The Evolution of Political Behavior Research, 1980–2009

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ABSTRACT

What are the most important concepts in the political behavior literature? Have experimental data sources supplanted surveys as the dominant method in political behavior research? What role does the American National Election Studies (ANES) continue to play in this literature? The researchers utilize a content analysis of over 1,100 quantitative articles on American mass political behavior published between 1980 and 2009 to answer these questions and thus provide a novel snapshot of the evolution of the field of political behavior. Four key takeaways are apparent. First, the agenda of this literature is heavily skewed toward understanding voting, rather than looking at specific policy attitudes and other topics. Second, experiments are ascendant, but nowhere close to displacing survey data sources, and particularly the ANES, as the central workhorse of American political behavior research. Third, while important changes to this agenda have occurred over time, it remains much the same as it was in 1980. Fourth, the centrality of the ANES seems to stem from its time-series component. In the end, the researchers conclude that the ANES is a critical investment for the scientific community and a main driver of political behavior research.

The central purpose of political science research is to generate knowledge about how politics works. This is done through the exploration of more specific questions such as why (some) citizens vote, how citizens formulate preferences regarding candidates and policies, and how environmental stimuli such as elite appeals and social interactions influence opinions. The preceding several decades of research on political behavior has seen innovative work by many scholars that has advanced our understanding of these broad questions, as well as many others (for but a sampling of relevant research, see Chong and Druckman 2007; Duch and Stevenson 2008; Hillygus and Jackman 2003; Huckfeldt and Sprague 1995; Iyengar and Kinder 1987; Lau and Redlawsk 2006; Leighley and Nagler 2013; Lodge, Steenbergen, and Brau 1995; Mutz 2006; Vavreck 2009; Zaller 1992).

Such gains, however, are not solely attributable to the creativity and passion of the scholars who produced them. The discipline as whole has also made considerable investments in data infrastructure and collections to support this important work. For example, since 1980, the American National Election Studies (ANES), have used many millions of dollars of federal funding to provide the data used in thousands of empirical analyses, many of which have been published in the discipline's leading journals. Likewise, the discipline's investment in the ANES has been mirrored by huge investments by private foundations and others in largely cross-sectional survey projects (e.g., Pew's Research Center on United States Politics & Policy, the Annenberg National Election Survey, the Cooperative Congressional Election Study, and the Cooperative Campaign Analysis Project).

As with any portfolio of investments, however, it is important to occasionally conduct an audit and ask if such allocations are justified and are producing the kinds of advances that we seek. Such an audit is particularly important now, given the development of new measurement

strategies that may challenge the continued value of large scale resources such as the ANES. Grant-making activities from government, foundations, and universities have increasingly supported various data collection strategies like laboratory experiments, survey experimentation (e.g., the Time-Sharing Experiments for the Social Sciences program), and, most recently, the mining of social media data (see, e.g., https://wp.nyu.edu/smapp/). In addition, the development of crowd-sourced data collection tools such as Amazon's Mechanical Turk may provide researchers with a cost-effective method for collecting data. These new resources are attractive as they enable some flexibility in data collection, although they clearly lack one of the key calling cards of resources such as the ANES—the ability to investigate mass politics over a long time period. Without occasionally stepping back and reviewing what we are funding and how it is translating into scholarship, we risk making funding decisions based on inaccurate or outdated ideas about how the discipline is or is not changing and what the drivers of our intellectual progress really are.

In this paper, we seek to provide an audit for the field of political behavior, and particularly the role of the ANES. We use content analysis data from more than 1,100 articles about American political behavior, published in eleven leading journals from 1980 to 2009 to explore, over time, the concepts most frequently studied and the methods typically employed to measure them. With such data, we can ask (and answer) a variety of specific questions: Given available data collections, what questions and topics have dominated political behavior research since 1980? Has a growing emphasis on experimental methodology (Druckman et al. 2006, 2011) led to a diminution of survey methods as the tool kit of choice for political behavior scholars? What role has the ANES, the largest investment by the National Science Foundation in political science, played in driving research on these concepts? Have the core concepts measured

in the ANES time-series continued to be relevant to most scholars of American political behavior? Does the data on what is being measured justify a different allocation of resources or a rethinking of the value of the ANES time-series?

In the remainder of this article, we first describe the data we collected and then present our analyses and conclusions. To preview, we find that the published research in American political behavior has (since 1980) been heavily skewed toward a small number of important concepts central to understanding voting. Further, over the entire period, these central concepts have been measured most often using survey methods, with use of experimental and archival data trending positively—though posing little threat to the dominant role of survey measures in the field. Perhaps surprisingly given the plethora of alternative survey data sources in recent years and the availability of inexpensive survey alternatives (e.g., Santoso, Stein, and Stevenson 2016), we find that researchers continue to use the ANES as the primary source of data about the central (and most frequently used) concepts in American political behavior. In addition, despite some important exceptions we discuss, there is a notable *stability* in the conceptual agenda and methodological focus of political behavior research over time. Finally, we provide clear evidence that the centrality to the ANES for political behavior research stems *from its time-series component*. The unique ability of researchers to use the ANES to explore variation (or lack thereof) over multiple elections continues to render the ANES invaluable to the field of political behavior.

Data

To investigate the evolution of political behavior research, we opted to focus on the years 1980 to 2009; this time frame not only encapsulates a fairly long period of time but also includes the purported rise in (or return of) political behavior research centered on political persuasion

(e.g., Mutz et al. 1996), and experimental methods (e.g., Iyengar and Kinder 1987). We

downloaded all (i.e., approximately 10,000) articles from a set of eleven journals that ostensibly

publish much of the central work in the field.[1] From these, we selected the 1,163 articles that

employed some quantitative approach to study one or more questions in the field of American

mass political behavior.[2] This meant we had roughly 39 articles coded per year.[3] We then had a

team of coders closely read and content analyze these articles.[4]

Information about the *substantive* content and data sources used was recorded in depth

and serves as the central data for our purposes. Two elements of the contents of each article were

available to be coded. First, coders indicated whether each article used any of 48 different

"concepts" we believed central to political behavior research; a full listing of the concepts can be

found in Table 1. Our identification of concepts was informed by our own broad experiences of

working in the field, which when taken together (i.e., sum of author X years) constitute more

than three quarters of a century of work, as well as a review of the ANES core and other major

surveys (e.g., Cooperative Congressional Election Study).

Notably, the concepts listed in Table 1 include, but are not limited to, factors related to

partisanship (e.g., party identification and feelings toward the parties), political participation

(e.g., vote choice and various elements of news consumption), values (e.g., liberal-conservative

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[1] The journals include the *American Political Science Review*, the *American Journal of Political Science*, the *British Journal of Political Science*, *The Journal of Politics*, *Perspectives on Politics*, *Political Behavior*, *Political Psychology*, *Political Research Quarterly*, *Political Science Quarterly*, *Public Opinion Quarterly*, and the *Western Political Quarterly*.

[2] As such, pure theory papers (formal or not), opinion papers, qualitative empirical papers, papers about other countries than the United States, and papers only about political elites rather than ordinary Americans are excluded. We arrived at our total N in two stages. First, a team of coders read the abstracts for all the downloaded articles, selecting the relevant ones (with this, our sample was 1,832). Second, our main content analyzers assessed whether the article met our criteria and, if not, they did not code it.

[3] The years 2008 and 2009 are outliers in terms of coded articles; while between 27 and 51 articles were coded per year between 1980 and 2007, only 8 articles were coded in 2008 and 14 in 2009. See Figure OA1 in the Online Appendix for a detailed look at the distribution of articles per year.

[4] Coders were provided with a detailed instruction document and engaged in substantial practice coding before encountering the articles in the data sample.

values and moral traditionalism), and attitudes toward/about government (e.g., political efficacy, trust, and Presidential/Congressional approval). The concepts are at a very general level and do not refer to particular questions; for example, one concept is "personal economic situation," which could be operationalized in dozens of ways (e.g., the ANES offers over 50 measures on its core utility). When it came to the actual coding, coders rarely, if ever, inquired about a concept in an article that was not part of the coding scheme.[5] This gives us confidence that we captured the full range of concepts.

[INSERT TABLE 1 HERE]

The second type of item coders recorded concerned whether the article in question incorporated data pertaining to 11 distinct policy domains (see Table 1). The coders could indicate whether the article included measures pertaining to individual attitudes, perceptions of party positioning, and/or perceptions of candidate positioning on the issues. In creating this list of issues, we relied more directly on the ANES as, each year, the ANES makes an effort to include long-standing critical issues as well as emerging ones, as reflected in policy-making and news coverage. Overall, then, each article could be coded for the presence of up to 81 (48 concepts + 33 issue indicators) different content elements. Coders also indicated whether a concept or policy position, when present in the article, was "central to the main themes of the paper." This enables us to speak not just to the frequency of a wide array of topics in research on American mass political behavior but also to their relative importance in the field.

Additionally, coders recorded the data source(s) used in the manuscript. Coders indicated whether the ANES, Other Survey(s), Experiments, or Archival sources provided the data for

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[5] To assess reliability, we had a team of 21 coders code the same 5 articles, identifying whether or not a concept was present. Thus, there were 48X5X21 total decisions to be made (i.e., 5,040). We found 91% agreement.

each of the concepts/policy issues coded as present in the article. When necessary, coders could

indicate that more than one data source had been employed. If the coder indicated that the ANES

had been used in the manuscript, they were further queried as to whether one, two, or three or

more ANES surveys had been used. These measures enable us to track the methodological

progression of political behavior research over the preceding three decades as well as the

frequency of use of the time series component of the ANES. Put another way, it allows us to

audit the worth of the ANES by documenting the extent of its usage and, in particular, whether

the time-series aspect of the ANES drives its application.

<div align="center">**Analyses**</div>

We begin by considering the agenda of the American political behavior literature

between 1980 and 2009. While this does not directly speak to the question of "auditing" the

worth of investments in different data collection approaches, it provides indirect evidence on

whether central concepts cohere with the missions of those data collections and specifically the

ANES. Then, we turn to an explicit investigation of methodological orientation. In so doing we

will also consider potential differences in substantive focus by method.

The Agenda of American Political Behavior Research

One place to begin is a consideration of the "complexity" of political behavior research

via a focus on the number of concepts and policy issues coded as present in the articles. On

average, articles contained 4.99 (s.d.: 3.73) coded elements representing the use of

approximately six percent of the potential codes. Interestingly, articles on average tended to

feature more "concepts" (mean: 3.88, s.d.: 2.54) than policy issues (mean: 1.11, s.d.: 2.40). This

gap does not arise from the availability of more concept codes than policy codes as it remains

even when focusing instead on the average proportion of codeable concepts and policies found in

the articles.[6] Moreover, there is some evidence that this gap has increased over time due to a slight increase in concept use and a slight decrease in issue use across the years coded (see Figure OA2 in the Online Appendix).

[INSERT FIGURE 1 HERE]

Figure 1 provides more context concerning the core contents of the American mass behavior literature.[7] First, the left-hand sub-graph in Figure 1 plots the number of times each concept and policy issue code was indicated as present in an article. A small set of factors dominate the scene; while the mean number of appearances per concept/issue is 71.54 (s.d.: 101.39), the median value is only 34. A great many of these factors thus appear rather sparingly in the dataset. The right-hand sub-graph in Figure 1 drills down into this distribution by focusing on the most used concepts, specifically those that appeared in at least 10% of articles, and therefore represents a first approximation of the core of the American political behavior agenda of the past thirty years. Two elements of this sub-graph stand out. First, the composition of the items speaks to the heavy focus of the behavior literature on voting as these most used concepts either directly speak to this behavior (e.g., vote choice and turnout) or deal with central explanatory factors used in voting studies (e.g., PID, ideology, interest, knowledge, and three issue attitudes at the heart of political debate in the United States). Second, this list is again dominated by "concepts" to the relative deprivation of focus on policy issues. Figure 1 thus suggests an agenda for behavioral research that is focused on voting to the detriment of other aspects of political participation and other opinion formation processes (at least in relation to

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[6] Articles, on average, were coded as containing approximately 8% of the available concepts and approximately 3% of the available policy issue codes.

[7] Tables OA1 and OA2 in the Online Appendix provide a tabulation of code frequency, centrality, and method use for each of the 81 concepts/issues.

specific issues).[8,9] Importantly, this conceptual focus on voting (elections) is suggestive about the

centrality of the ANES, whose stated mission is "to inform explanations of *election* outcomes by

providing data that support rich hypothesis testing, maximize methodological excellence,

measure many variables, and promote comparisons across people, contexts, and time"

(http://www.electionstudies.org/; italics added). We will return explicitly to the role of the ANES

in the next section, but the conceptual state of the field suggests one that is consistent with the

purpose of the ANES.

Figure 1 focuses on the most used concepts in American political behavior research.

However, this may give a mistaken impression of the factors dominating this agenda insofar as

some concepts may appear very frequently as components ancillary to the main purpose of the

article (e.g., as control variables). To get a better sense of which concepts have been most

important, we asked our coders to indicate whether the concept in question was "central to the

main themes of the paper." The average number of "central" factors per article was 2.93 (s.d.:

2.67). While concepts were more likely to be coded as present than policy information, they were

roughly similar in their propensity to be recorded as "central"; on average 2.23 (1.64) concepts

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[8] This is at least partially due to the cutoff used. "Campaign Activity", for instance, was the 21st most frequent topic of the behavior literature, appearing in 91 articles. However, this pales in comparison to the 345 appearances of "Vote Choice" and the 209 appearances of "Turnout."

[9] We have also explored the inter-relationship in use between these concepts and issues via factor analysis; see Figure OA7 and Table OA3 in the Online Appendix for the results. Thirteen factors emerge before rotation with an eigenvalue greater than 1, with most of these factors relating to combinations of the policies (e.g., Factor 1 captures most of the Candidate Placement issue codes, Factor 2 Party Placement on four issues, and Factor 3 Individual issue attitudes on six of the policies). The remainder of the factors with EV > 1 focus on sensible combinations of items, including news consumption (TV, Newspaper, and Radio), religion and values (Religious Identity, Religious Values, and Moral Traditionalism), Economic Conditions (Economic Performance andPersonal Economic Situation), and perceptions of the President performance, or the Parties' performance, on the Economy and Foreign Affairs. The factors that emerge past these thirteen factors explain small increments of variation and mainly represent two closely related concepts at a time. Factor 14 concerns Attitudes Towards Blacks and Stereotypes while Interest in Politics/Campaigns and Campaign Activity load onto Factor 15. Thus, there does appear to be an appreciable structure to concept use, albeit one of "small bites" rather than a larger over-riding structure.

were considered central versus 2.36 policy issues with scant a correlation between the two ($r = 0.09$).

<div align="center">**[INSERT FIGURE 2 HERE]**</div>

There are two ways to use this information to inform our understanding of the most important elements of American mass behavior research, both of which are displayed in Figure 2. First, we can consider centrality *contingent on appearance* in an article. In other words, when a concept is coded as present how often is it also coded as central? The left hand sub-graph in Figure 2 provides the 15 most central concepts/issues by this reckoning. While interesting, this method of determining centrality provides a misleading image of the factors most central to the behavior literature as the resulting tabulations tend to privilege little used concepts/issues that happen to receive specialized attention. For instance, attitudes about divided government were coded as central in all three articles this concept was coded as present within and thus was "central" in 100% of cases. The right hand sub-graph of Figure 2 instead focuses on the number of times a concept/policy was coded as central out of all potential cases—all 1,163 articles. The resulting list looks very similar to the ranking produced in Figure 1, with "Vote Choice" and "Party ID" emerging as the dominant factors, appearing as central in at least 20% of potential cases. Figure 2 also shows the beginnings of a sharp drop off in "centrality" after the fifth most used item ("Racial Identification"), with the remainder of items, and thus the vast majority of factors, coded as central in fewer than 10% of the possible cases. Figure 2 reiterates the skewed topical focus of the American political behavior literature, one heavily centered on the vote decision (and, as mentioned, one cohering with the ANES's focus).

<div align="center">**[INSERT FIGURE 3 AROUND HERE]**</div>

Figures 1 and 2 indicate that there is a clear focus to the American political behavior literature in the aggregate, but this does not tell us about any potential dynamics or evolution in these patterns. Figure 3 enables such an investigation by plotting the rate of appearance for the 15 most central elements identified in Figure 2 over time (see Figures OA3-OA6 in the Online Appendix for the remainder of the concepts/policies). Because the number of articles coded per year varies, Figure 3 focuses on the proportion of articles coded in a given year wherein the concept in question was present. On the one hand, Figure 3 shows a fair degree of stability for many of these items, including Vote choice, Party Identification, Voter Turnout, and Attitudes regarding Services and Spending. On the other hand, there does appear to be a noticeable increase in the use of "Racial Identity" and "Political Knowledge" over time and a decreasing emphasis on Attitudes on Jobs, Income Support, and Aid to Blacks. On the whole, though, Figure 3 suggests a research agenda that, despite some fluctuations, appears to be fairly consistent over time.[10]

Figures OA3-OA6 in the Appendix provide an overview of the remainder of the coded items over time. We pause to note three interesting patterns that emerge. First, there is a marked increase in the use of two values items—"Equalitarianism" and "Moral Traditionalism"—perhaps reflecting the increased salience of cultural issues in American politics and concomitant efforts at understanding the nature and origins of political values among the mass public (e.g., Carmines, Einsley, and Wagner 2012; Goren, Federico, and Kittilson 2009; Jost, Federico, and Napier 2009). Second, there is a slight increase in attention to "Campaign Contact" beginning in the early 1990s, signaling a renewed interest in the topic following Rosenstone and Hansen's (1993) landmark book and the resulting field experimental literature on the effectiveness of

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[10] Interestingly, ethnic identity also sees a marked increase in use during this time.

various mobilization strategies (e.g., Gerber and Green 2000; Gerber, Green, and Larimer 2008; Sinclair 2012). Finally, there is a decrease in attention to many of the individual issue attitude measures albeit with one notable exception: a positive trend in attention to respondent attitudes on Gay & Lesbian issues. Thus, Figure 3 and Figures OA3-6 suggest a political behavior agenda with a solid anchor (voting behavior, consistent with the mission of the ANES) and insurgent interest in values and cultural issues.

Political Behavior Methodology Over Time

In the foregoing we focused on the *content* of political behavior research over time—the *what* of the behavior literature. We now turn to discussing the methodological focus of this research—the *how* of this body of work. Recall that each article was coded as to whether it used data from the ANES, Other Surveys, Experiment(s), or Archival sources, with coders able to mark more than one source as needed. The dominant methodology within these article is survey methodology, with some type of survey coded as present in 914 (78.52%) of the articles. This far outstrips the number of articles using either Experimental (n = 113, 9.71%) or Archival (n = 188, 16.15%) data sources. Political behavior research, at least when it comes to American political behavior, is nearly synonymous with survey methodology.

Survey methodology dominates American political behavior research and the ANES dominates within this category and, hence, within this literature. While 50.95% of all articles were coded as using "Other Surveys," a sizable proportion of all articles featured the ANES (33.76%). Given this distribution the ANES is likely the single most important data source for political behavior research on American mass politics.[11]

[INSERT FIGURE 4 HERE]

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[11] Although it must be noted that when "Other Survey" was coded the source of the survey was not coded, e.g., whether it was from Gallup, Pew, or a single shot survey administered by the researcher.

Has the dominance of the ANES changed over time? We address this with Figure 4, which provides a temporal perspective of the methodological choices made in American political behavior research. The top row of graphs provides the proportion of articles in a given year where a particular data source was coded as present. The bottom row of graphs provides data for the two survey options combined as well as an examination of the potential trends in mixed data use (i.e., the proportion of articles using both Survey and Experimental data or Survey and Archival data). A few notable points emerge from Figure 4. First, the dominance of survey data sources over experimental and archival sources discussed above can clearly be seen at play in Figure 4. Second, while there has been a recent uptick in use of experimental methods (see also Druckman et al. 2006, 2011), this growth is rather modest and experiments are still a clear minority in data use compared to surveys overall and to the ANES in particular. During the last five years of the 2000s (2005-2009), approximately 13% of coded articles featured experimental methods, nearly triple the figure from the first five years of the time series (1980-1984; 4.6%). However, the former number is still well below the average proportion of articles using survey methods during this time frame (74.1%) and nearly a third of the figure for the ANES (35.6%). Finally, there is some evidence of an increased tendency to mix data sources, but surprisingly between survey and archival data sources and less so with survey and experimental methods, despite the potential benefits to a study's internal and external validity of pairing these latter data sources. Ultimately, Figure 4 shows a slowly changing data landscape, one dominated by survey methods, and particularly the ANES, but with a slow growing emphasis on experimental data sources.

[INSERT FIGURE 5 HERE]

Contributing to the predominance of the ANES is surely the ability of researchers to explore important questions over a long time frame, something which alternative data sources cannot equal. This fact is captured in Figure 5 which plots the proportion of ANES coded articles, both overall and over time, using a single, 2, 3 or more, and 2 or more ANES surveys (the 2 or more category merges the "2" category and the "3 or more category). Nearly 70% (270/393) of the articles coded as containing ANES data use the Time Series component of the survey (i.e. at least two surveys were used). Notably, researchers appear to have made increasing use of the Time Series, as the remainder of Figure 5 attests. For instance, during the time span of 1980-1984 approximately 31% of ANES coded articles per year used three or more ANES surveys. This number doubled by the end of the coded time frame to approximately 69% per year during the time frame of 2003-2007.[12] Clearly, researchers are making use of the over-time continuity available in the ANES. While the emergence of online data survey collection resources, such as YouGov, GfK, and Mechanical Turk, may enable researchers some greater flexibility in designing studies to capture important elements of political behavior during single time periods, the ANES seems poised to remain the key resource for American political behavior researchers interested in over-time analyses.

[INSERT FIGURE 6 HERE]

Finally, we can square the circle here and return to our discussion of the contents of political behavior research and, specifically, how concept use varies across these different data sources. In Figure 6 we provide a series of box plots showing the relative use of concepts, issues,

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[12] Figure 4 shows a drop off in use of more than one ANES survey in 2008 and 2009. However, this is largely due to the drop off in overall articles coded and ensuing noise in the estimates. For instance, 8 articles were coded in 2008 and 14 in 2009. In the former case 4 articles used ANES data and 2 used 3+ surveys, while in the latter 6 articles used ANES data and 1 used 3+ surveys. Had the number of articles coded in these years resembled the years immediately prior to them (i.e. 2003-2007) then it is highly likely that we would see no such drop off.

and both by data source of the article. Note that all cases of mixed data use are indexed under "Mixed" for this purpose, i.e., "ANES" indicates that the ANES was the *only* data source recorded for the survey, etc. What is perhaps most notable about Figure 6 is the enhanced "complexity" of articles using solely survey data sources and particularly those focused exclusively on the ANES compared to those employing experimental methods.[13] This likely reflects two factors: (1) the political depth of the ANES enables researchers to incorporate more elements than when using alternative survey sources that may not be as uniquely focused on politics, and (2) observational data sources require more complex efforts at addressing issues of internal validity, issues that are often resolved by randomization procedures within experimental articles. Even so, the results suggest experiments may not touch on nearly as many topics as those studied in observational data.

Concluding Discussion

In the present article we have discussed the results of a novel content analysis of over 1,100 published articles concerning American mass political behavior. These analyses suggest at least four key takeaways. First, the agenda of the this literature is heavily skewed toward voting, which may not be all that surprising given that two of the landmark books in this broader literature are titled *Voting* (Berelson, Lazarsfeld, and McPhee 1954) and *The American Voter* (Campbell et al. 1960). Second, experiments are ascendant, but nowhere close to displacing survey data sources, and particularly the ANES, as the central workhorse of American political

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[13] There is not surprisingly an overlap in concept use when looking at those concepts/issues that are commonly found on surveys (ANES or otherwise) and in experiments. For instance, the concepts/issues most commonly tagged as having experimental data are (in this order): party identification, liberal/conservative values/vote choice, racial identification, political knowledge, interest in campaigns, turnout, and spending/services attitudes (own). There is a pretty fair drop off here as well when one moves from political knowledge (present 30 times) to interest (20) and then down to 14, 12, and so on. So, while experimental data here is focused on a smaller number of concepts, they tend to be the same ones as used in other contexts.

behavior research. Third, while important changes to this agenda have occurred over time (see Figure 3 and Figures OA3-OA6), the agenda of American political behavior research remains largely the same as it was in 1980 and that agenda coheres with the mission of the ANES. Substantively, the underlying goals of the ANES echo the foci in the field. Finally, researchers clearly utilize the unique time series component of the ANES, which contributes to the centrality of the ANES within the literature. Overall, our results not only accentuate the central place of the ANES within the political behavior landscape, but also make clear this place has been stable over time. This is, to us, is very clear evidence to justify the continuing investment in the ANES as a data source for understanding American political behavior and, hence politics.

Survey methods, and the ANES in particular, constitute the lion's share of data for political behavior researchers during the time frame explored here. And, while experimental methods constitute a growing share of the behavior literature, this growth appears to be relatively slow thereby suggesting a continued role for the ANES and other surveys in guiding research on American political behavior. To be clear, while we used the ANES for guidance in constructing our coding scheme, it was not the only source of the scheme and by no means did it affect our selection of articles to code. In other words, our results were not bound to find a central place for the ANES either in its presence in behavior research or in its underlying prominence in concept determination. Even with the rise of alternative methods and data collection opportunities since the mid- to late-1990s, the ANES still dominates. It is a sound investment: it is the most used source of data, focuses on the concepts central to the field, and provides unparalleled access to over-time dynamics.

Moreover, we believe our analyses suggest that the ANES will continue to play a central role in guiding research on American political behavior even with the growing movement to use

what Groves (2011) refers to as "organic data"—behavioral measures such as Google search patterns, Twitter feeds, and other digital residues of politically relevant activities. As Groves (2011: 868) notes, "data streams have no meaning until they are used" and, instead, "the user finds meaning by bringing questions to the data and finding answers in the data." The stability of concepts in this literature suggests that the ANES will continue to be the guiding intellectual standard in the questions that are asked. In addition, we believe the ANES will remain central to political behavior research because it has no real competitor in terms of the availability of over-time repeated *political* data and particularly for such a long time frame. Researchers interested in tracking *changes* in political behavior due to changes in political and social context will necessarily remain focused on the ANES regardless of the presence of these new data sources, at least for the foreseeable future.

While our content analysis was quite fine-grained in its focus and incorporated a large number of articles, it still possesses some important limitations that future work could address. The most important limitation is perhaps its geographic focus. As articles focusing on political behavior outside of the United States were excluded from analysis we are unable to speak to any potential differences in content or methodological focus based upon geographical focus. One obvious likely difference is in the use of the ANES, although it is possible that a similar exercise would reveal the World Values Survey or some similar survey as serving a similar role. Ultimately we view this study as one that could be readily applied to non-US data and, thanks to recent advances in crowd-sourced text analyses (Benoit et al. 2016), one that is quite ready to be made. Overall, though, our results reveal a stable methodological and conceptual field that relies on surveys and focuses on voting. We leave it to others to assess the substantive advances made within the confines of the topics and methods, and the desirability of such stability. But we do

conclude that, by all accounts, the investment in the ANES has handsomely paid off as it not only provides the central data source over time, but also is foundational in terms of concepts studied by political behavior researchers.

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Table 1: Concepts and Policy Issues

		Concepts			
Differences between the parties	Emotions about President	Approval of congress' general job performance	Campaign contact	Equalitarianism	Attitudes about blacks
Feelings about the parties	Emotions about presidential candidates	Approval of congressional rep's general job performance	Vote Choice	Trust in government	Use and nature of stereotypes
Party Id	Likes and dislikes about presidential candidates	Economic performance	Turnout in national elections	Political efficacy and perceived government responsiveness	Racial Identity
Party performance: economy	President's traits	Personal economic situation	Registration	Television news consumption	Ethnic Identity
Party performance: foreign affairs	Presidential candidate's traits	Position of the country in world affairs	Liberal-conservative values	Internet news consumption	Social class
Feelings about President	Approval of President's general job performance	Interest in politics or campaigns	Religious values and beliefs	Newspaper news consumption	Personality
Feelings about presidential candidates	Approval of President's performance on the economy	Political knowledge	Religious identity	Radio news consumption	Problems facing the country
Feelings about congressional candidates	Approval of President's performance on foreign policy	Campaign activity	Moral traditionalism	Feelings about social groups in general	Attitudes about divided government

|		**Issue Attitudes and Perceptions (Own, Parties, Candidates)**			
Policies concerning the government's responsibility for the provision of jobs and income support	Polices concerning affirmative action	Policies concerning equality for women	Policies concerning the death penalty	Policies concerning environmental protection.	Policies concerning internationalism vs. isolationism
Policies concerning government aid to blacks	Policies concerning defense spending	Policies concerning abortion	Policies concerning gay and lesbian issues	Policies concerning services vs. spending	

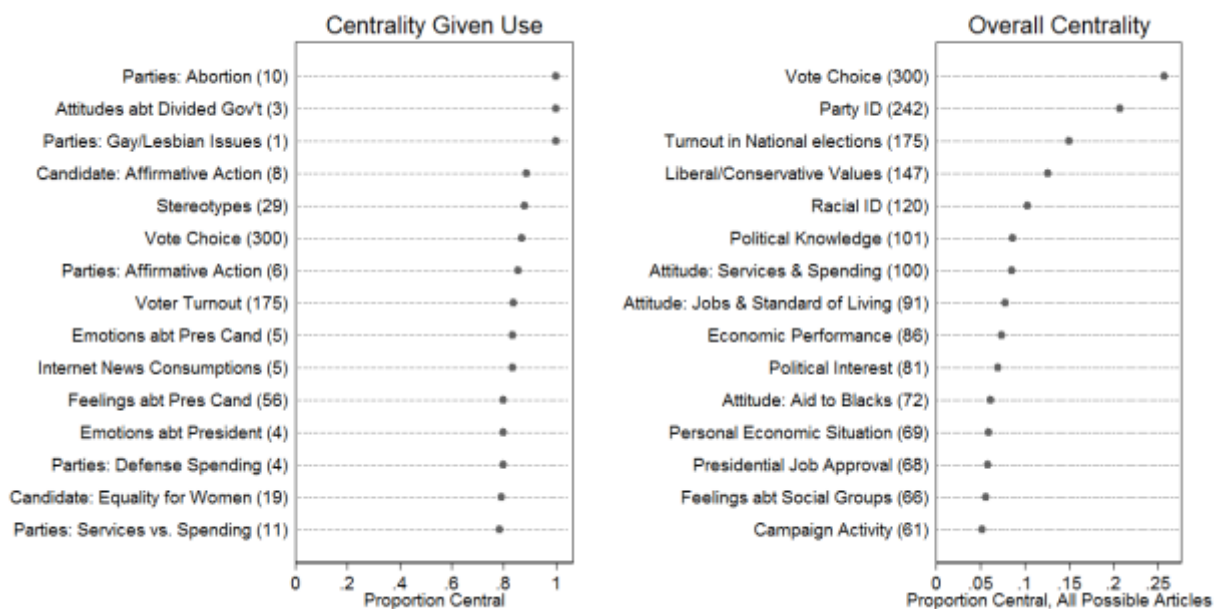**Figure 1:** Concept & Policy Issue Use
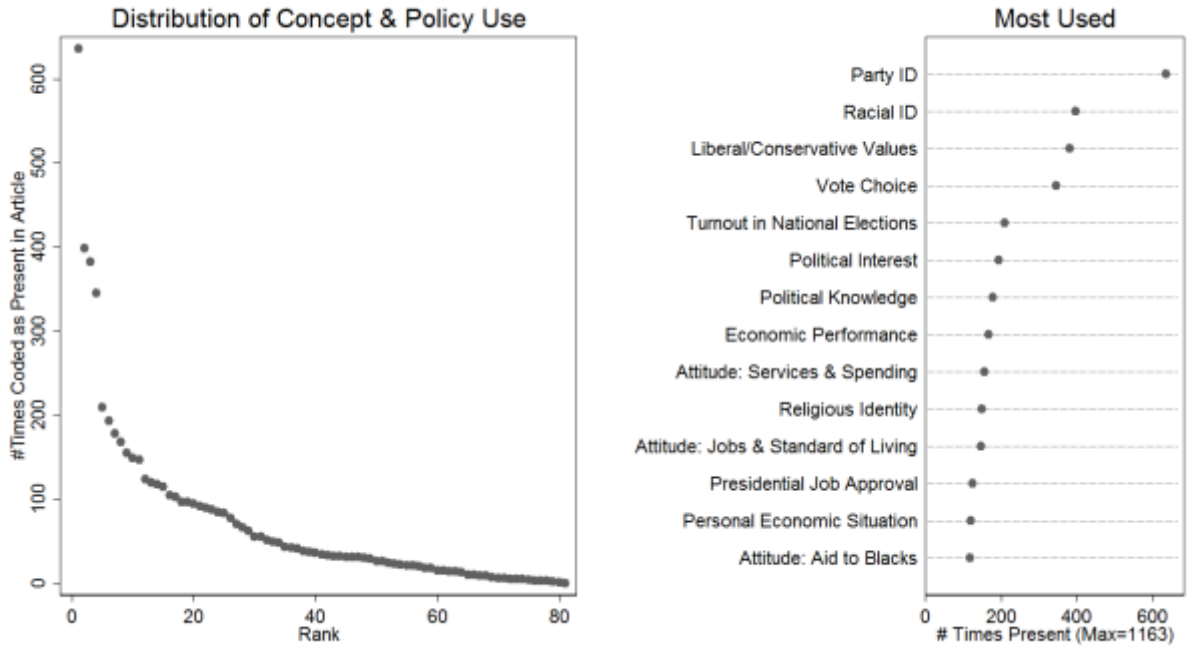
Figure 2: Concept & Policy Centrality

Note: The left-hand graph provides the proportion of cases where a concept/policy was considered central in articles where it appeared. The right-hand graph provides the proportion of cases where the concept was considered central out of all potential articles. The numbers in parentheses provide the number of times the concept/policy was coded as central. "Attitude" refers to individual attitudes on an issue, "Parties" to party placements, and "Candidate" to candidate placements on the issue.

Figure 3: The Evolution of the Political Behavior Agenda, 1980-2007
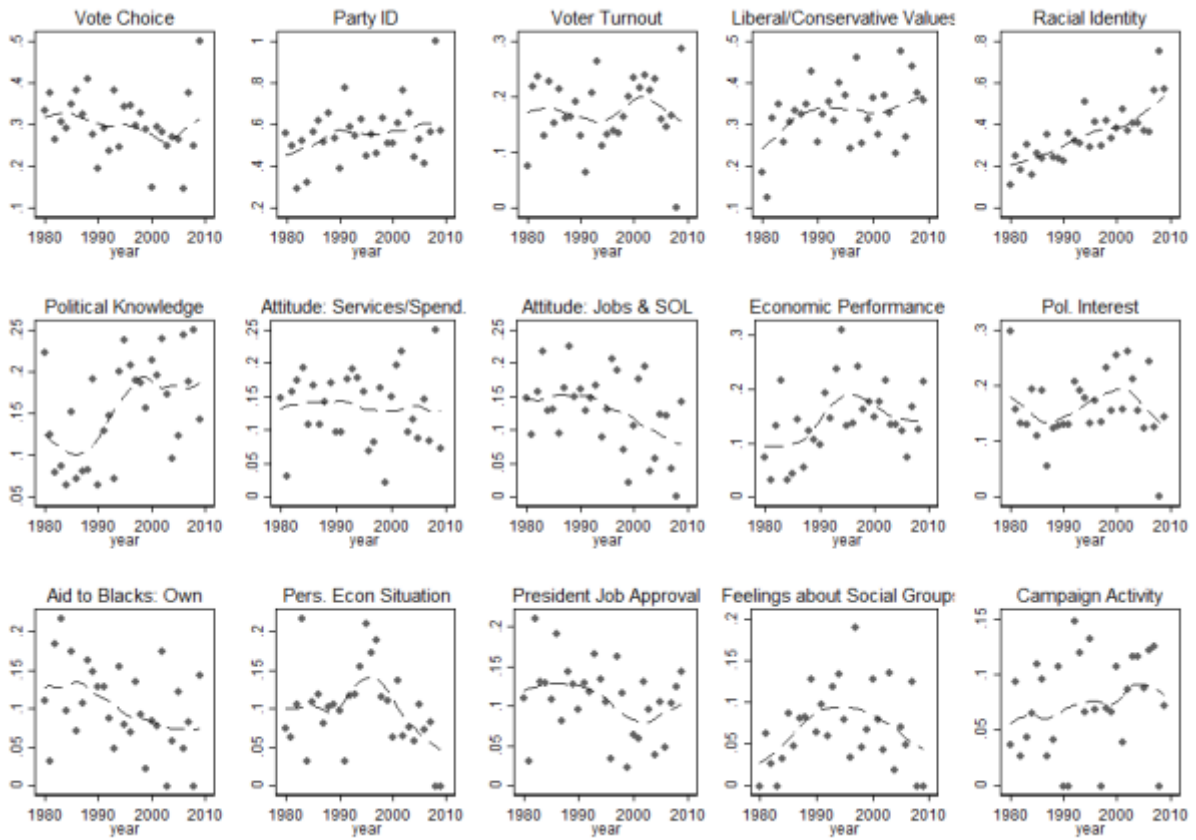
Note: Each marker provides the proportion of articles in a year in which the concept was coded as present. The fitted line is obtained from lowess smoothing using a bandwidth of 0.5 and mean smoothing.

Figure 4: Measurement Use Over Time
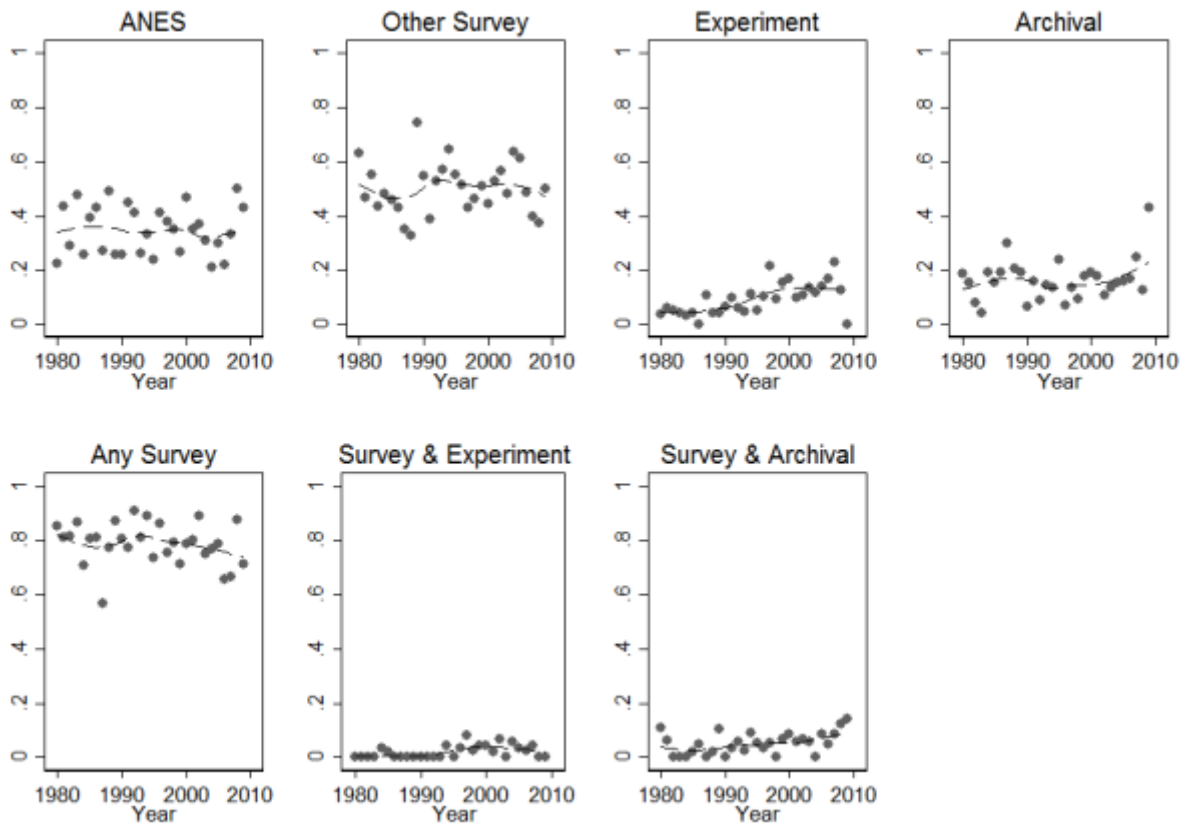
Notes: Each marker provides the proportion of articles within a given year wherein a particular method was coded as present. The fitted line is obtained from lowess smoothing using a bandwidth of 0.5 and mean smoothing.

Figure 5: Use of the ANES Time Series
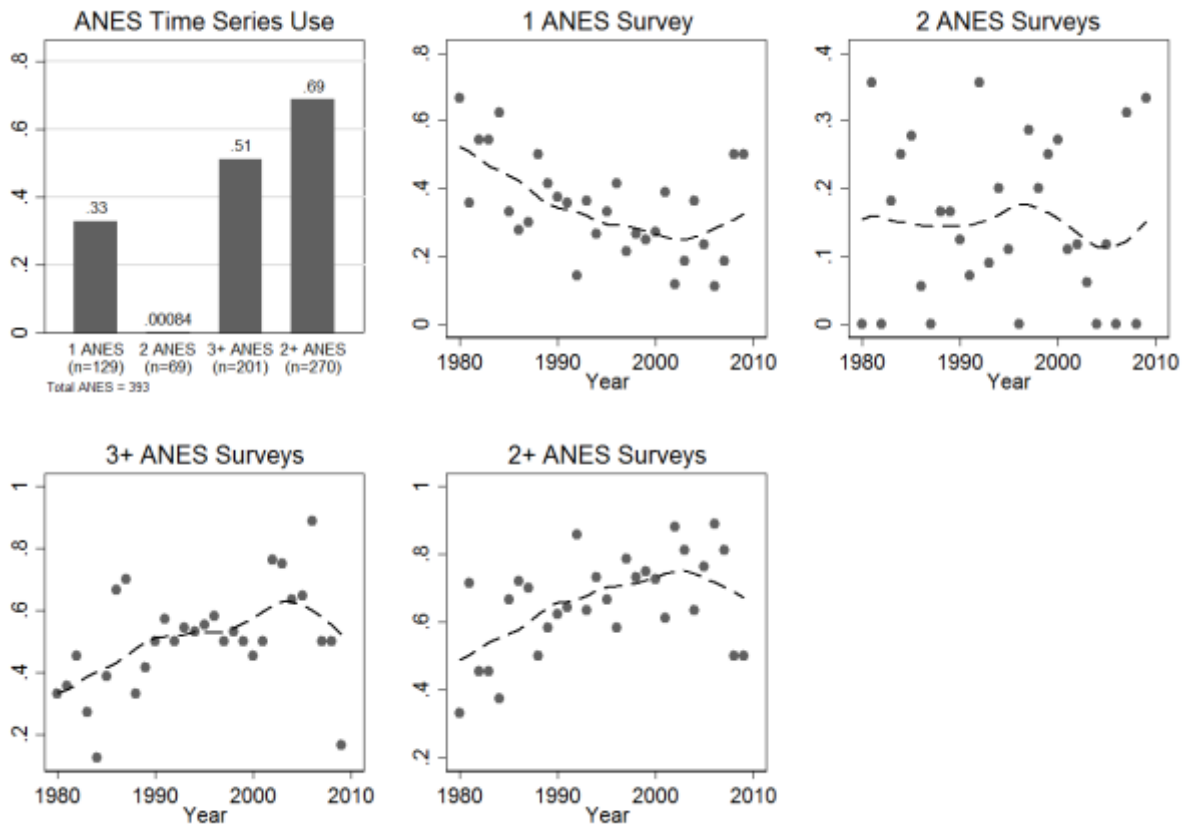
Note: Graphs provide the proportion of ANES articles using 1, 2, 3+, and 2+ ANES Surveys both overall (top left corner) and over time. The fitted line is obtained from lowess smoothing using a bandwidth of 0.5 and mean smoothing.

Figure 6: Article Complexity by Methodology

<u>Online Appendix</u>

Contents:

- **Figure OA1: Histogram of Articles Coded Over Time**
- **Figure OA2: Concept & Policy Use Over Time (Aggregate)**
- **Figures OA3-OA6: Concept & Policy Use (Specific) Over Time, Remainder of Items**
- **Table OA1 & OA2: Descriptive Statistics on Concept & Policy Issue Use**
- **Figure OA7: Scree Plot of Factor Analyses**
- **Table OA3: Factor Analysis Results**

Figure OA1: Histogram of Articles Coded Over Time
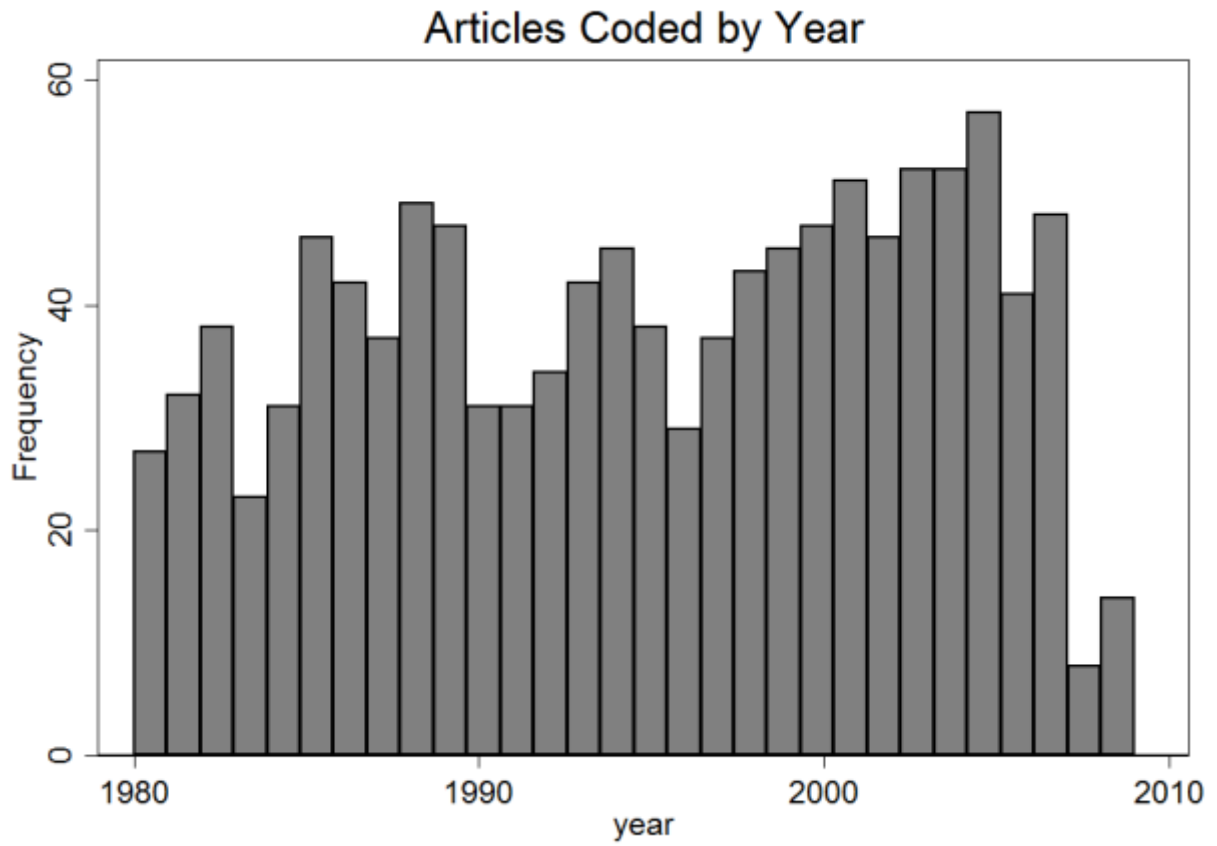
Figure OA2: Concept & Policy Issue use Over Time
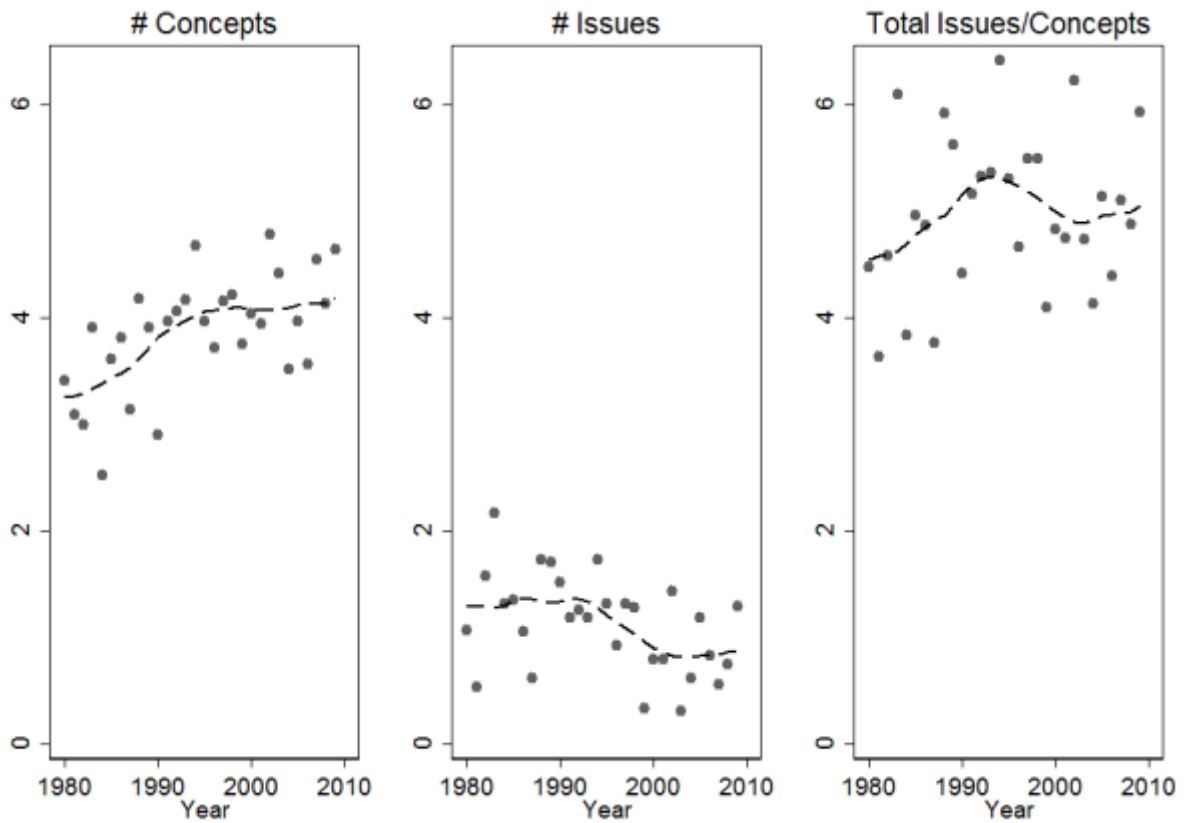
Notes: Each marker provides the average number of codable elements found in articles per year. The fitted line is obtained from lowess smoothing using a bandwidth of 0.5 and mean smoothing.

Figure OA3: Concept & Policy Use, Remainder of Items (pt. 1)
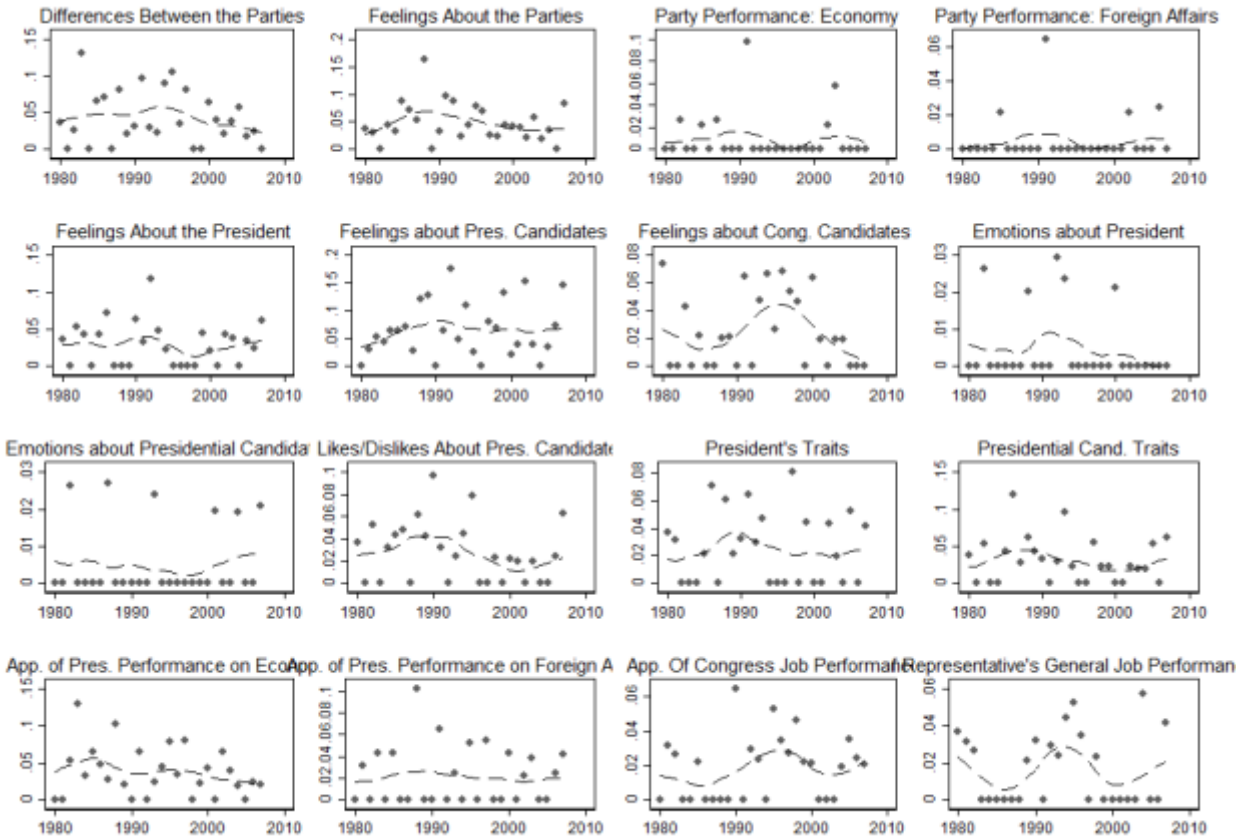
Notes: Each marker provides the proportion of articles in a year in which the concept was coded as present. The fitted line is obtained from lowess smoothing using a bandwidth of 0.5 and mean smoothing.

Figure OA4: Concept & Policy Use, Remainder of Items (pt. 2)
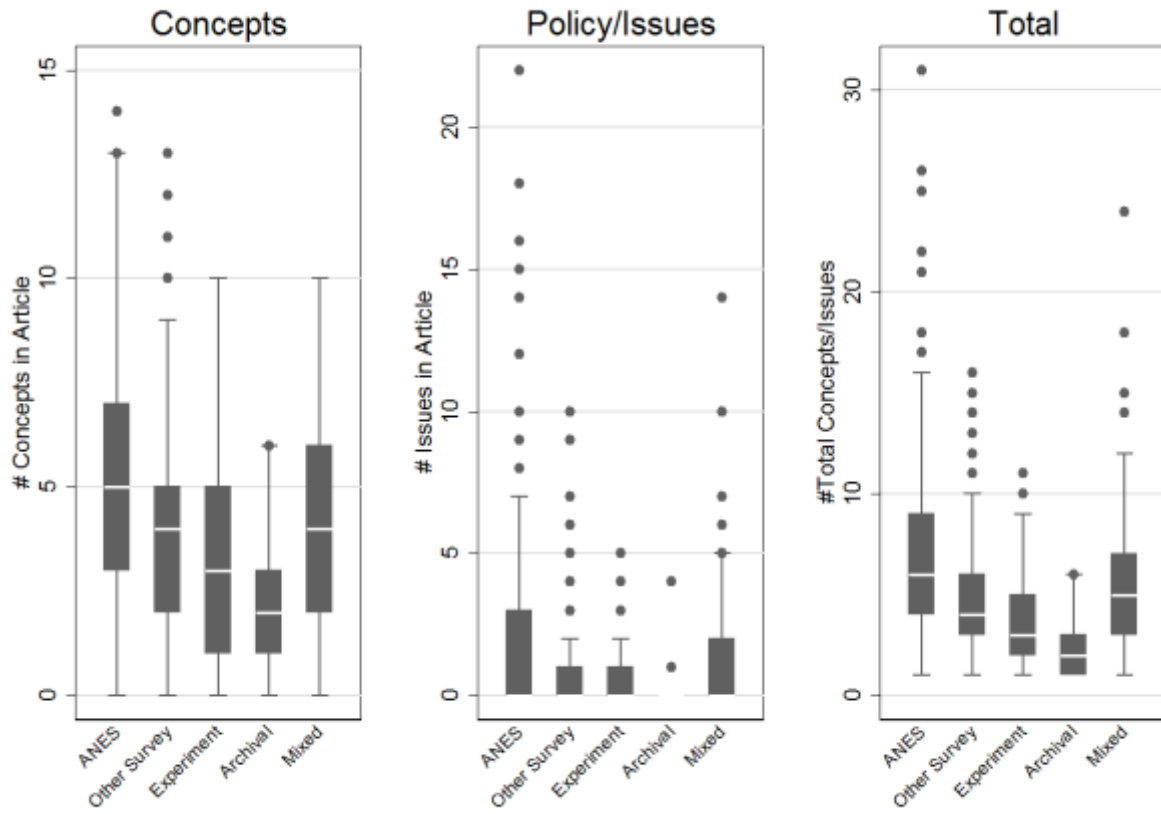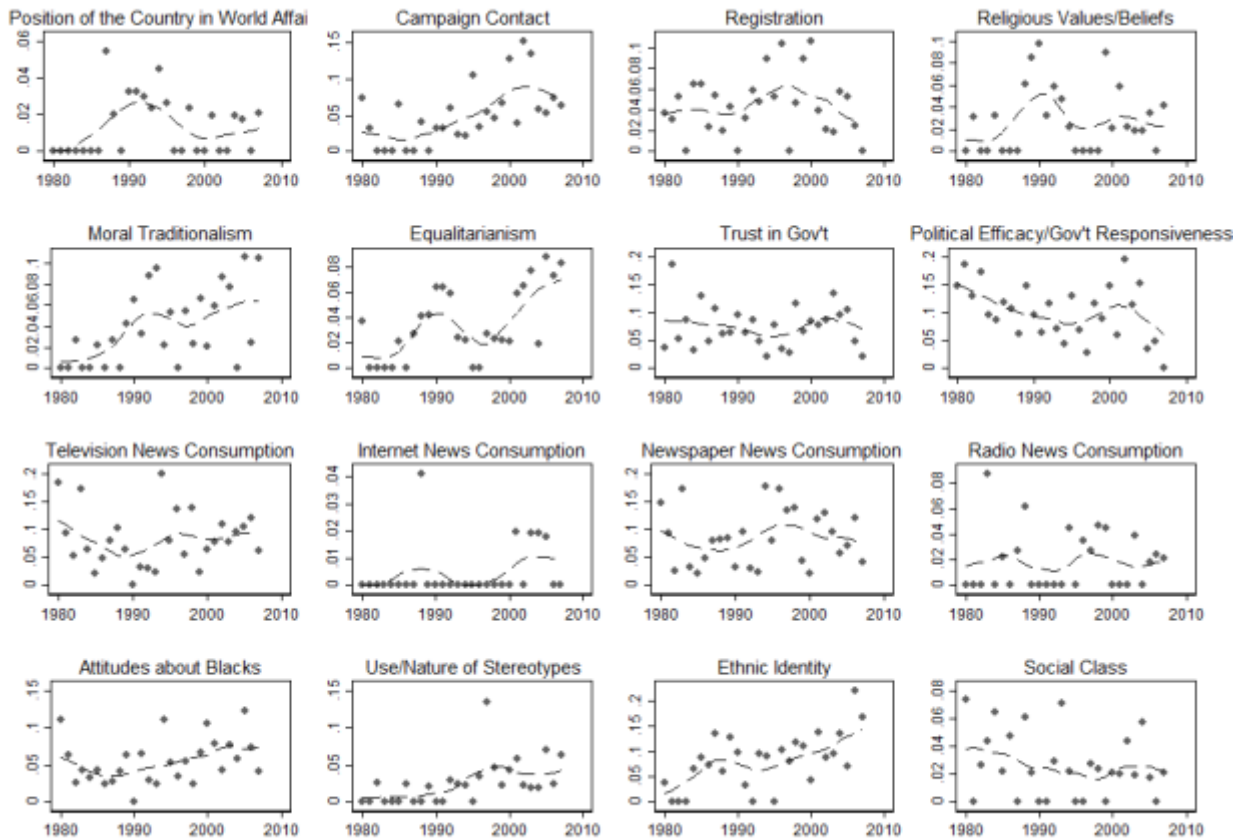

Notes: Each marker provides the proportion of articles in a year in which the concept was coded as present. The fitted line is obtained from lowess smoothing using a bandwidth of 0.5 and mean smoothing.

Figure OA5: Concept & Policy Use, Remainder of Items (pt. 3)

Notes: Each marker provides the proportion of articles in a year in which the concept was coded as present. The fitted line is obtained from lowess smoothing using a bandwidth of 0.5 and mean smoothing.

Figure OA6: Concept & Policy Use, Remainder of Items (pt. 4)

Notes: Each marker provides the proportion of articles in a year in which the concept was coded as present. The fitted line is obtained from lowess smoothing using a bandwidth of 0.5 and mean smoothing.

1   **Table OA1: Descriptive Statistics for 48 Concepts**

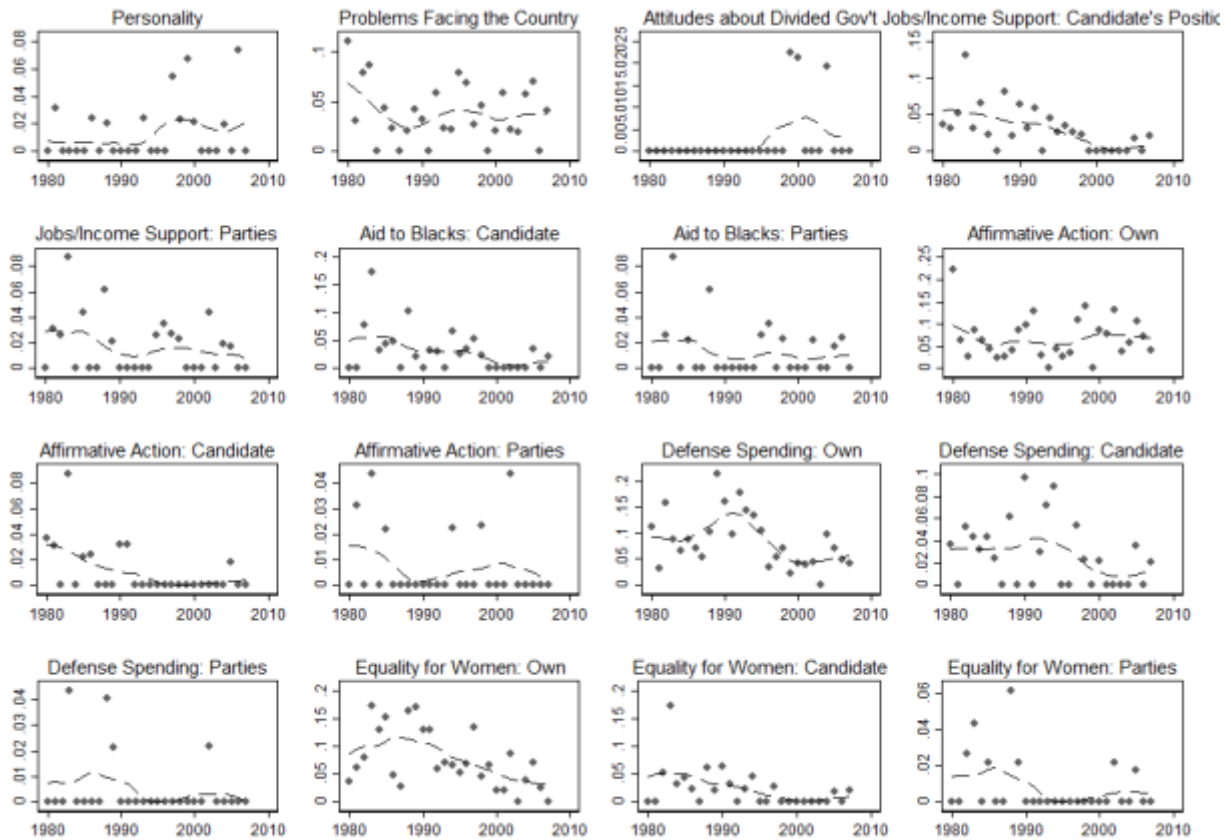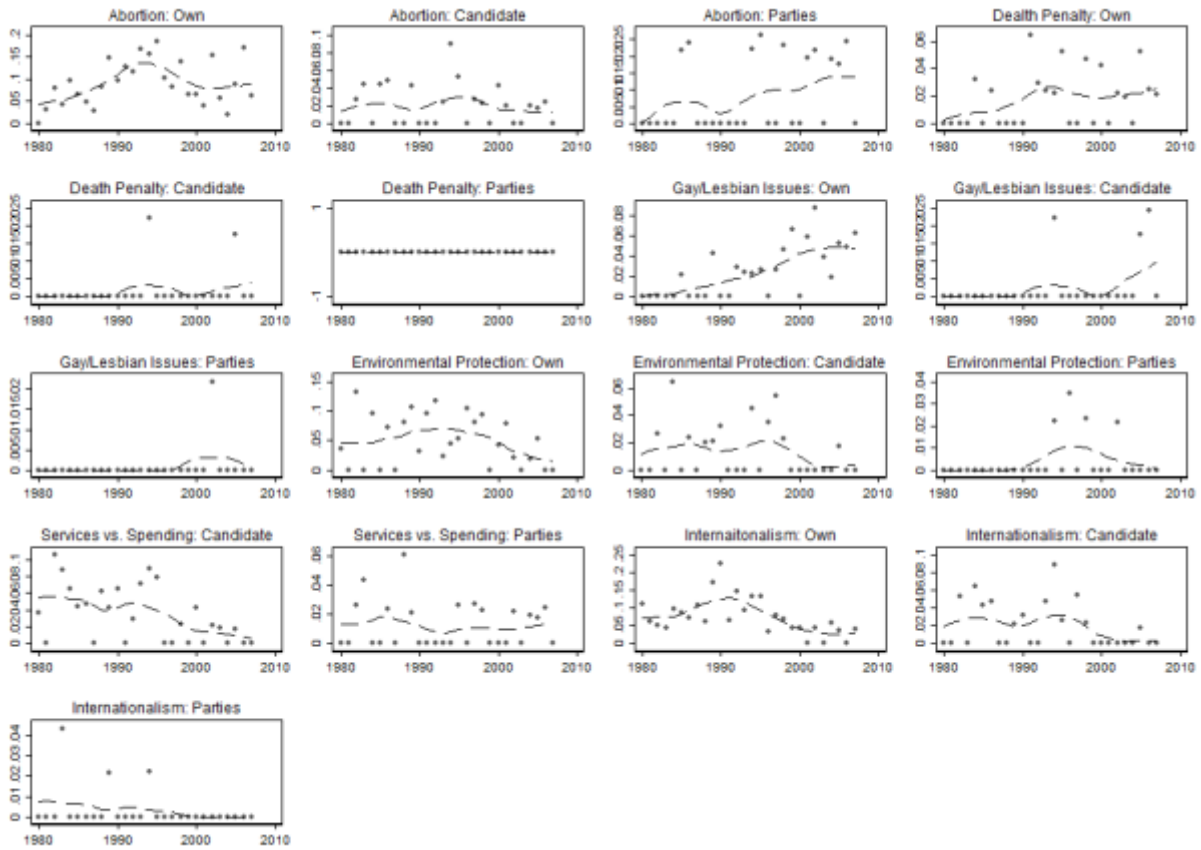| Concept:	Total	Percent of Articles	Centrality Given Use (Central/Total)	Centrality Overall (Central/1163)	# Times Coded as using…			
					ANES	Other Survey	Exp.	Archival
Party ID	636	54.69%	38.05%	20.81%	276	306	48	49
Racial Identity	398	34.22%	30.15%	10.32%	148	209	30	42
Liberal/Conservative Values	382	32.85%	38.48%	12.64%	158	206	36	9
Vote Choice	345	29.66%	86.96%	25.80%	137	122	31	79
Turnout in National Elections	209	17.97%	83.73%	15.05%	69	88	14	53
Interest in Politics or Campaigns	193	16.60%	41.97%	6.96%	76	103	20	3
Political Knowledge	178	15.31%	56.74%	8.68%	65	89	30	1
Economic Performance	168	14.45%	51.19%	7.39%	78	74	1	24
Religious Identity	149	12.81%	36.91%	4.73%	61	84	7	2
App. of President's Job Perform.	124	10.66%	54.84%	5.85%	51	67	8	2
Personal Economic Situation	120	10.32%	57.50%	5.93%	59	61	1	2
Political Efficacy/Gov't Responsiveness	115	9.89%	48.70%	4.82%	54	61	6	3
Ethnic Identity	102	8.77%	39.22%	3.44%	23	62	5	17
Television News Consumption	96	8.25%	58.33%	4.82%	37	51	8	10
Newspaper News Consumption	94	8.08%	47.87%	3.87%	35	47	8	7
Campaign Activity	91	7.82%	67.03%	5.25%	25	32	5	6
Feelings about Social Groups	89	7.65%	74.16%	5.67%	44	43	6	0
Trust in Gov't	87	7.48%	68.97%	5.16%	31	49	9	2
Feelings about Pres. Candidates	70	6.02%	80.00%	4.82%	51	27	4	2
Attitudes about Blacks	66	5.67%	77.27%	4.39%	29	36	7	1
Campaign Contact	62	5.33%	59.68%	3.18%	29	30	7	2
Feelings About the Parties	55	4.73%	69.09%	3.27%	43	14	1	0
Registration	51	4.39%	74.51%	3.27%	15	21	1	20
Moral Traditionalism	49	4.21%	67.35%	2.84%	16	33	4	2
Differences Between the Parties	48	4.13%	68.75%	2.84%	32	18	1	2
Problems Facing the Country	43	3.70%	60.47%	2.24%	11	30	2	3

Equalitarianism	42	3.61%	73.81%	2.67%	21	21	3	0
App. of Pres. Performance on Economy	41	3.53%	65.85%	2.32%	23	16	2	0
Religious Values/Beliefs	37	3.18%	72.97%	2.32%	14	23	1	1
Presidential Cand. Traits	36	3.10%	77.78%	2.41%	20	12	7	0
Use/Nature of Stereotypes	33	2.84%	87.88%	2.49%	9	22	9	33
Feelings About the President	32	2.75%	46.88%	1.29%	16	14	2	0
Likes/Dislikes About Pres. Candidates	31	2.67%	70.97%	1.89%	21	10	2	1
Social Class	30	2.58%	56.67%	1.46%	10	18	0	3
President's Traits	29	2.49%	75.86%	1.89%	14	11	4	0
App. of Pres. Performance on Foreign Affairs	26	2.24%	65.38%	1.46%	15	11	1	0
Feelings about Cong. Candidates	26	2.24%	73.08%	1.63%	12	10	6	0
App. Of Congress Job Performance	21	1.81%	71.43%	1.29%	7	15	1	0
Radio News Consumption	20	1.72%	55.00%	0.95%	9	12	0	0
f Representative's General Job Performance	18	1.55%	72.22%	1.12%	9	11	1	0
Position of the Country in World Affairs	15	1.29%	40.00%	0.52%	7	6	1	2
Personality	15	1.29%	66.67%	0.86%	2	12	3	0
Party Performance: Economy	10	0.86%	30.00%	0.26%	6	3	0	0
Emotions about Presidential Candidates	6	0.52%	83.33%	0.43%	4	2	1	0
Internet News Consumption	6	0.52%	83.33%	0.43%	3	3	1	0
Party Performance: Foreign Affairs	5	0.43%	40.00%	0.17%	4	1	0	0
Emotions about President	5	0.43%	80.00%	0.34%	2	3	0	0
Attitudes about Divided Gov't	3	0.26%	100.00%	0.26%	2	1	0	0

1   **Note:** The final four columns may not sum to "Total" as some articles used multiple data sources.

2

1   **Table OA2: Descriptive Statistics for 33 Policy Issues**

Policy Issue	Total	% (Out of 453)	% (Out of 1163)	Centrality Given Use (Central/Total)	Centrality Overall (Central/1163)	# Times Coded as using…			
						ANES	Other Survey	Exp.	Archival
Services vs. Spending: Own	155	34.22%	13.33%	64.52%	8.60%	85	63	12	2
Jobs/Income Support: Own Position	147	32.45%	12.64%	61.90%	7.82%	96	56	6	2
Aid to Blacks: Own	118	26.05%	10.15%	61.02%	6.19%	84	36	6	1
Abortion: Own	104	22.96%	8.94%	57.69%	5.16%	55	44	7	2
Defense Spending: Own	96	21.19%	8.25%	61.46%	5.07%	53	43	4	1
Equality for Women: Own	84	18.54%	7.22%	67.86%	4.90%	56	30	2	1
Internationalism: Own	83	18.32%	7.14%	69.88%	4.99%	32	44	8	0
Affirmative Action: Own	77	17.00%	6.62%	74.03%	4.90%	39	36	9	0
Environmental Protection: Own	55	12.14%	4.73%	63.64%	3.01%	20	32	2	1
Services vs. Spending: Candidate	38	8.39%	3.27%	65.79%	2.15%	22	11	4	1
Gay/Lesbian Issues: Own	34	7.51%	2.92%	64.71%	1.89%	17	15	1	0
Aid to Blacks: Candidate	32	7.06%	2.75%	65.63%	1.81%	26	6	1	1
Defense Spending: Candidate	31	6.84%	2.67%	77.42%	2.06%	23	6	1	2
Jobs/Income Support: Candidate's Position	31	6.84%	2.67%	64.52%	1.72%	29	3	0	0
Equality for Women: Candidate	24	5.30%	2.06%	79.17%	1.63%	19	5	0	0
Abortion: Candidate	23	5.08%	1.98%	65.22%	1.29%	13	7	3	1
Internationalism: Candidate	22	4.86%	1.89%	72.73%	1.38%	14	8	0	0
Dealth Penalty: Own	21	4.64%	1.81%	57.14%	1.03%	7	14	2	0
Jobs/Income Support: Parties	18	3.97%	1.55%	66.67%	1.03%	16	2	0	1
Services vs. Spending: Parties	14	3.09%	1.20%	78.57%	0.95%	12	2	0	1
Environmental Protection: Candidate	14	3.09%	1.20%	64.29%	0.77%	8	4	1	1
Aid to Blacks: Parties	13	2.87%	1.12%	76.92%	0.86%	12	1	0	0
Abortion: Parties	10	2.21%	0.86%	100.00%	0.86%	8	2	1	0
Affirmative Action: Candidate	9	1.99%	0.77%	88.89%	0.69%	8	1	0	0

Equality for Women: Parties	9	1.99%	0.77%	77.78%	0.60%	7	1	0	1
Affirmative Action: Parties	7	1.55%	0.60%	85.71%	0.52%	6	1	0	0
Defense Spending: Parties	5	1.10%	0.43%	80.00%	0.34%	3	1	0	1
Environmental Protection: Parties	4	0.88%	0.34%	75.00%	0.26%	3	1	0	0
Gay/Lesbian Issues: Candidate	3	0.66%	0.26%	66.67%	0.17%	2	1	0	0
Internationalism: Parties	3	0.66%	0.26%	66.67%	0.17%	0	2	0	1
Death Penalty: Candidate	2	0.44%	0.17%	50.00%	0.09%	2	0	0	0
Gay/Lesbian Issues: Parties	1	0.22%	0.09%	100.00%	0.09%	1	0	0	0
Death Penalty: Parties	0	0.00%	0.00%	0.00%	0.00%	0	0	0	0

Note: Two % columns are provided – one dividing the number of times the issue was coded as present by 453 (the number of articles with policy concepts coded as present) and the other by 1163 (the overall number of articles). The final four columns may not sum to "Total" as some articles used multiple data sources.

1 **Figure OA7:** Scree Plot of Factor Analysis of Concepts/Issues

Scree plot of eigenvalues after factor
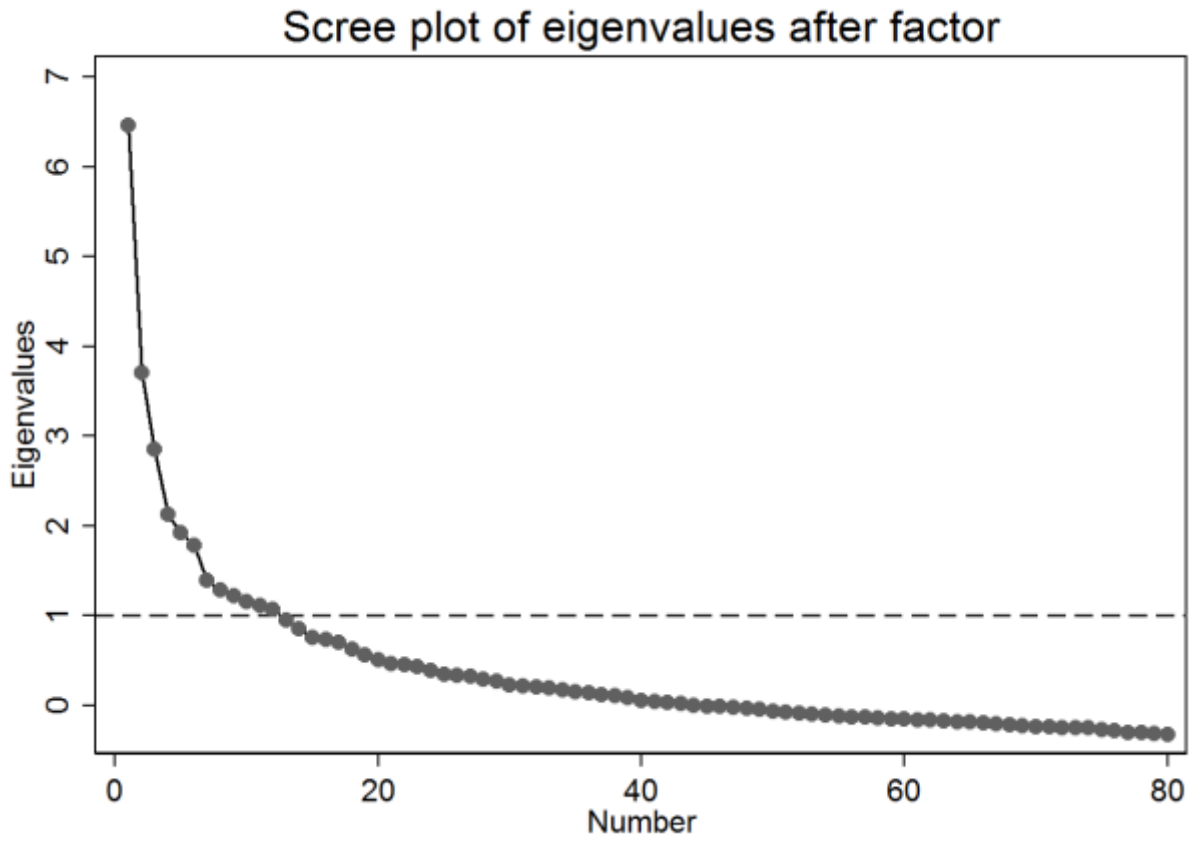
2

Table OA3: Rotated Factors

Factor	Variable	Variable	Variable	Variable	Variable	Variable	Variable	Eigenvalue	Proportion Explained	Cumulatite
F1	Candidate: Jobs (0.61)	Candidate: Aid to Blacks (0.77)	Candidate: Defense (0.80)	Candidate: Women (0.60)	Candidate: Environment (0.58)	Candidate: Services (0.69)	Candidate: Internationalism (0.66)	3.91	0.13	0.13
F2	Parties: Jobs new (0.78)	Parties: Aid to Blacks (0.88)	Parties: Women (0.84)	Parties: Services (0.85)				3.63	0.12	0.25
F3	Own: Jobs (0.71)	Own: Aid to Blacks (0.66)	Own: Defense (0.60)	Own: Women (0.54)	Own: Abortion (0.52)	Own: Services (0.68)		3.13	0.10	0.35
F4	Candidate: Death Penalty (0.86)	Candidate: Gay & Lesbian Issues (0.85)						2.10	0.07	0.42
F5	TV News Consumption (0.78)	Newspaper News Consumption (0.78)	Radio News Consumption (0.47)					1.78	0.06	0.47
F6	Parties: Affirmative Action (0.74)	Parties: Environment (0.73)						1.50	0.05	0.52
F7	President Approval: Economy (0.69)	President Approval: Foreign Policy (0.69)						1.36	0.04	0.57
F8	Religious Values (0.58)	Religious Identity (0.50)	Moral Traditionalism (0.47)					1.31	0.04	0.61
F9	Candidate: Jobs (0.52)	Candidate: Affirmative Action (0.72)						1.15	0.04	0.65
F10	Parties: Defense (0.67)	Parties: Internationalism (0.67)						1.12	0.04	0.38
F11	Economic Performance (0.65)	Personal Economic Situation (0.61)						1.10	0.04	0.72
F12	Candidate: Abortion (0.64)	Parties: Abortion (0.62)						1.08	0.04	0.75

| F13 | Party Performance: Economy (0.69) | Party Performance: Foreign Policy (0.67) | | 1.04 | 0.03 | 0.79 |

Note: The cells provide the variables loading onto each dimension (cut off = 0.4) after varimax factor rotation. The factor loadings are in parentheses.