vastly different evaluations of how much these institutions can be trusted? Does it matter if those on the left distrust the police, or that those on the right distrust science and universities? Can a lack of trust handicap efforts to confront the COVID-19 pandemic? This dissertation explores these topics by exploring trust in American institutions over the past 50 years.

These ostensibly apolitical institutions are often the essential actors affected by and influencing public policy enacted in arenas variously called iron triangles (Freeman 1965), issue networks (Heclo 1978), policy domains (Knoke and Laumann 1982), and policy niches (Gray and Lowery 1996). Although these paradigms for describing the policy process differ in their focus, they agree that the locus of political action is specific policy domains such as medicine, education, or banking where governing political institutions make decisions about these apolitical institutions who interact with governing institutions to shape the results.

This dissertation focuses on a set of broadly defined and ostensibly apolitical institutions such as business, medicine, and religion. I show that in the past 50 years there has been increasing polarization and politicization in people's assessment of many of these institutions, with Democrats more trusting than Republicans of higher education, journalism, and science, and Republicans more trusting than Democrats of religion, the police, and the military. I then find evidence that these institutions may actually be more ideologically aligned than they were in the past; the constituent members of these institutions have become more consistently liberal (e.g., higher education) and conservative (e.g., the military). Finally, I demonstrate in the context of one institution, medicine, the polarization of opinion can have important effects.

Institutions and Trust

The words *institution* and *trust* cover immense territories with a great deal of scholarly discussion about what they mean and what they should mean. *Institution* as used in sociology refers to everything from a handshake to world government – clearly too broad a scope for any concept intended for any meaningful use. Consequently, I focus on a subtype of institutions: organizations or groups of organizations (e.g., all police departments, all medical institutions, all public education institutions).

¹ For example, <https://news.gallup.com/poll/389033/biden-year-one-approval-ratings-subpar-extremely-polarized.aspx>

² <https://www.pewresearch.org/fact-tank/2021/08/30/partisan-divides-in-media-trust-widen-driven-by-a-decline-among-republicans/>

The word *trust* is also broad and ambiguous. Zucker (1986) provides a useful framing perspective. She argues that macro changes in the society in the last part of the 19th century such as immigration, population growth, and the rise of cities led to the destruction of faith in interactions based upon *personal* trust. The destruction of personal trust required the development of new kinds of institutions and social relations that provided *social* trust. These mechanisms for social trust take many forms: unions provide bargaining power and protection from risk for workers; banks offer trustworthy places to invest funds and to obtain loans; and hospitals provide reliable health care through certification and regulation. Social trust in these institutions produced by these methods became the glue that held societies together in the face of enormous complexity, volatility, and uncertainty.

Defining Institutions – Common Elements of Definitions of Institutions

Although institutions can range from taking turns in conversations to global regimes of free trade among nations, I am interested in a particular type of institution that involves the following elements:

People or Actors or Roles – Institutions involve people who are in roles (Turner 1997, Harré 1979, Miller 2019, Searle 2008). These roles delineate in a socially recognized way their interactions with others (Miller 2019).³ A doctor, a teacher, and city council member are roles. Roles can vary from institution to institution, and individuals might have many different roles (e.g., one person could be a teacher and a city council member).

Doing, Acting – People in their roles in institutions are “acting collectively” (Hughes 1939) or “doing” (Neale 1987). They are “producing” (Turner 1997) and they “perform functions” (Searle 2008). They are “agentic” (Mohr and White 2008), and they perform “tasks” (Miller 2019) and achieve “aims or outcomes” (Harré 1979). They engage in collective acceptance and collective commitment for the group (Tuomela 2003). Institutions, therefore, get things done, and they have a function (Miller 2019).

Methods of Structuring and Control – A third feature of institutions is that they constrain or enable people. Regulations or sanctions applied to institutions (Neale 1987, Miller 2019, Scott 2014, and Jepperson 1991) enforce duties and responsibilities subject to coercive actions that can be invoked if the responsibilities are not met or if requirements are violated – those violating the regulations are punished in some way. Another method of control is folkways (Neale 1987), mores (Hughes 1939), or norms (Scott 2014, Turner 1997, Tuomela 2003), which are informal standards that invoke censure and shame if violated. Cultural or cognitive understandings (Miller 2019, Scott 2014) are another form of control involving ways of understanding the world considered obvious ways to do things.⁴ Finally, control may be through competition that rejects inferior products or poor performance.

³ “These roles are defined in terms of tasks, and rules regulating the performance of those tasks. Moreover, there is a degree of interdependence among these roles, such that the performance of the constitutive tasks of one role cannot be undertaken, or cannot be undertaken except with great difficulty, unless the tasks constitutive of some other role or roles in the structure have been undertaken or are being undertaken. Further, these roles are often related to one another hierarchically, and hence involve different levels of status and degrees of authority....The constitutive roles of an institution and their relations to one another can be referred to as the *structure* of the institution.” (Miller 2019)

⁴ (Miller 2019) “This notion [of culture] comprises the informal attitudes, values, norms, and the ethos or “spirit” which pervades an institution. As such, it is to be distinguished from the wider notions of culture frequently in use among anthropologists. Culture in the wide sense embraces not only informal but also formal elements of institutions, e.g. rules and other components of structure.”

Persistence or Reproduction – A fourth feature of institutions is that they persist over time through working together (Hughes 1939), reproducing the institution (Turner 1997, Jepperson 1991), performing a function (Miller 2019),⁵ or adhering to deontic agreements (Searle 2008) or other kinds of agreements (Tuomela 2003).

Organizations – Finally, in this paper, we are specifically interested in institutions that are sets of organizations. We rule out other phenomena such as practices for managing behaviors for social and other interactions, cultural conventions for people’s behavior, constitutive features or practices of social institutions and society, or pervasive structural features of society.⁶ I focus here on social institutions that can be thought of as collections of organizations.

Organizations involve social positions and a task rights system (Tuomela 2003, 141).⁷ The Stanford Encyclopedia of Philosophy entry on Social Institutions (Miller 2019) focuses on these entities: “Social institutions in the sense in use in this entry need to be distinguished from less complex social forms such as conventions, rules, social norms, roles and rituals. The latter are among the constitutive elements of institutions.... Social institutions also need to be distinguished from more complex and more complete social entities, such as societies or cultures, of which any given institution is typically a constitutive element.... Social institutions are often organisations.” We will focus on social institutions of this sort.

Four Mechanisms for Legitimation

There must be some reasons for individuals and/or society to accept an institution as worthwhile, as valid. This notion is evident in the four sources of legitimacy that appear in many of the definitions of institutions. These four sources can be described in different ways. The first terms (regulatory, moral, cultural-cognitive, and pragmatic) in the following list includes a description from Deephouse et al (2008). The second set of terms (power, attraction, mimesis,

⁵ (Miller 2019) “Finally, on teleological and functional accounts, these roles are related to one another in part in virtue of their contribution to (respectively) the *end(s)* or *function(s)* of the institution; and the realisation of these ends or function normally involves interaction among the institutional actors in question and external non-institutional actors.”

⁶ Organizations are a subtype of institutions, but they have additional characteristics. Like institutions they involve people, they do things (“*Work* describes the tasks that the organization needs to accomplish given the goals it has set for itself” [Scott and Davis 2003, 21], they have methods of structuring and control (formal and informal rules and practices [Scott and Davis 2003, 22-24]), and they reproduce themselves. But they also have boundaries and exist within an environment so that “Every organization exists in a specific physical, technological, cultural, and social environment to which it must adapt.” (Scott and Davis 2003, 19). Furthermore, each organization has a command structure and strategy and goals about how it deals with its environment which can be markets, or clients, or constituencies, or problems. Hodgson (2006) says “Starting with a definition of institutions as socially embedded systems of rules, it is evident that organizations are a special kind of institution, with additional features. Organizations are special institutions that involve (a) criteria to establish their boundaries and to distinguish their members from nonmembers, (b) principles of sovereignty concerning who is in charge, and (c) chains of command delineating responsibilities within the organization (8).”

⁷ Raimo Tuomela describes a list of “increasingly stronger kinds of institutions” (2003, 141):

- a) institution as norm-governed social practice; [handshake, driving on right]
- b) institution conferring a new conceptual and social status to some entity (e.g. person, object, or activity); [tenure, worker, graduate]
- c) institution conferring a new deontic status and status functions to go with it to the members of the collective in question; [money, marriage, property]
- d) institution as an organization involving social positions and a task right system;”[Business corporation, university]

competition) come from Beckert (2010, Section Headings), and the third set (coercive, normative, mimesis, [no term]) are from Scott (2014, 60):

- Regulatory, Power, Coercive
- Moral, Attraction, Normative
- Cultural-Cognitive, Mimesis, Mimesis
- Pragmatic, Competition, [No term]

Regulatory legitimacy requires conforming to rules emanating from a government that has the power to coerce people. For example, a corporation gains legitimacy if it acts within the legal-regulatory framework under which it is chartered. Moral legitimacy comes from cognitive and normative forms (socialization and professional networks) that legitimate an institution. For example, a university is seen as legitimate if it focuses on providing truth and facts through its teaching and research that satisfies the norms and standards of the academic disciplines comprising the university's faculty. Cultural-cognitive and mimetic legitimacy comes from conforming to meaning systems and shared logics. A democratic government is legitimate if it accords with shared notions of what constitutes a democracy. Notions which depart from this shared understanding ("authoritarian" or "guided democracy") are considered deviations from the norm and illegitimate as democracies. Finally, pragmatic legitimacy requires efficiency and high performance resulting from succeeding with respect to competitive pressures. A business obtains pragmatic legitimacy if it produces a reasonable quality, market-priced commodity whose sale provides the business with a profit. Rational choice theorists such as Guala focus on this form of legitimacy.

These four forms of legitimacy provide an explanation of how populations of organizations justify their existence and sustain themselves. Every institution must be seen as legitimate in at least one, usually in more than one, and often in all four ways. Corporations are successful if they stay within regulatory frameworks, meet the professional standards of its employees, reflect the standard, culturally acceptable, form for a corporation within a particular society, and produce a financially successful product. Universities must also stay within regulatory frameworks and be culturally acceptable forms, but they typically focus more on professional standards than providing a financially successful product – although they still have to meet some performance standards, but typically not financial ones as much as successfully educating students (e.g., high completion rates with good jobs for students) and producing research.

How is Trust Related to Legitimacy?

The preceding discussion indicates that institutions are selected by their environment based upon the degree to which they attain legitimacy. The four forms of legitimacy indicate the dimensions along which these institutions are judged and selected. A *legitimate* institution has a greater chance of surviving and prospering; therefore, an institution judged to be doing a good job along these four dimensions is typically *trusted*. Hence, we can take the literature on social institutions and apply it to understanding our collection of institutions for which we have trust questions. Finally, trust is important because it is one way that institutions ensure their survival.

This approach assumes that we can have trust in institutions. Cook, Hardin, and Levi (2005) argue that large institutions cannot be trusted – or to be more specific, trust only makes

sense as a *relational* ideal where the relation is with another person. Their “encapsulated” notion of trust sees trust as something that requires knowing another person well enough to believe that the other person has “encapsulated” your interests. Cook, Hardin, and Levi argue that this is not possible with institutions. Their book shows that there are other methods whereby institutions solve the coordination problem, specifically by providing evidence that they are competent, reliable, and fair.

Cook, Hardin, and Levi are partly motivated by their rational choice and game theoretic (principal agent, economic) approach to institutions. In addition, they do not want trust to be too broad a term. Their point is well taken, but other authors have felt perfectly comfortable using the term “trust” to refer to faith in organizations. For example, Zucker (1986) uses trust to mean personal trust as well as institutional trust. Shapiro (1987) uses the term trust with respect to institutions, and argues that there are trust-like methods of control of institutions – what she calls “impersonal trust.” Finally, Morgner (2013) provides a semantic history of the words “trust” and “confidence” in which he argues that there is “personal trust” and “systemic trust/confidence.” Thus, although there is a case to be made for distinguishing various forms of trust, there is no necessary reason to say that institutional or impersonal trust are impossible. Furthermore, if institutional trust requires a separate word, confidence might provide a very good one.

Finally, there is the question of how we relate issues of trust and confidence to legitimacy. Jackson and Gau (2015) do this – they argue that trust is about (positive) expectations about current and future behavior, while legitimacy is about the content-free duty to obey the authority (or less strongly, to accept the institution’s role or right to do its job). Overlap occurs when people see the institution as appropriate for doing its job. Thus, an institution might be legitimate, but not appropriately doing its job so it would not be trusted; or an institution might be trusted (e.g., the Mafia in a village or a gang in a city) but not seen as legitimate.

The Police: An Example of Why Trust Matters

The recent movement to defund the police illustrates the importance of institutional trust and legitimacy. In many American cities, police have lost the trust of many of their constituents. A recent Gallup poll (Ortiz 2020) found that confidence in the police had fallen to a record low of 48% – with 28% of Democrats and 82% of Republicans expressing confidence. The debate over the police is not only about the pragmatic issues of their efficiency or effectiveness; there was a loss of trust in the police after the publication of videos of police murdering black men. As a result, a national debate focuses on normative and cultural-cognitive concerns such as the social obligations of government to its citizens and the proper cultural-cognitive frame for thinking about policing.

Although police retain one form of legitimacy because they are still the duly-constituted regulators of public order, they have lost other forms of legitimacy. Questions about the normative legitimacy of police arise when videos surface of actions that go counter to their sworn duties. Debate about their cultural-cognitive legitimacy occurs as groups wonder whether police have to be constituted as they are with so many diverse responsibilities. Should police simultaneously issue traffic tickets, deal with the mentally ill, monitor drug use, deal with domestic violence, and patrol communities as well as deal with criminal behavior? The loss of trust led to a fundamental debate about the legitimacy of the police.

The emerging partisan division over trust in the police only adds to the complexity of the situation. If there is societal agreement that an institution has lost its legitimacy, then the

political system can move to fix the problem. If there is substantial division, then there is no clear way to proceed. More generally, if we have a society where there is fundamental distrust of some institutions by one set of partisans but not by the other, then we face basic problems with respect to the operation of those institutions. The rest of this paper explores the implications of partisan division.

Outline of Chapters

In Chapter 1 I trace the polarization of trust of ostensibly apolitical institutions as far back as the 1970s. With Henry Brady, I use data from 50 years of existing surveys and original opinion measures from the 2019 Cooperative Congressional Election Study (CCES) to document the development of the polarization of trust. Our CCES measures support the idea that this polarization is driven at least in part by beliefs about the partisan and ideological composition of these institutions; for example, a conservative Republican who believes the press is made up mostly of Democrats and/or liberals is less likely to trust the press, and is more likely to believe the press “indoctrinates as much as it informs.”⁸

In Chapter 2 I address the question of what might have caused this polarization. Why do people believe what they do about the composition of institutions like the press or the military? How did they arrive at these judgments, and what information might have helped them reach them? One possibility is that Americans simply observe these institutions and infer, accurately, what kind of people a given institution comprises. That is, constituent members of institutions like the press, the military, and organized religion have political ideologies, and most have partisan preferences; perhaps the polarization we see in American public opinion is a reflection of Americans’ direct observation of institutions, their constituent members, and their ideology/partisanship. I investigate this possibility by... .

In Chapter 3 I attempt to answer the question, “so what?” With Neil O’Brian, I use survey experiments to show that Democrats and Republicans not only think differently about an important societal institution – medicine – but that they also approach it differently. Even accounting for other important factors in deciding which doctor to visit, partisans are less likely to visit a physician who does not share their political identity. When considered in the context of the findings of the first two chapters, this has disturbing implications for American society. If the ideology and partisanship of the constituent members of institutions has contributed to a sense among Americans that only those institutions with which they agree politically should be trusted, what will happen to the part of society that distrusts, for example, medicine? Or the press, or the military, or the police?

⁸ This wording is from the 2019 CCES survey.

Chapter 1: Increasing Polarization since 1970 in Trust for American Institutions⁹

This chapter focuses on a set of broadly defined and supposedly non-political institutions such as business, medicine, television, education, police, banking, law, religion, and the military. Since the 1970s, national surveys have asked Americans about their “confidence” or “trust” in these institutions. Table 1.1 summarizes the questions and which surveys recorded responses to these questions. The table also includes governing institutions such as Congress, the presidency, and the Supreme Court.

Table 1.1: Public Opinion Questions asking about Trust or Confidence in Institutions

Institutions	GALLUP	GSS	HARRIS
RELATIVELY NEUTRAL			
Medicine	The Medical System	Medicine	Medicine
Law			Law Firms
Television	Television	Television	
ECONOMIC CLEAVAGE			
Big Business	Big Business	Major Companies	Major Companies
Banks	Banks	Banks & Financial Institutions.	Wall Street
Organized Labor	Organized Labor	Organized Labor	Organized Labor
NEW SOCIAL/NATIONAL			
Military	The Military	Military	The Military
Religion	Church or Organized Religion	Organized Religion	Organized Religion
Police	The Police		
Criminal Justice System	Criminal Justice System		
Press	Newspapers	Press	The Press
Television News	Television News		Television News
Science		Scientific Community	
Higher Education			Major Ed. Inst. Such as Colleges
Public education	The Public Schools	Education	
HIGHLY POLITICIZED			
Congress	Congress	Congress	Congress
Presidency	The Presidency		The White House
Executive Departments		Executive Depts.	Ex. Branch Fed Gov
Supreme Court	US Supreme court	US Supreme Court	US Supreme Court

⁹ This chapter is drawn from a paper co-authored by Henry E. Brady. It was presented at the 2020 American Political Science Annual Meeting, held virtually due to the COVID-19 pandemic. It has been edited to fit in the cohesive dissertation.

This chapter shows that over the past 50 years there has been increasing polarization and politicization in people's assessment of many of these institutions. Democrats have become more trusting than Republicans of higher education, journalism, and science, while Republicans have become more trusting than Democrats of religion, the police, and the military. What does this polarization and politicization of formerly non-political institutions mean for American politics and public policy?

A more thoroughgoing definition of *institution* can be found in the introduction. Briefly, in this chapter I focus on social institutions that can be thought of as collections of organizations.

Why Are There Social Institutions?

In order to understand the role of institutions and the importance of trust, we must know something about how and why they exist. There are three basic theories in the literature: collective acceptance, functional or teleological, and rational choice.

Collective Acceptance Theories – Searle (2008) argues that institutions are constructed from the peculiar way that human language can assign a status function or role to someone or something. These assignments, if mutually agreed upon by groups of people, can reproduce a social structure over time. Searle's explanation of institutions is powerful because he gets at how they are constituted, and he clearly indicates that institutions are socially constructed. Searle says, for example, that physical reality is ontologically objective and epistemologically objective, but social reality is ontologically subjective yet epistemologically real to human beings. This is a powerful insight about institutions being constructed by human beings (they are ontologically or metaphysically subjective) but then being treated as objectively real by people in terms of their truth value (e.g., it is true that people are bound by laws). Moreover, he makes the important point that only human beings can create institutions because only human beings can make mutually agreed-upon statements that create institutions.

Tuomela (2003) elaborates upon Searle's theory by extending it with two additional conditions. Not only must there be collective acceptance of a statement (individuals must accept, they must know that others accept, and they must know that others know that they accept – a weak form of *common knowledge*), but these statements must be about the group and there must be a collective commitment to the institution. Collective acceptance theories go a long way toward explaining the material out of which human beings construct institutions and why they are uniquely able to do so because of their capacity to use language. They do not explain, though, why human beings construct the institutions that they do or why they mutually agree to them.

Functional and Teleological Theories – Functional theories argue that institutions exist because they undertake functions that any society must perform, and institutions are one of the best ways to accomplish those tasks. The virtue of functional theory is that it suggests reasons for institutions, and it indicates why there is such a range of institutions. Having reasons is a first step toward agreeing to something. Functional theory suggests good reasons for society to create institutions to educate the young, prevent and cure illness, ensure social order, provide moral purpose, manufacture and produce goods, and so forth. The defect with the theory is that functionalism does not explain why the reasons are sufficient to justify the collaboration that institutions require and how they persist in the face of individuals who might have incentives to free ride on the work of others. By adding evolutionary theories to functionalism, it becomes possible to explain the form of institutions as the result of myriad experiments that fill niches

available for institutional action and that become optimized through the survival of the fittest institution. Nevertheless, the question still remains as to why these institutions do not fall apart.¹⁰

Rational Choice Coordination/Cooperation Equilibria as Efficient Causes – One explanation for the persistence of social institutions is that they consist of coordination or cooperation equilibria that allow people to do things that they could not do without such organizations and for which there is no incentive to defect from the equilibrium (Guala 2016). Because human beings have the asset of foresight as well as the capacity for language, they can see when it is in their self interest to adhere to a strategy that produces a better outcome for them. For the convention of driving on the right hand side of the road, this explanation is quite satisfactory – defection to driving on the left means risking a collision with a car that is adhering to the norm. The power of self interest is less obvious with respect to social institutions where there may be prisoners’ dilemmas and other situations where free riding might be optimal individual behavior. It is also not obvious that even a highly rational human being can always see the virtues of following a specific strategy in the highly complex game of life. We are left with insistent questions about why institutions persist.

A More Historical Perspective – It is instructive to get beyond the toy examples that abound in most theoretical work by considering a real-world example of the development of an institutional form. Haveman and Rao’s (1997) work provides this kind of perspective. They show how the development of thrifts as a banking institution throughout the 19th and 20th centuries was an exchange involving mutual good, between the principals (the investors/borrowers) and their agents (the management of the thrifts or the thrifts themselves). The relationship can be thought of as a simple economic exchange that involves coordination and cooperation for mutual good. But Haveman and Rao also show that trust was an essential feature of these institutions and that the exact form they took often deviated from economically efficient solutions and reflected approaches legitimated by the Progressive movement of the early 20th century, even though they were not efficient.

“As Progressive ideas and values gained ground after the turn of the century, cooperation evolved from a spontaneous act between friends to a bureaucratized relationship among strangers; saving shifted from the outcome of external controls to the outcome of voluntary and rational decisions by members. The formalization of government provided an impetus to the proliferation of impersonal mechanisms that generated trust among strangers (Zucker 1986). The proponents of Progressivism sought to use impersonal mechanisms and the principles of continuity, efficiency, reliability, and service to transform government. As these ideas gained ground, they were reflected in the impersonalization of many forms of economic organization, including thrift (cf. Creighton [1995, 1996] on the corporate form).” (1642)

¹⁰ Pettit (1996) has argued that functional explanation might be thought of as an explanation of resilience rather than origin. It might not be the case that the origin of institutions, for example, can be explained by their selective advantage, but it is possible that their resilience can be explained by this advantage – whenever environmental changes cause them to be challenged, they are resilient in the face of the challenge.

Haveman and Rao emphasize the importance of trust, not just some self-enforcing equilibrium. In a subsequent article, Haveman, Rao and Paruchuri (2008) show how the thrift model that won out, the Dayton/Guaranteed Stock plan, did so because it was legitimated by Progressivism even though it was not the most efficient plan from an economic perspective; in fact, it led to the unstable possibility of combining short-term accounts and interest payments with long-term lending. But Progressivism legitimated this approach in a socio-political way by facilitating the passage of laws that allowed the new form to be legally acceptable and in a constitutive way by setting the stage for people believing it was the most legitimate form. Thus, legitimation, which may not lead to the most efficient and effective coordination mechanism to solve a problem, is essential for institutions to flourish.

Existing Data

I set out to collect existing data that could address the issues outlined above, and especially to answer these questions:

Is public trust in societal institutions polarized?
How polarized is trust among the American public?
With respect to which institutions is the public most polarized?
When did this polarization begin for various institutions?

Table 1.1 summarizes the questions in three different datasets from Harris, the General Social Survey (GSS), and Gallup. As early as the 1960s, various iterations of *The Harris Poll* (Louis Harris & Associates, Harris Interactive, etc.) asked respondents,

“As far as people in charge of running [institution] are concerned, would you say you have a great deal of confidence, only some confidence, or hardly any confidence at all in them?”

These data are now hosted by the University of North Carolina Dataverse.¹¹ Beginning with Harris’s earliest national sample I could locate, 1967, and ending in 2012 (the last available Harris survey on the UNC Dataverse¹²), I assembled Harris surveys that include questions about confidence in institutions into a time series. Harris surveys were inconsistent in which relevant demographic variables were collected, so my selection of independent variables is somewhat limited; I include gender, age, education, income, region, size of place, race, Hispanic ethnicity, 3-category party identification and 3-category ideological self-placement for most respondents. After 1979 there is one survey of interest for most years; between 1967 and 2012 the Harris data include surveys from 40 years.

The GSS asked identical questions to Harris, though for a different selection of institutions as indicated in Table 1, beginning in 1972. The GSS conducted surveys including these questions most years through 1994, then every other year through the present, for a total of 32 surveys.

¹¹ <https://dataverse.unc.edu>

¹² Harris was acquired by Nielsen Holdings in 2013.

Gallup asked similar questions beginning in 1973, and in most years thereafter. I include Gallup data through 2018, for a total of 39 years. Gallup confidence questions are worded slightly differently from Harris and the GSS:

“Now I am going to read you a list of institutions in American society. Please tell me how much confidence you, yourself, have in each one – a great deal, quite a lot, some or very little?”

For the purposes of this chapter I interpret the Gallup questions as interchangeable with Harris and GSS questions, though survey experiments could point to important differences in how people respond to each. I leave any adjudication of this point to further research.

The selection of institutions included in confidence questions by Harris, the GSS and Gallup vary from year to year and across firms. Harris was the least consistent, and GSS was the most consistent. Across firms, questions about a core set of institutions are almost always present: Congress, the Supreme Court, the military, big business (often “major companies”), organized religion, organized labor, the press and some variation on banks and financial institutions. Harris was the least consistent, but usually asked about law firms, colleges and universities (as opposed to simply “education” or “public schools”), television news (as opposed to “television”) and “the executive branch of the federal government” (as opposed to “the presidency” or “the White House”). GSS has the most consistent data on the scientific community (though Harris and Gallup occasionally ask about “science”), and Gallup has the most consistent data on the police. Table 1.1 outlines these differences.

In sum, when combined into one dataset the existing data include 24 confidence questions over 111 surveys in 48 years, and a total of 156,384 respondents.

New Data

After collecting existing data I moved on to field a new survey involving 1000 respondents as part of the 2019 Cooperative Congressional Election Study (CCES). One goal was to identify the components or underlying features of trust by asking questions based upon the four forms of legitimacy described above. For example, is trust (or distrust) in some institutions based upon their pragmatic performance (or lack of performance), or is trust based upon an institution’s adherence to (or contravention of) some basic norms or cognitive-cultural understandings? Another goal was to determine the implications of polarization in trust by asking respondents how their evaluations of institutions might affect their attitudes about those in the institutions. For example, are those who distrust an institution less likely to want their kin to be involved with it?

The Components of Trust – Decreasing confidence in an institution may indicate decreasing legitimacy; if cohesive groups in society (e.g., Democrats and Republicans) disagree about the legitimacy of an institution, there are unpleasant implications for society and democracy. Measuring polarization of legitimacy of various institutions over time is useful for creating a baseline, but in order to answer some of the more difficult questions the existing data present, and to validate my own model of institutions in society, I asked Americans how they feel about these institutions.

How can we learn about Americans' feelings about the four forms of institutional legitimacy (above)? I asked respondents for their level of agreement with four statements about each of several institutions¹³:

- [institution] is important;
- [institution] indoctrinates people as much as it [serves its specific purpose];
- [institution] costs too much;
- [institution] does good work.

These statements were designed to capture different dimensions of legitimacy.

Whether respondents agree that an institution is “important” maps well onto Moral/Attraction/Normative legitimacy; a respondent’s belief that the institution is normatively important may be independent from whether they think it does good work, whether its activities are culturally appropriate, or whether it is pragmatic. The statement about indoctrination taps into feelings of Cultural-Cognitive/Mimetic legitimacy; if an institution engages in indoctrination – a word with clear negative valence regardless of a respondent’s ideological perspective – then it is not serving its culturally appropriate role. Asking respondents whether an institution costs too much speaks to feelings about Pragmatic/Competitive legitimacy; one could well feel an institution is important and culturally appropriate but inefficient, and I expect this will independently decrease feelings of trust, because this institution is less legitimate than another that uses resources more efficiently, all else equal. The question about “does good work” is meant to capture another aspect of normative acceptability, but as later analyses show, it essentially amounts to asking about trust or confidence in the institution.

To address the underlying causes of polarization of opinion on societal institutions I asked respondents to estimate the ideological position and partisan composition of these institutions. This is another way of asking about cognitive-cultural appropriateness. A Democrat, for example, might have less confidence in an institution that consisted mostly of Republicans.

The Implications of Trust for Attitudes Toward Those in the Institution – If opinion on nominally apolitical institutions has acquired a political, even partisan, valence, can its polarization be characterized as affective? That is, does the politically polarized opinion about societal institutions spill over into personal feelings about the constituent individuals of these institutions? Iyengar et al (2019) summarize the implications of affective polarization, including those for dating and marriage, aspirations for children, economic activity and geographical distribution. Pursuant to this, I asked respondents a question familiar to those acquainted with the literature on affective polarization but applied it to members of several institutions: “How would you feel about your child or the child of someone close to you marrying a person who identifies as a college professor?” I use this question below to address affective polarization in the context of societal institutions.

Political Institutions and Political Partisanship

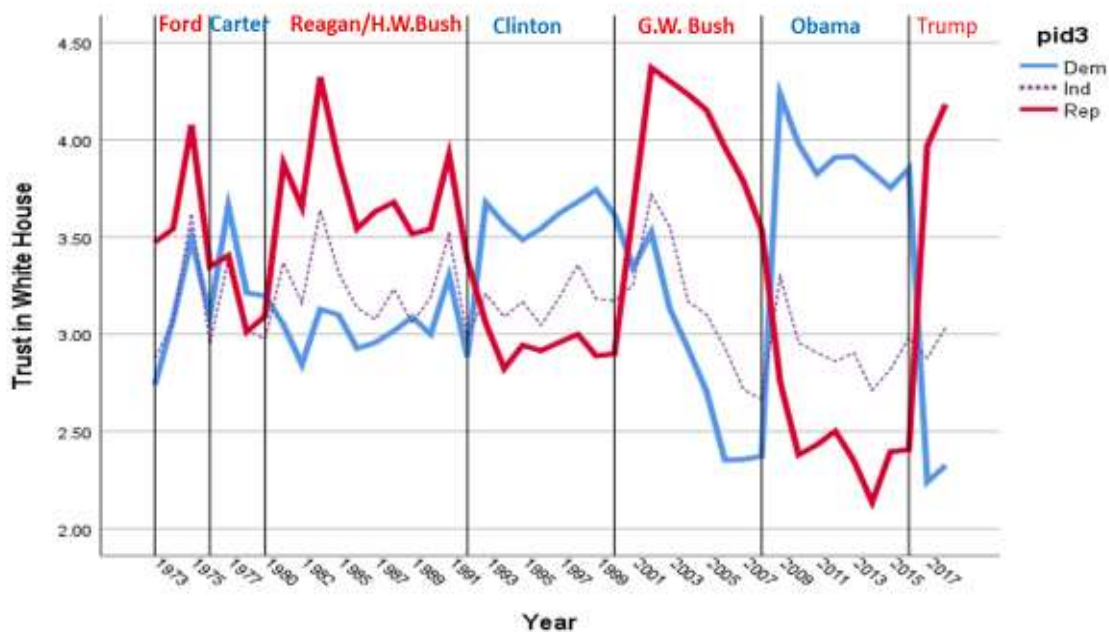
The theoretical section shows that institutions play a central role in the operation of society, and it explains why maintaining their legitimacy is a central problem for them. As we

¹³ Journalism, the military, organized religion, colleges and universities, science, medicine, organized labor, and banks. I regret not including the police in this section of the survey.

have seen recently with police departments, without legitimacy and trust, institutions run the risk of losing their funding, their support, and their ability to do their jobs. A long vein of literature discusses trust in government and how US governmental institutions (especially the presidency and the Congress) have lost the public's trust (Levi and Stoker 2000, Hetherington 2006, Lerman 2019). But much less has been written about the relationship between politics and the other ostensibly apolitical institutions of the sort prioritized here. It is worth noting some basic facts and trends regarding trust in government.

The literature on trust in government shows that trust (especially with regard to the presidency) has a strong partisan cast, with Republicans distrusting Democratic presidents and Democrats distrusting Republican presidents. Indeed, some have wondered whether there is any content in these measures beyond partisan predispositions (Citrin 1974). Figure 1.1 demonstrates the partisan component of trust in the president using the data from Harris, the GSS and Gallup. The figure plots trust in the White House for partisans of each party (and for independents) from 1973 to 2018. Note that trust fluctuates a great deal more for partisans than for independents – the dotted purple line for trust by independents is always inside, and typically well inside, the lines for partisans. Trust is highest among Republicans when a Republican is president and highest among Democrats when a Democrat is president. Figure 1.1 also suggests that partisan differences have gotten larger over time – the differences are half a point or less on the five point scale in the 1970s and a full point or more by the 2000s.

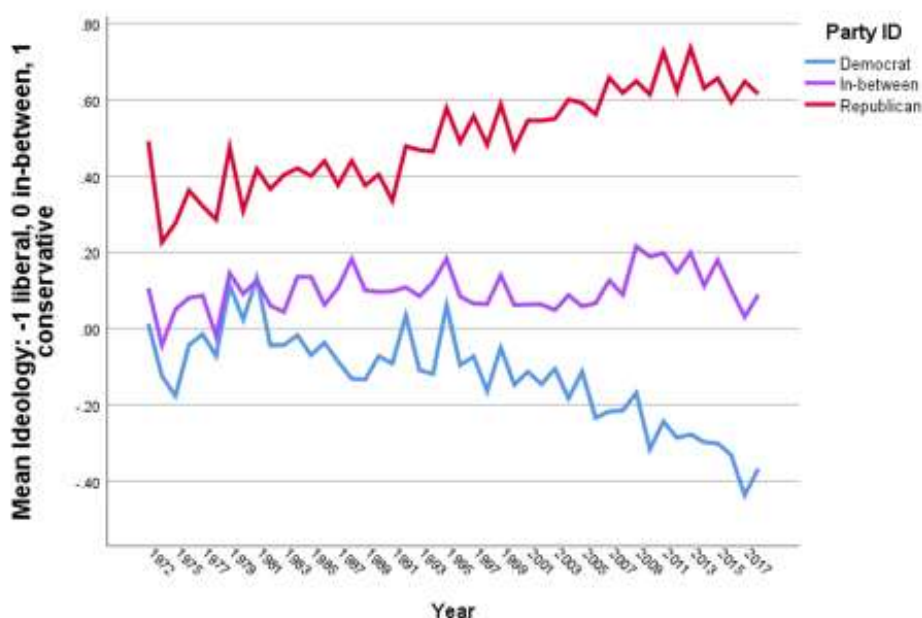
Figure 1.1: Confidence in the Presidency Over Time, by Partisanship



It is not surprising to see that partisanship matters for representatives of political parties such as presidents, and given what we know about increasing polarization in the United States (Abramowitz 2010, Levendusky 2009, Fiorina and Abrams 2008), the increasing differential in trust evaluations between Republicans and Democrats is not surprising, either.

The data from Harris, the GSS and Gallup also confirm the growth of *ideological* polarization over time. Figure 1.2 plots average ideology over time for the partisans of each party using the three answer (liberal, in-between, conservative) item that appears on many of the surveys. On a scale running from -1 (liberal) to 1, the partisan difference was about .40 in the 1970s, but by the 2010s, the partisan difference was almost a full point.

Figure 1.2: Increased Ideological Polarization Among Partisans from 1972 to 2018



“Non-Political” Institutions and Partisanship Over the Last 50 Years

This chapter is about how partisan polarization has affected ostensibly apolitical institutions over the past 50 years. Figure 1.3 presents data from the earliest part of the data, mostly the 1970s. The figure plots the average Democratic partisan’s trust in each institution during this period versus the average Republican partisan’s trust in that same institution for the thirteen institutions for which I have data over the entire time period from the 1970s to the present. Not surprisingly, some institutions are trusted more than others so that they are farther to the upper right on the figure. The diagonal neutral line (purple) indicates where the institutions would be located if Democrats and Republicans had the same average evaluation of them. The trust scales from these surveys typically have a standard deviation of about one point, so I add two dashed lines – one 0.2 units above the neutral line and the other 0.2 units below that line. This choice is somewhat arbitrary, but it represents a reasonable choice for a substantively significant effect. Note that it is about half of the difference noted for the 1970s in the evaluation of presidents.

Only two institutions are conspicuously outside these lines and more than 0.3 units from the neutral line: labor and business. In the 1970s, American politics was substantially still about the New Deal issues surrounding business and labor – with Democrats on the side of labor and Republicans on the side of business. Clearly, politics had seeped into the evaluation of these institutions. Several other institutions are relatively far from the neutral line – TV news and the

press, for example, were more trusted by the Democrats than by the Republicans, while banks and the military were more trusted by the Republicans than by the Democrats. The Republicans' trust of banks is likely a continuation of the New Deal cleavage.

Figure 1.3: Democratic and Republican Trust in Institutions around 1974

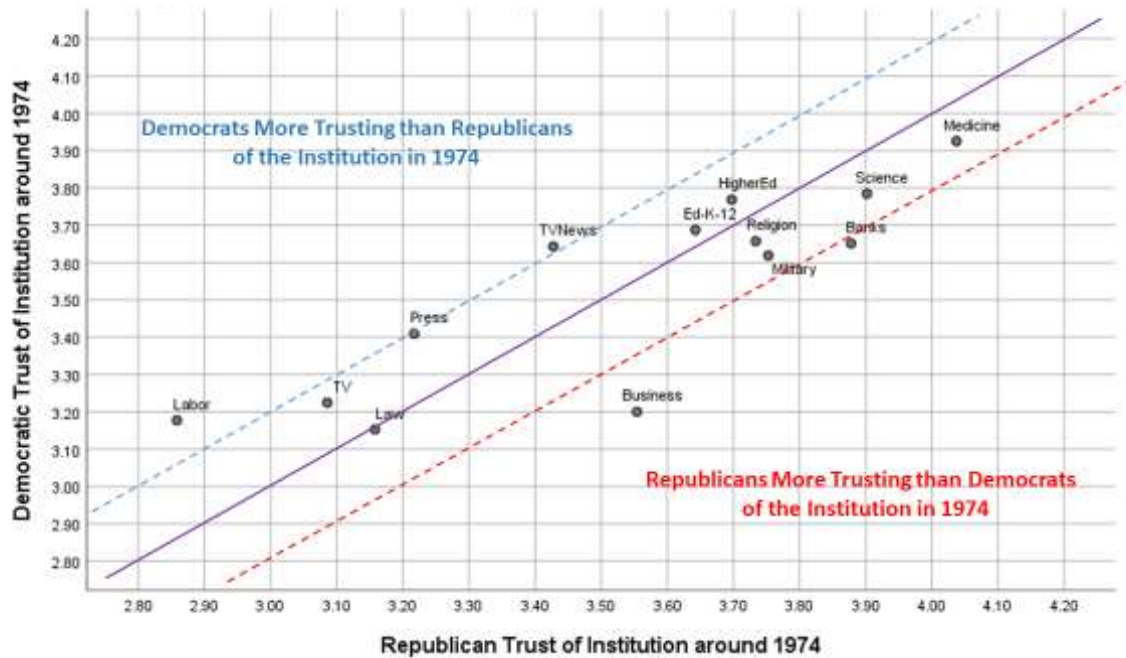


Figure 1.4: Democratic and Republican Trust in Institutions around 2014

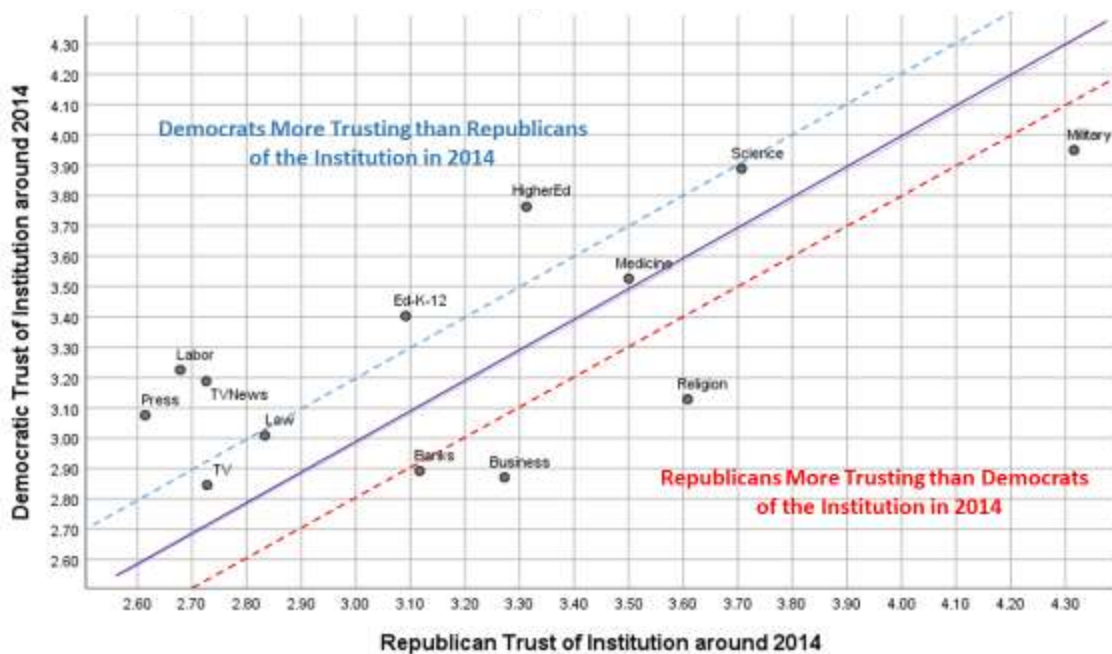


Figure 1.4 is an analogue for the 2010s of Figure 1.3 for the 1970s and shows the development of polarization in trust over time. For many institutions, partisan trust is about half a point higher for one party than another. For Democrats, these institutions are the press, labor, TV news, and higher education; for Republicans they are the military and religion. Science, which in the 1970s was more trusted by Republicans than Democrats, is now more trusted by Democrats than Republicans. Only a few institutions such as medicine and perhaps television and the law remain relatively not politicized.

Patterns of Change

There are different patterns of change in trust in institutions over the past fifty years. In this section I present three canonical patterns. In each figure in this section, the vertical and horizontal axes have the same net range so that the trends can be easily compared.

Figure 1.5: Trust in Television Over Time

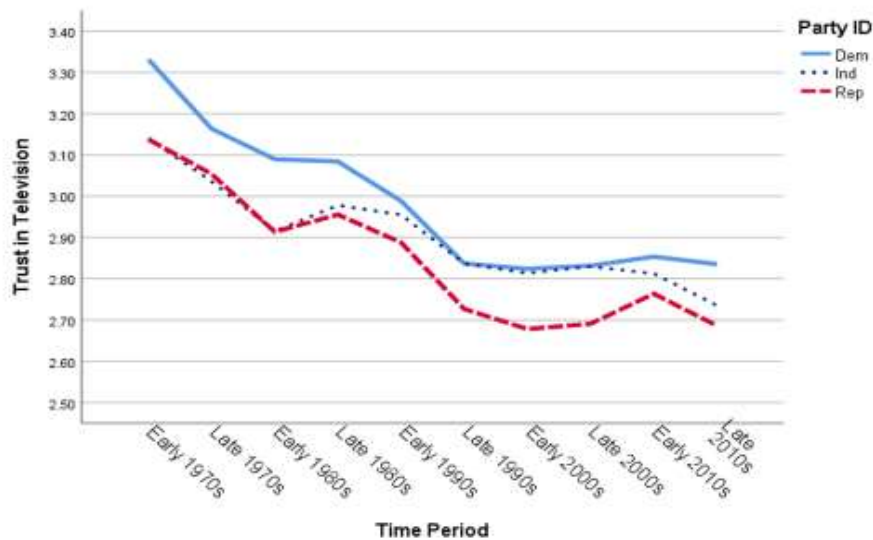
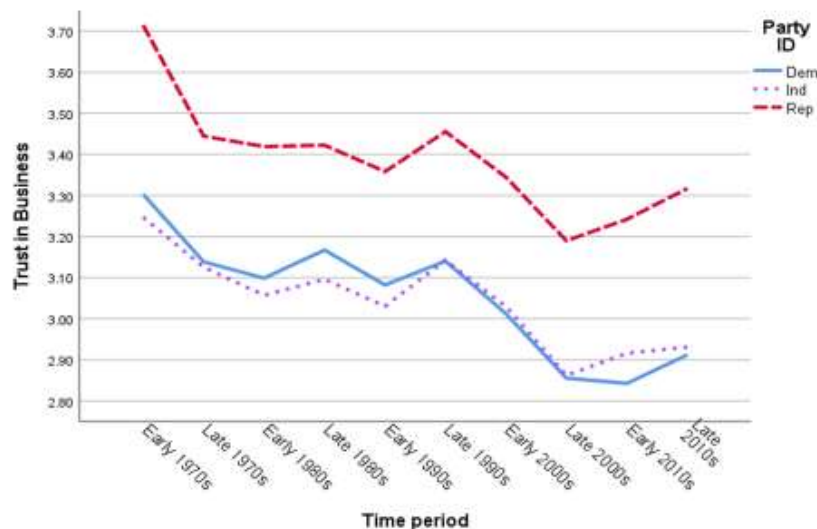


Figure 1.6: Trust in Business Over Time

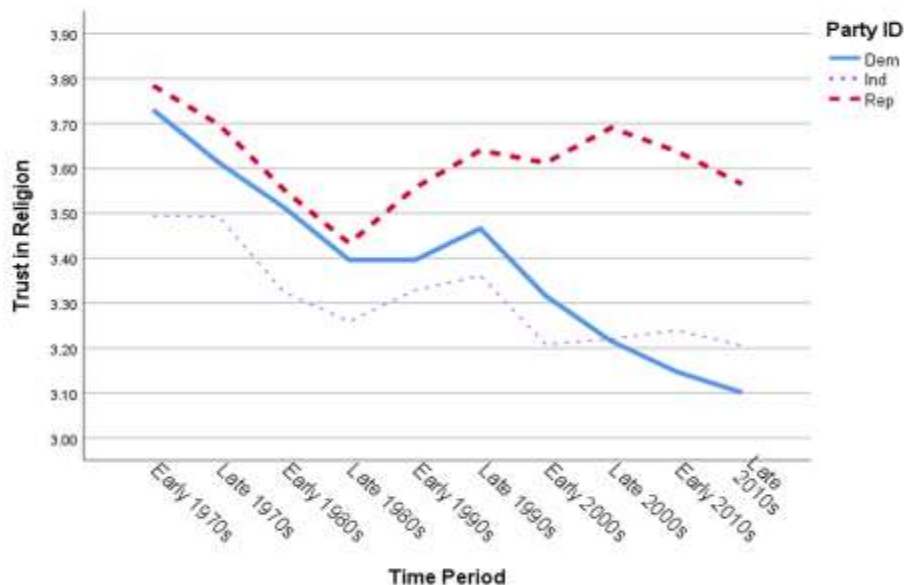


No Cleavage in Trust Case (Little Partisan Difference Initially and No Change Over Time) – The first pattern is stable, minimal partisan difference in trust for institutions over time. Figure 1.5 shows this for television. Note that the lines for the two groups of partisans are close to one another and essentially parallel. The partisan difference has remained about the same over time, and trust in the institution has declined over time (as it has for most of the institutions). This is the No Cleavage in Trust case.

Constant Cleavage in Trust (Significant Partisan Different Initially and No Change Over Time) – Unlike the situation above where partisan differences were small, there was a substantively significant difference in partisan trust in business of about .40 units in the 1970s that has remained steady over time, although there has been an overall decline of trust in business (Figure 1.6). Once again, the lines for the two partisan groups are essentially parallel, but they are significantly farther apart. This is the Constant Cleavage in Trust case.

Growth in Trust Cleavage (Little Partisan Difference but Significant Growth of Partisan Difference Over Time) – In the 1970s there was little partisan difference in trust in religion but starting in the 1990s, a significant gap of about .50 emerged between Republicans and Democrats (Figure 1.7). In this case, the lines for the two partisan groups were very close together in the 1970s but they diverged significantly starting in the early 1990s; today they are .55 units apart. This Growth in Trust Cleavage case is the most interesting, and as we have seen, there are many examples of it.

Figure 1.7: Trust in Religion Over Time



Summary of Features of Change – There are three kinds of differences in the pattern of partisan trust across institutions:

- Initial partisan differences for some (e.g, business) but not for others (e.g., television and religion);
- Growing partisan differences in trust for some (e.g., religion) but not for others (e.g., television) ;

- Secular trends – typically there have been declines in trust over time – although it turns out that trust in at least one institution has increased (the military).

Capturing these Changes in a Descriptive Model

These patterns suggest that it would be useful to have a model of change over time that incorporates the possibilities of initial partisan differences, growing partisan differences, and secular decreases (or increases) in trust over time.

Simple Model – The simplest model would be the following:

$$(1) \quad \text{Trust} = a + b*\text{PID3} + c*\text{YEAR} + d*\text{PID3}*\text{YEAR} + \text{error}$$

where:

Trust = A trust measure coded as described earlier;
 PID3 = Three-category (Democrat, Independent, Republican) party identification coded -1 for Democrat, zero for independent, and +1 for Republican;
 YEAR = Year of Survey – Coded, for convenience, from zero for the first year with equal increments to 1.0 so that it is normalized to range from zero to one; and
 PID3*YEAR = Interaction of party identification and year.

The first term's coefficient b captures the initial partisan difference due to partisanship. The second term's coefficient c captures any secular trend with a positive coefficient indicating an increase in trust and a negative coefficient indicating a decrease in trust. The third term's coefficient d captures any increasing polarization in trust over time if positive, no increase if zero, and decreasing if negative.

Dealing with Different Question Formats from the Three Survey Firms – This model should not be applied directly to the data because it includes data from three different survey firms (Gallup, GSS and Harris). Two firms use the same three response coding and one uses five categories, but it also seems likely that even with the same coding, there will be differences in responses to the questions. How can these data be combined? There are many ways to do this, but one simple way is to assume that one scale is an (unknown) linear transformation of another. This approach provides two parameters to help overcome differences in the scales:

$$\text{Trust for Survey House One} = A2 + B2*(\text{Trust for Survey House Two}).$$

The first parameter, $A2$, allows the two scales to have different zero points. The second parameter $B2$ allows the two scales to have different sized divisions between points. By definition a linear transformation like this will not get at nonlinear differences between the two scales, but it will go a long way toward making them comparable for anything resembling linearity.

In the case of two survey firms, if we define two dummy variables:

DUM1 = Dummy Variable with value of one for Survey House One and Zero Otherwise

DUM2 = Dummy Variable with value of one for Survey House Two and Zero Otherwise

Then, equation (1) becomes:

$$(2) \text{ Trust} = (\text{DUM1})*[a + b*\text{PID3} + c*\text{YEAR} + d*\text{PID3}*\text{YEAR}] + A2*(\text{DUM2}) + B2*[a + b*\text{PID3} + c*\text{YEAR} + d*\text{PID3}*\text{YEAR}] + \text{error}$$

Thus, when DUM1 = 1 for the first survey house, this reduces to (1) because DUM2 = 0. When DUM2 equals one (and DUM1 = 0), then we have:

$$(3) \text{ Trust} = A2*(\text{DUM2}) + B2*[a + b*\text{PID3} + c*\text{YEAR} + d*\text{PID3}*\text{YEAR}] + \text{error}$$

We can easily add parameters for additional survey firms in the same way.

Adding an Ideology Variable – In addition to this methodological problem, there is also a theoretical concern. Figure 1.2 showed that the political parties have become more ideologically polarized over time as Democrats become more liberal and Republicans become more conservative. This leads to an interesting question: do changes in trust reflect partisan polarization or ideological polarization? Is equation (1) the right model or is the following the right model:

$$(4) \text{ Trust} = a + b*\text{IDEO3} + c*\text{YEAR} + d*\text{IDEO3}*\text{YEAR} + \text{error}$$

where IDEO3 is a three-point ideological measure with values of minus one (liberal), zero (in-between), and plus one (conservative).

One way to test for which model describes the data best is to combine the two approaches as follows:

$$(5) \text{ Trust} = a + bp*\text{PID3} + bi*\text{IDEO3} + bpi*(\text{PID3}*\text{IDEO3}) + c*\text{YEAR} + dp*\text{PID3}*\text{YEAR} + di*\text{IDEO3}*\text{YEAR} + dpi*(\text{PID3}*\text{IDEO3})*\text{YEAR} + \text{error}$$

This model can help adjudicate whether the *bp* coefficient for the role of party identification is more important than the *bi* coefficient for the role of ideology in terms of initial differences. With respect to changes over time, the model will demonstrate whether the *dp* coefficient for the over-time trend in the role of party identification was more or less important than *di*, the coefficient for the role of ideology over time.

This model involving partisan identification and ideology can easily be combined with the model for different question formats. The resulting model is nonlinear in the coefficients so it was estimated using the “NL” program in SPSS.

Results of Estimations

Table 1.2 summarizes the results. The rows are separated into four types of institutions. The first three institutions (medicine, law and television) are consistently apolitical. The next three (business, banks and labor) are economic. The remainder are all social in that they deal with the non-economic aspects of society, but they have become more politicized with the growth of politics around social issues, nationalism, and identity. One group of social institutions is concerned with maintaining order or morals (the military, the police, the crimin

Table 1.2: Trust in Institutions over Time Using Gallup, GSS, and Harris Data

Parameters to Make Polls Comparable										Initial Difference due to Party ID and Ideology				Trend	Change in Trust over time due to Party ID & Ideology				
Institutions		A2	B2	A3	B3	a	Party -bp	Ideol -bi	Both-b pi	Sum	c	Party-dp	Ideol.-di	Both-dpi	Sum	R-sq.			
Apolitical																			
Medicine		-3.64 (1.32)	2.22 (.40)	-1.95 (1.02)	1.64 (.31)	3.49 (.03)	0.04 (.01)	.001 (.01)	-.03 (.01)	.01	-.25 (.04)	-.03 (.01)	.01 (.01)	.06 (.02)	.04	.04			
Gallup, GSS, Harris																			
Law						3.11 (.02)	.04 (.02)	-.01 (.02)	-.09 (.03)	-.05	-.34 (.03)	-.13 (.04)	-.05 (.04)	.11 (.05)	-.02	.01			
Harris																			
Television		.88 (.70)	.63 (.22)			3.22 (.12)	-.09 (.03)	-.08 (.03)	-.07 (.03)	-.24	-.58 (.18)	.07 (.04)	-.02 (.04)	-.12 (.05)	-.07	.03			
Gallup, GSS																			
Economic																			
Business		1.16 (.09)	.72 (.03)	.71 (.11)	.80 (.04)	3.25 (.02)	0.17 (0.02)	.13 (.02)	.01 (.02)	.31	-.43 (.02)	-.02 (.02)	.03 (.02)	.02 (.03)	.02	.06			
Gallup, Harris																			
Banks-Wall St.		.79 (.11)	.72 (.03)	-.18 (.15)	.94 (.04)	4.02 (.03)	0.04 (0.01)	.07 (.02)	-.03 (.02)	.08	-.96 (.04)	.05 (.02)	.02 (.02)	.03 (.03)	.10	.04			
Gallup, Harris																			
Labor		1.19 (.07)	.58 (.03)	0.46 (.10)	.82 (.03)	3.00 (.02)	-.01 (.02)	.01 (.02)	-.11 (.02)	-.25	.03 (.02)	-.06 (.02)	-.26 (.02)	.08 (.03)	-.24	.05			
Gallup, GSS, Harris																			
Social																			
Military		.06 (.16)	.95 (.04)	-1.62 (.21)	1.39 (.05)	3.52 (.02)	.01 (.01)	.09 (.01)	-.08 (.01)	.02	.67 (.03)	.15 (.16)	.10 (.02)	.08 (.02)	.33	.07			
Gallup, GSS, Harris																			
Religion		1.22 (.09)	0.6 (.03)	0.89 (.11)	.63 (.03)	3.90 (.02)	-.03 (.02)	.01 (.02)	-.07 (.02)	-.09	-.54 (.03)	.15 (.03)	.43 (.03)	.10 (.03)	.68	.05			
Gallup, GSS, Harris																			
Police						3.68 (.04)	-.10 (.05)	-.01 (.05)	-.09 (.06)	-1.86	.02 (.05)	.26 (.06)	.17 (.06)	.19 (.07)	.62	.03			
Gallup																			
Criminal Justice						2.75 (.04)	-.13 (.05)	.01 (.05)	-.02 (.06)	-.15	.35 (.05)	.18 (.06)	-.01 (.10)	.05 (.07)	.21	.003			
Gallup																			
Press		-.07 (.10)	.92 (.03)	.44 (.09)	.78 (.03)	3.73 (.02)	-.04 (.01)	-.04 (.01)	-.02 (.01)	-.10	-.79 (.03)	-.11 (.02)	-.16 (.02)	-.06 (.02)	-.28	.06			
Gallup, GSS, Harris																			

justice system, and religion), and the other is concerned with providing knowledge, news, and education (the press, TV news, science, higher education, K-12 education). Note that this table includes two additional institutions, the police and criminal justice, for which there is existing data only after 1993.

The table reports a separate estimation of the model for each institution (see equation (5) above), and the columns provide the estimated coefficients. For each coefficient the table includes the estimate and its standard error (in parentheses). The coefficients for a given variable or term in the model can be compared across the institutions (down the columns) because the estimation method provides a common metric for them. They can also be compared across some terms (e.g., those for partisan identification and ideology or those for the interaction of year with partisan identification and ideology) to the extent that using the same range (from minus one to plus one) for the variables makes them more or less comparable.¹⁴ I will not say much about the first four columns entitled “Parameters to Make Polls Comparable” because they are nuisance parameters.

Clear Evidence of Downward Trend for Many, but Not All Institutions – A simple place to start is with the column denoted “Trend” which estimates c in the models above. Most of these estimates are highly negative indicating that almost all institutions have lost trust. Trust in the military and the criminal justice system has increased – although the data only go back to 1993 for the criminal justice system. For three institutions (labor, the police, and higher education) there has been no secular change (although once again, for police the data only go back to 1993).

Initial Differences Due to Party ID or Ideology – I find, for example, that the most substantial initial partisan differences are for the economic institutions of business and labor. And, as expected, both Republicans and conservatives were more likely to trust business than Democrats and liberals. Democrats, especially liberal Democrats, were more likely to trust labor. The lack of substantial differences for banks is intriguing, but hard to explain. Perhaps it has to do with the ambiguity of the question – does it refer to your local bank or big banks?

There are also some significant initial differences for television news, science, and higher education, but it is interesting to note that these show that science and higher education were actually more trusted by those on the right of the political spectrum than by those on the left. Hence, the current distrust of science and higher education by Republicans and conservatives amounts to a very substantial movement from once having trusted these institutions more than those on the left.

Growing Polarization of Trust – The columns entitled “Change in Trust over time due to Party ID and Ideology” are estimates for dp , di , and dpi . Except for labor, where conservative ideology accounts for additional distrust of organized labor, there is only slight evidence for growing cleavages among the apolitical and economic institutions. But there is very strong evidence for significant growth in the polarization of trust for all of the social institutions. Except for K-12 education where the primary factor appears to be ideology, party identification is strongly associated with this polarization. Ideology is also strongly associated with increasing polarization for most institutions, especially for higher education and religion.

Summary of Results – I find examples of all three patterns of polarization in trust. The apolitical institutions essentially reveal *no cleavage in trust*. The economic institutions

¹⁴ Another way to make such comparisons possible is to estimate beta weights. In either case, the presumption is that either the standard deviation of a variable or the range of a variable provide a way to compare effects across them.

demonstrate *constant cleavage in trust* except for the role of ideology in increasing polarization for labor. Indeed, a closer examination of labor indicates that there has been essentially a constant cleavage in trust with respect to partisan identification but a growing cleavage in trust (beginning with very little cleavage) with respect to ideology. This result accords well with the conservative attack on organized labor from the 1970s onward.

Finally, the social institutions typically start with small amounts of initial cleavage (or with a cleavage that is the opposite of what develops in the next fifty years as in the cases of science and higher education and even perhaps religion) and then develop a *significant and substantial cleavage in trust*. It is also notable that those institutions associated with nationalism, law and order, and morals become more trusted by Republicans and conservatives, while those associated with news, knowledge, and education become more trusted by Democrats and liberals.

The rest of this chapter will provide a preliminary exploration of what the growth of these cleavages in trust might mean for American society.

Analysis of Micro-Data from the 2019 Cooperative Congressional Election Study (CCES)

Using a new data set obtained through the Cooperative Congressional Election Study (CCES), I set out to learn more about possible causes and implications of the societal polarization we document above using existing data. In this section I establish that the new data is consistent with the existing data. I show the relevance of most of the new measures and then refine a model of confidence using novel data. I discuss the implications of these analyses further below.

Figure 1.8: Mean Confidence by Party Identification

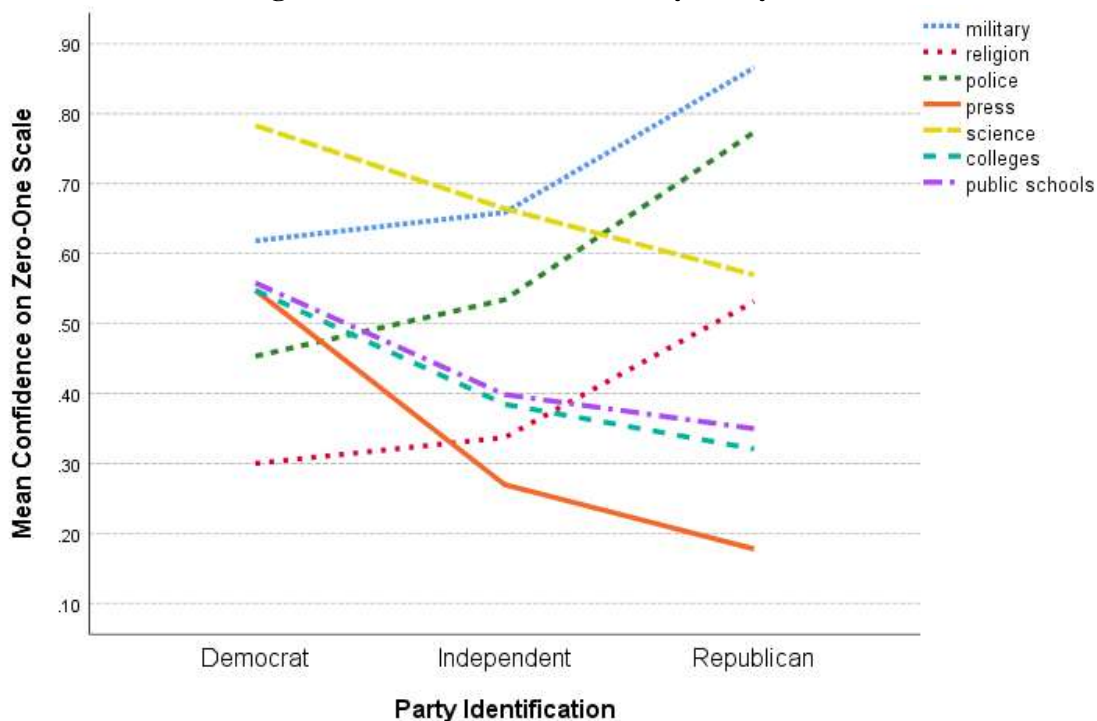


Table 1.3: Trust in Institutions in the 2019 Cross-Section Using Congressional Cooperative Election Study

	Mean Differences			Regression Coefficients for Regression of Trust Measure on Party ID, Ideology, and their Interaction				
	Party ID Rep – Dem	Ideology Con – Lib	a	Party-bp	Ideol.-bi	Both-bpi	Sum	R-sq.
INSTITUTIONS								
APOLITICAL								
Medicine	-.004	-.002	.602 (.013)	-.014 (.017)	.017 (.017)	-.033 (.042)	-.030	.002
Law	-.021	-.012	.408 (.011)	-.005 (.015)	-.018 (.015)	-.035 (.016)	-.058	.008
Television	-.167	-.064	.366 (.013)	-.059 (.016)	-.050 (.016)	-.141 (.018)	.250	.057
ECONOMIC								
Business	.059	.199	.404 (.012)	.051 (.016)	.069 (.015)	-.004 (.017)	.116	.073
Banks	.173	.207	.432 (.012)	.038 (.015)	.079 (.015)	.025 (.017)	.142	.076
Labor	-.219	-.288	.425 (.013)	-.041 (.016)	-.119 (.016)	.004 (.018)	-.156	.115
SOCIAL								
Military	.248	.283	.699 (.013)	.043 (.016)	.124 (.016)	.017 (.018)	.184	.127
Religion	.233	.156	.387 (.013)	.038 (.017)	.131 (.017)	-.023 (.019)	.146	.122
Police	.339	.190	.570 (.013)	.058 (.016)	.168 (.016)	.009 (.018)	.235	.211
Press	-.400	-.223	.344 (.012)	-.088 (.016)	-.172 (.016)	-.001 (.018)	-.261	.266
Science	-.192	-.135	.673 (.012)	-.044 (.016)	-.105 (.016)	.022 (.018)	-.127	.106
Higher Ed	-.234	-.114	.451 (.013)	-.051 (.017)	-.102 (.017)	-.072 (.019)	-.225	.107
Education – K-12	-.165	-.079	.452 (.013)	-.095 (.017)	-.015 (.016)	-.045 (.019)	-.155	.067

Confidence in Institutions in the CCES Data – I will focus on the seven institutions that are related to the social/identity/nationalism cleavage in American politics, but also consider all of the non-political institutions for which there is data. Figure 1.8, displaying mean trust by partisan identification, reveals what would be expected based on existing survey data. As before, I have normalized the trust measure to range from zero (hardly any confidence) to one (a great deal of confidence) and have split the sample into three groups, Democrats, Independents (including those who lean Democratic or Republican), and Republicans. Confidence in the military, religion, police, press, science, higher education, and public K-12 education show large partisan differences with the first three institutions (military, religion, and police) being trusted much more by Republicans than Democrats and the last four (press, science, higher education, and public education) being trusted much more by Democrats than Republicans.

Table 1.3 presents statistical analyses for these seven institutions plus three ostensibly apolitical ones (medicine, law and television) and three economic ones (business, banks and labor). The second column of the table shows the mean difference between confidence in each institution among Republicans and among Democrats. The third column shows the main difference between confidence among conservatives and liberals.

Note that of the three apolitical institutions, only television shows a substantial partisan difference with Democrats trusting it more than Republicans. This result may belie the description of television as apolitical, but it repeats what we found in Table 1.2 where there was a pre-existing difference due to party identification and ideology for television but not much of a trend over time. One could argue that trust in television appears to have a partisan cast, but the partisan cast has existed for a long time and it has not grown over time. Moreover, it seems to depend upon the interaction of ideology and party identification with each other. Clearly television is somewhat different than medicine and law firms for which there is no partisan difference in trust¹⁵, but it is also different from the other institutions because the cleavage is so long-lasting without any change over time.

The fourth through eighth columns report the results of regression analyses of trust in each institution on party identification, political ideology, and their interaction that is identical to the specification in equation (5) except that the time series terms are dropped. Note the minuscule R-squares for medicine and law, and the relatively small one for television.

The next set of institutions are those related to the economic cleavage in American politics. As shown in Table 1.2, there are significant partisan and ideological differences in trust ratings with business and banks trusted more by Republicans than Democrats and organized labor trusted more by Democrats than by Republicans. These differences are clearly more substantial than for the apolitical institutions but they are not as strong as most of the partisan differences for the social institutions in the rest of the table. Compare, for example, the sum of the coefficients for each of the economic and social institutions. The sum for each of the seven social institutions is larger than they are for business. The sum for six of the seven social institutions is larger than for banks, and it is larger for four of the seven (with one tie) social institutions than for organized labor. Similar results are true for the R-square statistics. In summary, the partisan differences tend to be larger for social institutions than for economic institutions.

Finally, the cleavages are quite substantial for some of the social institutions such as the military and the police that are trusted much more by Republicans, and the press and higher

¹⁵ As of 2019 - but see Chapter 3.

education that are trusted much more by Democrats. The size of the partisan and ideological differences in trust for religion, science, and public K-12 education are roughly the same as those for organized labor, which has the largest partisan and ideological differences in trust of the three economic institutions. These results indicate that the CCES data are capturing the same characteristics of trust in institutions that were found in the Gallup/GSS/Harris data.

Categorizing Institutions Based Upon a Factor Analysis – The analysis of the data above – both the Gallup/GSS/Harris data and the new CCES data – suggests that societal institutions are breaking down into conservative and liberal institutions. The CCES data can be used to explore this idea. I undertook a factor analysis of the trust measures for the 13 non-political institutions and for one overtly political institution – namely the presidency, which in 2019 was clearly a Republican institution. I omitted Congress and the Supreme Court because of the complexity of defining their partisanship. The results can be seen in Figure 1.9.

The factor analysis¹⁶ shows that the institutions break down generally into two groups, with the police, organized religion, the military, business, and banks in the conservative/Republican group at the upper left of the plot. The proximity of this group to the presidency at the far left of the plot indicates that this is, indeed, a Republican group. Science, television, public schools, organized labor, higher education and the press are at the lower right of the plot making up the liberal/Democratic group. Institutions that are as yet not politicized, medicine and law, are in between¹⁷.

Qualities that Contribute to Trust or Distrust – I asked respondents whether they agree that these institutions indoctrinate people, whether their work is important, whether they cost too much, and whether they do good work¹⁸. Respondents were asked whether they “Strongly agreed,” “Agreed,” “Somewhat agreed,” “Neither agreed nor disagreed,” “Somewhat disagreed,” “Disagreed,” or “Strongly disagreed” with each question. I recoded these responses so that the scale ranged from -1 (strongly disagree) through zero (neither agree nor disagree) to +1 (strongly agree).

Figure 1.10 plots the mean answers about whether institutions indoctrinate people for five of the institutions by partisan identification. Partisan identification clearly deeply influences responses to these questions – for example, Democrats are more likely to agree that organized religion and the military indoctrinate people (the two dotted and dashed lines that slope downward), and Republicans are more likely to agree with this statement regarding science, the press and colleges and universities (the three lines that slope upward).

¹⁶ The factor analysis was a principal components with an oblimin rotation. The number of components was determined by considering eigenvalues over one – the first eigenvalue was 4.15 and the second was 3.10. The third eigenvalue was below one. The components were correlated at .120.

¹⁷ The survey was fielded in November 2019, before COVID-19 emerged in the United States. Chapter 3 demonstrates medicine is no longer so apolitical. Also note that this plot suggests that television should be considered a Democratic institution.

¹⁸ Unfortunately, I did not include these questions for every institution, so I do not have this data for the police.

Figure 1.9: Plot of Pattern Loadings for Factor Analysis of Trust Items

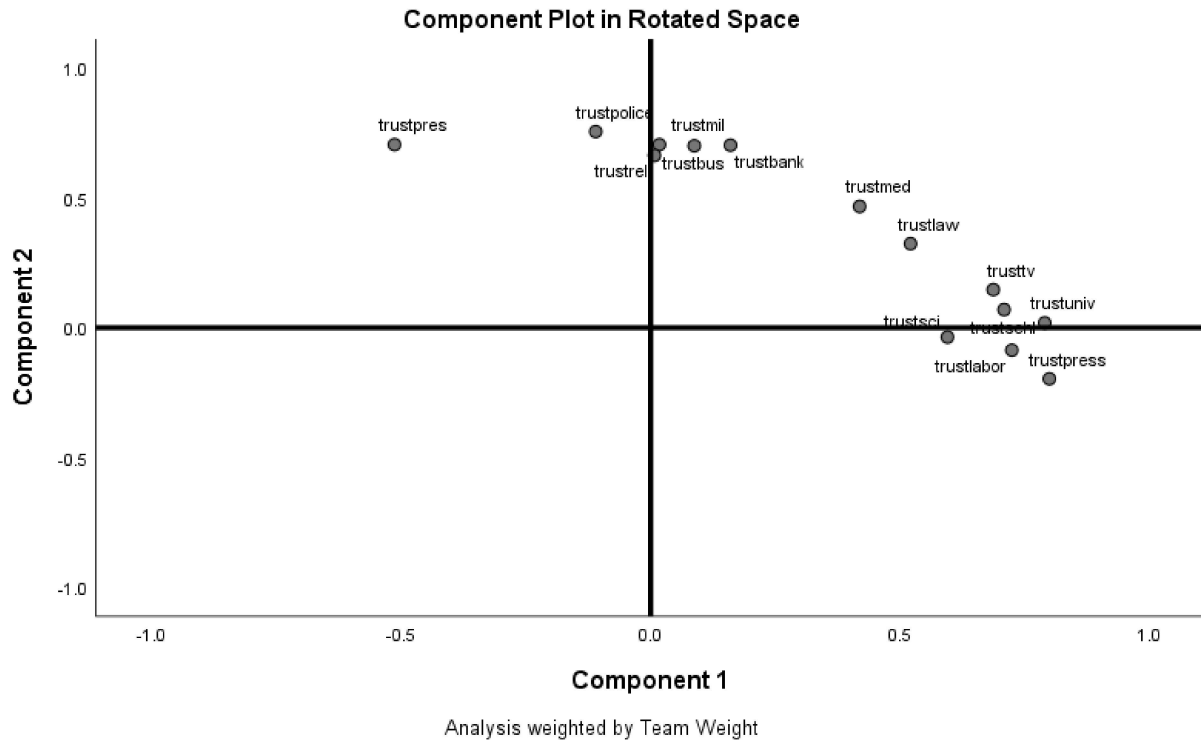


Table 1.4 illustrates partisan differences on each of the four questions about the qualities of the institution. Under the column for “indoctrinates” it reports the difference between the mean score for Republicans and the mean score for Democrats for each institution that is plotted on Figure 1.10. Since these scales all range from minus one to plus one with standard deviations between .4 and .7, differences of .67 are very large because they are one-third of the entire range of the scale and about one standard deviation, differences of .50 are large, differences of .33 are somewhat large, and differences of .25 are worth noting. To put this another way, a difference of .67 is about two steps on the original seven-point scale – from, say, somewhat agree to strongly agree. A difference of .50 is about one and one-half steps on the original scale, a difference of .33 is about one step on the seven point scale, and .25 is about three-quarters of a step.

There are large partisan differences on all four questions for almost every institution except medicine and banks where the largest difference in absolute value is only .168. I will focus on those institutions other than medicine and the banks because the differences are so small for them, and they are not substantively significant.

Note that, by design, two of the qualities are good and two of them are bad, and the differences are scored so that a plus sign indicates that Republicans have a higher average score

than the Democrats and a negative sign means the reverse. As a result, some care must be taken in interpreting the numbers.

Figure 1.10: Mean Scores on Indoctrination for Five Institutions by Partisan Identification

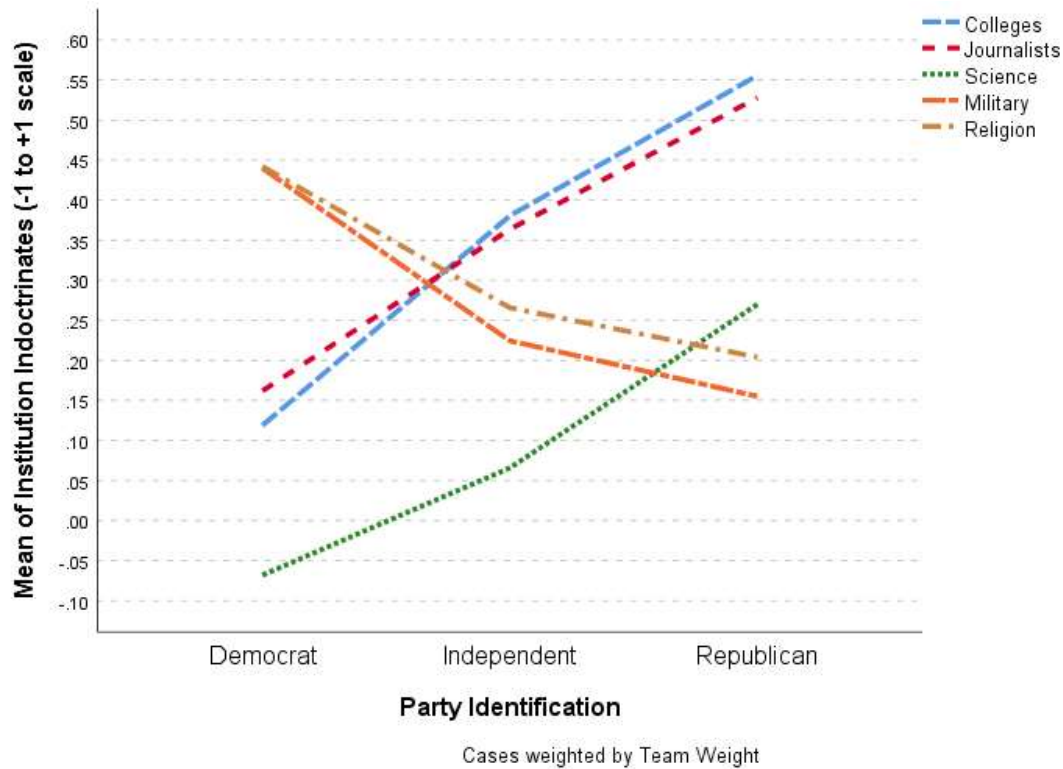


Table 1.4: Republican Minus Democratic Scores for Scores on Four Qualities

Institution	Good Qualities		Bad Qualities	
	Does Good Work	Is Important	Costs Too Much	Indoctrinates
Medicine	.142	-.089	-.124	.144
Banks	.129	.123	-.168	-.106
Labor	-.449	-.520	.450	.298
Military	.291	.214	-.607	-.274
Religion	.296	.420	-.328	-.244
Press	-.772	-.452	.357	.365
Science	-.283	-.195	.274	.336
Higher Education	-.466	-.323	.448	.437

For the good qualities, positive numbers mean that Republicans assign those good qualities to the institution more than Democrats. Not surprisingly, Republicans assign more positive scores on these good qualities to the military and religion but not to labor, the press, science, or higher education. For the bad qualities, positive numbers mean that Republicans

assign those bad qualities to the institution more than Democrats. Again, not surprisingly, Republicans more than Democrats assign bad qualities to labor, the press, science, and higher education, but not to religion or the military.

There are some interesting highlights. Much more than Republicans, Democrats think that the press, higher education and labor do good work. And much more than the Republicans, Democrats think that labor and the press do important work. On the other hand, the Republicans believe much more than the Democrats that religion does important work. Republicans are much more likely than Democrats to believe that labor and higher education cost the nation too much, but they are forgiving of the military for whom Democrats are much more likely than Republicans to think their work costs too much. Finally, although the partisan differences on indoctrination are not as striking as those for the other questions, it is still the case that Republicans are much more likely than Democrats to think that higher education, the press, and even science indoctrinate people.

Partisanship and Trust or Distrust – To test whether perceived partisanship contributed to trust or distrust in an institution I asked respondents to estimate the partisanship of constituents of these institutions (e.g., college professors as individual constituents of colleges and universities). In Figure 1.11 I plot the average perceived partisan composition by partisan identification on a minus one to a plus one scale for the eight institutions that are under consideration.¹⁹ For four institutions there are significantly different partisan perceptions: college professors, journalists, highly religious people, and bankers. The lines for these groups are thicker in Figure 1.11. For every one of these institutions, Democrats perceive the members to be more Republican than do Republicans. As a result, these lines slope downward from left to right. For the other four institutions (medicine, science, the military, and labor), I do not find partisan differences in the perceptions of their partisan composition, and the lines are essentially flat.

It seems likely that one's trust in an institution increases to the extent that it is composed of fellow partisans and it decreases to the extent it is composed of those of the other party. I find that there is little partisan difference in trust for medicine, so two things are likely true. First, there should not be much partisan difference in evaluations of the partisan allegiance of doctors, and this is corroborated on Figure 1.11 because the line for medicine is flat. Second, doctors should be perceived as reflecting the partisan composition of the population with approximately equal numbers of Democrats and Republicans. In fact, for doctors, the average value does not depart too much from zero which means that people by and large think of doctors as not very partisan.²⁰

There are three other institutions for which there are no significant partisan differences in perceptions of their partisan composition (scientists, military generals, and labor union members) so that their lines on Figure 1.11 are flat, but they are not perceived to be as non-partisan as doctors. Military generals are seen as tending Republican with a score of .30, scientists as slightly Democratic with a score of -.20, and labor union members as somewhat more Democratic at -.30. These scores suggest that Democrats should trust science and organized labor more than Republicans since scientists and labor union members are of their party – and this lines up with results from above. Republicans should trust the military more than Democrats

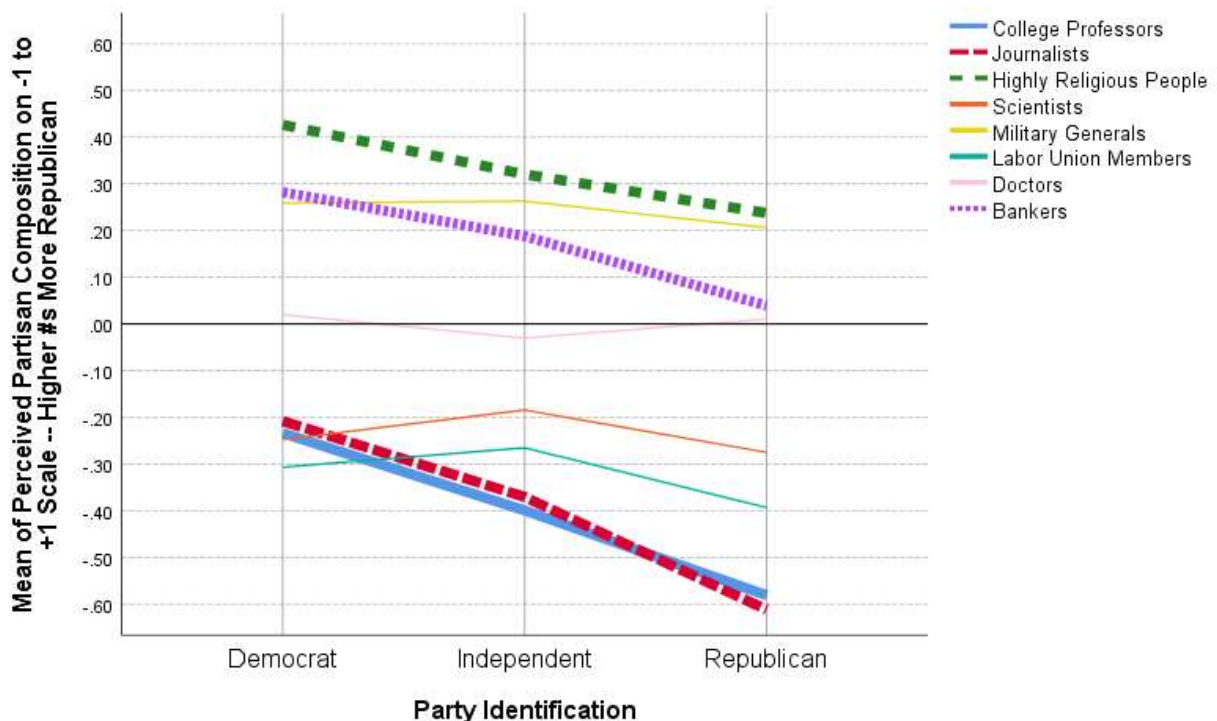
¹⁹ This scale has five values from “Mostly Democratic” (-1), “More Democratic than Republican” (-.5), “About the same” (0), “More Republican than Democratic” (.5), and “Mostly Republican” (1).

²⁰ Again, compare the results here, gathered in 2019, to those presented in Chapter 3.

since military generals are perceived to be slightly more Republican than Democratic. Still the average values for these institutions do not depart too much from zero so that people by and large think of these groups as not exceptionally partisan.

Given the data in Figure 1.11, though, we might expect especially large differences in trust for at least three institutions – the press, universities, and religion – because the perceived partisanship of their members is more extreme. The lines for these three institutions (especially the press and universities) are significantly far away from zero. For Democrats, highly religious people are perceived to be at .42; for Republicans journalists and university professors are at around -.60. It is also worth noting that these lines are highly sloped so that there are large partisan differences in perceptions. Because the lines are negatively sloped, for each of these institutions, partisans of the party that everyone agrees is predominant in the institution (e.g., Republicans for religion; Democrats for journalism and universities) which I will call congruent partisans, actually think that their party is less represented in the institution than do those from the other party. As a result, these congruent partisans are likely to trust these institutions less than they would if they had the perceptions of either independents or the other party. And, of course, because non-congruent partisans (e.g., Democrats with respect to religious institutions or Republicans with respect to journalism and universities) have more extreme views of the partisan composition of these institutions than either independents or congruent partisans and because they do not trust those people because their partisanship is different, non-congruent partisans are especially distrusting of the institutions. The result is that a downward slope means that distrust of the institution is exacerbated. Note that an upward slope would tend to indicate higher trust in an institution.

Figure 1.11: Perceived Partisan Composition of Eight Institutions by Partisan Identification



Regression Analysis of Trust – These results suggest that there are differences in the evaluations of the qualities of institutions and their partisanship that might affect trust ratings. I now check that by regressing confidence in each of the eight institutions on three characteristics (they do important work, they indoctrinate, and they cost too much), the perception of partisan composition, partisan identification, and the interaction of perceptions with partisan identification. I did not include “do good work” because I concluded that this question was so highly correlated with the trust measure itself that it amounts to asking the same question.

I expected that the interaction of perception of the partisanship of an institution with party identification would be highly significant because Democrats would favor those institutions they perceived as being composed of Democrats, and Republicans would favor those institutions they perceived as being composed of Republicans. I also expected that believing that an institution doing important work would contribute positively to trust, and a belief that an institution indoctrinates people or that it costs too much would contribute negatively to trust. Table 1.5 summarizes the results.

Table 1.5: Regressions of Trust on Qualities and Perceived Partisanship

Institution	Role of Partisanship				Qualities			R-Squared
	Constant	Perceived Partisanship	Party ID	Perception X Party ID	Important Work	Indoctrinate	Costs Too Much	
Medicine	.422	.004	.004	.081*	.347*	-.013	-.132*	.090
Banks	.405	-.084*	.036*	.092*	.226*	.030	-.123	.285
Labor	.350	-.002	.009	.081*	.272	-.061*	-.061	.352
Military	.419	.003	.042*	.024	.412*	.018	-.092*	.360
Religion	.346	-.003	.027*	.036*	.305*	-.019	-.049*	.405
Press	.327	.098*	-.034*	.159*	.184*	-.101*	-.072*	.374
Science	.428	.003	-.016	.142*	.348*	-.068*	-.054*	.314
Higher Ed	.458	.128*	.038*	.194*	.256*	-.067*	-.109*	.339
		x >.050	x >.050	x >.050	x >.050	x >.050	x >.050	

All standard errors between .013 and .027. Asterisk indicates significant at least at .05 level.

Perceived partisanship and party identification have mostly small coefficients and many of them are not statistically significant. The interaction of perception and party identification has the expected impact. When perception and partisan identification are more congruent as measured by increasing values of perception times party identification, then the positive coefficient entries in the table for the interaction variable indicate that there is higher trust. The effects are especially strong for the press, science, and higher education. These effects are further indicated by the question about indoctrination; the largest (negative) coefficients are for these three institutions. Somewhat surprisingly, there are no similar results for religion.

Of the three characteristics, the notable ones are the importance of the work for the military, science, medicine, and religion; the importance of costs for medicine, banks, and higher education; and as noted above, the concerns about indoctrination for the press, science, and higher education.

It would be wrong to treat the independent variables in these regressions as causal explanations of what is driving trust ratings because it is quite conceivable that trust in the institution is driving the values of the independent variables, not to mention the possibility of omitted variables. But they do provide a sense that these variables are at the very least factors

which are strongly correlated with trust evaluations, and they provide candidates for those factors that might causally explain trust or distrust.

Consequences of Trust Evaluations – I asked respondents about their level of comfort with their child (or a child close to them) marrying a constituent member of the institutions of interest and of other groups. I also asked about their child (or a child close to them) identifying as one of the people in one of the institutions. In each case I asked their reaction on a five point scale with these categories: “Very Unhappy,” “Happy,” “Neither Happy nor Unhappy,” “Unhappy,” and “Very Unhappy.” I added these questions together and normalized the scale to run from 0 (very unhappy about either situation) to .5 (on average neither happy nor unhappy), to 1 (very happy about both). The averages of these scales are displayed in Table 1.6.

The second column presents the overall score for the whole population for each kind of person. Our respondents provided average scores above .5 on this scale for people in this order (see column three of Table 1.5): doctor, scientist, businessperson, professor, soldier, Democrat, banker, journalist, religious person, and Republican. They provided average scores below .5 for a gay person and atheist. Future work should include a measure of anticipated salary for these positions, as this probably affects parents’ satisfaction with the idea of their children marrying or becoming each sort of person.

Of interest here, however, is not just in whether people would like their family to be affiliated with people in a particular institution. It is also whether partisan differences affect these judgments. Column four of Table 1.6 shows the mean partisan difference in scores for Republicans minus Democrats for each job or characteristic. There are virtually no partisan differences for doctors, bankers, and businesspeople, and these differences are both statistically and substantively insignificant.

Table 1.6: Happiness on Zero to One Scale of Having Kin Closely Associated with Groups

Job or Characteristic	Mean Score	Overall Ranking	Mean Partisan Difference – R-D	Ranking –Abs. Value
doctor	0.778	1	-.0096	1
businessperson	0.695	3	.0432	3
banker	0.591	7	.0387	2
soldier	0.673	5	.1683 *	5
religious person	0.559	9	.2039 *	8
policeperson	0.627	6	.1654 *	6
journalist	0.574	8	-.2728 *	11
scientist	0.732	2	-.1130 *	4
professor	0.666	4	-.2008 *	7
atheist	0.405	12	-.2409 *	9
gay person	0.457	11	-.2565 *	10
Republican	0.534	10	.4942 *	13
Democrat	0.627	6	-.2972 *	12

(*) indicates significance at .01 level.

The largest differences are for Republicans and Democrats, and these differences are substantively significant. Democrats are unhappy (at .315) with family affiliations with Republicans, but happy (.778) with family linkages with Democrats; Republicans are at best neither happy nor unhappy (.481) with family affiliations with Democrats, but happy with linkages with Republicans (.809).

What is surprising is to see large partisan differences for journalists, professors, and religious people that rival those for other marginalized groups such as gay people or atheists. And as one might expect, Democrats are much more favorable toward journalists and professors than are Republicans, while Republicans are much more favorable toward religious people. There is even some indication that soldiers and police are more favored by Republicans than Democrats and scientists more favored by Democrats than Republicans. The fact that there is distress on the part of Republicans about a child who marries or identifies as a journalist, college professor, or scientist and distress on the part of Democrats about a child who marries or identifies as a religious person, soldier, or police officer suggests that the impact of institutional distrust is large indeed.

Discussion of Analysis of the CCES Data

We can conclude that all of the new variables (important work, indoctrination, good work, cost, perceived partisan composition, 7-category party ID, and the interaction of perceived partisanship and partisan self-placement) are explanatory to a significant degree, and they have impacts with respect to variation within each item and across items. To summarize the results:

- Colleges suffer from perceptions of partisanship, indoctrination, and cost, although they do good and important work;
- Journalists suffer from perceptions of partisanship and indoctrination and no clear sense that they do important work;
- Science does important work, but it also suffers from perceptions of partisanship and some weaker sense of indoctrination;
- Religion does very important work, and there is some sense of partisanship and indoctrination, but less so than the three institutions of colleges, journalism, and science;
- The military does important work, but it suffers from a sense that it is very costly, although there is little partisanship or sense of indoctrination;
- Medicine has little sense of indoctrination and partisanship, but is perceived to be too costly;
- Unions suffer from a sense of partisanship and indoctrination; and
- Banks suffer from being seen as somewhat partisan but no sense of indoctrination – their major issue is their cost.

The simple models considered in the preceding pages go a long way toward explaining differences across items. There are some evident problems with this analysis – not the least of which is the probable endogeneity of some of the explanatory measures – but the results are still highly suggestive.

The analyses both suggest that the importance of an institution matters as does its partisan composition. Indeed, there is very strong evidence for the impact of partisan composition

because it can be linked with responses to questions about indoctrination. Clearly, some partisans think that some institutions are indoctrinating people. Beyond that, there is also evidence that just partisan makeup *per se* matters – presumably because it indicates that the institution’s values might be at variance with one’s own. Surprisingly, costs do not seem to matter as much, but perhaps they would matter more if the sample was broken up by income.

Unfortunately, this analysis shows that the “does good work” question did not provide a separate basis for explaining trust. Instead it seems to simply provide a reiteration of the trust measure. Perhaps a wording closer to “efficiency and effectiveness” of the institutions would have yielded more interesting results.

Conclusion

This chapter has been primarily exploratory. It attempted to document the role of ostensibly apolitical institutions in American politics. The chapter began with an exploration of the theoretical literature on institutions to understand how we should think about them, and concluded that institutions defined as groups of organizations play an important role in the political life of American society and that the set of institutions considered in the existing trust and confidence questions provide a relatively comprehensive sampling of all American institutions.

The theoretical literature also suggested that institutions must continually grapple with basic questions about their legitimacy in order to function. One aspect of legitimacy is trust or confidence in the institution. Although there is debate over whether there can be trust in institutions as there can be in individuals, there is agreement that institutions require legitimacy and that something like trust, perhaps better called confidence, is necessary for them to succeed.

We must consider, then, what has happened to confidence in institutions over the past fifty years using data from Gallup, the General Social Survey, and Harris. I found that while some institutions (e.g., medicine and law) have remained trusted over time without any significant partisan differences in trust, other institutions, such as journalism, higher education, science, religion, the police, and the military, have experienced significant politicization in the form of partisan differences in public confidence. The knowledge and information institutions (journalism, higher education, science, and perhaps even public K-12 education) have lost the confidence of Republicans while remaining trusted by Democrats. The moral and putatively order-producing institutions of religion, police, the military, and the criminal justice system have lost the trust of Democrats while retaining the trust of Republicans.

I moved to an analysis of a survey fielded in fall 2019 through the Cooperative Congressional Election Study. The study had these goals:

- To replicate findings about trust from the time-series data;
- To explore factors that might affect evaluations of trust; and
- To explore the possible consequences of trust.

The CCES data provided essentially the same results for the partisan and ideological determinants of trust as obtained using the time-series data. I found some institutions for which there are no significant partisan differences in trust (e.g., law and medicine). I found other institutions such as business, bankers, and organized labor for which the historic polarization in trust remained intact. And finally, I confirmed that there are significant differences in trust

between Republicans and Democrats for the knowledge and information institutions (journalism, higher education, and science) and for the institutions of social order (police, military, and religion). Specifically, the knowledge and information institutions are substantially more trusted by Democrats than Republicans and the institutions of social order are more trusted by Republicans than Democrats.

As for factors that might contribute to distrust, I found that perceptions of the partisan composition of institutions played a big role – both directly through the measure of such perceptions and indirectly through the belief that some institutions indoctrinate people. I found that measures of doing “important work” and “cost[ing] too much” might explain some differences in trust. Finally, I found that the measure of “does good work” was so closely related to the trust question itself that it needs refinement before it can get at the notion that institutions perform effectively and efficiently.

As for consequences, there are large partisan differences in the feelings of those who identify as partisans when presented with the possibility that their kin affiliate with certain institutions. Democrats are much more favorable to journalists and professors than Republicans, and Republicans are much more favorable to religious people.

This chapter has helped to set an agenda and to explore an area that has not been much investigated. I believe that it has provided a good case for the importance of non-political institutions, for the over-time polarization in evaluations of trust for the knowledge and information producing institutions and for the institutions of social order, and for the important role played by partisan sorting in these institutions. Finally, it has shown that there might be substantial consequences for these growing cleavages.

How did this polarization in trust come about? Chapter 2 investigates the possibility that when partisans judge the constituent members of institutions to be increasingly ideological or partisan, they are correct – that is, perhaps these institutions are actually diverging, with the direct consequence that Americans detect this, and myriad downstream consequences (I address this in Chapter 3).

Chapter 2: Institutions and Constituents: Ideological Trends Over Time

In Chapter 1 I documented partisan polarization in public confidence in ostensibly nonpolitical institutions since the 1970s. I use surveys from Harris, Gallup and the General Social Survey (GSS) to document the polarization process, and an original, nationally-representative survey in the 2019 Cooperative Congressional Election Study (CCES) to investigate causes. I hypothesize that Americans' estimates of the *partisan composition* of these institutions – that is, the nature of the political attributes of the constituent members of each institution – play a major role in the changing, polarizing opinion toward these institutions over time.

This chapter attempts to identify causes and consequences of this polarization in trust. I use Adam Bonica's Database on Ideology, Money in Politics, and Elections (DIME) to construct a new categorization of more than 11,000,000 campaign contributors into institutions, which allows me to test the hypothesis that Americans have simply observed the real ideological composition of them.

Using DIME data to estimate institutional ideology

Chapter 1 provides convincing evidence that perceptions of the components of institutional legitimacy help to determine Americans' confidence in various societal institutions, and that partisanship and ideology play their own roles in the polarization of confidence documented since 1970. But why would Democrats and Republicans imagine the underlying partisan and ideological composition of these institutions so differently? These differences help to assign partisan valence to otherwise nonpartisan, apolitical institutions; in this context, it is less surprising that we find partisan opinion of many institutions converging toward the pattern of opinion we see in institutions like the presidency.

One possible explanation for the divergence in confidence in many institutions between Democrats and Republicans is that they correctly perceive these institutions to be more homogeneously ideological over time; that is, Republicans might be right that the press is made up of liberals, and Democrats might be right that most police officers are conservative. Unfortunately, measuring the ideology of individual societal institutions is uncommon, inconsistent and difficult. Surveys of *industries* or *occupations* exist, but they often present two problems for the analysis I hope to complete. First, industries, occupations and institutions are not perfect analogues. Some match up quite nicely – a survey of journalists would probably encompass nearly everyone I would wish to include in the institution of “the press” – but others match up less well – the institution of medicine not only includes doctors, but also nurses, physician assistants, hospital administrators, etc. Second, surveys of a specific industry or occupation group rarely include direct questions about partisanship and political ideology, as these seem distant from the purposes of the group taking the survey²¹.

Another option is to use large, periodic surveys that include these questions about partisanship and political ideology – the American National Election Studies (ANES) or the GSS

²¹ For example, in 2022 the Pew Research Center surveyed nearly 12,000 journalists (Pew Research Center 2022), but the organization is clear on two points: they make no claims of representativeness of all journalists in the United States, and they did not ask respondents about their own partisanship or political ideology (Blazina 2022). Pew fielded a similar survey of police officers in 2017.

– but with rare exceptions these do not include enough of any particular occupation in a given year to make up a reasonable sample for analysis over time.

For these reasons, I turn to Adam Bonica’s Database on Ideology, Money in Politics, and Elections (DIME) (Bonica 2016). DIME uses federal election donation data to estimate ideological scores (Bonica calls these CF scores) for each donor who donated to at least two committees between 1979 and 2018. Importantly for this paper, in addition to its critical contribution of ideological estimates DIME data includes a measure of contributions per election cycle, most recent occupation reported and most recent employer reported. This information, when present, is enough to allow me to categorize donors into institutions.

The full DIME data set includes more than 26 million rows (one row for each donor). After removing all rows that contain no information in occupation *and* employer, and after removing some cases that contain no information useful for my coding approach,²² 11,677,716 cases remain. While these omissions clearly correlate with cycle – older contributor data includes less information about employer and occupation – there is no obvious reason they should correlate with specific institutions. Since my estimates are within institutions and cycles, I assume the remaining cases yield unbiased estimates of contributor ideology within institutions. These almost 12 million cases constitute the data I use to begin my analysis.

Rule-based coding – Bonica and others have used DIME data to examine the politics of certain industries (Bonica, Rosenthal and Rothman 2014; Bonica and Sen 2017; Bonica and Sen 2015), some of which fit well within Brady and Kent’s institutions. However, these efforts use rule-based coding based on occupation and/or employer;²³ that is, they match strings (character sequences) in the data to strings believed to indicate membership in a given industry, or even within a specific law firm, medical specialty, or judge’s office.

Rule-based coding is unlikely to incorrectly include cases (Type I error), but will miss many cases that should be included (Type II error). Beyond leaving data on the table, rule-based Type II error leaves open the possibility of bias. To see why, consider how Federal Election Commission (FEC) donation data is built. Occupation and employer are input by the donor (more common later in the 1980-2018 period) or by campaign fundraising staff (more common earlier in the 1980-2018 period); if some committees abbreviate or misspell occupation or employer in unique ways, some committees’ donors may be missed entirely by a rule-based approach. Beyond this, rule-based approaches will never be able to include all relevant abbreviations and misspellings, and may fail to include some that turn out to be surprisingly common. If any of these omissions correlates with CF score, bias will be present in estimates of mean CF score.

Supervised learning – Instead of a rule-based approach for classifying donors into *industries* or *occupations*, I use a supervised learning approach to classify donors into *institutions*. I use the `e1071` package in R to train and implement a naive Bayes (NB) model based on strings present in hand-coded cases; in this way, NB text-classifying models are a kind of supervised learning.

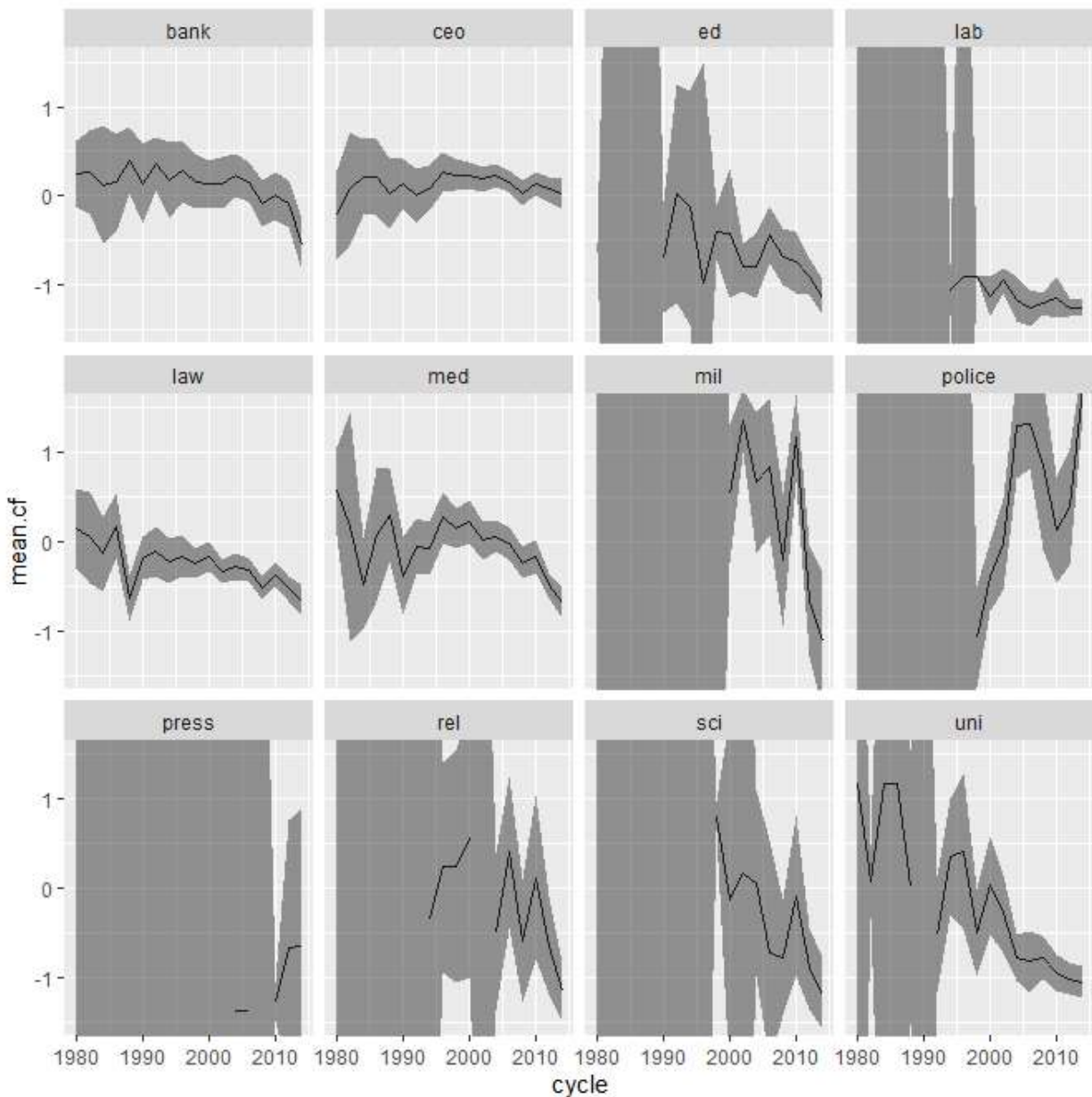
Manual coding – Beginning with the set of 11,677,716 cases in the narrowed DIME data set discussed above, I selected cases at random for classification, displayed columns `most`.

²² When a case includes *only* labels like “homemaker” or “retired” in occupation *and* employer, I cannot categorize the case in an institution.

²³ This is correct to the best of my knowledge; I conclude this partly based on inspecting code Bonica sent me upon my request. Many thanks to Adam Bonica for his responsiveness.

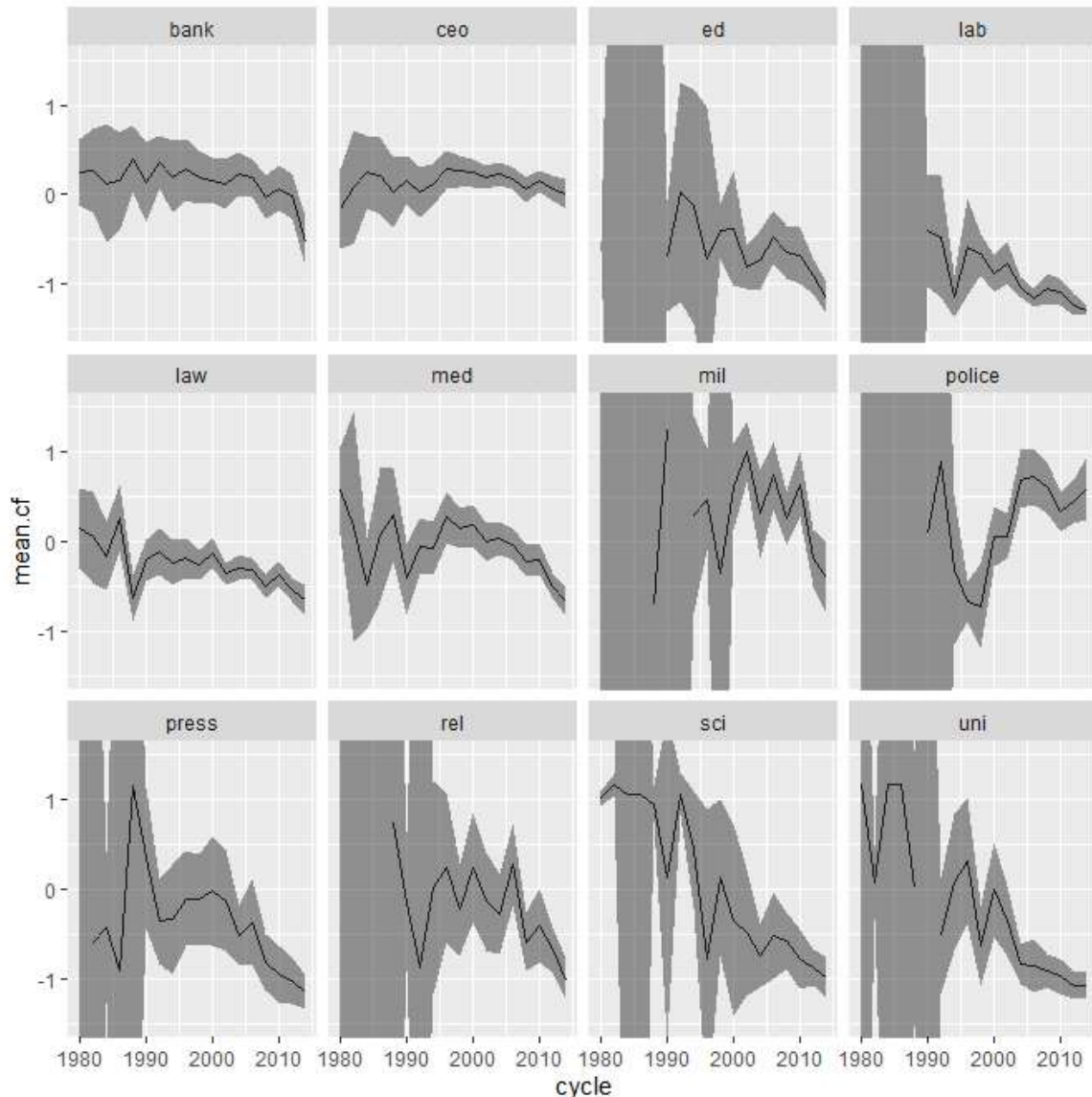
recent.contributor.occupation and most.recent.contributor.employer, and assigned an institution label in a new column (occ.code). For the most part, I used the institutions from surveys used in Chapter 1 as labels, but added those that seemed relevant and/or useful for better classification – for example, I coded a separate institution for those working in real estate, as many cases in the data can be coded into this category and no other. I repeated this procedure 7500 times; this produced a set of 7500 cases, selected randomly from 11,677,716, which are interesting in and of themselves. Figure 2.1 shows the mean CF scores of 12 institutions of interest over time based only on these 7500 cases. Within usable DIME data, these represent an unbiased estimate of the ideology of each institution over time.

Figure 2.1: Mean Ideology Estimates for Institutions, 7500 Hand-coded Cases



From Figure 2.1 it is clear that, using only 7500 randomly-selected cases, there is tremendous uncertainty in the estimates of ideology over time for most institutions. (The exceptions are banking, business leaders, law and medicine.) To give the text-classification model more to work with, I then searched preferentially for cases in institutions where data was thinner until I reached [approximately] 200 coded cases in each category.²⁴ After this step I had coded 9498 cases; Figure 2.2 shows mean CF score estimates over time for each institution using these 9498 hand-coded cases.

Figure 2.2: Mean Ideology Estimates for Institutions, 9498 Hand-coded Cases



²⁴ Depending on my search criteria in this step, this could present a version of the rule-based bias problem I discussed earlier. However, the text-classification model will “learn” to associate the words I used for my searches with other words, including misspelled, abbreviated and unintentionally combined words, in the same records. For example, searching for cases to be included in the organized labor category will tend to catch terms like ‘business agent’ that are present in many of these records, even if these words are not spelled correctly.

Text-cleaning – I used the `tm` package in R to clean the text present in the occupation and employer columns, and to combine them. I standardized letter case (all lowercase), removed stop words (there are very few stop words in this data), and removed extra white space. I did not stem words,²⁵ as the data is very sparse to begin with and includes many proper nouns and misspellings. I then combined the occupation field with the employer field, functionally counting all words in each evenly, and not using these two categories as separate information.²⁶

Model-fitting – After the data-cleaning steps described above I had a data set of 9498 cases with hand-coded institutional labels and a cleaned `occ.emp` column that includes all words from both occupation and employer. I used the `e1071` package in R to fit a NB model for institutional label; the model uses the information present in `occ.emp` for each case to predict which institutional category is the most likely, and places the case in this category. NB models use an underlying assumption that each case being categorized is independent of all others, which is rarely true, but NB classifiers perform very well in spite of this. This is likely because while their underlying probabilities for each category can be significantly wrong, the category with the highest probability is usually correct (Zhang 2004).

Table 2.1: Accuracy of a Naive Bayes Text-Classification Model

Institution	Correct	Type II	Type I
Banking	83%	17%	21%
Big Business	79%	21%	21%
K-12 Education	90%	10%	10%
Org. Labor	89%	11%	13%
Law	93%	7%	7%
Medicine	82%	18%	11%
Military	90%	10%	18%
Police	95%	5%	27%
The Press	81%	19%	19%
Org. Religion	79%	21%	0%
Science	90%	10%	27%
Col's and Univ's	85%	15%	12%

To evaluate the resulting model, I trained it on 80% of my coded data (7598 cases) and tested it on the remaining 20% (1900 cases). I report Type I and Type II error for each category of interest in Table 2.1. Overall the model did well: category accuracy ranged from 79% to 95%. Between 5% and 21% of cases were not classified in their correct category (Type II error), and between 0% and 27% of all cases coded into a category of interest were classified as the wrong category (Type I error).²⁷

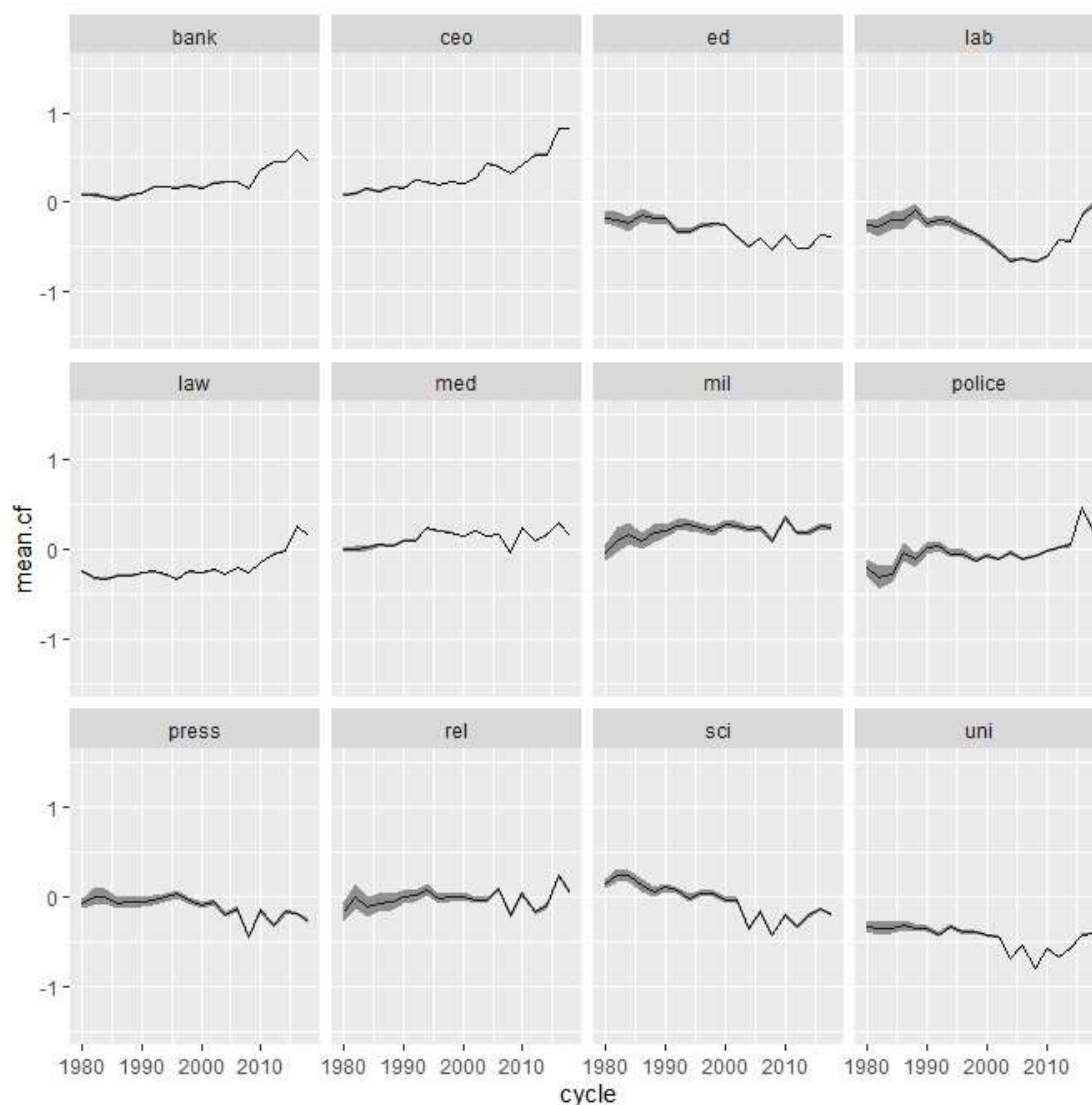
²⁵ Many text-classification efforts include a step where words are reduced to a finite set of word stems; for example, consulting, consultant and consultants would all be recoded as consult.

²⁶ FEC data, and thus DIME data, is rife with confusion between these two categories. Information that should more appropriately be included in occupation is often found in employer and vice versa. This is why I used both while manually coding, and combined them into a single “bag of words” before fitting my model.

²⁷ Consider the police; within the test set of 1900 cases, the model classified 75 cases into this category while I hand-coded only 58. Of all hand-coded cases in the testing set, correctly-classified cases (55 of 58) and cases

Supervised learning – I used the resulting model to classify each of the 11,677,716 cases in my narrowed data set. Figure 2.3 shows the result for each institution, normalized by mean ideology²⁸ for all contributors over \$200 in each election cycle. Figure 2.4 shows these institutions overlaid in one chart, which highlights how the ideological composition of these institutions has in fact diverged since 1980. Strikingly, Figure 2.4 resembles the divergence of partisan confidence in institutions: Figure 2.5 shows the difference between Republican confidence and Democratic confidence over time for all institutions.

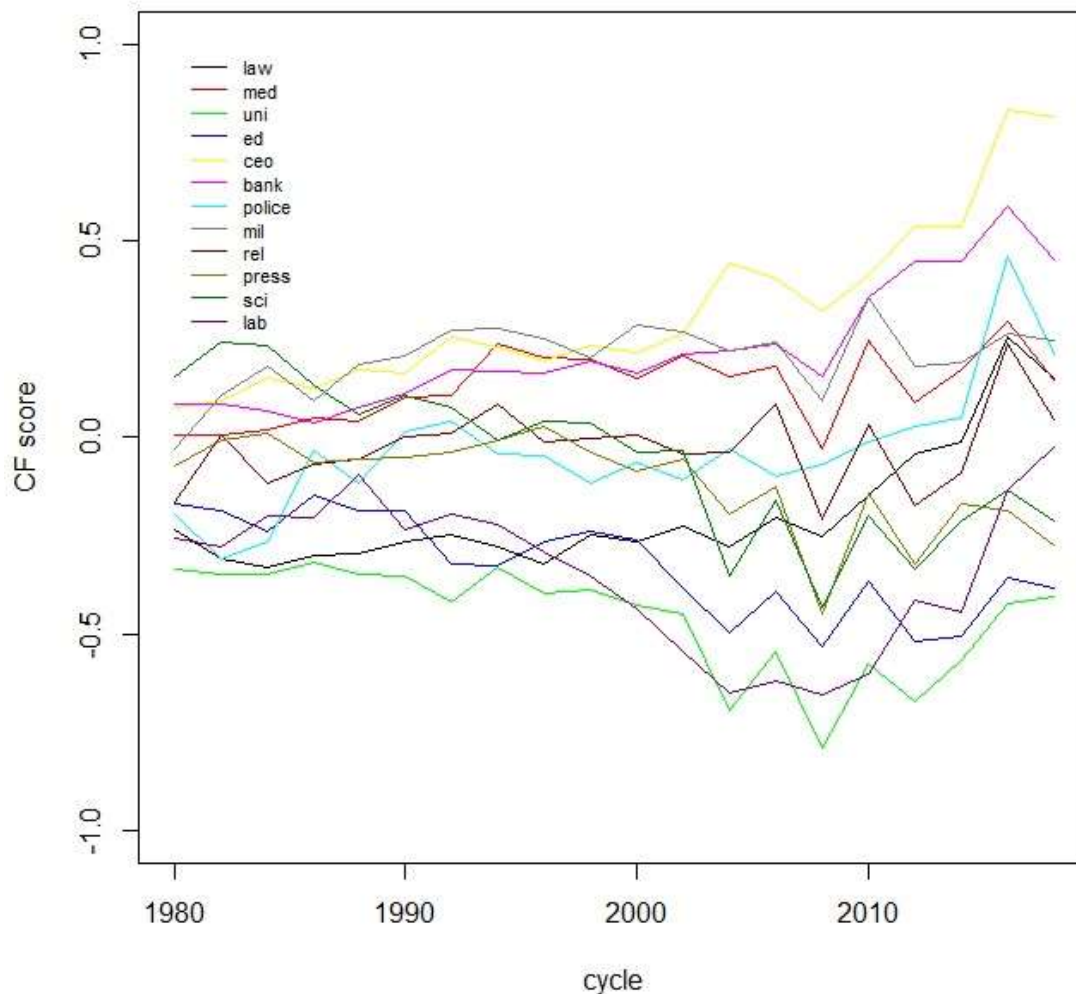
Figure 2.3: Mean Ideology Estimates for Institutions, 11,677,716 Automatically-coded Cases, Greater than \$200 per cycle



incorrectly classified in some other category (Type II error, 3 of 58) total 100% of all real cases. Those cases incorrectly classified as police (Type I error, 20 of 75) are expressed as a percentage of all cases classified as police by the model.

²⁸ I adjust by the mean ideology in each cycle because DIME data shows what is very likely an artificial shift to the left over time.

Figure 2.4: Mean Ideology Estimates for Institutions



Figures 2.3 and 2.4 highlight how the real underlying mean ideological placements of these institutions have diverged over time. Over the same period, public opinion about most of these institutions has polarized. What can be learned by comparing these trends? With so many institutions included in each, these figures are hard to decipher, but we can compare the rank order correlations (using the Spearman correlation) of the set of 12 institutions under consideration.²⁹

Figure 2.6 shows these Spearman correlations over time. The lowest correlation coefficient, in the 1980 cycle, is 0.5636; the highest, in both the 1982 and 1992 cycle, is 0.8182. There is no discernable trend upward or downward. This data supports the idea, though, that the real ideological placement of societal institutions explains a significant amount of the movement in public opinion, and therefore polarization, over time.

²⁹ Though DIME data includes all 12 institutions in every two-year cycle, not every one of these institutions is present in our public opinion data for each cycle. Each cycle, thus each Spearman correlation, includes at least ten of the 12 institutions I focus on.

Figure 2.5: Difference in Partisan Confidence (R-D) in Institutions Over Time

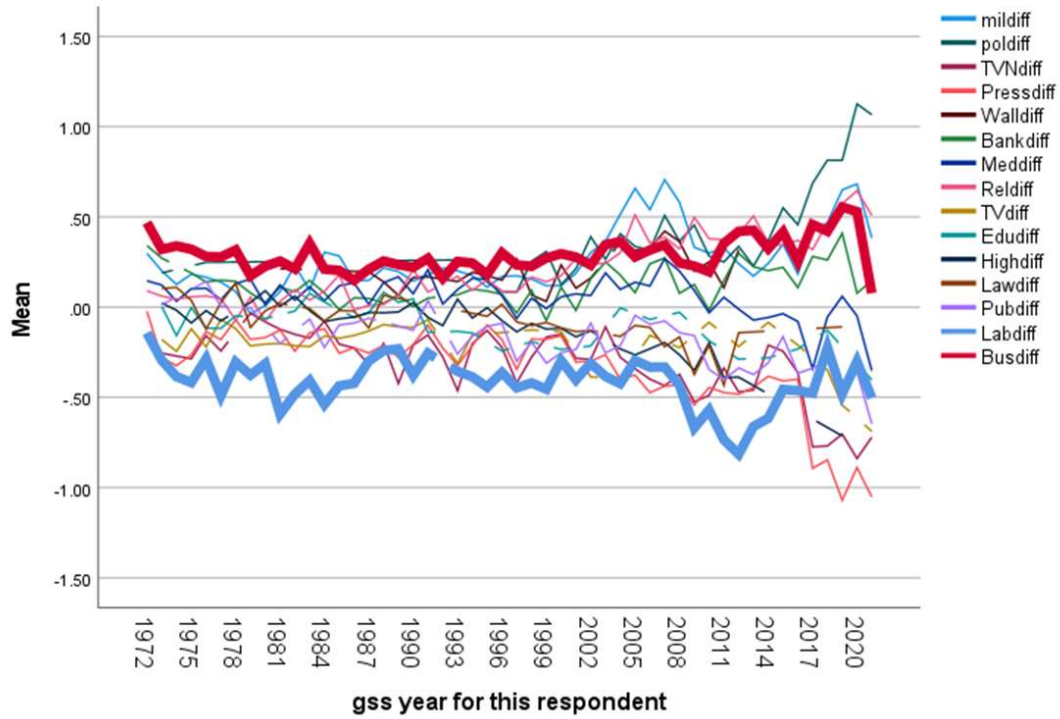


Figure 2.6: Rank-order Correlations Over Time, Public Confidence and Institutional Ideology

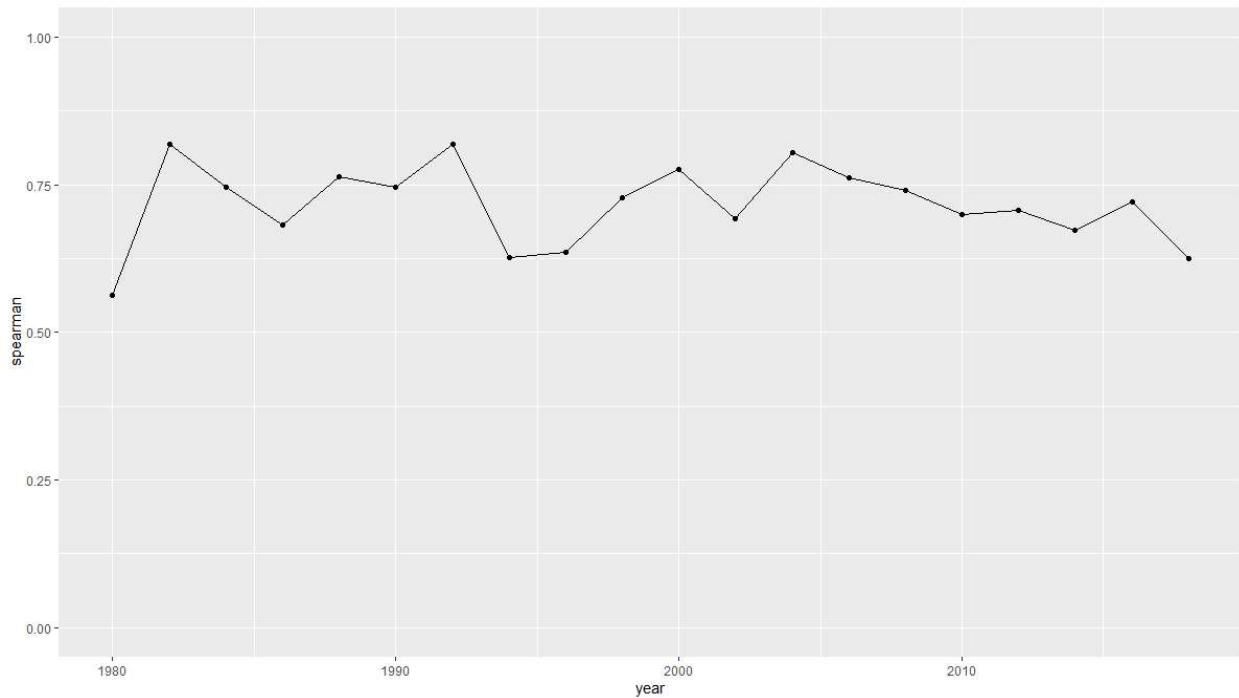
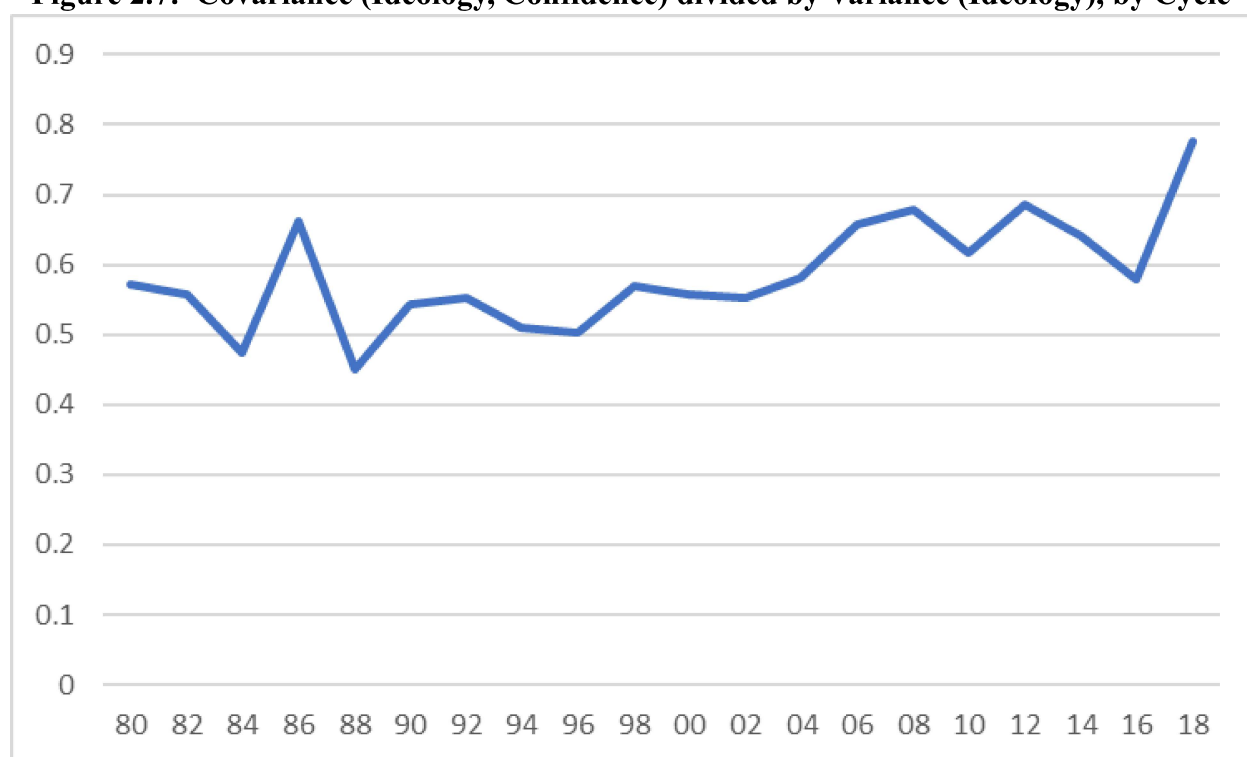


Figure 2.7 shows the covariance of the mean-adjusted institutional ideology (from DIME) and confidence differences (from the data used in Chapter 1) divided by the variance of mean-adjusted ideology for each two-year cycle. These quantities are equal to the coefficient for a regression of the confidence differences on the mean-adjusted institutional ideology scores for each cycle. If people are simply observing the ideological makeup of institutions and generating confidence in a consistent way over time, then these quantities should be constant. Figure 2.7 suggests that this coefficient is approximately constant over time, although it may increase slightly. Hence, the increasing variance in confidence regarding differences (that is, the increasing polarization in confidence in institutions) in Figure 2.5 appears to be primarily driven by increasing variance in the ideological makeup of the institutions shown in Figure 2.4. The slight upward tilt suggests that there might be some other factors, such as media or elite signaling, that amplify this result, but these other factors do not appear to be the major driving force.

Figure 2.7: Covariance (Ideology, Confidence) divided by Variance (Ideology), by Cycle



Conclusion

The order of institutions, from most liberal to most conservative, line up well with expectations: colleges and universities are among the most liberal institutions, business management is made up of more conservative people, and law enforcement has become one of the most conservative institutions in recent years. However, there are some surprises; for example, medicine and law have, relative to other institutions, trended more conservative over time. This is not in line with expectations based on Chapter 1.

How does this new data bear on the question at hand? As a loose hypothesis, if the relative mean ideology of an institution affects partisan trust, we should see (for example) low

trust among Republicans in the most liberal institutions (and vice versa), and the difference between Democratic trust and Republican trust should increase as the institution becomes more liberal relative to other institutions. This idea is supported by some of the relative ideological estimates; Democratic trust in the police and the military has in fact fallen at the same time that these institutions have shifted to the right relative to others ideologically. Republicans have come to trust higher education and science less as they have become relatively more liberal. Interestingly, though, business leaders have moved furthest away from the other institutions to the right, but as Figure 1.6 shows, opinion on business has not polarized an appreciable amount since the 1970s.

What is the importance of polarizing trust in societal institutions? The COVID-19 pandemic has set in stark relief how a new partisan valence may affect the ability of major institutions of our society – medicine and science – to accomplish their work: combating disease and supporting public health. The work of government is already made more difficult by partisans judging its work differently; for example, the relationship between economic performance and incumbent reelection has weakened, because Americans now tend to evaluate the economy as good when their co-partisans are in power and bad when they are not (Freeder 2019). I argue we should expect the same sort of partisan reinterpretation of the performance of ostensibly nonpartisan, apolitical institutions – which is particularly problematic, as until recently citizens could appeal to these institutions as sources of truth separated from politics.

Let us consider medicine as an example. Often considered as an apolitical science, medicine may have been politicized by the COVID-19 pandemic, various parts of government, and the medical establishment's response to it. Do Americans use partisanship to make medical decisions in 2022? Chapter 3 suggests they do, if this information is made available to them, and that when primed with a partisan valence partisans' trust in medicine diverges.

Chapter 3: Partisanship and Trust in Personal Doctors: Causes and Consequences³⁰

Chapter 1 documented the divergence in trust in certain ostensibly apolitical societal institutions, and Chapter 2 showed support for the idea that this has happened at least partly because the constituent members of those institutions, whether by replacement, attrition, ideological change at an individual level or some other process, diverged from one another (e.g., faculty and staff at institutions of higher learning did, on average, become more liberal since 1980, while members of the military became more conservative). What remains is the most important question: does this matter? In what ways might this ideological divergence and polarization of trust affect regular Americans?

In this chapter I document the polarization of trust in one of the last unpolarized institutions: medicine. Since the COVID-19 pandemic especially, Democrats' and Republicans' opinions toward medicine and doctors have diverged. I find that this affects partisans' choice in doctors when partisan information is provided. This gives a glimpse of a stark possible future: one day soon we may have not only liberal and conservative news channels, but brazenly liberal and conservative doctors. The alternative is worse – one party's adherents may retreat from medicine even farther, and pay the price with their health and their lives.

Partisan Doctors?

Existing scholarship documents that political polarization has eroded the health of democracy in the United States (e.g., Levitsky and Ziblatt 2018). Less attention has focused on the fact that political polarization has also imperiled the physical health of its citizens: between 2001 and 2019, death rates among Republican- and Democratic-leaning counties diverged; Democratic counties were living longer (Warraich et al. 2022)³¹. This trend has accelerated in recent years: counties with poor health and higher drug, alcohol and suicide saw the largest four-year electoral swings to Donald Trump in 2016 (Monnat and Brown 2017).

Political science scholarship has long been interested in the partisan effects of health policy generally, compliance with COVID-related measures more recently, and trust in medicine as an institution (e.g., Larsen et al. 2023; Patashnik, Gerber and Dowling 2017; Pink, Chu, Druckman and Willer 2021; Blendon and Benson 2022; Canes-Wrone, Rothwell and Makridis, n.d.; Gadarian, Wallace Goodman and Pepinski 2022; Clinton et al. 2021). Yet existing scholarship overlooks the relationship between trust in one's personal doctor as a function of their political predispositions.

This chapter argues that political beliefs are a powerful determinant of who trusts and engages with their healthcare providers (including on non-COVID related health) and, perhaps as a consequence, who is healthy and who is not. I present three sets of findings. First, while people's views towards the medical community as a whole have divided along partisan lines (e.g., Leonard et al. 2021; Blendon and Benson 2022), little scholarship exists about whether partisanship predicts people's trust in their *personal* doctors. I find that in the last decade the partisan gap in trust towards personal doctors has flipped: Republicans used to be marginally

³⁰ This chapter is drawn from a paper co-authored by Neil O'Brian. It was presented at the 2023 American Political Science Association Annual Meeting, held in Los Angeles. It has been edited to make it part of a cohesive dissertation.

³¹ This gap emerged before the coronavirus.

more trusting of their personal doctors while today, Democrats are about 12 percentage points more trusting than Republicans. A similar, though more muted, transformation has occurred in people's willingness to follow their personal doctor's advice; today, Democrats are more willing to say that they adhere to their doctor's advice than Republicans while in 2011, the opposite was true.

Second, I investigate possible causes of increasing partisan polarization of trust in their personal doctors. I present evidence that as conventional medical advice on how to address the COVID-19 crisis became associated with the Democratic Party this spilled over and shaped people's trust in their personal doctors. For example, former Vice President Mike Pence remarked, "I believe Dr. Fauci ultimately aligned himself with many Democratic governors" during the COVID-19 pandemic (O'Neill 2022). "He's a Democrat – everybody knows that," Donald Trump said of Fauci during the 2020 campaign (Watson 2020). In this way, perceptions of a group's ideological position (doctors as a whole) potentially extend to perceptions of individual group members (one's personal doctor). To investigate this possibility, I randomly assigned respondents to read real news stories accusing Anthony Fauci of being tied to the Democratic Party. Trump voters exposed to this treatment expressed lower levels of trust in their personal doctors while treated Biden voters expressed higher levels of trust. I also find that changing party demographics in the 2010s, as well as growing institutional distrust among Republicans more generally, contributes to the growing partisan divide in trust of one's doctor.

Finally, I investigate the potential consequences, and solutions, for a growing partisan trust gap toward doctors. The medical field has long been interested in trust between patients and their doctors. Trust increases adherence to a doctor's advice, patient satisfaction and health status (Safran et al. 1998). Sharing common identities with a medical provider can increase trust. For example, while determinants of trust are multifaceted, people exhibit higher levels of satisfaction of care, uptake of preventive services, and trust with race-concordant physicians (Cooper et al. 2012; Takeshita et al. 2020; Alsan, Garrick and Graziani 2019). A similar pattern emerges along gender lines: research shows that women, particularly young women, choose to see female doctors while men prefer to see male doctors and that women express higher levels of trust in female physicians (ZocDoc; Deroose et al. 2001).

While the American Medical Association advises that physicians "refrain from initiating political conversation during the clinical encounter" (AMA n.d.), there are many opportunities for personal doctors to be viewed through a partisan lens. For example, the centrality of healthcare in contemporary politics has mobilized physicians into political action, creating opportunities for direct connections between one's doctor and partisanship (e.g., Skalka 2022). Likewise, the growth of social media means that a doctor's personal activities and sentiments (attending a political rally, expressing support for a politician, commenting on current events) may be visible to patients. Still further, explicit or implicit political markers shape perceptions. For example, some patients note that their doctors make political expressions in the office (Panreck 2023).

Given the medical field's heightened salience in partisan political debates and an existing scholarship which documents that partisanship has become a core identity to many Americans (e.g. Mason 2018; Iyengar, Sood and Lelkes 2012), what are the consequences of perceptions of doctors as partisans?

I conduct two studies. First, I demonstrate that partisans primed with a real headline accusing Dr. Anthony Fauci of being a partisan Democrat change their opinions about doctors

and medicine. Second, I conduct a conjoint experiment that asks respondents which of two dermatologists they are more likely to visit, randomly assigning doctors' attributes, including their overall patient rating, race and gender (often available on medical groups' websites) and – key to my argument – whether they are a Democrat or a Republican. I find, for example, that Republicans are less likely to say they would visit a dermatologist who is a Democrat than one who is a Republican, controlling for all other attributes. Among women and people of color, I find that partisanship is at least as important as sharing a racial background or gender identity with a provider.

Together, my findings suggest that partisanship's relationship with the medical field is not cordoned to attitudes towards public policy, medicine as an institution or COVID-related behaviors. Rather, it is seeping into one of the most delicate and important relationships: trust in one's personal doctor. At a time when relationships between doctors and their patients is a primary tool to combat some of society's most pressing problems, including increasing deaths of despair, a broader crisis in mental health and lagging life expectancy among Americans compared to other developed nations (e.g., Case and Deaton 2015), understanding the role partisanship and trust in one's doctor – both in terms of its perils and possibilities – is vital.

Patient Trust and Personal Doctors

What do we mean when we say that a patient trusts a doctor, or that a person trusts medicine or the medical industry? A popular sociological definition of trust (Cook, Hardin, and Levi 2005) holds that one person should trust another only when the former's interests are 'encapsulated' by the latter; that is, that one's interests are the same as the other's. While a strict definition, it illustrates an important, more general, point: people trust one another when they believe, even in moments of vulnerability, that their interests will be considered, even prioritized. Most definitions of trust “stress the *optimistic* acceptance of a *vulnerable* situation in which the truster believes the trustee will *care* for the truster's interests” (Hall et al. 2001, emphasis in original). When a patient visits a doctor – or considers doing so – to say they trust the doctor means they believe the doctor will prioritize their health and well-being, perhaps even their financial well-being. While Cook, Hardin, and Levi's (2005) definition of trust does not allow for any analogue to organizations or institutions, other trust scholars (e.g. Zucker 1986, Shapiro 1987) acknowledge the possibility of trust in collections of people, and the implications for the individual are similar: they must believe the organization or institution will prioritize their interests.

Trust in most major American societal institutions has polarized along partisan lines in recent years, and there is support for the idea that this happens as partisans come to the conclusion that these institutions are made up of out-partisans (Chapters 1, 2). For example, as Republicans come to believe the press is made up of Democrats their trust in the institution of the press decreases. Medicine has, for most of the post-1970 period, actually bucked this trend; as of 2019 opinion of medicine as an institution was substantially identical across partisans of both stripes (Chapter 1). Since the beginning of the COVID-19 pandemic, though, opinion toward medicine seems to have joined most other institutions as polarized along partisan lines.

To the extent that partisans' belief that institutions are made up of out-partisans determines (dis)trust of those institutions, one possible reason for this polarization of trust in institutions is the actual ideological composition of institutions. Chapter 2 finds that changes in average ideology among constituents of institutions since 1980 do in fact correlate with changes

in polarization in trust in institutions over the same period. For example, as the average member of the press has become more liberal, Republicans (and conservatives) have become less trusting of the press. This suggests that Cook, Hardin and Levi's (2005) definition of trust may in fact be the right way to think about *institutional* trust: as people who lack shared characteristics become more and more representative of an institution, or at least perceive that to be the case, people trust that institution less. Doctors and others in medical professions (e.g., nurses) have, since 1980, on average shifted to the left ideologically with respect to other institutions (Chapter 2), but political ideology differs across medical specialties (Bonica, Rosenthal and Rothman 2014).

Though not polarizing over most of the post-1970 period, trust in doctors has declined over time (Lipset and Schneider 1983; Davies 1999; Blendon, Benson and Hero 2014). Patients' trust in doctors is important not just on a societal scale, but seems to affect medical outcomes: higher trust is associated with better self-care among diabetics (Bonds et al. 2004; Lee and Lin 2011; Mancuso 2010), completion of colorectal screening (Gupta et al. 2014), and following doctors' recommendations to control high blood pressure (Jones et al. 2012). Higher trust in doctors and the health care system in general is positively associated with higher self-evaluations of good health, itself an important correlate of health outcomes (Nummela et al. 2009).

All of this suggests an uncomfortable possibility: if patients come to believe that the medical industry, doctors in general, or their personal physicians are different from them politically, health outcomes may decline. Here I propose a novel mechanism for declines and political polarization in trust in doctors and the medical system: when a partisan valence is attached to a person or institution in American life, partisans consider this information and reevaluate the object of trust.

Over-Time Trends

I investigate over-time trends in three elements of trust. First, I ask how much confidence in medicine people have generally. Respondents answered on a three-point scale saying they have "a great deal of confidence," "some confidence," or "hardly any confidence." Second, I analyze trust in one's personal doctor. To my knowledge, this is the first work that studies trust in one's personal doctor as a function of partisanship. Respondents were asked to what extent they trust their personal doctor on a four point scale: a) a great deal; b) somewhat; c) not too much or d) not at all. Finally, I track trends over time in people's adherence to their doctor's advice. If people's trust in their personal doctor is polarizing along partisan lines, people's adherence to their doctor's orders may be doing the same. I ask respondents, "how closely would you say you follow your doctor's advice and treatment recommendations...?" Respondents answered this question on a five-point scale from "extremely closely" to "not at all closely."

I expected that the COVID-19 pandemic shaped partisan evaluations of doctors, and so I analyzed trust and adherence both before and after the pandemic. I specifically chose the above questions because publicly available data asked these questions before 2020 and those surveys included questions related to partisanship. For the post-COVID survey I commissioned a poll through the NORC-Amerispeak panel, a random sample of people 18 years of age and older living in the United States. This survey mimicked, as closely as possible, the questions asked in the prior years.

For trust in one's personal doctor, I compared the NORC data to a 2013 survey from AARP (conducted by Social Science Research Solutions) that, like the NORC survey, included a random sample of people 18 years of age and older living in the United States. Finding a survey

to benchmark adherence to medical doctors' advice proved difficult, but a 2011 AARP survey asked about adherence to a doctor's advice, though only to people living in the United States aged 50 and over.

Given the age categorization, I compare the 2011 results with those aged 50 and over in the 2022 NORC sample (only for the adherence question do I subset to 50+; the other questions include all respondents). The third question, which asks about confidence in medicine, was benchmarked against survey questions fielded as part of the 2019 Cooperative Election Survey and conducted by *YouGov* (see Chapter 1). Although not a true probability sample, *YouGov* is well respected among social scientists and is nationally representative.

Figure 3.1 shows the change over time for each of these measures by partisanship. Because the 2011 and 2013 surveys do not ask about which way Independents lean, I categorize partisanship by people who, when asked the first time, say they are either Democrats or Republicans.

The first panel shows the proportion of respondents who have a "great deal of confidence" in medicine as a whole. In 2019, there was no partisan divide but by 2022, that divide had exploded to nearly 26 percentage points. This makes sense in context of the pandemic and has been documented by others: the medical community's response became attached to a partisan valence, and trust in the institution polarized.

Of course, one's personal doctor may be removed conceptually from the broader institution. Despite this, trust in one's *personal* doctor is also polarizing along partisan lines. The second panel of Figure 3.1 shows the percentage of respondents that say they have a "great deal" of trust in their personal doctor. While Republicans were slightly more trusting of their personal doctor in 2013, a partisan divide emerged by 2022 such that Democrats were 12 percentage points more likely to say they trusted in their personal doctor a "great deal."

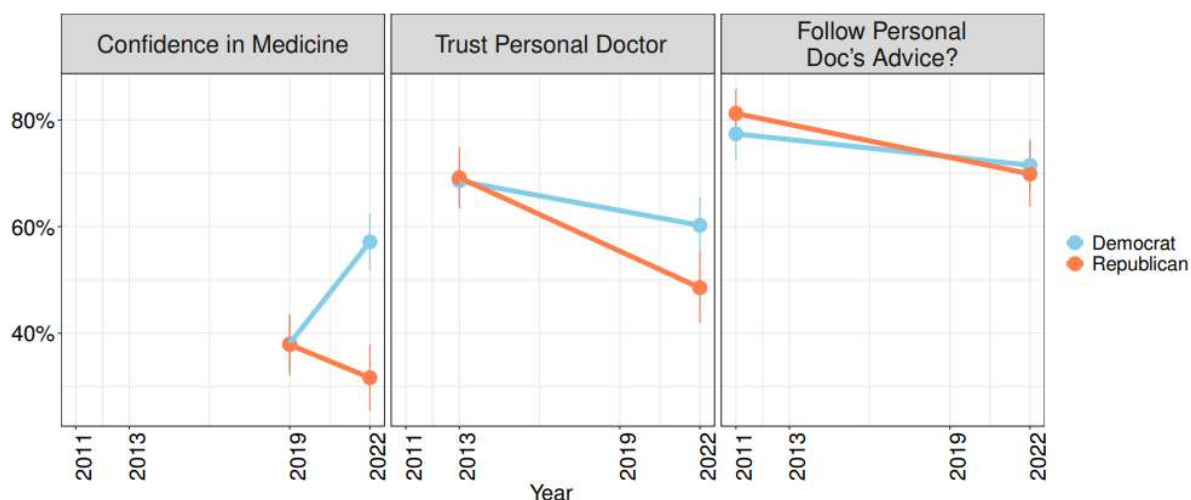
The final panel shows the percent of respondents who say they follow their doctor's advice "extremely closely" or "very closely." Because the 2011 sample included people only 50 and over, the 2022 respondents (in the third graph only) are subset to that age range as well. Here, the partisan divide is smaller, but there is still an appreciable shift. In 2011, Republicans 50 and over were about four percentage points more likely to indicate high adherence to their doctor's advice while in 2022, Democrats were about four percentage points more likely to exhibit high adherence levels. While the divide is modest, it represents an eight percentage point swing in 11 years.

What Explains Partisan Change in Trust Towards Personal Doctors?

Why might voters be polarizing in their trust towards their personal doctor? This section details three complementary explanations. One explanation for the growing partisan divide is compositional changes among the parties' supporters that happen to bring less-trusting voters into the Republican Party. Alternatively, the emerging partisan gap could be explained by growing generalized distrust among Republicans compared to Democrats that extends to include doctors, but is not unique to them. Scholars (e.g., Boon et al. 2020) document growing Republican distrust in institutions associated with the intellectual establishment including the media, science, academia and government itself. A third explanation, highlighted above, is that as messaging about COVID-19 precautions (social distancing, mask mandates and vaccines) became increasingly tied to Democrats and liberals, a spillover occurred into areas of health other than COVID-19, leading to an erosion of trust among Republicans more broadly (outside

of COVID-related measures).

Figure 3.1: Trust Over Time, by Partisanship



Note: Graph shows percent of people who identify as Democrat or Republican (excluding leaners as they are not available on initial surveys) and their trust/adherence towards facets of the medical system. The left-hand panel shows the percent of respondents who say they have “a great deal of confidence” in medicine. The middle panel is the percent of people who say they have a “great deal” of trust in their doctor; the right panel are the percent of respondents (50 and older) who say they follow their doctor’s advice “extremely closely” or “very closely.”

Changing Party Demographics – The two parties changed in the 2010s in a way that meaningfully correlates with trust in doctors: notably, the migration of the white working class from the Democratic Party to the Republican Party (Barber and Pope, forthcoming). People without a college degree are less trusting of institutions generally and are less trusting of doctors specifically. In 2013, white people without a bachelor’s degree were about six percentage points less likely to exhibit high levels of trust in their personal doctor than those with a college degree. As white working class voters moved from the Democratic Party to the Republican Party, they may have brought their distrusting attitudes with them. There are other potential explanations: despite a very racially polarizing election in 2016 and 2020, the parties actually experienced racial depolarization. People of color are generally less trustful of doctors and so if African-American and Latinx voters shifted towards the Republican party, this might contribute to the growing partisan divide.

To investigate these possibilities I control for confounding demographics available in both survey waves that might affect both partisanship and trust in one’s doctor: age, income, race, gender and education. I regress the four-point trust in doctor scale on partisanship, an indicator variable for year and an interaction of time and partisanship; Table 3.1 shows the results. The variable “Dem/Rep x Year” (the interaction term) shows the difference in partisan trust between 2013 and 2022. Column 1 is the simple bivariate relationship and the negative coefficient means Republicans have become less trusting compared to Democrats.

Table 3.1: Change in Trust: Controlling for Covariates

	(1)	(2)	(3)	(4)	(5)	(6)
	Doctor	Doctor	Doctor	Judges	MoC	Neighbors
Dem/Rep	0.01 (0.06)	-0.00 (0.06)	-0.07 (0.06)	0.01 (0.06)	-0.11 (0.07)	0.25 (0.07)
Year	-0.06 (0.05)	-0.08 (0.05)	-0.12 (0.05)	-0.19 (0.06)	-0.23 (0.07)	-0.26 (0.06)
Dem/Rep × Year	-0.15 (0.08)	-0.11 (0.08)	-0.11 (0.08)	-0.16 (0.09)	-0.19 (0.11)	-0.14 (0.10)
BA+		0.14 (0.04)	0.06 (0.05)			
Inc<30K			-0.07 (0.05)			
Inc>100K			0.14 (0.05)			
Male			-0.04 (0.04)			
White			0.15 (0.08)			
Black			0.10 (0.10)			
Hispanic			0.11 (0.09)			
Age			0.01 (0.00)			
Constant	3.59 (0.04)	3.55 (0.04)	3.14 (0.10)	3.01 (0.04)	2.69 (0.05)	3.13 (0.04)
<i>N</i>	1169	1169	1146	1131	1144	1164

Standard errors in parentheses

If diverging trust levels between the parties is compositional, controlling for demographic variables that correlate with both trust in doctors and changing partisanship should diminish the relationship. That is, if changing education levels or racial makeup of the parties' bases explains the difference in trust levels between 2013 and 2022, controlling for those factors should erode the interaction between partisanship and year. Column 2 shows that controlling for education, a correlate of both trust in doctors and changing partisanship in this era, somewhat reduces the growth of partisan divisions. However, adding in more controls for income, race, age and gender do little to change this relationship further (column 3).

It is worth emphasizing a point related to the analysis above: not only does partisanship predict trust in one's own doctor in 2022, it is robust to controlling for a host of covariates that might be correlated to trusting one's doctor. Partisanship is not simply a proxy for other baseline factors that influence trust in one's doctor. In fact, among people who have a doctor or place they regularly go when they are sick or need advice about their health, with the exception of age, *partisanship is the strongest predictor of trust in one's doctor* in my 2022 NORC sample. In this analysis at least, partisanship (identifying as a Democrat versus Republican) is more predictive

of trust in one's doctor than income, race, insurance status or education.

General Partisan Distrust – Rather than changing composition of the parties along demographic lines, the emerging partisan gap could also be explained by growing distrust in general among Republicans compared to Democrats. Scholars (e.g., Chapter 1; Boon et al. 2020) document growing Republican distrust in institutions that have been associated with the intellectual establishment including the media, science, academia and government itself. This could be due to either compositional changes or opinion change. As Trump attracted anti-establishment voters from the Democratic Party, these voters potentially brought distrust across a range of people and institutions with them (e.g., Sides, Vavreck and Tesler 2019). Alternatively, as Trump messaged anti-establishment cues, this might have eroded trust across a variety of institutions and people, including doctors.

Both the 2013 AARP survey and the 2022 NORC survey ask about people's trust in their member of Congress, judges, and a respondent's neighbors using the same wording and scale which we ask about trust in their personal doctor. Are Democrats and Republicans polarizing by trust in just doctors, or are they polarizing in their trust in these other figures as well?

Columns 4, 5 and 6 of Table 3.1 show the change in partisan gap between 2013 and 2022 on the four-point trust scale for judges (model 4), members of Congress (model 5), and trust in neighbors (model 6). When compared to Democrats, Republicans are becoming more distrustful in each group. This aligns with the theory that there is a general growing trust gap along partisan lines that includes, but is not exclusive to, trust in doctors. The measures available in both years offer another insight: that distrust and polarization is not unique to system-oriented people (judges and members of Congress), but also applies to neighbors (albeit to a slightly smaller degree).

Perceptions of Doctors as Partisans – This section explores a third source of growing divides in trust towards doctors: partisan messaging related to COVID-19. As messaging about COVID-19 precautions (social distancing, mask mandates and vaccines) became increasingly tied to Democrats and liberals, Republicans may have decreased their trust in doctors, adherence to doctor's advice, and become more distrustful of medicine more broadly.

To test this hypothesis, I developed a survey experiment conducted on the *Prolific* survey platform of people over 18 years of age living in the United States. This is an opt-in convenience sample, so the cross-sectional results do not represent the population at large, but are useful for analyzing differences between experimental treatment groups. Because *Prolific* samples tend to be heavily Democratic, and Republicans are important to the intervention, I over-recruited people who reported voting for Donald Trump in the 2020 election. Of the 1204 survey participants, 1150 passed a basic attention check and were included in the study (95.5% passage rate, which is a good return for online samples (see Aronow et al. 2020)).

In this experiment, I primed respondents to think about COVID-19 in a partisan lens, as was common during the pandemic. To do this I showed respondents in the treatment group a headline that was typical of partisan charges during the COVID-19 crisis: that Dr. Anthony Fauci, the head of the National Institute of Allergy and Infectious Diseases and the medical community's public face of the COVID crisis, was a Democrat. The headline, taken from the *New York Post* reads: "Trump bashes Anthony Fauci as 'a Democrat' and 'Cuomo's friend.'"³² This experiment mimics messaging that was repeated many times over in the first years of the pandemic. The outcomes of interest are three questions that closely parallel the questions above:

³² <https://nypost.com/2020/10/15/trump-slams-dr-fauci-as-a-democrat-and-cuomos-friend/>

trust in one's personal doctor (answered on a 0-10 sliding scale), whether someone adheres to their doctor's advice (answered on a 0-10 sliding scale), and whether a person has confidence in the medical system (four-point scale). To get a baseline I asked respondents each of these questions, in addition to a range of demographic variables, in the first survey wave. Two weeks later respondents were re-interviewed. At this point half of respondents that returned were randomly assigned to the treatment group and were shown the headline that Fauci was a Democrat while half were assigned to a pure control group (and saw no prime). Of the 1150 respondents in wave 1, 1040 returned to wave 2 (90% return rate; attrition is not correlated with wave 1 characteristics or outcome variables.)

We expected that Trump voters exposed to the treatment would express lower trust in their personal doctor, decreased willingness to follow their doctor's advice and less confidence in the medical system as a whole. We expected exposure to the prime would increase trust, adherence and confidence among Biden voters.

The results, presented in Figure 3.2, show this to be generally the case. Each point in Figure 3.2 is the difference-in-difference, presented separately among Biden voters (blue dots; $n = 287$) and Trump voters (red dots; $n = 542$), controlling for wave 1 attitudes. The estimates can be represented by the following equation where Y represents the outcome of interest (adherence, trust in doctor, confidence in the medical system):

$$Y_{t=1} - Y_{t=0} = \alpha_1 + \beta_1 \cdot T_{reat} + \beta_2 \cdot Y_{t=0} + \epsilon$$

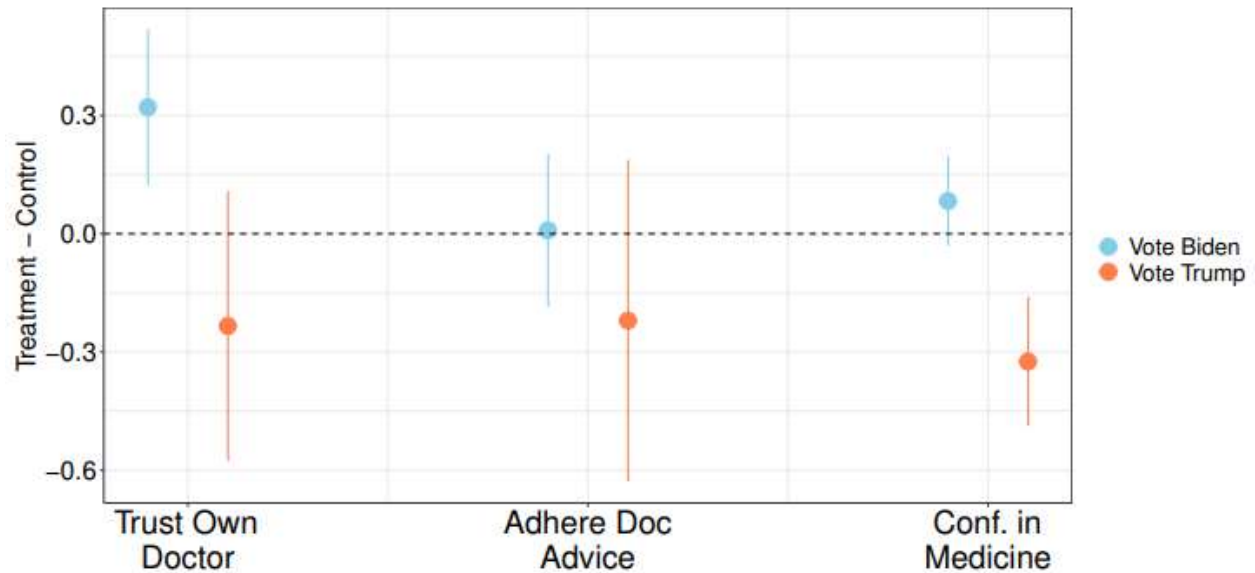
$Y_{t=1}$ represents the outcome of interest after treatment while $Y_{t=0}$ represents the outcome of interest before treatment. By controlling for the baseline ($Y_{t=0}$ in the above equation) I am controlling for regression to the mean between survey waves. The estimate of interest is β_1 which measures the difference in the given outcome measure between wave 1 and wave 2 between respondents in treatment and control (difference-in-difference).

Consider the left-most blue point in Figure 3.2, which is *positive*. This point consists of Biden voters only, and is the difference in each respondent's post-treatment trust minus their pre-treatment trust for those in the primed condition versus the control condition. It is positive because Biden voters in the treatment group expressed more trusting attitudes after the Fauci prime when compared to the control group. The first red point is negative because Trump voters that received the Fauci prime became less trusting than those in the control group (who received no prime).

The Fauci prime generated partisan polarization towards both trust of one's own doctor and confidence in medicine. The Fauci prime did not change reported adherence among Biden voters, although it did decrease reported adherence to doctor's advice among Trump voters. This is possibly because Biden voters already have high compliance and a small prime is unlikely to make any difference. Similarly, each of these measures, but especially reported adherence to a doctor's advice, are sticky, making a change of these attitudes difficult. This makes the even modest change among Trump voters striking.

This survey experiment parallels the over-time changes shown in the previous section. As people were repeatedly shown partisan messages about COVID, it not only polarizes confidence in the medical system as a whole, but spills over into trust of one's personal doctor. Biden voters express more trust and adherence, and Trump voters express less.

Figure 3.2: Experimental Prime: Fauci is a Democrat



Consequences of Viewing Doctors as Partisan

The increasing politicization of medicine, whether due to COVID, health care reform or abortion policy, means that people have more opportunities to evaluate their doctor through a partisan lens. Patients may ask their doctor's political views or come to conclusions about their political allegiances given their public-facing activities on social media or otherwise.

A literature on trust in the medical field focuses on patients and their doctors sharing identities as a means to increase trust in one's personal doctor. These studies largely focus on sharing a racial or gender identity. Black people are more trusting of black doctors and women are more trusting of female doctors. Might partisanship have a similar effect?

Conjoint Experiment – To investigate this possibility I conducted a conjoint experiment in which respondents select one of two doctors they would choose to visit given a host of covariates of a hypothetical doctor. This experiment assumes that to engage with a healthcare provider, one must trust them in the first place. This is a related but distinct concept of trusting a doctor that is already providing care.

If made plainly clear to patients, does a doctor's politics affect people's decision to seek care even after taking other factors into account? I conducted this experiment at the end of the first wave of the experiment described in the previous section. The pool of respondents were people living in the United States who are 18 years or older.

I asked respondents, "Suppose you need to schedule a dermatology appointment and are choosing which dermatologist to go to. Which dermatologist are you more likely to schedule an appointment and visit? Doctor A or Doctor B?" I then presented respondents with a table of randomly assigned attributes across each of the categories detailed in Table 3.2. Each respondent was asked to do this twice. The order in which respondents saw the attributes varied across respondents, but within respondent, the rank stayed the same.

Table 3.2: Conjoint Table

	Doctor A	Doctor B
Patient Rating (out of 5 stars)	[3.9, 4.1, 4.9]	[3.9, 4.1, 4.9]
Distance from you (minutes)	[10 minutes, 35 minutes]	[10 minutes, 35 minutes]
Education	[Ivy League, State school]	[Ivy League, State school]
Race	[Black, White, Hispanic]	[Black, White, Hispanic]
Gender	[Male, Female]	[Male, Female]
Party	[Democrat, Republican]	[Democrat, Republican]

I included attributes that are important factors in the decision, and are often readily available, to people when searching for healthcare providers such as patient ratings, distance to the office and, because photos are often included in doctor bios, perceived race and gender. In the context of this experiment, and of primary interest, I also labeled the doctor as a Democrat or Republican. While a blunt treatment, it enables the observation of a treatment effect if it exists. Furthermore, this information is sometimes available: there are databases for doctors that align with your political views, and partisan voter registration data is often public.

Thus, each respondent saw a table for Doctor A and Doctor B, with attributes randomly assigned. For example, Doctor A was randomly assigned to have a 3.9 star rating, 10 minutes away, attended an Ivy league (and so on) while Doctor B had a 4.1 star rating, was 35 minutes away, and attended a state school (and so on). Because I randomly assigned attributes, it is possible both Doctor A and Doctor B shared an attribute (e.g., both are male). Each respondent was shown two tables for a total of 2,299 choices (1,150 respondents $\times$ two tables per respondents; one respondent ranked only one of the tables).

To analyze the experiment, I subset the sample between Democrats (represented by blue dots) and Republicans (represented by red dots) and estimate the average marginal component effect (AMCE) using the following equation (standard errors are clustered at the individual level):

$$Doctor_{A|B} = \beta_0 \cdot HighRating + \beta_1 \cdot MedRating + \beta_2 \cdot FarAway + \beta_3 \cdot IvyLeague + \beta_4 \cdot Black + \beta_5 \cdot Hispanic + \beta_6 \cdot Male + \beta_7 \cdot Democrat + \alpha_0 + \epsilon$$

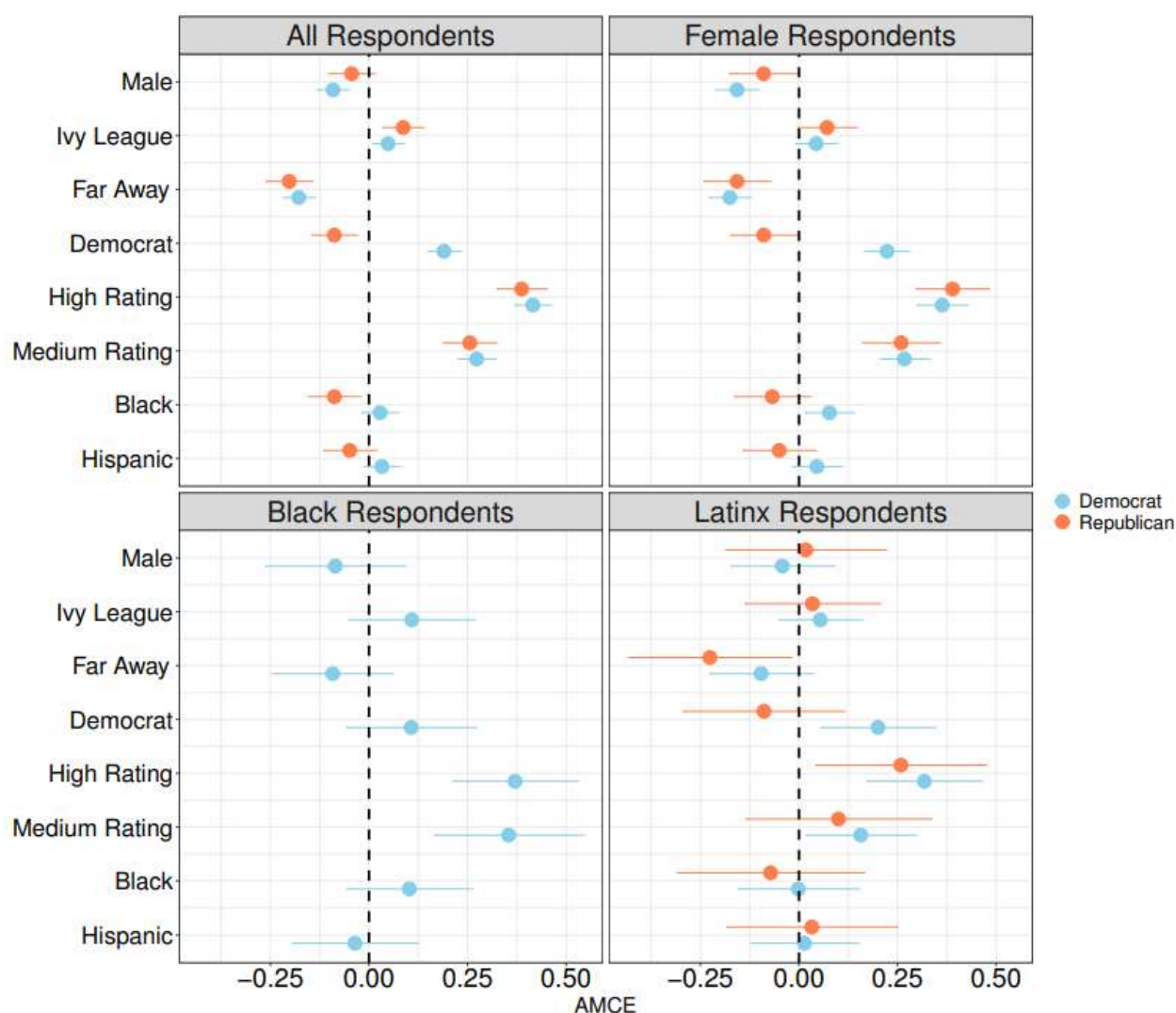
The AMCE for all respondents, estimated in the top-left panel of Figure 3.3, shows the marginal effect of a doctor with a given attribute against the baseline. For example, coefficients next to “High Rating” and “Medium Rating” show the marginal effect of doctors with either of these ratings compared to those with a low rating (which is the baseline), averaged over all other combinations of attributes. As one might expect, doctors with a higher rating are preferred to a lower-rated doctor. Medium-rated doctors are also preferred over lower-rated doctors, but less so than highly-rated doctors.

Of interest here is the coefficient on Democrat among Democratic (blue dots) and Republican (red dots) voters. As expected, Democrats are more likely to say they would choose the Democratic doctor compared to the Republican doctor. The reverse holds true for Republicans.

To benchmark the importance of partisanship, consider the marginal effect of

co-partisanship versus sharing a gender or race. An existing literature predicts that patients who share a racial or gender identity with their doctor have increased levels of trust. How does sharing a partisan background compare? The remaining three panels of Figure 3.3 subset respondents by gender and race. Among Democratic women, black Democrats and Hispanic Democrats, sharing a partisan label is at least as important as sharing a gender or racial identity. The same is true for Latinx Republicans, although the coefficient is not statistically significant (the sample lacks enough black Republicans to present analysis). These results are striking; a robust literature points to the importance of shared identity for increasing trust among women and under-represented minorities. The conjoint experiment hints that the importance of partisanship potentially rivals these attributes.

Figure 3.3: Conjoint Experiment: Which Doctor Would You Choose?



Conclusion

This chapter documents two main findings. First, I show that over the last decade a partisan gap has emerged in people's trust of their personal doctor. There was also smaller, but not negligible growth in partisan reporting of adherence to a doctor's advice among people 50

and older (for whom data are available). These accompany increasing partisan divisions in confidence of the medical community as a whole. Second, I find evidence that framing the medical response to COVID in a partisan lens decreases trust among Republicans in not only the medical community at large, but Republicans' trust in their own personal doctors. I find the reverse effect among Democrats.

The implications of these findings are significant. They document the stakes of viewing medicine through a partisan lens: if doctors, like other groups of people, are seen as tied to a political party, they become less credible to a portion of the population. The opposite is also true: in an era where almost all information has the potential to be filtered through a partisan lens, receiving medical advice from someone who shares your background has the potential to increase trust in your doctor and to increase the likelihood you follow that doctor's advice. In a period where mental and physical health indicators are declining (Case and Deaton 2015), and deaths of despair are increasing, understanding the role politics plays in seeking medical care is crucial.

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