

# Is Public Opinion Stable? Resolving the Micro/Macro Disconnect in Studies of Public Opinion

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*Abstract: Public opinion matters, both as a central element of democratic theory and as a substantive foundation for political representation. The origins and nature of public opinion have long attracted the attention of social scientists. Yet a number of questions remain; among the more perplexing is whether – and under what conditions – public opinion is stable. The answer depends in large part on whether one looks at aggregations of individual opinions (macro public opinion) or at the individual opinions themselves (micro public opinion). In this essay, we explore the macro/micro divide and offer a framework to determine when opinions are likely to be stable or volatile. This framework reflects both the content of the political environment and the nature of individuals' opinions. Using public opinion dynamics surrounding the Patriot Act as a primary example, we discuss the role of opinion stability in interpreting public opinion and in understanding the normative implications of public preferences.*

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Public opinion matters. In theory, it serves as the foundation on which democratic governmental action is based.<sup>1</sup> In practice, elected officials tend to respond to public opinion<sup>2</sup>; moreover, politicians invest massive resources in an effort to track and influence opinions that will affect election outcomes. Scholars have been interested in the origins and nature of public opinion since the emergence of the modern social sciences. Yet a number of questions remain, in particular: *is public opinion stable?* Stability in public preferences suggests that sentiments expressed at one point in time will largely sustain and thus may reflect clearly held beliefs. On the other hand, instability *could* suggest that less stock should be placed in the meaning of public preferences at a given point in time.<sup>3</sup>

Whether one concludes stability or instability depends to a significant extent on whether one looks to macro trends in aggregated opinions (for example, the percentage of the public that supports in-

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creased defense spending) or micro-level individual opinions (for example, an individual's preference for defense spending). Consider the conclusions from two highly influential books published in 1992, the first focused on macro opinion and the second on micro:

- "Our data reveal a remarkable degree of stability in America's collective policy preferences."<sup>4</sup>
- "Opinion statements vary randomly across repeated interviews of the same people; entirely trivial changes in questionnaire constructions... can easily produce [large] shifts in aggregate opinion."<sup>5</sup>

These conclusions are not time-bound, as similar conclusions can be found in recent research on macro trends<sup>6</sup> and micro-level opinions.<sup>7</sup>

We explore the sources of the micro-instability and macro-stability divide. We begin with a general discussion of micro versus macro studies via an extended example of public opinion surrounding the Patriot Act. We then offer a framework for understanding when opinions should be stable or volatile. Next, we identify three sources of the micro/macro disconnect that we believe explain why the type of data employed yields such distinct conclusions. We end by discussing the implications of our argument for both understanding public opinion and interpreting what (in)stability implies from a normative perspective. We consider why this matters for those who report on and read about public opinion in the news. Among other ideas, we conclude that stability, often presumed to indicate "higher quality" opinions, may bring with it some undesirable features.

The divide between micro and macro perspectives in the social sciences is well established, studied by such prominent

scholars as William James, Harold Lasswell, Kurt Lewin, and Thomas Schelling.<sup>8</sup> In his aptly titled autobiography, *Micro-Macro Dilemmas in Political Science*, Heinz Eulau explains, "The fancy terms 'micro' and 'macro' have come to mean large and small or individual and aggregate or part and whole.... Once micro and macro had been attached to persons or groups... [i]t was only a small step to insist on 'bridging' the micro-macro gap."<sup>9</sup> This gap pervades a range of topics, but we focus here on how it manifests in relation to public opinion and communication.

We should be clear in what we mean by micro and macro public opinion data. For micro data, the unit of analysis is an individual (for example, a survey respondent). Typically, the researcher is interested in knowing what opinion(s) that person holds, why, and with what effects. For example, one may be interested in knowing whether an individual respondent opposes or supports the Patriot Act, which is a piece of legislation enacted by the U.S. Congress and signed by President George W. Bush shortly after the September 11, 2001, terrorist attacks. It increases the powers that law enforcement agencies have to monitor communications, records, and financial transactions in an effort to identify terror threats.<sup>10</sup> With micro data, it is instructive to understand why the individual holds an opinion – does it reflect deeply held values, knowledge about an issue, social experiences, and/or media coverage? – and whether the opinion shapes subsequent behavior: for example, is the individual willing to sign a petition in support of that issue? Much of this work employs surveys that measure an individual's support for an issue, asking, for example:

- The Patriot Act was enacted in the weeks after September 11, 2001, to strengthen law enforcement powers and technol-

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ogy. What do you think – do you oppose or support the Patriot Act?

Researchers then correlate answers to this opinion measure (typically measured on a seven-point scale ranging from 1, oppose strongly, to 7, support strongly) with other variables such as demographic features (gender or income, for example), partisan attributes, experiences (media exposure, for example), values (such as importance of law and order), and so on. Some of the first survey research reported responsive instability, meaning individuals' opinions measured at one point in time changed at a later point in time.<sup>11</sup>

More recent work has built on this finding by employing experiments that randomly assign respondents to different types of questions.<sup>12</sup> For example, some respondents randomly receive the following (civil liberties) version of the Patriot Act question:

- The Patriot Act was enacted in the weeks after September 11, 2001, to strengthen law enforcement powers and technology. Under the Patriot Act, the government has access to citizens' confidential information from telephone and e-mail communications. As a result, it has sparked numerous controversies and been criticized for weakening the protection of citizens' civil liberties. What do you think – do you oppose or support the Patriot Act?

Others receive a distinct (terrorism) version that asks:

- The Patriot Act was enacted in the weeks after September 11, 2001, to strengthen law enforcement powers and technology. Under the Patriot Act, the government has more resources for counterterrorism, surveillance, border protection, and other security policies. As a result, it enables security to identify terrorist plots on American soil and

to prevent attacks before they occur. What do you think – do you oppose or support the Patriot Act?

Much of the work that takes this (experimental) approach finds that respondents' opinions, on average, differ widely depending on which version of the question they receive. To many researchers, this finding suggests that opinions are not grounded and are malleable based on whatever rhetoric is most recently heard by respondents.<sup>13</sup> In many ways, these conclusions offer an explanation for responsible instability by showing that instability stems, at least in part, from alternative rhetoric found in discourse or in survey questions.

Other relevant work has tracked individuals' opinions over time by asking the same respondents the same question several weeks apart. The modal finding here is that opinions change and any effects (for example, from a certain type of question at one point in time) quickly decay.<sup>14</sup> For instance, when individuals receive the terrorism version of the Patriot Act question, they likely become more supportive of the Act. Yet for the modal individual, that support quickly dissipates and, in fact, may flip if the individual later receives the civil liberties frame. According to a 2010 study by Dennis Chong and James Druckman, "[W]hen competing messages are separated by days or weeks, most individuals give disproportionate weight to the most recent communication because previous effects decay over time."<sup>15</sup>

Whether this instability suggests that citizens' opinions are baseless and of little value is a topic of debate; reasonable movements, rather than ineptitude, could explain an individual's change in opinion.<sup>16</sup> Still, when studied at the micro-level, individuals' political attitudes appear unstable on many issues.<sup>17</sup> Such dynamics led Samuel Best and Monika McDermott to conclude that "reported opinions on . . .

the USA Patriot Act ...vary greatly due to simple variations in question wording, content, and response options.”<sup>18</sup>

This view of public opinion as fickle is somewhat puzzling because it appears to contradict macro-level studies. For macro studies, the unit of analysis is not the individual per se, but rather a given issue or a given point in time. The focus is often on the overall percentage of individuals who support or oppose a perspective, such as the percentage that support the Patriot Act or the frequency of each response at a given point in time.<sup>19</sup> Much macro-level work studies whether government policies respond to aggregate trends in opinions (does the government increase Patriot Act spending when support increases over time?), and conversely, whether public opinion reacts to governmental actions (does support wane once spending increases?) or other events (for example, the effect that a terrorist threat has on support).<sup>20</sup> Studies of macro opinions toward the Patriot Act report tremendous stability, contradicting the micro findings: a 2011 report from the Pew Research Center states, “Public views of the Patriot Act, whose renewal is being debated by Congress, have changed little since the Bush administration.”<sup>21</sup> This assertion means that the level of support for the Act at one point in time, for example, is near equivalent to support at a later time. These findings of micro instability and macro stability are not unique to the Patriot Act; rather, they extend across countless issues and times.<sup>22</sup> Peter Mortensen explains, “Studies convincingly demonstrate that aggregated voter opinions are rather sticky ... [yet there are] random fluctuations at the individual level.”<sup>23</sup>

This contradiction emerges even though macro opinion is the aggregation of micro attitudes: macro support for the Patriot Act comes from simply counting the number of individual respondents who

expressed support. What explains this striking micro/macro instability/stability inconsistency?<sup>24</sup> Unraveling the ostensible micro/macro inconsistency is more than a pedantic exercise.<sup>25</sup> Politicians often turn to aggregate opinion for guidance,<sup>26</sup> and media outlets typically report on aggregate trends.<sup>27</sup> To interpret these trends and to understand how one might go about altering them, we must contemplate their micro-foundations. Do these trends reflect reasoned judgments, or is their meaning less substantive?

What generates stability? Opinions are *stable* if they sustain or do not change when measured at two or more points in time. Two factors are critical for creating *unstable* opinions. The first is a weak attitude. Attitudes can range from nonexistent (a non-attitude) to weak to extremely strong.<sup>28</sup> For example, an individual may be asked for her opinion on a policy that she has never heard of (regulation of vending machines, say) or an issue on which she is highly committed to a position (abortion, for instance). As attitudes become stronger, they also exhibit greater stability; indeed, by some definitions, a strong attitude is (tautologically) one that persists and resists change.<sup>29</sup> Thus, change occurs mostly when attitudes are weak.

Attitude strength is a multidimensional concept. The strength of a given attitude depends on the nature of the attitude (for example, more extreme opinions tend to be stronger), the attitude's structure (more accessible attitudes tend to be stronger), and the process by which one forms attitudes (those based on elaborative thinking tend to be stronger, as are attitudes formed in an “online” fashion<sup>30</sup>). Attitudes also tend to be stronger when they are deemed personally important or are viewed as more certain.<sup>31</sup> Finally, attitude strength grows when individuals think about their attitudes or have atti-

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tude-relevant experiences,<sup>32</sup> including being exposed repeatedly to the same information (as from continuous media coverage).<sup>33</sup> Attitude strength lies on a continuum from weak to strong; however, we focus here on either strong or weak attitudes.

The second factor that contributes to instability in opinions is the presence of a stimulus. For an attitude to change, there typically must be a stimulus that induces the change; such stimuli might include an ostensibly persuasive argument (even one not consciously processed), a world event, a novel experience, and/or rethinking a viewpoint. That said, most micro studies attend to stimuli contained in communications, as in the case of the experimental example described above. These studies are meant to mimic the types of rhetoric found outside the study context (communications that may influence macro trends). Macro movements, and hence instability, could be driven by other factors such as world events and experiences. Because we seek to explain micro instability and macro stability (rather than vice versa), we limit our following discussion to communications. We also attend to stimuli that are potentially persuasive: that is, information that has sufficient credibility to induce change under at least some conditions.

Our *attitude strength x stimulus* framework maps into four model scenarios (Table 1). All else constant, we expect stability at both the micro and macro level to occur in three of the four situations. In the first two cases, in which there are no stimuli, we expect stability because there are no experiences that would stimulate reconsideration of an attitude, such as encountering new information. We expect instability when opinions are weak and there is a stimulus (assuming the stimulus is sufficiently credible to induce change). As explained, weak attitudes are relatively

open to change, and thus a stimulus may induce such modifications (assuming the stimulus pushes the opinion in a direction counter to the prior stance).

Perhaps most interesting is when an individual possesses a strong opinion and encounters a potentially persuasive stimulus (countering one's present opinion, such as a terrorism argument presented to an individual who opposes the Patriot Act). When this occurs, we expect that, all else constant, the individual will reject the stimulus and cling to the extant opinion. This happens because individuals with strong attitudes tend to engage in motivated reasoning, whereby they seek out information that confirms priors (confirmation bias), view evidence consistent with prior opinions as stronger (prior-attitude effect), and spend more time counterarguing and dismissing evidence inconsistent with prior opinions, regardless of objective accuracy (disconfirmation bias).<sup>34</sup>

Strong attitudes are likely to "come inescapably to mind, whether consciously recognized or not, and for better or worse these feelings guide subsequent thought."<sup>35</sup> When people receive new information about George W. Bush, for example, those with strong feelings interpret that information in light of their existing opinions about Bush. Thus, a pro-Bush voter might interpret information suggesting that Bush misled voters about the Iraq War either as false or as evidence of strong leadership in a time of crisis, rather than as an indication of incompetence or deception. Such voters maintain their support of Bush and may even become more supportive. An individual strongly opposed to the Patriot Act, by contrast, will reject arguments about its utility for combating terrorism, even if the argument is otherwise objectively sound. Ironically, those with less developed, weaker attitudes "are processing infor-

Table 1  
Conditions for Opinion Stability

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Attitude Strength	Stimuli	Stability?
Weak	No Stimuli	Yes
Strong	No Stimuli	Yes
Weak	Stimuli	No
Strong	Stimuli	Yes

Source: Table created by authors.

mation more ‘objectively’ than those with [stronger] attitudes.”<sup>36</sup>

As explained, micro-level public opinion work tends to suggest instability while macro-level work suggests stability. With our *strength x stimulus* framework in mind, we can now turn to three possible sources that may explain the inconsistent micro/macro findings.

*Measurement Error.* Measurement error can generate instability on individual survey responses that, when randomly distributed in the sample, cancel out at the macro level. Measurement error occurs when a survey response departs from its “true value”; for example, on the seven-point scale measuring support for the Patriot Act, ranging from strongly opposed to strongly support, a respondent’s true attitude could be around 5.5. If the survey were to be administered twice, the respondent might report a 5 in one instance and a 6 in another.

Measurement error can stem from characteristics of the respondent (for example, he or she is not paying attention or did not understand the question), the interviewer (misreading the question, including the response options), the questionnaire (the order in which questions are asked), or other factors such as the context of data collection. At the micro level, measurement features can cause a respondent to offer different answers at

distinct points in time, leading to instability over time. Yet at the macro level, random measurement error cancels out because roughly the same number of respondents who move in one direction (for example, 40 percent offer a lower level of support at the time a question is first answered than at the second time) will move in the other (40 percent offer a higher level of support the first time than the second).<sup>37</sup> Thus, stability exists in aggregation (even though 40 percent of respondents increased their support between the first and second instances, and 40 percent decreased their support, the averages at each time are the same).<sup>38</sup>

Measurement error can generate micro instability in any of the four scenarios presented in Table 1. Such error would appear to be less likely among individuals with strong opinions, because they tend to cling to those attitudes. Yet measurement error is not about substantive changes, and therefore susceptibility is not contingent on attitude strength. Jon Krosnick and Robert Abelson posit that the “relatively simple hypothesis that these effects [that is, responsive instability] are greater in the case of weaker attitudes has clearly been disconfirmed.”<sup>39</sup>

Stephen Ansolabehere and colleagues offer compelling evidence that once corrections for measurement error are put in place (for example, using multiple measures and taking averages), the result is

micro-level (and macro-level) stability. “[T]he low correlations of individuals’ issue preferences over time,” they explain, “are easily reconciled with a model in which there is a high degree of measurement error and a high degree of stability in preferences.”<sup>40</sup>

*Sample Inconsistencies.* Most discussions about a survey sample focus on the selection of respondents: for example, are the respondents representative of the target population? Yet sampling also includes the selection of issues and times. Researchers aim to draw inferences about opinions on the universe of issues across time; however, they have no choice but to focus on select issues at particular times. We suspect that at least some of the micro/macro discrepancy can be traced to distinct foci in the issues examined and the timing of the studies. Aggregate studies almost always rely on publicly available survey data from credible polling organizations (Gallup, American National Election Study, and so on); consequently, these studies focus on public opinion toward the issues that were asked about in these surveys. This selection turns out to be a very small and likely nonrandom sample of the possible universe of issues (for instance, all issues the government addresses over a term). Paul Burstein explains that “the entire set of issues studied may be so small that it is unrepresentative of the set of all issues and an inadequate basis for generalization. . . . [W]hat should be emphasized is how our capacity to generalize is limited by the narrowness of the range of issues studied.” He also states that “it’s no secret that public opinion data don’t exist for most policies legislatures consider.”<sup>41</sup>

Importantly, the issues that tend to be included in public surveys are those that are more salient, and it makes sense that survey organizations would prefer to gauge issues salient to the public. James Druckman and Lawrence Jacobs explain that

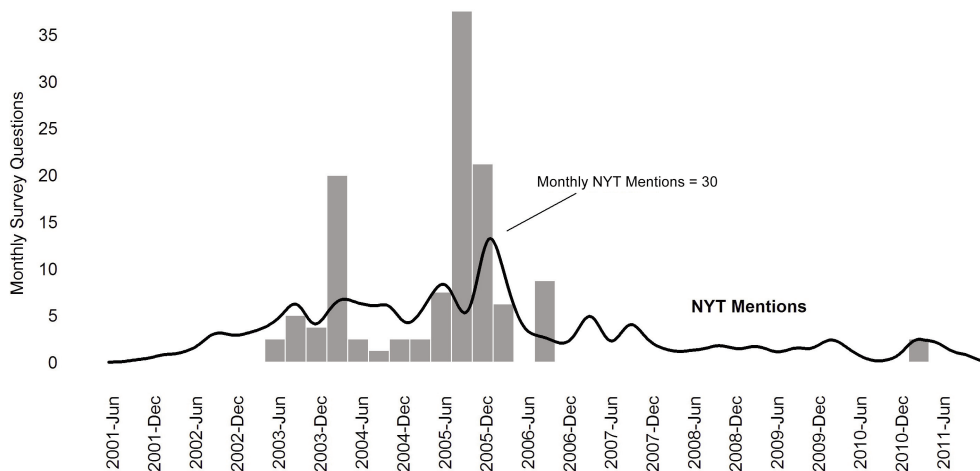
there is pressure “to collect policy opinion data on issues seen as important by the public.”<sup>42</sup> In his survey of extant work, Burstein shows that these issues include social welfare, taxes, and defense: issues that have the potential to affect citizens directly.<sup>43</sup>

Thus, macro studies may be biased toward issues on which citizens possess stronger opinions because the issues are more likely to be of personal importance, a key dimension of attitude strength.<sup>44</sup> Also, these issues are more likely to be covered in the media, thereby providing citizens with repeated exposure, which, as mentioned, enhances attitude strength.<sup>45</sup> In Figure 1, we chart the number of questions asked regarding the Patriot Act (by all survey organizations contained in the iPoll database) along with media coverage of the Patriot Act (as captured by non-editorial mentions of “Patriot Act” in Section A of *The New York Times*). The number of survey questions in the field (gray bars) peaks when media coverage increases. Survey questions are not asked consistently across the period; none were in the field during initial authorization in October 2001, and few were asked between the July 2005 and May 2011 reauthorizations. Effectively, polls that are responsive to media coverage select upon opinions that are strong and salient; this nonrandom selection of times for assessing public opinion problematizes the assessment of stability. Indeed, as mentioned above, access to information tends to generate stronger attitudes, which in turn lead to stability.

In short, the strong opinions on issues that are polled during times of increased media activity lead to stability. This fact sharply contrasts with the foci of many micro-level studies that typically choose issues for the exact opposite reason. These studies search for issues on which prior opinions are weak, since that may allow

Figure 1  
Patriot Act Survey Questions and Mentions in *The New York Times*

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The histogram depicts the number of survey questions fielded each month (grouped into three-month intervals for clarity of presentation). The dark black line is a kernel-smoothed density plot of noneditorial mentions of “Patriot Act” in Section A of *The New York Times* (NYT) over the same period. Source : Figure created by authors.

for change (the focus of many of these studies), and/or issues that have been absent from recent media coverage. Dennis Chong and James Druckman echo many other micro studies in stating that they selected issues for their 2010 study because “opinions on these issues are liable to change, which allows us to test hypotheses [about opinion change].”<sup>46</sup> Studies also opt to select issues “that receive scant attention outside of the experiment itself.”<sup>47</sup> Examples from the micro-studies that demonstrate volatility include attitudes about a particular ballot proposition,<sup>48</sup> an election involving a new candidate about whom individuals have scant prior opinions,<sup>49</sup> regulation of hog farms,<sup>50</sup> urban sprawl in situations where respondents are not directly affected,<sup>51</sup> or abstract and impersonal subjects, such as people’s trust in institutions.<sup>52</sup>

In sum, varying measures of stability in studies of macro- and micro-level opin-

ion may stem in part from differences in the issues explored and the timing of that exploration.<sup>53</sup> The disconnect originates in samples of issues and times that are incomparable.

To see how opinion strength can generate distinct patterns of stability, consider Chong and Druckman’s survey experiment.<sup>54</sup> Their December 2009 study involved a nationally representative sample of about 1,300 individuals and focused on opinions about the Patriot Act. Their specific dependent measure was the same as that presented above, where respondents reported their support for the Patriot Act on a seven-point scale, with higher scores indicating increased support. They measured opinions at two points in time (t<sub>1</sub> and t<sub>2</sub>), separated by about ten days.

There are two critical features of this study. First, it employed versions of the aforementioned terrorism (“pro”) and civil liberties (“con”) frames. (The frames,



however, were presented as a series of statements rather than in the wording of the question, as in the example above.) Respondents received different mixes of these frames at t1 and t2. Second, Chong and Druckman randomly assigned respondents to conditions that induced them to form strong opinions at t1, or induced them to form weaker opinions at t2.<sup>55</sup> We will not go into the details of the specific opinion-strength manipulations, but suffice it to say that Chong and Druckman offer evidence that their inducements (which are commonly used in psychology) did in fact generate stronger or weaker t1 opinions about the Patriot Act.<sup>56</sup>

Figure 2 reports the average opinions at t1 and t2 for the weak-attitude conditions, for various frame combinations.<sup>57</sup> Figure 2a shows conditions that did not include a frame at t2, while Figure 2b is from conditions with a t2 frame. Substantial over-time volatility is evident in the figure, with opinions at t1 reflecting the direction of whatever frame the respondents received, but then either moving toward the control group at t2 (that is, the t1 “No,” t2 “No” condition) when no t2 frame is offered or flipping to reflect the direction of the t2 frame when a t2 frame is offered. There is no stability whatsoever.

Figure 3, which contains analogous results but in this case for those induced to form strong opinions, presents an entirely different portrait. Here we see tremendous stability when no t2 frame is offered (Figure 3a). Moreover, Figure 3b shows similar stability even in the presence of a contrary t2 frame; individuals with strong attitudes reject it and cling to their t1 opinion (which was affected by the t1 frame). This latter dynamic reflects motivated reasoning, whereby respondents counterargue and reject contrary evidence.<sup>58</sup>

These results have been replicated with various issues, including attitudes about

urban sprawl, a state-funded casino, new scientific technologies, and health care.<sup>59</sup> The implication is that if macro studies focus on issues at times when individuals develop strong attitudes, then stability is to be expected; however, instability would be the norm for micro studies to the extent that they focus on less-developed issues.

While Chong and Druckman’s experiment reveals a source of the macro/micro disconnect, it cannot explain the discrepancy in the case of the Patriot Act, given that it focuses on one issue during one time period. Moreover, there are undoubtedly issues on which most possess weak opinions that nonetheless lead to differing macro and micro dynamics (putting measurement error aside). We suspect that these issues as well as the aforementioned Patriot Act inconsistency stem from a third possible cause of inconsistency.

*Ecological Validity of the Rhetorical Environment.* One possible reason why micro instability on a given issue at a certain time would exhibit macro stability is that the instability cancels out. Consider the weak-attitude conditions in the Patriot Act experiment. In that case, proportional numbers of individuals were exposed to the pro and con frames at each point in time. There was considerable movement; but because the numbers were largely equivalent (due to the assignment to conditions), the consequence was a canceling out. Indeed, if we merge all the weak-attitude scenarios, it would appear as if there was aggregate macro stability, as the overall t1 mean is 4.40 (standard deviation = 1.79; N = 575) and the t2 mean is 4.38 (standard deviation = 1.70; N = 575).

This finding suggests one possibility: that stability stems from a macro environment that includes a broad array of contrasting information. Such environments would differ from micro studies that often expose individuals to informa-

Figure 2a  
Weak Opinions/No t2 Frame

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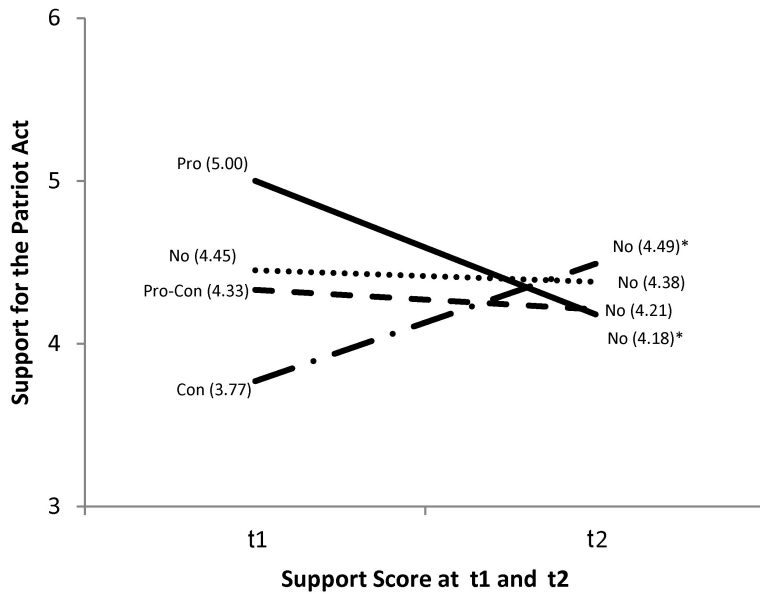
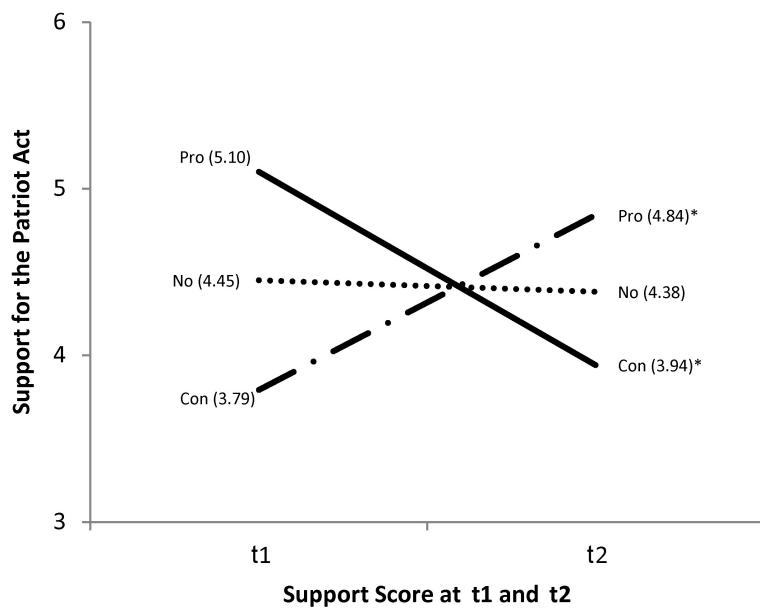


Figure 2b  
Weak Opinions/t2 Frame



\* $p \leq 0.01$  for one-tailed tests (for changes between t1 and t2). Source: Dennis Chong and James N. Druckman, "Dynamic Public Opinion: Communication Effects over Time," *American Political Science Review* 104 (4) (2010); used here with permission of Chong and Druckman.

Is Public Opinion Stable?  
 Figure 3a  
 Strong Opinions/No t2 Frame

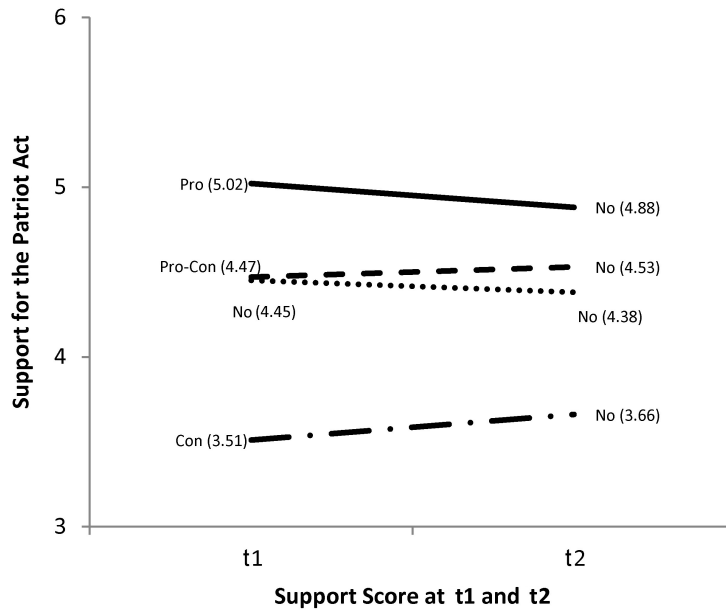
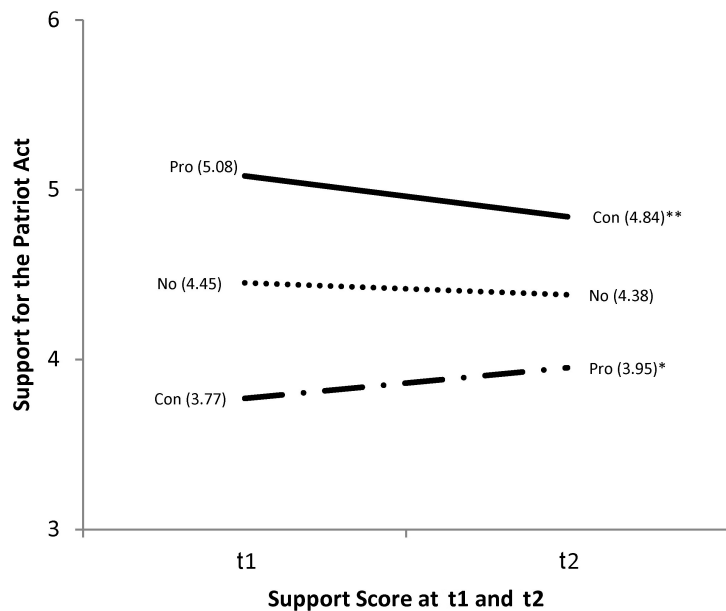


Figure 3b  
 Strong Opinions/t2 Frame



\* $p \leq 0.10$ ; \*\* $p \leq 0.05$  for one-tailed tests (for changes between t1 and t2). Source: Dennis Chong and James N. Druckman, "Dynamic Public Opinion: Communication Effects over Time," *American Political Science Review* 104 (4) (2010); used here with permission of Chong and Druckman.

tion pushing them in a single direction. In terms of the Patriot Act, Chong and Druckman report that the civil liberties and terrorism frames appeared with nearly identical frequency in *The New York Times* from 2001 through 2005. When this occurs, the competing frames often cancel out, leaving opinions unaffected.<sup>60</sup> The results in Figures 2 and 3 support this contention. Notice that for both the strong- and weak-attitude conditions, when individuals receive pro and con frames at t<sub>1</sub>, their opinions are unmoved relative to the control and consequently sustain until t<sub>2</sub>.<sup>61</sup>

Micro work may be lacking in ecological validity, that is, the extent to which studies approximate “real life” situations. If most stimuli in the world (and thus in macro studies) involve competing information streams, but micro studies explore asymmetric information, the disconnect may simply reflect a lack of ecological validity in micro studies (particularly those experimental studies on which we have focused). Chong and Druckman make this exact point upon discovering that across many issues, media coverage incorporates competing information: “Because news stories typically contain more than one or two effective frames, readers rarely encounter a scenario – common in experimental studies – in which they are restricted to a single monolithic frame of the issue. Thus, framing effects that occur outside of controlled experimental settings are not well understood.”<sup>62</sup>

The implication is that stability is the norm, due to competing communications, and that micro studies overstate instability due to scant attention to competition. This raises the question of how these competing communications work. On the one hand, Paul Sniderman and Sean Theriault suggest that “political debate, being exposed to opposing sides, tightens the linkages of mass belief systems and increases

the constraint between basic principles and specific issue choices.”<sup>63</sup> In other words, individuals exposed to competing messages largely ignore them and fall back on their well-formed values. On the other hand, John Zaller suggests that “the mass media routinely carry competing political messages [and] each message . . . has its effects, but the effects tend to be mutually canceling in ways that produce the illusion of modest impact.” That is, citizens do not rely on well-formed, reasoned values, but rather move back and forth in response to the messages.<sup>64</sup>

We began by asking whether public opinion is stable. Our answer may be less than satisfying: it depends. More important, however, is our identification of when we can expect stability. We predict that opinions will be stable on issues and at times when individuals possess strong opinions or, putting measurement error aside, when there is a lack of persuasive stimuli in the environment. We argued that micro-level studies significantly overstate the malleability of the mass public by focusing on issues on which individuals possess weak attitudes. On the flip side, macro studies likely overstate the extent of stability by relying on publicly available data that overrepresent issues that receive substantial media coverage and on which individuals possess strong opinions.

We offer a fairly clear blueprint for steps that can be taken to vitiate the micro/macro gap:

- All possible efforts should be put forth to reduce measurement error in surveys.

While some approaches to doing so – such as using multiple items, as Stephen Ansolabehere and colleagues suggest – come with costs (for example, the cost of survey time or demand effects), there are also more straightforward steps that can be taken to minimize error.<sup>65</sup>

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- Studies should consciously assess the representativeness of the issues and the times on which they focus.

A first step is to carry out a more systematic appraisal of the exact issues and times that have been the focus in micro and macro study. Then, going forward, studies should attempt to incorporate multiple issues (ones that are likely to have varying distributions of attitude strength), or at least recognize the consequences of not doing so. While most instruments include a vast array of questions about respondent demographics, they rarely incorporate attitude-strength questions that could provide insight into expected stability or instability.<sup>66</sup> Twenty years ago, Jon Krosnick and Robert Abelson made a plea for the regular inclusion of attitude-strength measures in public opinion surveys, but thus far, it has gone largely unheeded.<sup>67</sup>

- More attention should be paid to issues of ecological validity.

The intellectual evolution of many political communication studies led to an overemphasis on documenting the possibility of effects.<sup>68</sup> This is no longer a critical goal, and scholars should invest more time in identifying the nature of the rhetorical environment that surrounds an issue. They should seek to theorize and emulate the effects of that environment. We recognize that this task brings with it a host of challenges: it requires more intensive content analyses, and it introduces the likelihood of fewer statistically significant findings, which then face a publication bias. This raises a larger concern about the publication process and the biases that result from a narrow focus on p-values.<sup>69</sup>

We urge caution to anyone inferring much at all from survey evidence that suggests mass opinions either have changed or remained stable on a given issue. Politicians frequently legitimize their stances

by referring to public opinion, particularly when majorities are on their side or opinions seem to be shifting their way. Whether a bare majority or a few-percentage-point shift is meaningful requires an understanding of survey practice – question wording, sampling, and so on – but also some sense of why opinions might behave the way they do. To comprehend the latter, reports of mass opinion need to be contextualized with information about the environment in which opinions were measured and some sense of the strength of those opinions. Unfortunately, present reporting rarely mentions either. Observers and reporters should aim to present richer narratives to make sense of public opinion.

A final point concerns the normative implications of our argument. Strong opinions and stability are often seen as signs of an engaged and thoughtful citizenry – coveted attributes. Attitude strength promotes constraint<sup>70</sup> and engagement.<sup>71</sup> Yet strong attitudes also lead to motivated reasoning that can cause individuals to resist consideration of relevant alternative perspectives. At the extreme, such individuals can be close-mindedly dogmatic, which might be as problematic as extremely labile preferences. In terms of opinion “quality,” theorists should not presume that the quality of well-developed and thoughtful opinions always trumps that of fleeting opinions.<sup>72</sup>

Micro/macro gaps pervade the social sciences, and we have focused on just one example. In so doing, however, we affirm Heinz Eulau’s hope for the field of communication and public opinion. He believed that it had the potential to bridge the micro/macro gap: “the new ‘discipline’ of Communication represents the fulfillment of the dream for . . . [i]nterdisciplinary behavioral science that can address the gap.”<sup>73</sup>

ENDNOTES

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- <sup>1</sup> See, for example, Robert A. Dahl, *Polyarchy: Participation and Opposition* (New Haven, Conn.: Yale University Press, 1971).
  - <sup>2</sup> Robert Y. Shapiro, "Public Opinion and American Democracy," *Public Opinion Quarterly* 75 (5) (2011).
  - <sup>3</sup> We emphasize that it *could* suggest that less meaning should be attached to public opinion; another possibility is that instability stems from systematic and thoughtful opinion changes in response to meaningful events.
  - <sup>4</sup> Benjamin I. Page and Robert Y. Shapiro, *The Rational Public: Fifty Years of Trends in Americans' Policy Preferences* (Chicago: University of Chicago Press, 1992), 45.
  - <sup>5</sup> John Zaller, *The Nature and Origins of Mass Opinion* (New York: Cambridge University Press, 1992), 28.
  - <sup>6</sup> For example, Robert S. Erikson, Michael B. MacKuen, and James A. Stimson, *The Macro Polity* (New York: Cambridge University Press, 2002), 235; Bryan D. Jones and Frank R. Baumgartner, "A Model of Choice for Public Policy," *Journal of Public Administration Research and Theory* 15 (2005): 325–351; B. Dan Wood and Arnold Vedlitz, "Definition, Information Processing, and the Politics of Global Warming," *American Journal of Political Science* 51 (3) (2007): 553; Frank R. Baumgartner, Jeffrey M. Berry, Marie Hojnacki, David C. Kimball, and Beth L. Leech, *Lobbying and Policy Change: Who Wins, Who Loses, and Why* (Chicago: University of Chicago Press, 2009), 175–178; Stuart N. Soroka and Christopher Wlezien, *Degrees of Democracy* (New York: Cambridge University Press, 2009), 69.
  - <sup>7</sup> For example, Christopher H. Achen and Larry M. Bartels, "Musical Chairs: Pocketbook Voting and the Limits of Democratic Accountability," paper presented at the Annual Meeting of the American Political Science Association, Chicago, Illinois, 2004; Douglas A. Hibbs, Jr., "Implications of the 'Bread and Peace' Model for the 2008 Presidential Election," *Public Choice* 137 (2008): 1–10; Dennis Chong and James N. Druckman, "Dynamic Public Opinion: Communication Effects over Time," *American Political Science Review* 104 (4) (2010): 665.
  - <sup>8</sup> For a historical discussion, see Heinz Eulau, *Micro-Macro Dilemmas in Political Science: Personal Pathways Through Complexity* (Norman: University of Oklahoma Press, 1996); see also Thomas C. Schelling, *Micromotives and Macrobehavior* (New York: Norton, 1978).
  - <sup>9</sup> Eulau, *Micro-Macro Dilemmas in Political Science*, 37–38.
  - <sup>10</sup> The Act contains a number of other elements, such as redefining *terrorism* to include domestic incidents. The actual name of the Act is the USA PATRIOT Act, which stands for Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism. The Patriot Act is a good issue to focus on insofar as it resembles many other issues by being periodically salient and touching on both economic and social dimensions.
  - <sup>11</sup> For example, Philip E. Converse, "The Nature of Belief Systems in Mass Publics," in *Ideology and Discontent*, ed. David Apter (New York: Free Press, 1964).

- <sup>12</sup> See James N. Druckman, Jordan Fein, and Thomas J. Leeper, “Framing and Biased Information Search,” paper presented at the Annual Meeting of the American Political Science Association, Seattle, Washington, 2011.
- <sup>13</sup> For instance, Zaller, *The Nature and Origins of Mass Opinion*; and Larry M. Bartels, “Democracy with Attitudes,” in *Electoral Democracy*, ed. Michael Bruce MacKuen and George Rabinowitz (Ann Arbor: University of Michigan Press, 2003).
- <sup>14</sup> Chong and Druckman, “Dynamic Public Opinion.”
- <sup>15</sup> *Ibid.*, 663.
- <sup>16</sup> See James N. Druckman, “On the Limits of Framing Effects: Who Can Frame?” *Journal of Politics* 63 (2001): 1041–1066; Paul M. Sniderman and Sean M. Theriault, “The Structure of Political Argument and the Logic of Issue Framing,” in *Studies in Public Opinion: Attitudes, Nonattitudes, Measurement Error, and Change*, ed. William E. Saris and Paul M. Sniderman (Princeton, N.J.: Princeton University Press, 2004).
- <sup>17</sup> As is typical, we treat the terms *opinion* and *attitude* as interchangeable.
- <sup>18</sup> Samuel J. Best and Monika L. McDermott, “Measuring Opinions vs. Non-Opinions – The Case of the USA Patriot Act,” *The Forum* 5 (2007): 1.
- <sup>19</sup> The measure could be the same as the previously presented individual-level measure, where support is construed as any score above 4. Alternatively, a measure could report percentages for each of the seven response options (for example, percentage of respondents who registered a 6) or use a distinct set of response options (for example, “support,” “not sure,” “oppose”).
- <sup>20</sup> See Page and Shapiro, *The Rational Public*; Erikson et al., *The Macro Polity*; and Soroka and Wlezien, *Degrees of Democracy*. There is a related debate on whether political actors respond to issue-specific opinions (for example, specific trends regarding the Patriot Act) or more generalized ideological trends (for example, liberalism versus conservatism); see James N. Druckman and Lawrence R. Jacobs, “Lumpers and Splitters: The Public Opinion Information that Politicians Collect and Use,” *Public Opinion Quarterly* 70 (4) (2006): 453–476.
- <sup>21</sup> Pew Research Center, “Public Remains Divided Over the Patriot Act,” 2011, <http://pewresearch.org/pubs/1893/poll-patriot-act-renewal>.
- <sup>22</sup> For example, see Bartels, “Democracy with Attitudes,” in *Electoral Democracy*, ed. MacKuen and Rabinowitz.
- <sup>23</sup> Peter B. Mortensen, “The Impact of Public Opinion on Public Policy,” Ph.D. dissertation, Aarhus University, Denmark, 2006, 18.
- <sup>24</sup> The micro/macro inconsistency is a prototypical example of an ecological inference problem, whereby stable trends at the macro level belie the underlying volatility at the micro level.
- <sup>25</sup> John E. Jackson and Ken Kollman, “Connecting Micro- and Macropartisanship,” *Political Analysis* 19 (2011): 507.
- <sup>26</sup> Erikson et al., *The Macro Polity*.
- <sup>27</sup> Michael W. Traugott and Paul J. Lavrakas, *The Voter’s Guide to Election Polls* (Lanham, Md.: Rowman & Littlefield, 2008).
- <sup>28</sup> Russell H. Fazio, “Attitudes as Object-Evaluation Associations of Varying Strength,” *Social Cognition* 25 (5) (2007): 603–637.
- <sup>29</sup> Jon A. Krosnick and Wendy A. Smith, “Attitude Strength,” in *Encyclopedia of Human Behavior*, ed. V. S. Ramachandran (San Diego: Academic Press, 1994); Joanne M. Miller and David A.M. Peterson, “Theoretical and Empirical Implications of Attitude Strength,” *The Journal of Politics* 66 (3) (2004): 847–867; Penny S. Visser, George Y. Bizer, and Jon A. Krosnick, “Exploring the Latent Structure of Strength-Related Attitude Attributes,” *Advances in Experimental Social Psychology* 38 (6) (2006): 1–67.

- 30 Richard E. Petty and Jon A. Krosnick, eds., *Attitude Strength: Antecedents and Consequences* (New York: Psychology Press, 1995); George Y. Bizer, Jon A. Krosnick, Allyson L. Holbrook, S. Christian Wheeler, Derek D. Rucker, and Richard E. Petty, "The Impact of Personality on Cognitive, Behavioral, and Affective Political Processes," *Journal of Personality* 72 (2004): 995–1027. James N. Druckman & Thomas J. Leeper
- 31 Jon A. Krosnick, "Attitude Importance and Attitude Change," *Journal of Experimental Social Psychology* 24 (1988): 240–255; Visser et al., "Exploring the Latent Structure of Strength-Related Attitude Attributes."
- 32 Ibid.; Krosnick and Smith, "Attitude Strength," in *Encyclopedia of Human Behavior*, ed. Ramachandran; Laura R. Glasman and Dolores Albarracín, "Forming Attitudes that Predict Future Behavior: A Meta-Analysis of the Attitude-Behavior Relation," *Psychological Bulletin* 132 (2006): 778–822.
- 33 Dennis Chong and James N. Druckman, "Public-Elite Interactions," in *The Oxford Handbook of American Public Opinion and the Media*, ed. Robert Y. Shapiro and Larry R. Jacobs (New York: Oxford University Press, 2011).
- 34 See Milton Lodge and Charles S. Taber, "Three Steps Toward a Theory of Motivated Political Reasoning," in *Elements of Reason: Cognition, Choice, and the Bounds of Rationality*, ed. Arthur Lupia, Mathew D. McCubbins, and Samuel L. Popkin (New York: Cambridge University Press, 2000); Ziva Kunda, *Social Cognition: Making Sense of People* (Cambridge, Mass.: MIT Press, 1999); Larry M. Bartels, "Beyond the Running Tally: Partisan Bias in Political Perceptions," *Political Behavior* 24 (2) (2002): 117–150; David P. Redlawsk, "Hot Cognition or Cool Consideration? Testing the Effects of Motivated Reasoning on Political Decision Making," *The Journal of Politics* 64 (4) (2002): 1021–1044; Thomas J. Rudolph, "Triangulating Political Responsibility: The Motivated Formation of Responsibility Judgments," *Political Psychology* 27 (1) (2006): 99–122; Alan S. Gerber and Gregory A. Huber, "Partisanship and Economic Behavior: Do Partisan Differences in Economic Forecasts Predict Real Economic Behavior?" *American Political Science Review* 103 (2009): 407–426; Alan S. Gerber and Gregory A. Huber, "Partisanship, Political Control, and Economic Assessments," *American Journal of Political Science* 54 (2010): 153–173; Paul Goren, Christopher M. Federico, and Miki Caul Kittilson, "Source Cues, Partisan Identities, and Political Value Expression," *American Journal of Political Science* 53 (4) (2009): 805–820; James N. Druckman, Cari Lynn Hennessy, Kristi St. Charles, and Jonathan Weber, "Competing Rhetoric Over Time," *The Journal of Politics* 72 (2010): 136–148; James N. Druckman and Toby Bolsen, "Framing, Motivated Reasoning, and Opinions About Emergent Technologies," *Journal of Communication* 61 (4) (2011): 659–688; Howard Lavine, Christopher Johnston, and Marco Steenbergen, *The Ambivalent Partisan: How Critical Loyalty Promotes Democracy* (forthcoming, Oxford University Press).
- 35 Milton Lodge and Charles S. Taber, "The Rationalizing Voter: Unconscious Thought in Political Information Processing," unpublished manuscript, Stony Brook University, 2008, 33.
- 36 David A. Houston and Russell H. Fazio, "Biased Processing as a Function of Attitude Accessibility: Making Objective Judgments Subjectively," *Social Cognition* 7 (1) (1989): 64. Motivated reasoning is less likely to occur if the individuals are motivated to process information in an accurate way. Taber and Lodge, however, argue that in most political contexts, this is unlikely; see Charles S. Taber and Milton Lodge, "Motivated Skepticism in the Evaluation of Political Beliefs," *American Journal of Political Science* 50 (3) (2006): 755–769 (although see James N. Druckman, "The Politics of Motivation," forthcoming in *Critical Review*).
- 37 There is also the possibility of nonrandom measurement error, such as a question written in a biased fashion ("Most support the Patriot Act since it helps prevent terrorism. What do you think?"). This type of measurement error would generate micro instability only if it were corrected or changed in over-time surveys.
- 38 Page and Shapiro, *The Rational Public*; Mortensen, "The Impact of Public Opinion on Public Policy," 18. See also Larry M. Bartels, "Uninformed Votes: Information Effects in Presidential Elections," *American Journal of Political Science* 40 (1) (1996): 194–230.



- <sup>39</sup> Jon A. Krosnick and Robert P. Abelson, "The Case for Measuring Attitude Strength in Surveys," in *Questions About Questions: Inquiries into the Cognitive Bases of Surveys*, ed. Judith M. Tanur (New York: Russell Sage, 1992), 193. For a more recent discussion, see Visser et al., "Exploring the Latent Structure of Strength-Related Attitude Attributes."
- <sup>40</sup> Stephen D. Ansolabehere, Jonathan Rodden, and James M. Snyder, Jr., "The Strength of Issues: Using Multiple Measures to Gauge Preference Stability, Ideological Constraint, and Issue Voting," *American Political Science Review* 102 (2) (2008): 216.
- <sup>41</sup> Paul Burstein, "The Impact of Public Opinion on Public Policy: A Review and an Agenda," *Political Research Quarterly* 56 (2003): 31, 36, 68.
- <sup>42</sup> Druckman and Jacobs, "Lumpers and Splitters," 470.
- <sup>43</sup> Burstein, "The Impact of Public Opinion on Public Policy." Another point is that publicly available surveys tend to focus on policy generalities rather than on specific topics: for instance, questions about support for welfare in general rather than for a particular welfare provision. It may be that attitudes toward such general areas are more stable.
- <sup>44</sup> On attitude strength, see Visser et al., "Exploring the Latent Structure of Strength-Related Attitude Attributes." While we focus on the issue and time, we also note that another possible reason for the micro/macro gap is the nature of the samples used (for example, more student samples in many micro studies). However, recent work that relies on representative sample survey experiments leads us to put less emphasis on this possibility.
- <sup>45</sup> Chong and Druckman, "Public-Elite Interactions," in *The Oxford Handbook of American Public Opinion and the Media*, ed. Shapiro and Jacobs.
- <sup>46</sup> Chong and Druckman, "Dynamic Public Opinion," 667.
- <sup>47</sup> Claes H. de Vreese, "The Effects of Strategic News on Political Cynicism, Issue Evaluations, and Policy Support: A Two-Wave Experiment," *Mass Communication and Society* 7 (2) (2004): 191–214; Chong and Druckman, "Dynamic Public Opinion"; James N. Druckman and Thomas J. Leeper, "Learning More from Political Communication Experiments: The Importance of Pretreatment Effects," *American Journal of Political Science* (forthcoming): 3.
- <sup>48</sup> Bethany L. Albertson and Adria Lawrence, "After the Credits Roll: The Long-Term Effects of Educational Television on Public Knowledge and Attitudes," *American Politics Research* 37 (2) (2009): 275–300.
- <sup>49</sup> For example, Alan S. Gerber, James G. Gimpel, Donald P. Green, and Daron R. Shaw, "How Large and Long-Lasting are the Persuasive Effects of Televised Campaign Ads? Results from a Large-Scale Randomized Experiment," *American Political Science Review* 105 (1) (2011): 135–150.
- <sup>50</sup> David Tewksbury, Jennifer Jones, Matthew W. Peske, Ashlea Raymond, and William Vig, "The Interaction of News and Advocate Frames," *Journalism and Mass Communication Quarterly* 77 (4) (2000): 804–829.
- <sup>51</sup> For example, Dennis Chong and James N. Druckman, "Framing Public Opinion in Competitive Democracies," *American Political Science Review* 101 (4) (2007): 637–655.
- <sup>52</sup> For example, de Vreese, "The Effects of Strategic News on Political Cynicism, Issue Evaluations, and Policy Support"; Diana C. Mutz and Byron Reeves, "The New Videomalaise: Effects of Televised Incivility on Political Trust," *American Political Science* 99 (1) (2005): 1–15. For discussion, see Kathleen M. McGraw and Thomas Dolan, "Personifying the State: Consequences for Attitude Formation," *Political Psychology* 28 (2007): 299–328.
- <sup>53</sup> See also Wood and Vedlitz, "Definition, Information Processing, and the Politics of Global Warming."
- <sup>54</sup> Chong and Druckman, "Dynamic Public Opinion."
- <sup>55</sup> They also included conditions with no attitude-strength inducement, but we do not discuss those results here.

- 56 They did this by inducing “online” or memory-based processing; for details, see Chong and Druckman, “Dynamic Public Opinion.”
- 57 We recognize that it may be ironic that we are using aggregated averages to make a case about micro opinion, which we have argued differs from macro opinion because it is not aggregated. Nonetheless, we take this approach for presentational clarity, noting that if we instead looked at individual opinion change across periods, the story would be the same. What is critical here are the conditions that generate different types of micro-level opinions – and these conditions accentuate common differences in micro and macro samples given when measurement typically takes place (as explained).
- 58 Direct evidence of this dynamic comes from a question that asked strong-attitude individuals to rate the “effectiveness” of the t1 and t2 statements, in terms of “providing information and/or making an argument about the Patriot Act,” on a seven-point scale, with higher scores indicating increased effectiveness. Participants who received the con frame at t1 reported an average effectiveness score of 4.84 (standard deviation = 1.65; N = 83) whereas those who received the same frame at t2 (after having received the pro frame at t1) registered a significantly lower 4.40 (standard deviation = 1.44; N = 83) average ( $t_{164} = 1.83, p \leq 0.05$  for a one-tailed test). Similarly, the average t1 pro rating is 5.05 (standard deviation = 1.54; N = 83), but only 4.29 (standard deviation = 1.59; N = 83) at t2 ( $t_{164} = 3.13, p \leq 0.01$  for a one-tailed test). In short, those induced to form strong attitudes at t1 downgraded the t2 frames that contradicted their t1 priors.
- 59 For example, see James N. Druckman, “Competing Frames in a Political Campaign,” in *Winning with Words*, ed. Brian F. Schaffner and Patrick J. Sellers (New York: Routledge, 2010); Druckman and Bolsen, “Framing, Motivated Reasoning, and Opinions about Emergent Technologies”; Druckman et al., “Framing and Biased Information Search”; and Druckman and Leeper, “Learning More from Political Communication Experiments.”
- 60 Chong and Druckman, “Public-Elite Interactions,” in *The Oxford Handbook of American Public Opinion and the Media*, ed. Shapiro and Jacobs, 257. One challenge to this, however, is if individuals select information consistent with their prior opinions and thus segment themselves such that those with pro (or con) prior opinions view only pro (or con) information. Indeed, this is a manifestation of motivated reasoning. In this scenario, we would find micro stability rather than instability; see Druckman et al., “Framing and Biased Information Search.”
- 61 Alternatively, stimuli in the world may be less likely to change in macro contexts: for example, see Baumgartner et al., *Lobbying and Policy Change*, 175 – 178.
- 62 Chong and Druckman, “Public-Elite Interactions,” in *The Oxford Handbook of American Public Opinion and the Media*, ed. Shapiro and Jacobs, 255. See also Sniderman and Theriault, “The Structure of Political Argument and the Logic of Issue Framing,” in *Studies in Public Opinion*, ed. Saris and Sniderman, 141; and Donald R. Kinder, “Curmudgeonly Advice,” *Journal of Communication* 57 (1) (2007): 155 – 162.
- 63 Sniderman and Theriault, “The Structure of Political Argument and the Logic of Issue Framing,” in *Studies in Public Opinion*, ed. Saris and Sniderman, 158.
- 64 John Zaller, “The Myth of Massive Media Impact Revived: New Support for a Discredited Idea,” in *Political Persuasion and Attitude Change*, ed. Diana C. Mutz, Richard A. Brody, and Paul M. Sniderman (Ann Arbor: University of Michigan Press, 1996), 20. Based on an explicit testing of these alternative accounts, Chong and Druckman report, “The participants in our experiments were open to argumentation on both sides of the issue and did not merely revert to standing positions”; see Chong and Druckman, “Framing Public Opinion in Competitive Democracies,” 651.
- 65 Ansolabehere et al., “The Strength of Issues.” For a general discussion, see Jon A. Krosnick and Stanley Presser, “Question and Questionnaire Design,” in *Handbook of Survey Research*, ed. Peter V. Marsden and James D. Wright, 2nd ed. (Bingley, U.K.: Emerald, 2010).

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<sup>66</sup> Page and Shapiro explore potential volatility differences among various demographic subgroups (based, for example, on age, income, education, region, and race). They conclude that “the bulk of the evidence indicates that different groups do not tend to *change* their preferences very often in very different ways”; see Page and Shapiro, *The Rational Public*, 285–320, italics in original. Our point, however, is that much more relevant subgroup differences may be found if one focuses on attitude strength instead of conventional demographics.

<sup>67</sup> Krosnick and Abelson, “The Case for Measuring Attitude Strength in Surveys,” in *Questions about Questions*, ed. Tanur.

<sup>68</sup> See James N. Druckman, James H. Kuklinski, and Lee Sigelman, “The Unmet Potential of Interdisciplinary Research,” *Political Behavior* 31 (2009): 485–510.

<sup>69</sup> See Alan S. Gerber, Neil Malhotra, Conor M. Dowling, and David Doherty, “Publication Bias in Two Political Behavior Literatures,” *American Politics Research* 38 (2010): 591–613.

<sup>70</sup> Christopher M. Federico and M. C. Schneider, “Political Expertise and the Use of Ideology: Moderating Effects of Evaluative Motivation,” *Public Opinion Quarterly* 71 (2) (2007): 221–252.

<sup>71</sup> Thomas J. Leeper, “Information Choice and Opinion Change Over Time,” paper presented at the Annual Meeting of the Midwest Political Science Association, Chicago, Illinois, 2012.

<sup>72</sup> See Druckman, “The Politics of Motivation.”

<sup>73</sup> Eulau, *Micro-Macro Dilemmas in Political Science*, 359.