Studying Framing Effects:
Existing Research and Lingering Questions

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Introduction

Few concepts in the study of political communication have attracted as much attention as framing. A common focus is on "emphasis framing," whereby a political actor (e.g., candidate, interest group, media outlet, opinion leader) highlights a subset of potentially relevant considerations about a candidate, issue, or event (Druckman 2001). A framing effect occurs when that emphasis causes individuals to place greater weight on the highlighted considerations as they form opinions. A paradigmatic example involves a debate over whether to permit a hate group (e.g., Ku Klux Klan) to hold a public rally. Supporters of the rally might frame the issue as a question of free speech. This causes citizens to weigh constitutional rights heavily when forming their opinions and to support the group's right to demonstrate. On the other hand, opponents of the rally might frame the issue as one of public safety, leading citizens to focus on maintaining social order when forming opinions and to oppose the rally (Nelson, Clawson, and Oxley 1997).

Over the past quarter century, researchers have documented framing effects across a multitude of issues, campaigns, and events (e.g., Klar, Robison, and Druckman 2013), and the study of framing has played a role in political and communications research since at least the 1950s (see Berelson, Lazarsfeld, and McPhee 1954: chapter 12). This research suggests that frames play a substantial role when it comes to political attitude formation. Yet, our understanding of how and when frames influence attitudes in realistic political settings remains limited. We identify a series of lingering questions about framing effects and discuss recent studies that speak to each.

The chapter proceeds as follows. First, we offer a definition of framing effects that focuses on the relationship between frames contained in political communications

and frames used to form political attitudes. Second, we address the fundamental—and largely unanswered—question of why certain frames have larger effects than others. Third, we discuss individual and contextual moderators of framing effects, pointing out how framing effects demonstrated in experimental laboratories are likely less robust in other settings. Finally, we detail a common psychological model of framing effects and describe how existing research should be understood in light of this model. Our discussion highlights a number of conceptual and methodological challenges for framing researchers. We elaborate upon these challenges and suggest fruitful paths forward.

What Is A Framing Effect?

In framing research, a common starting point is to draw a distinction between two different notions of framing: *frames in communication* and *frames in thought* (Scheufele 1999, Druckman 2001). Frames in communication refer to the way a speaker uses words, images, elements of an event, etc. to relay information. This kind of frame is a product of the individual communicating information and reflects the ideas and goals of that individual. In other words, "a communicator…associates certain pieces of information and…omits potentially topic-relevant information in an effort to define the topic and purvey a set of judgments about it" (D'Angelo n.d. :1). Frames in communication deal with the information conveyed by different kinds of messages, such as news stories and campaign appeals. For example, a news story that emphasizes the role of the economy in a political campaign uses an "economy frame," indicating that economic considerations are important in thinking about the election.

Frames in thought, in contrast, refer to how individuals *perceive* a situation. This kind of frame does not refer to an attribute of a specific communication; rather, it

"reveals what an individual sees as relevant to understanding a situation" (Druckman 2001: 228). Frames in thought can, in turn, influence overall opinions about the issue, person, or event. Individuals who evaluate candidates according to economic issues, for example, can be said to be in an economic frame of mind.

The frames in communication versus thought distinction is critical for understanding the phenomenon typically of interest to framing researchers. In particular, a *framing effect* occurs when a frame in communication influences individuals' frames in thought, leading to a change in attitudes. In the sections that follow, we discuss several examples of these kinds of framing effects. As will become clear, researchers typically consider frames in communication that originate in news or media coverage (Chong and Druckman 2011) and focus on how such frames influence overall opinions.

Framing Effects Across Domains

As mentioned, over the past several decades, researchers have documented framing effects in numerous domains (e.g., Klar, Robison, and Druckman 2013). We next review framing effects in three such areas to show how framing effects work in various political contexts. In each case, researchers identify commonly used frames in communications (e.g., by media outlet) and explore how such frames shape opinions.

A first example concerns election framing: in this case, the relevant object is an attitude toward a candidate.[1] When evaluating a candidate, voters typically consider a range of evaluative dimensions, including (but not limited to) a candidate's policy stances and personality characteristics (Druckman and Jacobs 2015). The multidimensional

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[1] Some previous research refers to what we call "election framing" as "priming" (e.g., Iyengar and Kinder 1987). We follow Druckman, Kuklinski, and Sigelman (20009) in treating election framing as a type of framing rather than priming.

nature of candidate evaluation opens the door to framing, and the news media and candidates frequently present a number of different frames in communication.

Druckman et al. (2010) study how frames focusing on two dimensions—issue positions and candidate images (e.g., honesty, empathy, etc.)—affect evaluations and vote choices in a congressional primary election. Specifically, Druckman et al. study attitudes toward two candidates running in a Republican primary election for Congress in Massachusetts: Tom Tierney and Jim Ogonowski. The authors randomly assigned participants to read one of two versions of a newspaper article, which contained frames commonly used by media and political figures: one framed the election as being about issues and the other about images. The issue frame indicated that, "This election is about the issues such as the war and healthcare—the voters need to determine who will put their preferences into action." In contrast, the image frame stated, "This election is about the candidates' personal strengths and weaknesses." After reading one of the frames, participants watched a debate in which the candidates discussed the relevant issues and some of the images in play. In a post-debate questionnaire, those who had read the issue article based their evaluations on the candidates' issue stances (e.g., where they stood on healthcare). Those who read the image article, in contrast, based their evaluations on image perceptions (e.g., which candidate displayed more leadership qualities). Participants in the study also favored Tierney on the issues and Ogonowski on images; thus, the frames generated distinct candidate preferences, with the issue frame leading individuals to favor Tierney and the image frame causing individuals to favor Ogonowski (Druckman et al. 2010: 140).

A second example of framing effects concerns the framing of particular policies. Work in this area explores countless topics, such as abortion (McCaffrey and Keys 2000; Ball-Rokeach et al. 1990), gun control (Haider-Markel and Joslyn 2001), climate change (Spence and Pidgeon 2010), welfare (Nelson and Oxley 1999; Sniderman and Theriault 2004), and many others. Take, for example, research on gay rights. Brewer (2008) exposed individuals either to a media frame emphasizing equality or one highlighting morality. He finds that the equality and morality frames influence individuals' frames in thought, which in turn, alter overall opinions about gay rights: individuals reading an equality (morality) frame became more (less) supportive of these rights (Brewer 2008). Another policy example comes from Sniderman and Theriault (2004). The authors show that framing spending for the poor as an enhancing opportunity leads individuals to support spending, while framing it as increasing taxes leads individuals to oppose spending.

Another example of policy framing concerns opinions about concealed handgun laws. Haider-Markel and Joslyn (2001) randomly assigned participants to read a frame emphasizing either individuals' right to protect themselves or the threat such policies may pose to public safety. They find that framing concealed handgun laws as threatening public safety greatly increased opposition to these laws. The authors also explored how subjects attributed responsibility for gun violence. Specifically, they randomly exposed participants to one of three possible frames: one that only mentioned a recent shooting (i.e., control group), one that attributed the shooting to weak gun control laws, and one that attributed the shooting to violence in media. The frames had the expected result,

increasing participants' blame for the cause mentioned in each frame (i.e., laws or the media).

This latter study—focusing on how frames affect attributions—introduces a third domain in which framing effects apply: for causing ("causal responsibility") or addressing ("treatment responsibility") a problem (Iyengar 1991; see, e.g., Malhotra and Kuo 2008). A classic example of attribution framing comes from Iyengar (1991), who differentiates *episodic* and *thematic* frames. The former focuses on individual stories, while the latter emphasizes general patterns in society or the economy. In his study of attribution framing effects, Iyengar (1991: ch. 5) manipulated a network television broadcast to include either a thematic or episodic frame for poverty. Thematic frames discussed recent nationwide increases in poverty, reductions in social welfare programs, and the relationship between unemployment and the deficit. By contrast, episodic frames focused on particular cases of unemployment, describing a Midwestern family unable to pay its winter heating bills, homeless individuals in New York and San Diego, and an unemployed auto worker in Ohio. Iyengar (1991) observes robust framing effects on perceived causal responsibility for poverty. He explains, "Individualistic attributions for poverty [i.e., blaming individuals for living in poverty] were more than twice as prominent under conditions of episodic framing. Conversely, the frequency of societal causal attributions [i.e., blaming societal forces for poverty] was substantially higher following exposure to thematic framing of poverty" (54).

Some studies consider how attribution frames affect broader opinions. For example, in their study of how partisan conflict affects evaluations of the U.S. Congress, Flynn and Harbridge (n.d.) manipulated the causal explanation provided for legislative

gridlock. Specifically, they randomly assigned participants to one of two attributions: one frame attributed gridlock to ideological differences between Democrats and Republicans, and the other attributed it to strategic partisan fighting (i.e., preventing a victory by the opposing party).[2] The authors then measured participants' approval of how Congress is handling policymaking. They report that the "ideological differences" frame resulted in higher approval than the "partisan fighting" frame, suggesting that individuals were more understanding of gridlock arising from ideological differences than from strategic partisan conflict.

What Makes a Frame in Communication Strong?[3]

The framing effect studies just reviewed focus on reactions to a single frame in isolation. Yet, in many contexts, such as elections and policy debates, political elites compete with one another by offering different frames with the hope of moving citizens in their preferred direction. For example, in a debate about whether to permit a hate group to hold a rally, supporters emphasize free speech while opponents focus on public safety. Which frames win this competition?

In one of the first studies of competitive framing, Sniderman and Theriault (2004) examine what happens when individuals receive competing frames at the same point in time. Focusing again on support for a hate group rally, the authors randomly assigned individuals to a free speech frame, a public safety frame, or *both frames* (i.e., competing with one another). As expected, they find that exposure to only a free speech frame or only a public safety frame pushed individuals' opinions in opposing directions (e.g., free speech recipients favored the right to rally while public safety recipients opposed it).

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[2] The design included other conditions we do not discuss.
[3] This discussion is drawn from Druckman and Lupia (n.d.).

However, the group that received both frames was not moved by either and, instead, based their opinions on their prior values. Individuals who generally valued free speech (public safety) expressed support (opposition) for the rally. Thus, the frames cancelled out, and people returned to their basic values when forming opinions.

Yet, competing frames do not always cancel out. Some frames are "stronger" than others, and stronger frames generally win in competitive settings. Chong and Druckman (2007: 639-640) characterize strong frames as possessing three properties: availability (e.g., do people connect a value such as civil liberties to a hate group rally?), accessibility (e.g., do civil liberties come to mind?), and applicability/appropriateness (e.g., is the civil liberties frame judged as compelling?).

To illustrate how one of these three properties enhances frame strength, consider Druckman's (2010) study of frames regarding public casino funding. Druckman began by pre-testing strength by asking individuals to rate the effectiveness of various frames (i.e., increased "effectiveness" indicates greater applicability). He finds that individuals viewed frames accentuating economic security (e.g., benefits from the casino) and social order (e.g., avoiding addiction and debt) as strong frames for and against the casino, respectively. In contrast, respondents rated morality (of gambling) and entertainment (from gambling) low in terms of strength, and thus they constitute respectively weak con and pro frames. For the experimental portion of the study, Druckman randomly assigned a distinct group of respondents to various combinations of these frames. He finds that strong frames in isolation move opinions, weak frames in isolation do not move opinions, and most importantly, when presented together, only the strong frames influence opinions. For example, participants exposed to a strong economic frame were 41 percent

more likely to support the casino (relative to a control group that received no frames), even when they also received weak frames pointing in the opposite direction. These findings suggest that some frames are more effective due to their applicability to the issue at hand.

It seems clear that frame strength matters; yet, an enduring question in framing research is precisely which properties of frames promote strength. Even the large literature on persuasion offers little insight. As O'Keefe (2016: 165-166) points out, decades of research on the topic has failed to identify factors that consistently result in higher perceived strength. Nonetheless, several recent studies offer some insights. In what follows, we focus on four factors that seem to promote strength: source, episodic focus, emotion, and identity threat.

First, individuals often perceive frames from credible sources (as opposed to non-credible sources) as more applicable (Druckman 2001; also see Lupia and McCubbins 1998). Chong and Druckman (2007) study source effects with an experiment akin to Sniderman and Theriault's hate group rally study, but with sources added to the frames. The randomly assigned frames—a free speech frame, a public safety frame, or both— were attributed to either a credible source (a major local newspaper) or a non-credible source (a high school newspaper). The authors report that when presented with competing frames of this kind, the more credible source's frame had a much larger effect on attitudes (648-649). A free speech frame from the credible source, for example, did not cancel out a public safety frame from a non-credible source, but rather the former moved opinions by causing people to become more supportive of the right rally. The

stronger frame—defined here as one coming from a credible source—won the battle between frames.

A second source of frame strength concerns the episodic or thematic nature of frames. As mentioned, episodic frames deal with personal accounts, case studies, and human interest stories. Such messages reference individuals' concrete experiences. Thematic frames, on the other hand, reference general patterns in society (e.g., summary statistics). Aarøe (2011) explores the relative strength of episodic versus thematic frames on the issue of immigration and marriage law in Denmark.[4] Aarøe's experiment varied two aspects of the frames: support/opposition to the law and the episodic/thematic nature of the frame. For example, episodic frames in support of the law described how an immigrant woman was protected from an unwanted arranged marriage by the law. The thematic version referenced patterns in overall marriage, rather than any particular individual's experience. Aarøe finds an interesting combination of frame type and emotional response: the episodic frames generated more emotional responses from participants and were more persuasive among individuals who experienced higher amounts of emotion. Thematic frames, on the other hand, were only more effective than episodic frames among subjects who reported no or low levels of emotions in response to the frames. As a whole, then, this research suggests an interaction between the emphasis of a frame and emotional responses: episodic frames can be stronger than thematic frames, contingent on the amount of emotion invoked by the issue at hand.

This discussion introduces a third determinant of frame strength: emotion. Arceneaux (2012) sheds light on the role of emotion in his study of loss and gain

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[4] The issue under study was Denmark's "24-year rule", which requires Danish citizens who marry noncitizens to live outside of Denmark until both spouses are 24 years old. This law has been the subject of considerable controversy in Denmark and the European Union.

framing. In a study of support for gay-straight alliance clubs in high schools, he manipulated both the frames subjects encounter and their emotional states (prior to receiving the frames). When anxiety was induced, subjects preferred arguments that focused on averting losses, regardless of whether the frames emphasized free speech or traditional family values. This research suggests that the strength of a frame depends partly on the extent to which its content matches the emotions being experienced by the frame receivers.

A final factor that can promote frame strength is identity threat. Klar (2013) studied two identities—being a parent and being a Democrat—and three issues—social spending versus reducing the deficit, anti-terrorism spending, and sex offender sentencing. Importantly, these are topics on which Democratic parents often experience ambivalence. For example, parents are more likely than non-parents to support deficit reduction, increased anti-terrorism spending, and harsher sentences for sex offenders. These positions contrast with common Democratic preferences. Klar exposed a sample of Democratic parents to receive a mix of frames linking the issues to each identity (i.e., Democratic or parental). The experiment varied whether subjects received a frame that merely mentions the identity, a frame accentuating the political relevance of the identity, or a frame highlighting a threat to the identity. She finds that the threat appeal had the largest effects on expressed preferences. In regard to strength, frames that threaten individuals' identities are more likely to be persuasive and win out in competitive settings.

In sum, understanding the determinants of frame strength is critical if scholars are to isolate which arguments will prevail in competitive political settings (also see

Buamgartner, De Boef, and Boydstun 2008; Druckman and Bolsen 2011). Extant research identifies some factors that contribute to frame strength, but clearly more work is needed.

When Do Frames Matter?

The success of a given frame depends not only on its strength but also on various individual and contextual variables. We review research on five factors that may conditions framing effects: prior attitudes, cues, deliberation, media choice, and time.

First, framing effects depend on the strength of individuals' prior attitudes (i.e., the pre-frame attitude). Strong attitudes are defined as those that endure and impact cognition and behavior (Krosnick and Petty 1995). The stronger an individuals' prior attitude, the less likely the individual will be influenced by a frame. As Druckman and Leeper (2012: 54) explain, "when an individual possesses a strong opinion and encounters a potentially persuasive stimulus [e.g., frame]…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." Motivated reasoning occurs when individuals view evidence (e.g., new frames) consistent with prior opinions as stronger or more effective and counter-argue evidence inconsistent with prior opinions (Kunda 1990, Taber and Lodge 2006). Stronger attitudes increase the likelihood of motivated reasoning (Taber and Lodge 2006).

To understand how this process works, consider Chong and Druckman's (2013) over-time experiment focusing on the Patriot Act. At an initial time 1 (t_1) session, the researchers randomly exposed individuals to one of two frames: a pro-frame focused on the threat of terrorism or a con-frame focused on civil liberties. They also induced some

individuals to form strong attitudes in response to the initial frames (and others to form weak attitudes).[5] Thus, at the end of t_1, as in the prototypical framing experiment, those exposed to the pro (con) frame become more (less) supportive of the Patriot Act. The important addition is that some held their attitudes more strongly than others. At a later time period (t_2), some individuals were exposed to the opposite frame from what they received at t_1 (e.g., those who received the pro terrorism frame received the con civil liberties frame). The authors find that individuals with weak t_1 attitudes moved in the direction of the t_2 frame (e.g., exposure to the con frame generated decreased support). By contrast, individuals with strong t_1 attitudes rejected the counter frame at t_2, as they engaged in motivated reasoning. In short, a strong prior attitude prevents a (t_2) framing effect.

The moderating role of attitude strength has important implications for how framing studies are executed. Druckman and Leeper (2012: 56-57) point out that when designing experiments, scholars often choose to focus on issues on which individuals have weak prior opinions (see, e.g., Chong and Druckman 2010: 667). This practice could lead to misunderstandings about the robustness of framing effects across issues. Put differently, published work likely overstates the robustness of framing effects because it focuses overwhelmingly on issues on which prior opinions are weak—and therefore more easily framed.

Second, framing effects are less likely when individuals use cues to form opinions. A cue is "a piece of information that allows individuals to make inferences

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[5] Those in the strong attitude condition were asked to think carefully about what the frame did to their thoughts, and were told they would be queried later about their attitudes. Those in the weak attitude condition were distracted when reading the frame and told to focus on the grammatical structure of the sentences in the frame.

without drawing on more detailed knowledge" (Druckman et al. 2010: 137). Reliance on a simple cue (e.g., an endorsement) can sometimes overwhelm a frame, making it impotent. For example, when individuals follow a party cue (e.g., their party endorses allowing a hate group rally), individuals may just follow the cue/endorsement and ignore any frames on the topic (e.g., about free speech of public safety) (see Druckman et al. 2010 for discussion).

Even when people consider frames and cues jointly, cues can still shape how framing effects operate. For example, Slothuus and de Vreese (2010) study how party cues moderate framing effects in two experiments focused on welfare and trade policy. In both studies, the researchers randomized the direction of the frames (i.e., pro or con) *and* the cue provided (i.e. frames are attributed to one of the two major parties). The effect of party cues is striking: participants' opinions moved in the direction of the frames, *but only when the frame was attributed to one's own party*. By contrast, when frames were attributed to the opposing party, individuals ignored them altogether. As Slothuus and de Vreese (2010: 637) explain, "These results suggest that citizens act as motivated reasoners when responding to party frames. Thus, when judging applicability of frames explicitly sponsored by a partisan source, people tend to use their partisanship as a filter biasing their assessment of the frame" (also see Druckman, Peterson, and Slothuus 2013). Thus, framing effects are less likely when individuals follow cues—as opposed to engaging in more thorough deliberation—to form opinions.

Third, framing effects can vary depending on social networks (e.g., inter-personal discussions). In particular, social networks can both introduce new frames and moderate the effects of frames originated elsewhere (e.g., from elites). Walsh (2004) studies the

influence of interpersonal discussion on people's understanding of frames used in local media coverage. She content-analyzed local newspaper coverage of several political issues and observed discussion of these issues among a group of senior citizens (see Walsh 2004: 128). She notes that although initial media frames influenced the course of discussion, people were able to "transform and even circumvent [elite] frames" through interpersonal discussion (16). For example, one issue concerned the decision of a local automobile manufacturer to begin offering benefits to same-sex partners of its employees. While the media framed the issue in terms of the company's motivations, corporate influence on social norms, and equality of opportunity, discussion participants largely eschewed these frames in terms of an alternative frame: feasibility. This study suggests that citizens are not passive receivers of frames; rather, deliberation can seriously limit the ability of elites to frame political issues (see Calvert and Warren 2014 for further discussion).

Druckman and Nelson (2003) employ an experiment to study the influence of deliberation on framing effects. In an experiment on campaign finance, they randomly assigned their pro- or con-frame subjects to discussion networks. Subjects first read a news story containing a randomly assigned frame—a pro-frame focused on special interests or a con-frame focused on free speech—and were then invited to discuss campaign finance with three or four peers. Some discussion groups contained only individuals who had read the same frame ("heterogeneous groups"), while others contained some individuals who had read each frame ("homogeneous groups"). At the end of the study, subjects were asked about the extent to which they supported campaign finance reform. The influence of the post-frame discussions was dramatic: among

subjects in heterogeneous discussion groups, framing effects occurred as expected (e.g., the initial pro-frames make people more supportive). However, among participants in homogeneous discussion groups, framing effects dissipated entirely. This is true regardless of the frame to which subjects were initially assigned: homogeneous discussion networks eliminated the effect of both the pro- and con-frames on overall support. These findings cohere with a large body of research on deliberation, which suggests that conversations among diverse opinion groups tend to result in more moderate attitudes (e.g., Mutz 2006; Huckfeldt, Johnson, and Sprague 2004; also see Druckman 2004, Klar 2014). In sum, this research suggests that social networks can serve as a source of frames or as a limit to framing effects.

A fourth factor that influences the robustness of framing effects is the degree of choice in the media environment (see Prior 2007). As Arceneaux and Johnson (2013: 10) point out, today's media consumers "have agency over what they watch, and they exercise this agency when given a choice. More important, the act of choosing has implications for the extent to which the media influence people." In particular, framing effects are less likely if citizens can selectively avoid certain types of messages: many citizens will avoid or counter-argue frames that contradict their existing attitudes (e.g., Stroud 2011, Taber and Lodge 2006), and others will eschew politically relevant media (e.g., frames) altogether (Prior 2007).

Arceneaux and Johnson (2013) provide experimental evidence on how media choice limits the breadth of framing effects. They employ a unique design in which participants were asked their preference for news or entertainment programming *before* being randomized into experimental groups. This allowed the researchers to examine the

effects of media frames among groups that are more or less likely to be exposed to them in the real world ("news-seekers" and "entertainment-seekers," respectively). After measuring content preferences, they randomly assigned participants to watch one of two news programs about federal tax policy (or a control group, which watched a non-political program). Specifically, one treatment group watched a program employing pro-Democratic frames (e.g., "rich people are not paying their fair share"), while another watched a program employing pro-Republican frames (e.g., "not enough people paying federal taxes").

The researchers then asked participants to rank-order the importance of the six frames featured in the programs. As a dependent variable, they calculated the probability that participants in each group rank an attitude-consistent frame (e.g., a pro-Democratic frame for a liberal participant) as the most important one in thinking about tax policy. Arceneaux and Johnson (2013: 120) find that *among news-seekers*, frames had no discernible effect on the problem definitions. Put differently, media frames fail to affect the way in which news-seekers think about the issue of federal taxes. By contrast, *among entertainment-seekers*, the researchers find no effects for pro-attitudinal frames and modest effects for counter-attitudinal frames (121). To summarize, media frames had no effect among the group most likely to encounter them in the real world. The modest framing effects the researchers uncover are limited to entertainment-seekers, who are unlikely to encounter these frames outside the experimental context. A key implication is that citizens' ability to choose their media content represents a serious obstacle to widespread framing effects.

Druckman, Fein, and Leeper (2012) provide further evidence of the influence of media choice on framing effects with an over-time experiment on healthcare policy. At an initial time period, they randomized whether participants are exposed to pro- or con-frames regarding health care reform (the pro-frame focus on reducing inequality while the con-frame focus on the high costs of reform). In subsequent time periods, some subjects were allowed to select their frames, while others were given frames chosen by the experimenter (captive audiences). Druckman, Fein, and Leeper (2012: 437) find that over-time framing dynamics differed greatly depending on whether participants were allowed to choose their frames. In the over-time captive exposure conditions, framing effects were observed as expected, with individuals' attitudes reflecting the *most recently* encountered frame; this is akin to the recency effects Chong and Druckman (2010) observe among those with weak attitudes. By contrast, in the choice conditions, the researchers observed a primacy effect: the earliest encountered frame shaped opinions, as participants selectively avoid subsequent frames that are inconsistent with prior opinions. Put differently, when given choice over-time, individuals opted for frames that were consistent with their initial opinions (that had been shaped by the *first* frame received); this means any contrary frames are ignored and thus ineffectual. The result is a primacy effect from the first frame. Without choice, later frames predominated, meaning there was a recency effect. The researchers explain, "[t]hese results imply that the captive audience constraint present in nearly all extant experiments has potentially generated a misleading or at least incomplete portrait of framing effects. In our case, the relaxation of this assumption shifted the over-time influence from decay to stability and recency to

primacy effects. This suggests that using captive subjects…changes the very nature of [framing] effects" (Druckman, Fein, and Leeper 2012: 439; emphasis in original).

A fifth factor that moderates framing effects is time—or how long it has been since the individual first encountered the frame. Typically, studying the duration of framing effects involves exposing an individual to a frame, recording an immediate opinion, and then re-measuring that same opinion at a future point in time. Some studies suggest that after initial exposure, framing effects generally dissipate with time (e.g., Chong and Druckman 2010; Lecheler and de Vreese 2011, 2013). However, there are conditions under which framing effects are more likely to endure. One such factor is the repetition of frames. Repeated exposure to or use of a consideration may increase accessibility—and thus promote continued framing effects (Moons et al 2009; Chong and Druckman 2013; Lecheler and de Vreese n.d.). Additionally, framing effects are more likely to endure when people are induced to form stronger, more effortful opinions upon initial exposure to the frame (Chong and Druckman 2010; Matthes and Schemer 2012).

There are also frame-level factors that are known to promote endurance. For example, frames emphasizing losses or cons ("negative frames") tend to have longer-lasting effects than frames that emphasize gains or successes ("positive frames") (Lecheler and de Vreese n.d., Ledgerwood and Boydstun 2014). Additionally, the duration of framing effects depends on characteristics of the recipient. For example, one study finds that although initial framing effects do not depend on political knowledge, individuals with moderate amounts of political knowledge experience the most persistent framing effects days and weeks after exposure. The authors explain that these individuals are best positioned to incorporate frames into long-term memory (Lechler and de Vreese

2011). To be sure, there is still ongoing debate about frame duration, and existing research is limited in the types of frames and time periods that studies employ. As Lecheler and de Vreese (n.d.: 4) state, "the literature on over-time experimental designs in framing research is in its infancy."

As discussed, frames are not encountered in a vacuum; rather, framing effects depend on a number of individual and contextual factors. Here we reviewed research on five such factors; a more detailed discussion would consider many more.[6] To the extent that framing experiments fail to incorporate these realities, we are likely to misunderstand—and to overstate—the robustness of framing effects in realistic communicative scenarios.

The Psychology of Framing Effects: Assumptions and Evidence

In this section, we turn to a discussion of a commonly employed psychological model of how framing effects work (e.g., it has been the implicit models underlying our discussion thus far): the expectancy value model (Fishbein 1967; Fishbein and Ajzen 1974; Ajzen and Fishbein 1980; Nelson, Oxley, and Clawson 1997). According to this model, an individual's attitude toward a specific object (e.g., candidate, issue, etc.) reflects the weighted sum of a set of beliefs about that object.[7] Formally, an attitude can be described with this equation:

$$Attitude = \sum v_i * w_i$$

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[6] One literature review, for example, examined over ninety articles published in a ten year span, documenting both the spread and depth of framing research (Borah 2011). An earlier review of the framing literature considered over 130 published articles on framing from within a fifteen year period (Matthes 2009).

[7] The expectancy value model is also referred to as the summative model (O'Keefe 2016: 56).

In this formula, v_i refers to the evaluation of the object on dimension i, and w_i refers to the salience weight connected to that dimension ($\sum w_i = 1$). For instance, someone's attitude on the development of a new industrial site would consist of a combination of different evaluations on the dimensions that are salient to that individual (i.e., dimensions on which $w_i > 0$). This person may think that the industrial site will damage existing green spaces ($i=1$) but also provide an economic boost through job creation in the area ($i=2$). Assuming the individual values both environmental protection and economic growth, v_1 would be negative (i.e., negative evaluation on the dimension of green space) and v_2 would be positive (i.e., positive evaluations on job creation). The overall attitude, then, would depend on which dimension is more salient, or has a larger weight (w_i): green space or economics (Nelson and Oxley 1999).

According to this model, a framing effect occurs when a frame in communication leads to a change in the salience of a given consideration i (w_i), thereby influencing an individual's *frame in thought* (for applications of this model, see Nelson, Clawson, and Oxley 1997, Nelson, Oxley, and Clawson 1997, Nelson and Oxley 1999, Wood 2000, Chong and Druckman 2007b, Klar, Robison, and Druckman 2013).[8] Importantly, the expectancy value model does not presume individuals consider a wide range of dimensions when forming attitudes; rather, in most cases, individuals rely on a highly constrained subset of possible evaluative dimensions (see Druckman and Lupia n.d.).[9]

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[8] Changes in salience result from one of three processes: changes in availability, accessibility, and/or applicability. We discussed each of these processes briefly above. See Chong and Druckman (2007) for more detail.

[9] At the extreme, people consider only a single dimension and assign that dimension a weight of 1 (all other considerations are therefore weighted at 0); for example, one may only think/care about free speech when it comes to a right of a hate group to rally.

Many studies, including those referenced in the previous section, show that frames in communication influence overall opinions of issues, candidates, and political decisions. However, the expectancy value model suggests that these changes can occur through different mechanisms, not all of which involve changing frames in thought. For instance, instead of changing the *salience* of existing considerations (and therefore frames in thought), frames in communication could change the *content* of individuals' beliefs (i.e., introduce new considerations).

Resulting Problems

How can researchers convincingly demonstrate that attitude change results from a framing effect, as we have defined it? A useful example comes from Nelson and Oxely (1999), who study attitudes towards developing land for the construction of a new hotel. The authors randomly assigned subjects to read an article using either an economic benefits (pro) frame, or an environmental risks (con) frame. After reading the article, subjects were asked to (1) rank the *salience* (or importance) of various beliefs when they thought about the development (e.g., how important was "the environmental impact of the property development in the area?", how important was "the economic impact of the development on the area?"); (2) *evaluate* whether the project would have negative or positive benefits for the environment and the economy, respectively; and (3) report their *overall* opposition or support for the project.

Nelson and Oxley's approach is appealing because, in addition to documenting overall opinion change resulting from exposure to various frames, they present direct evidence that frames changed the salience of the considerations invoked in the frames. In other words, individuals exposed to the economic benefits (environmental risks) frame

ranked the economy (environment) as more important than individuals exposed to the other frame. They also report that the frames had no influence on the *content* or *evaluations* of beliefs about the environmental or economic consequences. Unfortunately, Nelson and Oxley's clear demonstration of a causal process represents an exception to the norm in framing studies. Many do not explore the psychological processes at work, discussing only change in overall opinions (e.g., Sniderman and Theriault's 2004, Haider-Markel and Joslyn 2001, Chong and Druckman 2010).

Other studies that directly measure changes in salience resulting from frames offer mixed support for the model presented here. For instance, Slothuus (2008) studies framing effects on support for cutting social welfare. He measured salience, evaluations (or belief content), and overall attitudes. Slothuus reports that observed effects from frames in communication do not work exclusively through changes in salience. Instead, at least for some individuals (e.g., those with moderate political knowledge or those with weak values), frames affect both salience *and* belief content (also see Druckman and Nelson 2003).

Another example of contrary findings comes from Leeper and Slothuus (2015), who study the framing of a proposal to implement electronic medical records (using a pro frame focused on increased quality and a con frame focused on costs). They find the frames influenced opinions *only* when they also contain information (e.g., that the use of electronic medical records would have a large influence on the health care of American citizens). More importantly, these effects result *entirely* from changes in belief content and not from alterations in salience; thus, there is no framing effect, as we have defined it (cf., Druckman and Bolsen 2011).

These varied findings suggest that the field has yet to adequately isolate the psychological process(es) that generate "framing effects," and the conditions under which one process dominates. Thus, it is possible that studies that only measure overall opinions are not documenting framing effects at all.

Mixed findings aside, clearly documenting salience changes from a communication poses serious methodological challenges. The problem stems from the fact that, if a communication affects overall opinion via multiple processes (e.g., changes in salience *and* evaluative content), then the statistical method used by Nelson and Oxley and others is biased (Imai and Yamamoto 2013, Bullock and Ha 2011). Careful experimental design and analysis can help to address some of these problems, but studies that simply assume frames in communications influence overall opinions through salience (i.e., frames in thought) will likely lead to unjustified conclusions. It is beyond the purview of this chapter to dive deeply into these methodological concerns, but a number of researchers have challenged the techniques researchers have used to explore the processes behind framing effects.[10]

In addition to methodological issues, framing studies sometimes suffer from significant conceptual ambiguity. For example, use of the term "priming" has created some confusion. In general, the concept of priming refers to changes in accessibility and has a long history in the social sciences (Molden 2014). However, research on framing effects sometimes uses the term "media priming" to reference the way frames in communication influence frames in thought (i.e., through any of the three processes discussed above). We suggest that this is a misapplication of the term "priming," and we

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[10] Interested readers should see Imai, Keele, and Tingley (2010); Bullock and Ha (2011); Imai and Yamamoto (2013); and Imai, Tingley, and Yamamoto (2013).

prefer to use the term "framing" for this area of study. Additionally, the use of the term "persuasion" can also be problematic, as it can refer to a change in opinions resulting from any number of processes.[11] To avoid these issues, we recommend distinguishing between studies that merely demonstrate changes in overall opinion from those that provide direct evidence of a framing effect.

We are hardly the first to highlight these conceptual problems. For instance, one prominent scholar states, "the boundaries between framing and other forms of media or elite influence on public opinion have become blurred. Framing is often indistinguishable from [other concepts]… more attention—both at the conceptual and operational levels— to distinguishing between framing and other contextual, short-term influence on public opinion [is needed]" (Iyengar 2011: 190; see also Cacciotare, Scheufele, and Iyengar 2016). This state of confusion has led some to argue that researchers ought to eschew emphasis framing and focus instead on other types of frames in communication, such as *equivalency frames* and *visual frames* (Scheufele and Iyengar n.d.; Cacciotare, Scheufele, and Iyengar 2016). While these two forms of framing are no doubt important, we disagree with the call to restrict framing research to these subjects.

Equivalency frames entail different—but logically equivalent—characterizations of an issue or event (Druckman 2001). One example of equivalency framing asks participants to choose between two employment policies, which are described in different but mathematically equivalent ways (Druckman 2004). For some participants, the frame describes the percent of the population the policies would employ (90 and 95 percent

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[11] For example, one widely cited definition of persuasion is "human communication designed to influence others by modifying their beliefs, values, or attitudes" (Simons 1976: 21). This definition is sufficiently broad to envelope framing (as we have defined it), changes in belief content, changes in belief importance, and still other processes.

employment); the other version discusses the percent of the population that would remain

*un*employed (10 and 5 percent, respectively). This difference in framing leads to dramatic

changes in policy choices. Framing effects such as these operate differently from the

emphasis framing effects we have described.[12] In particular, equivalency framing effects

are typically assumed to result from long-standing biases in human decision-making (e.g.,

loss aversion; see Arceneaux 2012), rather than as a result of increases in the salience of

certain considerations over others.

Scholars have also suggested that framing researchers should devote greater

attention to non-verbal frames, such as facial similarity and skin tone (Scheufele and

Iyengar n.d.). For example, Bailenson, Iyengar, and Yee (2008) use editing technology to

manipulate the degree of similarity between politicians and voters, holding constant the

information provided about the politicians. Visual framing effects can result from a

number of psychological biases, such as a preference for visually "similar" others.

Equivalence and visual frames are appealing insofar as they permit a high degree

of experimental control—that is, they allow researchers to vary the manner in which a

stimulus is presented, holding constant the informational or persuasive content of

messages (Scheufele and Iyengar n.d.; Cacciatore, Scheufele, and Iyengar 2016). The

result, these scholars argue, is a cleaner test of framing effects. Leeper and Slothuus

(2015: 10) make a similar point in their critique of the paradigmatic framing experiment,

noting "[the] need to independently evaluate the impact on opinions of mere emphasis on

an issue dimension (i.e., framing) by separating it experimentally from the impact of

policy information or argumentation."

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[12] Interested readers should see the extensive psychological literature on equivalency framing. For prominent examples, see Kahneman and Tversky (1979, 1984).

We agree that documenting opinion change resulting from exposure to emphasis frames is insufficient to establish the presence of a "framing effect." Studies that claim to do so invite conceptual ambiguity of the sort noted by Scheufele and Iyengar (n.d.) and others. However, we disagree with these scholars that the way forward is to restrict our focus to the effects of equivalency or visual frames. One obvious problem with such a move is that *emphasis* framing is the norm in elite discourse (Leeper and Slothuus 2015: 10-11); as Sniderman and Theriault (2004: 135) argue, "it is difficult to satisfy this requirement of interchangeability of alternatives [imposed by equivalency and visual framing studies] outside a narrow range of choices." Put differently, restricting scholarly focus to equivalency frames means overlooking the types of frames that typically appear in realistic political settings (e.g., media, policy debates).

What to Do Now

Our recommendation is to study frames in communication on their own, without making claims about frames in thought *per se*. This approach would look for differences among emphasis, equivalency, and non-verbal media frames without the need to explore distinct psychological mechanisms (which can be studied as part of a distinct research agenda).

Using this perspective, researchers could still look for changes in overall opinion from frames in communication. This effect could be labeled a framing effect, but in a way that does not reference any change in frames in thought (i.e., salience changes). Frames in communication frequently affect opinions, but the mechanisms behind these effects remain unclear. For instance, such effects may operate through frames in mind and belief importance, changing the content of individuals' beliefs, or other processes; a

focus on frames in communication would allow all of these possibilities. On the other hand, scholars who are interested in frames of thought should document the distinct psychological processes at work. Without this level of analysis, these studies cannot establish that the effects of a communication occur via changes in salience.

Along with other framing scholars (Brewer and Gross 2010), we urge researchers to employ careful research design when studying framing. The moderators we have discussed, including the passage of time and competing frames, suggest that framing effects can be overstated when these moderators are not considered. Indeed, the very context in which framing experiments are conducted may influence the perceived effectiveness of frames (Brewer and Gross 2010). Along these lines, we agree with calls to diversify the methods used to study frames, including increased reliance on non-laboratory experiments, content analyses, and qualitative interviews. Such methodological diversity could significantly improve the generalizability of framing findings—both by documenting framing effects in various settings and by overcoming the limitations of a single method (e.g., laboratory experiments).

We also recommend that framing researchers exercise caution when making normative claims about what their research says about attitudes, democratic competence, and the influence of the media (see Druckman 2001). Given the moderators discussed above, the overall influence of framing in opinion formation remains unclear. For instance, the passage of time, individuals' media choices, conversations between people, and competition all influence the overall effect of a frame. Scholars should consider these realities carefully before making sweeping conclusions about the normative implications of framing.

Conclusion

This chapter emphasized several key points about frames and framing effects. The first is that framing effects occur when frames contained in political communications affect frames in thought. Working from this broad definition, researchers have demonstrated framing effects in an array of contexts (e.g., campaigns, policy debates, attributional judgments). However, as discussed, there are serious questions about the robustness of these framing effects in realistic political settings. In particular, research in five areas—including attitude strength, cues, social networks, media choice, and frame timing—suggests that frames may be less consequential in the real world than in surveys and experimental laboratories.

A second key point concerns the psychology of framing effects, which is nicely captured by the expectancy value model of attitude formation. In this view, attitudes are the sum of various considerations and the salience attached to those considerations. Framing effects, then, occur when frames in communication change frames in thought by altering the salience (w_i) of particular considerations. In order to convincingly document a framing effect, scholars need to present evidence that their treatments caused a change in overall opinions via a change in salience, and not other processes (e.g., changes in belief content).

In addition to the research discussed above, there are likely countless other factors that determine the effects of frames. For example, research to date has paid scant attention to changing trends across media. Almost two decades ago, Price and Tewksbury (1997) discussed framing in the context of journalistic norms. However, these norms have clearly changed and differ across different types of media. Existing research on

framing has barley explored how varying norms affect the presentation of issues and how that presentation influences attitudes.

       To summarize, we argue that framing effects can have important effects on attitudes, operate via a specific psychological process, and are strongly mitigated by a number of individual and contextual factors. We urge framing researchers to take all of these points seriously, as overlooking them can lead to conflicting and unclear conclusions about how framing operates in realistic communicative contexts.

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