The Blame Game: Narrative Persuasiveness of the Intentional Causal Mechanism

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Introduction

Narratives have a dual function that both *reflects* and *shapes* who we are. Representing both the communicative and transformative nature of narrative, storytellers spin their tales as both fundamental expressions of individual and group identities and expressions of values (McAdams 2004). For example, love stories such as Romeo and Juliet, Odysseus and Penelope, and Cinderella and the Prince are enduring because they reflect our experiences and expectations of the passion, devotion, sacrifice, and tragedy that may accompany our love experiences. These stories also give clear (and well-studied) signals about how to shape identity, such as gender roles for men and women in relationships (e.g., Parsons 2004). Thus, such broad, culturally shared narratives function to represent our human experiences and identity, and they also work to influence and shape our beliefs and preferences through a compelling story.

A specific narrative's influence, however, is not wholesale; countervailing stories arise to reflect different experiences, articulate different beliefs, and challenge narrative orthodoxies. When competing stories arise in public policy, debate and conflict often ensues such as in cases of the women's movement, gay marriage, and an innumerable array of other policy areas. The narrative policy framework (NPF) focuses on these rivaling policy narratives propagated in their respective policy areas in an effort to understand the role they play in public policy processes, designs, and outcomes. At the meso level, the NPF examines coalitional policy narratives by disaggregating them into their constitutive elements,

strategies, and represented belief systems (see Jones et al. 2014 and McBeth et al. 2014 for detailed definitions and Shanahan et al. 2013 for illustrative examples) to assess their role in the policy process. At the micro level, the influence of these same disaggregated narrative components is assessed in terms of how they influence individuals (Jones and McBeth 2010) and, consequently, public policy. For example, Shanahan et al. (2011a) find that policy narratives that are congruent with an individual's policy preference strengthen prior opinion, while policy narratives that diverge from an individual's prior policy stance could alter preferences, thus illuminating the power of story as a communication device. Jones (2014) takes an even more precise approach in his micro-level NPF study by isolating the effect of policy narrative characters on individual policy preferences and opinion related to climate change. Similarly, Jones and Song (2014), using an experimental design, find that when stories are culturally congruent with an individual's a priori cultural orientation, the narrative elements help individuals cognitively organize the information they are presented, likely affecting how those individuals access and use the information in the future. While the NPF is nascent in its understanding of the exact magnitude of influence that narratives have on public policy, incremental progress is being made at the micro level toward developing a better understanding of how policy narratives shape individual preferences and opinions via the narrative components identified by the NPF.

In this study, we continue with the Jones (2014) approach to delve surgically into the NPF's narrative structure by focusing specifically on causal mechanisms.[1] Causal mechanisms are types of strategies used in structuring policy narratives to describe a relationship between a policy problem and its asserted cause(s). Specifically, Stone (1989; 2002; 2012) proposes that causes can be characterized as being driven by purposeful or unguided actions and that they lead to different kinds of effects—intended or unintended. As a result, she posits four types of causal relationships: intentional, mechanical, inadvertent, and accidental. In wicked policy contexts when no resolution is at hand, previous NPF work finds rivaling policy narratives have a consistent drumbeat of an intentional causal scenario (e.g., McBeth et al. 2012). However, in the policy context when a resolution has materialized, there was more variation in the use of causal mechanisms over time (Shanahan et al. 2013). Stone (2012) suggests that casual mechanisms are strategically embedded in narratives to convince the public and policy officials of who or what is to blame for the problem.

Thus, the central research question this chapter addresses is: what is the effect of different types of causal mechanisms on an individual's policy opinions? More specifically, what is the effect of various kinds of causal mechanisms on opinions when an individual is presented with a congruent and a breaching policy narrative? We examine these effects while controlling for political ideology, age, and gender. In addressing these questions, we hope to contribute to the NPF's understanding of how specific policy narrative elements and strategies shape individual understandings of public policy.

Why NPF?

There are two reasons to employ the NPF as a framework for the research presented in this chapter. First, the NPF identifies feedback loops that recursively link public opinion,[2] policy narratives, and policy decisions (e.g., Shanahan et al. 2011b). Thus, the NPF models the importance of policy narratives in this process, yet has to date failed to fully articulate the inner workings of policy narratives to a degree that would allow us to say how policy narratives interact with public opinion and policy decisions at the micro level. Understanding how causal mechanisms function may help us unpack these relationships.

Second, the NPF disaggregates the structure of policy narratives into elements, narrative strategies, and representations of beliefs (McBeth et al. 2014; Jones et al. 2014), with subcomponent categories in each of these three principal areas of the NPF. Importantly, these narrative components are posited as variables, with the intention of operationalizing them to empirically discern the role of each narrative component in the policy process at as many as three levels of analysis (detailed in the Introduction of this volume). The research presented in this chapter is concerned with the specific strategy used by policy actors that asserts causal relationships within policy narratives, where this activity is understood here as asserting blame via a *causal mechanism*. Extant meso-level NPF scholarship has identified that narrative strategies are used in competing coalitions' narratives (e.g., McBeth et al. 2007); however, the extent to which specific NPF narrative strategies are effective at the micro level is not well known. In the early development of NPF, McBeth and Shanahan (2004) broadly argue that there are policy marketers who construct narratives to "sell" to citizens and decision makers. Jones and McBeth (2010) further detail NPF's micro level of analysis as aimed at understanding the effects of such political marketing on individual policy preferences. The research design in this chapter isolates the policy marketing strategy of assigning blame via causal mechanisms and assesses the effect on policy opinions.

NPF Variables and Hypotheses

In this chapter we isolate one narrative variable—the causal mechanism—to empirically test its effect on individual policy opinions. Why are causal mechanisms so important in the formation of opinion? Stone (2012, p. 206) harkens back to Aristotle, who says that it is fundamental to our nature as human beings to strive to understand the "why" or the cause of something. In policy sciences, the dominant approach to measure causal mechanisms has been from a rational choice perspective, where causal mechanisms are typically the independent variables in a logic model, a path model, a structural equation, or a regression equation. The identification and operationalization of these causal mechanisms cannot be overstated, as the results of sophisticated rational forms of analyses "establishing" these relationships do indeed shape policy in a practical

sense (Delahais and Toulemonde 2012; Noonan 2008; Rothstein 2012). Because causal linkages are so powerful and desired in understanding an issue (and hence a solution), policy narratives tend to have strategically constructed causal mechanisms embedded in them (McBeth et al. 2012; Shanahan et al. 2013). The NPF argues (McBeth et al. 2014; Jones et al. 2014) that casual mechanisms are a narrative strategy that connects events and characters to create a policy reality that both defines the problem and the reasons the problem exists in the first place, which most certainly walks the solution in a particular direction.

To date, the NPF has relied on the work of Stone (1989; 2002; 2012) in the operationalization of causal mechanisms (e.g., McBeth et al. 2012; Shanahan et al. 2013). Her approach to understanding policy is that problem definition is about crafting the story in order to attribute cause, blame, and responsibility. Thus, a problem has been defined when its causes have been identified and described. This unfolds through the manipulation of the role of different characters, played out against one another causing harm and creating heroes, villains, and victims. In other words, causal mechanisms are theoretical abstracts conveyed through the roles that different characters play that work to assign blame.

In naming her causal mechanism typology, Stone (2012, pp. 207–208) identifies (1) the nature of a character's *actions*—purposeful (guided) or not purposeful (unguided) and (2) the *consequences* of the action—intended effects or unintended effects. Intersecting the two dimensions of action and effect produces a 2×2 matrix, the result of which reveals four types of causal mechanisms. Purposeful action with intended consequences produces *an intentional causal mechanism* that typically depicts the villain as harming the victim through nefarious means or through ignoring the harm. The intentional causal mechanism is most commonly used by both sides in wicked policy problems. *Accidental causes* are usually found in disasters, whereby the action that unintentionally led to the disaster was not purposeful; no one is responsible in these causal stories. *Inadvertent causal mechanisms* are those whereby the action of the character was purposeful, but the effect was not; this could be due to unforeseen consequences, carelessness, or ignorance. Here, responsibility is suspended. Finally, there are *mechanical causal mechanisms*, whereby there is a purposeful actor with intended consequences, but the action is unguided and carried out through other people, machines, or routinized procedures.

We chose to limit our analyses to the two causal mechanisms that we have found are most used (Crow and Beggren 2014; McBeth et al. 2012; Shanahan et al. 2013) in policy debates: intentional and inadvertent. Moreover, we are also interested in intentional and inadvertent causal mechanisms not only for their common use, but also because they are posited to be a more effective way to construct a policy story as they assign blame to a discernable agent and not an accidental or mechanical cause such as random chance or a complex "system" (see Stone 2012, pp. 206–228). The NPF micro-level hypotheses summarized in the Introduction of this volume do not address the role of narrative strategies in shaping opinion; thus we propose the following new NPF hypotheses related to inadvertent and intentional causal mechanism at the micro level:

H1: The *inadvertent causal mechanism* will have a positive (i.e., narrative position affirming) effect on individual policy opinion.

H2: The *intentional causal mechanism* will have a positive (i.e., narrative position affirming) effect on individual policy opinion.

Using a case study of the restoration of bison to the public grasslands in northeastern Montana (see details of the case study below), the research team constructed a baseline control treatment with no causal mechanism and treatment policy narratives with one of the two causal mechanisms embedded in the text (see the Appendix). How did we arrive at such texts? Having observed numerous public meetings on the issue, the research team was able to construct policy narrative treatments with the characters and casual mechanisms used in these meetings. The narratives were constructed with very similar word length, and each is presented in one paragraph. Structurally, the treatment narratives were consistent, with each containing consistent narrative elements: setting, characters, and a moral of the story or policy solution. With the length, presentation, and structure constructed similarly across treatments, the causal mechanism is created through the manipulation of the villains, victims, and heroes. In order to control for policy preference, two narratives for each causal mechanism were constructed, one for each policy stance (pro-restoration and against-restoration). To illustrate, listed below are the first two sentences of the four treatment and one control narratives:

Pro-restoration Policy Stance with an Inadvertent Causal Mechanism: While the near-elimination of bison as a wild species in Montana was a tragic mistake, it can be rectified by allowing bison to return to the public grasslands they once inhabited. We not only have the opportunity to bring bison back to their native prairie habitat, we also have the responsibility to do so.

Pro-restoration Policy Stance with an Intentional Causal Mechanism: While the near-elimination of bison as a wild species in Montana was a tragic mistake, ranching interests are perpetuating this history of eradication by fighting to keep bison off of our public prairie lands. We not only have the opportunity to bring bison back to their native prairie habitat, we must stand up to the self-interested few who feel their right to use public land for cattle grazing is more important than the rights of other users.

Against-restoration Policy Stance with an Inadvertent Causal Mechanism: While the near-elimination of bison as a wild species in Montana was a tragic mistake, we need to recognize that the days of vast herds of bison on the public prairie lands they once inhabited are indeed past. Well-meaning groups would like to see bison back in its original habitat, but the fact of the matter is that habitat is simply gone.

Against-restoration Policy Stance with an Intentional Causal Mechanism: While the near-elimination of bison as a wild species in Montana was a tragic mistake, some advocacy groups are threatening our economic and historic livelihood by proposing to restore bison of a bygone era to our public grasslands in Montana. By using misinformation and fear tactics, these bison advocacy groups are trying to pull on heart-strings of nostalgia and threaten our private property rights.

Control Narrative: There are two subspecies of bison, the plains bison and the wood bison. Plains bison historically occupied most of the North American continent, with the greatest concentration found in the Great Plains, which includes present-day Montana. Bison evolved alongside other prairie species such as grassland birds, pronghorn antelope, and native prairie grasses.

Next we describe the policy issue and then move to a detailed description of our methods, followed by a presentation of our results and ending with a discussion of lessons learned and how this work contributes to the science of NPF as a policy process theory.

The Policy Issue: Restoration of Bison to Public Grasslands in Eastern Montana

In order to gauge the influence of different causal mechanisms embedded within policy narratives, we employed treatments representative of a current regional public policy debate over whether or not wild bison should be restored to portions of public grassland in eastern Montana of the United States. To the reader outside of the American West, this issue may appear to be banal; however, public land debates have roots not only in the setting of the American West, but reaches back to fissures in our founding ideologies over the intersection of private and public rights.

Wild bison have been absent from this region since hunted to near-extinction by commercial hunters in the late 1880s (US Fish and Wildlife Service; Lott 2002). The majority of the private land within the region is agricultural land, with a large percentage is used for cattle grazing. The region is seeing a decline in population partly due to an increase in corporate agriculture. In eastern Montana, there is a large amount of public land managed by a variety of agencies under different management directives. Montana has a longstanding tradition of allowing ranchers to graze their cattle on public land for a fee. The Taylor Grazing Act of 1934 defined grazing of private livestock on public land as a privilege, and this practice has grown to be vital for the economic viability of individual ranchers (Manning 2008). The Multiple-Use, Sustained Yield Act of 1960 (http://www. fs.fed.us/emc/nfma/includes/musya60.pdf) recognized that public land must be managed for a variety of uses including for wildlife. These two acts establish that public grazing land must be managed for domestic livestock grazing and the needs of wildlife. This dual purpose leads to the current debate over whether or not there is a place for bison on public lands.

Montana Fish, Wildlife & Parks (MT-FWP) has begun an examination as to whether or not there is a place for bison to be managed as wildlife on public lands in eastern Montana. This examination is occurring through the development of a programmatic environmental impact statement under the Montana Environmental Policy Act. This Act requires the input of the public through formal scoping meetings and public hearings. Two opposing interests have arisen within this highly controversial policy debate. These two opposing interests are competing to have their narrative gain legitimacy within the media, in political

campaigns, on group websites, and through public meetings. MT-FWP received 22,928 comments from an estimated 20,000 individuals during the public scoping process, which indicates that this policy issue has garnered significant attention.

The first of the competing interests are those who strongly oppose the restoration of bison. Eastern Montana, which has a large agricultural base, places a high value on personal property rights and freedoms. Those that oppose bison restoration have developed narratives that argue that the restoration of bison will lead to the end of agriculture in Montana. The second are those who support the restoration of bison. This coalition has developed the narrative that it is important to restore bison to the grassland ecosystems, and that the state is responsible for righting the historical wrong of commercial bison hunting. Both sides of this policy issue have engaged in similar bison management policy battles in the Greater Yellowstone Area since the mid-1990s.

Methodology

This study utilizes a quantitative research strategy with an experimental research design to examine the extent to which the narrative strategy causal mechanism influences variation in a key dependent variable related to individual policy opinion regarding bison grazing on public lands. A pre–post-test between subjects design was employed in order to allow the independent variable of interest—the causal mechanism—to be manipulated to determine the extent to which it explains variation in our public opinion dependent variable (see definition below). The data used in the study was obtained from an online survey (n = 772) completed by undergraduate students at a mid-sized public university in the fall of 2012 in which respondents to the survey were randomly assigned to individual experimental treatments.

Sample

Generalization necessitates a representative sample of the population. While university students are not perfectly representative of the general population, they are appropriate in our case as university students are more representative of an attentive political public that has higher rates of education and higher than average levels of reading, which is a demographic more likely to participate in policy disputes such as the one examined here. However, the age of our sample is not representative of the engaged public, as the mean, median, and mode for our sample is 23, 21, and 20 years old, respectively. Our sample also included more females (56%) than males (44%). In order to maximize participation in the study, two sampling techniques were utilized. The first technique was a convenience sample, which allows for accessibility to study subjects (Bryman 2012). A brief message and link to the online survey was e-mailed to approximately 5,000 students enrolled in larger 100/200 level college courses. A brief message and link to the survey was also posted on a Facebook group for incoming freshman, which

has approximately 900 members. The second technique was a probability sample. An e-mail list of 2,500 undergraduate students was randomly generated from the undergraduate list serve. The 2,500 individuals were e-mailed a brief message and link to the survey. It is not possible to determine how many of the completed surveys resulted from the two sampling techniques, though based on timing of survey completion it appears to be close to equal. A cash prize incentive was offered to potential subjects to increase response rate. All of the surveys were completed within a four-week time period, with 880 starting and 772 completing the survey.

The Variables and the Survey

The dependent variable, policy opinion change, was calculated using pre- and post-tested sets of 6, 7-point Likert scale questions that were combined into a single composite scale variable (possible range $= 37$, min. $= 6$ and max. $= 42$; Cronbach's $\alpha = 0.713$; Table 4.1). The pre- and post-test thus account for direction of change where a negative result means policy opinion changed toward the anti-restoration narratives movement and a positive result means policy opinion changed in the direction of the pro-restoration narratives. Policy opinion change was calculated by the following equation:

$$Policy\ Opinion\ Change = \frac{(Pre\ Test\ Policy\ Opinion - Post\ test\ Policy\ Opinion)}{Range}$$

The results are normally distributed, with a mean opinion change of 0.001. Examples of opinion questions are "Montana should preserve the ranching heritage of the American West by maintaining cattle's use of prairie lands" and "Bison on public lands should be managed as wildlife not as livestock."

The independent variables are the causal mechanism narrative strategies imbedded in the policy narratives (the treatments), and other traditional political science variables: issue knowledge, a priori policy preference, political ideology, age, and gender (Table 4.1).

The causal mechanism variable of interest is captured in all but the control treatment (see the Appendix). Thus, the remaining four treatment narratives consist of two pro-restoration narratives and two against-restoration narratives, with each narrative portraying either an inadvertent or an intentional causal mechanism. The control narrative is a list of neutral material with no policy position.

By controlling for a priori policy preference, we examine what Jones and McBeth (2010) describe as narrative breach and narrative congruence. Due to random assignment to discrete treatments, some of our subjects read a policy narrative that is congruent with their a priori preferences, and others read a policy narrative that breached their preferences. To operationalize the a priori policy preference, two seven-point Likert-scale questions (distinct from the questions used in our dependent variable) were combined into a single composite scale

Table 4.1 Variable definitions and descriptive statistics

Dependent variable			
Policy opinion change			
Composite index of six 7-point Likert scale questions, e.g., should preserve ranching heritage by maintaining cattle on prairie lands; bison should be managed as wildlife not livestock Cronbach's alpha = .713 min = 6; max = 42 lower numbers = support reintroduction policy higher numbers = oppose reintroduction policy			
Rate of opinion change $\dfrac{(\text{pre-test opinion} - \text{post-test opinion})}{\text{total possible range}}$ negative numbers = opinion change toward opposition to reintroduction policy positive numbers = opinion change toward support for reintroduction policy	772	.0976	mean = .001 median = .000
Independent Variables			
A priori policy preference Composite index of two 7-point Likert scale questions, e.g., should bison be reintroduced or not Cronbach's alpha = .664 min = 2; max = 14 lower numbers = support reintroduction policy higher numbers = oppose reintroduction policy	880	2.620	mean = 7.24 median = 7.00
Recoded policy preference into three categories Reduced composite variable into 3 categories	880	.561	median = 2 mode = 2
(1) support policy (responses 2–5 above)	205		
(2) middle (responses 6–10 above)	588		
(3) oppose policy (responses 11–14 above)	87		
Issue knowledge Composite index of 10 true-false-'I don't know' questions, e.g., low bison numbers are due to natural causes. Cronbach's alpha = .772 min = −10; max = +10 negative numbers = more incorrect answers positive numbers = more correct answers	783	2.806	mean = 3.11 median = −3.00
Political ideology 7-point Likert scale question	774	1.599	mean = 3.87 median = 4.00
(1) strong conservative	49		
(2) conservative	142		
(3) leaning conservative	104		
(4) middle of the road	229		
(5) leaning liberal	109		
(6) liberal	100		
(7) strong liberal	41		

Table 4.1 (Continued)

Age interval variable, computed from question asking what year the respondent was born	772	6.678	mean = 23.12 median = 21
Gender 0 = male; 1 = female	774	.496	median = 1 mode = 1
(0) male	337		
(1) female	437		

variable (range = 13, min. = 2 and max. = 14; Cronbach's $\alpha = 0.664$; Table 4.1). The results indicate that there is a slight skew toward pro-bison restoration (mean = 7.24; median = 7.00). The questions asked are whether "cattle should be allowed to remain on the public prairie grasslands without the intrusion of bison" and whether "bison should be restored to the public prairie grasslands." In order to analyze changes in opinion by narrative congruence and breach, these data were also recoded into three categories: those who support bison restoration, those who are more neutral, and those who oppose restoration policy. The research team decided to create these categories based on strength of opinion (versus equal binning), with the support and oppose categories being comprised of the lowest and highest four responses to the composite index, respectively (2 through 4 and 11 through 14) and the middle or neutral category being in the center of responses of the index (6 through 10).

The issue knowledge questions were 10 true–false–"do not know" knowledge questions, centered on the bison restoration policy issue. These questions were combined into a single composite scale variable (range = 21, min. = −10 and max. = +10; Cronbach's $\alpha = 0.772$; Table 4.1). The lower the number, the more incorrect the answers; the higher the number, the more correct the answers, with 0 for "do not know". The results of issue knowledge reveal that more respondents, on average, identify correct responses (mean = 3.11; median = 3.00). Examples of knowledge questions are "Bison will naturally prevent cattle from getting close to needed water sources" and "The once vast herds of bison in Montana naturally died out due to overpopulation."

Political ideology is measured through asking "How would you describe your political views" with a seven-point Likert scale response option, ranging from strong liberal to strong conservative, with "middle of the road" the center point of the scale. The respondents were diverse in their political ideology, with 29.6% ($n = 229$) in the middle, 32.3% ($n = 295$) in the liberal range, and 38.1% ($N-295$) conservative range. Age was obtained by asking the year the respondent was born (mean = 23.12; median = 21), and gender was a dichotomous variable, coded 0 for male (43.5%; $n = 337$) and 1 female (56.5%; $n = 437$).

The survey's design was a pre–post-test, with the random assignment of one participant to one of the narrative treatments. The pre-test began with a priori policy preference questions followed by the policy opinion and issue knowledge

questions, and ending with demographic questions (age, gender, political ideology). The randomly assigned treatment was introduced next, followed by the post-test. The policy opinion questions were repeated in order to calculate policy opinion change per respondent. Embedded in the pre- and post-policy opinion questions were different red herring questions to ensure respondent interest and attention. The survey took between 30 and 40 minutes to complete.

Results

To test the two aforementioned hypotheses, two statistical tests are performed. First, a paired t-test is conducted to examine policy opinion changes after exposure to the treatment. Importantly, these comparisons are controlled for respondents' a priori policy preference (support, middle, oppose) to examine the effect of these causal mechanisms based on whether the participant reads a breach or congruent narrative. Second, an ordinary least squares regression analysis is conducted to allow for the isolation of the effects of the causal mechanisms while controlling for more standard variables that we might expect to see influencing our dependent variable; thus, the causal mechanism, a priori policy preference, policy knowledge, and political ideology are regressed on the rate of opinion change between the pre- and post-tests.

The paired t-test is utilized to determine the statistical significance of the change in policy opinion when respondents were exposed to inadvertent and intentional breaching and congruent policy narratives. The results of the paired t-tests reveal that the intentional causal mechanism more consistently influences individual policy opinion change than that of the inadvertent causal mechanism, controlling for an a priori policy preference (Table 4.2). Five out of the six groups reading a policy narrative with an intentional causal mechanism treatment experience a statistically significant change in opinion, with changes all occurring in the directions of the narrative treatment policy stance. In contrast, the narrative treatments that harbored an inadvertent causal mechanism had less effect, with only two out of the six groups of respondents demonstrating a statistically significant change in opinion; however, regarding the opinion change that did occur in these treatments, both were in the direction of the narrative policy stance. Importantly, and as expected, the control group showed no statistically significant change in opinion.

Controlling for respondent a priori policy preference allows for a closer examination of the power of these causal mechanisms. For example, we would expect those with mild policy preferences ("middle") to be more strongly swayed by policy narratives than those with more strongly held policy preferences (Entman 1995). These results show inconsistent effects on those with mild policy preferences ($t = 1.805$, $p < 0.05$; $t = 0.847$, ns; $t = 2.090$, $p < 0.05$; $t = -0.563$, ns). Interestingly, some of the most robust opinion changes are seen in the breaching narratives with intentional casual mechanisms ($t = 2.048$, $p < 0.05$; $t = -3.810$, $p < 0.001$); it is only the breaching narrative that reveals a significant change with an inadvertent causal mechanism ($t = -1.924$, $p < 0.05$).

Table 4.2 Policy opinion change by a priori policy preference, causal mechanism, narrative policy stance

Causal mechanism by Narrative Policy Stance	Respondent a priori policy preference (n)		Change in policy opinion t-statistic, sig.
Inadvertent			
pro restoration	support[++]	(n = 47)	t = −0.398
	middle	(n = 58)	t = 1.805*
	oppose[+]	(n = 33)	t = 0.887
against restoration	support[+]	(n = 68)	t = −1.924*
	middle	(n = 62)	t = 0.847
	oppose[++]	(n = 27)	t = 0.247
Intentional			
pro restoration	support[++]	(n = 76)	t = 1.870*
	middle	(n = 56)	t = 2.090*
	oppose[+]	(n = 38)	t = 2.048*
against restoration	support[+]	(n = 69)	t = −3.810***
	middle	(n = 61)	t = −0.563
	oppose[++]	(n = 44)	t = −1.718*
Control			
	support	(n = 63)	t = −0.290
	middle	(n = 43)	t = −1.261
	oppose	(n = 32)	t = 0.403

Note: one-tailed *t*-tests; *$p < 0.05$; **$p < 0.01$; ***$p > 0.001$.
[+]indicates breaching narratives or those narratives with policy stances that are opposite from the respondent's a priori policy preference;
[++]indicates congruent narratives or those narratives with policy stances that are congruent with the respondent's a priori policy preference.

We thus reject H1. The inadvertent causal mechanism shows two statistically significant *t*-tests out of a possible six. And while there is some evidence to suggest a relationship between inadvertent causal mechanisms and individual policy opinion, the lack of significance in the four remaining categories directs us to conclude that there is simply insufficient support for H1. However, we do find sufficient evidence to accept H2. In five of the six intentional cells, the intentional causal mechanism shows a statistically significant effect on policy opinion change. Moreover, significance is found for both breaching and congruent policy narratives.

Next, we conducted an ordinary least squares (OLS) regression controlling for issue knowledge, a priori policy preference, political ideology, age, and gender, which allows for a more precise assessment of the influence of causal mechanisms on policy opinion change than the previous *t*-tests, which speak only to significance and direction. Table 4.3 illustrates our findings. For this model, each causal mechanism is coded as a dichotomous variable where 0 indicates a respondent's absence from the treatment, while a 1 indicates presence. The control group is represented by the constant in the equation. Control variables specified earlier maintain their previous operationalizations in this model.

Table 4.3 OLS regression results for policy opinion change

	Policy Opinion Change
Constant	−0.130*** (0.022)
Experimental Treatments	
Inadvertent causal mechanism in pro-policy narrative	0.015 (0.011)
Inadvertent causal mechanism in against-policy narrative	0.001 (0.011)
Intentional causal mechanism in pro-policy narrative	0.032** (0.011)
Intentional causal mechanism in against-policy narrative	−0.022* (0.011)
Control Variables	
Issue knowledge	0.007*** (0.001)
A priori policy preference	0.007*** (0.001)
Political ideology	0.011*** (0.002)
Age	0.000 (0.001)
Gender	0.005 (0.007)
F-statistic	11.034***
Adj. R^2	0.105
n	769

*p < .05, **p < .01, ***p < .001 one-tailed test (std. errors reported in parentheses).

Table 4.3 shows that inadvertent causal mechanisms do not show statistically significant effects on change in our rate of change opinion dependent variable; providing further evidence to reject H1. However, when respondents are exposed to intentional causal mechanism policy narratives, our OLS partial regression coefficients show statistically significant effects in the expected directions on changes in policy opinion, confirming our findings using *t*-tests in the previous analysis while also controlling for other related factors. Not surprisingly, issue knowledge, a priori policy preference, and political ideology—all reveal significant effects on policy opinion. Age and gender show no effects. The OLS regression results thus provide additional support for confirming H2.

What We Have Learned

This chapter opened with the idea that narratives both reflect and shape who we are. If this idea of narrative influence is true on a general level, then it probably applies to our understandings of how we relate to public policy as well. Then, in considering narratives in the policy sphere, policy narratives may both reflect a coalitions' identity through policy beliefs and policy solutions, and they may also shape who we are through the narrative strategies they deploy. One narrative strategy identified by the NPF that is used in policy narratives is the manipulation of characters to construct a causal mechanism, ostensibly to make the story more effective in terms of its mobilization and persuasive capabilities. Past NPF research (e.g., McBeth et al. 2012) has found that the intentional casual mechanism is the prevalent strategy used by competing coalitions in wicked policy

issues. In the examination of a policy issue that ended in a regulatory decision, Shanahan et al. (2013) were surprised to discover that the winning coalition employed the inadvertent causal mechanism narrative strategy toward the end of the policy debate. One of the initial goals when this study was planned was to test whether an inadvertent causal mechanism might well be a powerful tool in influencing individual opinion and a tool that would not be as divisive as that of the intentional causal mechanisms. This chapter is thus an initial inquiry into new micro-level hypotheses centered on the influence of casual mechanisms as a narrative strategy on public opinion.

We have learned that not all written words have an effect. The control experimental treatment specifically did not have narrative elements (i.e., heroes, victims, villains, a plot, and a moral to a story) or strategies (i.e., causal mechanisms). As such, the respondents randomly assigned to read the control narrative did not reveal statistically significant changes in their opinion on our issue of interest. Thus, and given the performance of respondents in the control treatment, we can offer a conjecture based upon our findings that a real-world condition does not become a policy problem unless it is defined, constructed as a problem, and presented as a narrative in some form or another (Shanahan et al. 2011b). It is from this basis that we can, in turn, make some statements about the role of causal mechanisms in effecting individual opinion.

We have learned that the strategic choice of causal mechanism matters. Intentional causal mechanism appears to influence an individual's opinion, whereas inadvertent causal mechanism has little or no effect. In exploring our two hypotheses that the use of causal mechanism effects policy opinions, we focused specifically on intentional and inadvertent narrative strategies. We find that causal mechanisms, as a whole, do not affect policy opinions, but, rather, the specific kind of casual mechanism employed does, at least in the short run. Importantly, these results are based on cross-sectional data and thus only show a snap shot in time, whereas real policy conflicts occur over the years, even decades. In the short run, however, our data and analysis do show that intentional causal mechanisms appear to be powerful narrative tools; however, our data do not speak to the long-term effects of such usage. Indeed, as noted earlier, Shanahan et al. (2013) in their meso-level NPF study of the citing of a wind farm in Cape Cod found that the winning narrative focused on inadvertent causal mechanisms. We can only speculate as to why we find different results at different levels of analysis. Perhaps in the long run, publics steeped in policy debates dominated by intentional causal mechanisms for many years may grow weary of the negativity. Perhaps interest groups, once they feel they have come to dominate politically, switch to inadvertent causal mechanisms. Perhaps the role of policy narratives and their constituent causal mechanisms are slight and other factors such as institutional venue, financial resources, and talented leadership are more important. These are questions future NPF scholarship will need to sort out. The research presented here offers some guidance and foreshadows a need in NPF research to explore longitudinal panel data to determine how, why, and to what end causal mechanisms are deployed over time.

Despite being unable to speak to the longevity of the effect, we have also learned that intentional causal mechanisms result in changes in opinion—whether the policy narrative breaches (opposes the individual's a priori policy preference) or is congruent (supports the individual's a priori policy preference). Jones and McBeth (2010) hypothesize that breaching narratives and congruent narratives can be persuasive; the results in this chapter suggest that the causal mechanism may play a key role in the effects of narrative breach and congruency. In a previous study, Shanahan et al. (2011a, p. 392) found that "the power of policy narratives can both strengthen the opinions of friendly audiences and convert the opinions of audiences harboring divergent opinions." Our findings not only reinforce this broad statement about the power of policy narratives, but also support the hypothesis that intentional causal mechanisms can effect change in policy opinion, whether the aim is to expand the scope of conflict (thus use breaching narratives) or to limit the scope of conflict (thus use congruent narratives).

What, exactly, was occurring in how the intentional and inadvertent causal mechanisms manipulate characters that resulted in such different effects? The intentional causal mechanisms feature a nefarious villain out for their own parochial interest at the expense of others. The inadvertent causal mechanisms contain very mild villains, those whose ignorance has resulted in this situation. For the intentional casual mechanisms, there is a hero who must fight to right the wrong; in contrast, the inadvertent casual mechanisms turn the ignorant villain into the hero, once an understanding of the mistake occurs. The engagement of the reader in this experiment was stronger with the battle or fight presented by the structure within the intentional casual mechanisms than the villain-turn-hero of the inadvertent causal mechanism.

The beauty of an experimental design is the ability to isolate certain conditions, such as narrative strategies. However, the very real limitation of an experiment is that they do not replicate the complexities in the real world. In high-stakes policy debates, not only are individuals immersed in these narrative debates over time, they are barraged with competing policy narratives with various narrative strategies in multiple dissemination venues (social media, TV, Internet, radio etc.). Teasing out narrative effects in this complex environment will take time. As such, we turn to future NPF scholars to assist in these discoveries of the power of policy narratives in an increasingly complex policy world.

NPF as a Policy Process Theory: So What?

The results of this experiment highlight two important aspects of the NPF as a policy process theory. First, this chapter demonstrates support for one of our two hypotheses (H2), indicating that the intentional causal mechanism plays an important role in shaping policy opinion. In a more general sense, support for our second hypothesis also indicates that the strategic construction of policy narratives matters in terms of shaping opinion. Future NPF research should endeavor

to determine the effects of strategies at the micro level on policy opinions and preferences beyond the two causal mechanisms addressed in this research. Second, the effects of narratives in our political world are not trivial. For example, policy narratives have played a part in mobilizing large groups of people for both better (Rosie the Riveter) and worse (Nazi Germany). The NPF explicitly recognizes their importance and asks the critical question of what role do these policy narratives play in the policy process? This micro-level study is contributory in understanding the effects of the strategic construction of policy narratives and how they shape the policy opinions of individuals and groups and thus offers some insight into that critical question. We suspect that answers to this question will play an increasingly important role as society becomes more adept at disseminating policy narratives through technology and narrators become more sophisticated in their delivery. Moreover, the concurrence of the decline in social capital (Putnam 2001) and the rise in policy marketing (McBeth and Shanahan 2004, p. 334) means that the NPF is likely a needed framework for public administrators, policy analysts, and, ultimately, citizens to both grasp and use in understanding policy narratives as both a reflection of beliefs and identities, and a powerful force of human nature that shapes them and the political realities they operate within.

Appendix: The Narratives

Pro-Restoration with an Inadvertent Causal Mechanism Narrative

While the near-elimination of bison as a wild species in Montana was a tragic mistake, it can be rectified by allowing bison to return to the public grasslands they once inhabited. We not only have the opportunity to bring bison back to their native prairie habitat, we also have the responsibility to do so. Given our ranching history in the American West, many of us have become accustomed to thinking of bison as livestock, to be managed and controlled. As a result, we have inadvertently limited what we thought possible for the bison. What if we think about these wild bison as North America's elephant—a threatened species with fierce herd loyalty, cultural ties to our Native American tribes, an important part of the ecosystem for other wildlife, and our national symbol? Suddenly the idea of restoring bison as a valued wildlife species seems like the right plan to protect what some call our National Mammal. As Americans honoring our past, we can find solidarity behind this solution. Now is the time when Montanans have an opportunity to be national leaders in this effort to preserve our heritage of the American West and continue our state wildlife legacy, which has restored other species such as elk and deer.

Pro-Restoration with an Intentional Causal Mechanism Narrative

While the near-elimination of bison as a wild species in Montana was a tragic mistake, ranching interests are perpetuating this history of eradication by fighting

to keep bison off our public prairie lands. We not only have the opportunity to bring bison back to their native prairie habitat, we must stand up to the self-interested few who feel their right to use public land for cattle grazing is more important than the rights of other users. By using misinformation and fear tactics, the ranching industry is trying to stop the restoration of wild bison back to their native habitat. The cattle industry only sees bison as livestock, to be managed and controlled for their own narrow economic interests. These groups threaten our growing tourism industry that is based on our diverse wildlife. Ranchers claim that bison will compete with their cattle for grass, destroy their expensive fences, and give their cattle diseases. However, scientists say there is enough wide-open publicly owned space suitable for bison and the potential impact to the cattle industry could be mitigated. Now is the time when Montanans have an opportunity to be national leaders in this effort to preserve our heritage of the American West and continue our state wildlife legacy, which has restored other species such as elk and deer.

Against Restoration with an Inadvertent Causal Mechanism Narrative

While the near-elimination of bison as a wild species in Montana was a tragic mistake, we need to recognize that the days of vast herds of bison on the public prairie lands they once inhabited are indeed past. Well-meaning groups would like to see bison back in its original habitat, but the fact of the matter is that habitat is simply gone. Those swaths of grassland are now dotted with our beloved towns, fragmented by our well-used highways, and occupied by industries like ranching that serve as strong economic drivers in our state. We have progressed in important ways, with our robust cattle industry filling the niche the bison once held. We have a responsibility to continue to enrich and safeguard our 150-year American legacy of cattle ranching on these beautiful prairie lands once occupied by bison. Advocates for restoring bison fear that these animals will be forgotten, but our American bison are everywhere—on signs and billboards, advertising and letterhead, as decor for homes and lodges, and, of course, in Yellowstone National Park. Now is the time when Montanans have an opportunity to be national leaders in this effort to preserve our heritage of the American West by maintaining cattle's use of these prairie lands, thus continuing our state's ranching legacy.

Against Restoration with an Intentional Causal Mechanism Narrative

While the near-elimination of bison as a wild species in Montana was a tragic mistake, some advocacy groups are threatening our economic and historic livelihood by proposing to restore bison of a bygone era to our public grasslands in Montana. By using misinformation and fear tactics, these bison advocacy groups are trying to pull on heart-strings of nostalgia and threaten our private property rights. These groups would like to see bison back in their "original" habitat, but the fact of the matter is there is no such thing! Those swaths of grassland have already been developed with our beloved towns, our well-used highways,

and, yes, our important cattle industry. By pushing bison onto the fragments of public prairie, these groups threaten our robust cattle industry, our economic well-being, and our 150-year American legacy of cattle ranching on these beautiful prairie lands. Cattle and bison are not meant to live side-by-side, because these bison will knock down our fences, compete with our herds for grass, and possibly spread terrible diseases to our cattle. It makes us wonder if what these groups really want is to drive the ranchers off their lands! Now is the time when Montanans have an opportunity to be national leaders in this effort to preserve our heritage of the American West by maintaining cattle's use of prairie lands, thus continuing our state's ranching legacy.

Control Narrative

There are two subspecies of bison, the plains bison and the wood bison. Plains bison historically occupied most of the North American continent, with the greatest concentration found in the Great Plains, which includes present-day Montana. Bison evolved alongside other prairie species such as grassland birds, pronghorn antelope, and native prairie grasses. During the 1880s bison were eliminated in large quantities throughout their entire range, for varying reasons. Following the 1880s, there were bison in a few places: Yellowstone National Park, a small herd in Texas, and private herds that were started from orphaned bison calves. Today, the majority of bison exist in private commercial herds. However, there are two areas in Montana that are home to public herds. One is the National Bison Range and one is Yellowstone National Park. For both of these public herds of bison, the bison are managed to stay within the boundaries of these public lands. Montanans have different opinions as to whether or not a herd of wild bison has a place in Montana. Some feel that wild bison belong in Montana, whereas others feel that there are not enough resources to support bison and other land uses such as agriculture, livestock grazing, and energy exploration.

Notes

1. The NPF has historically identified causal mechanisms as a narrative *element* (Shanahan et al. 2013). The authors have realigned this thinking to understand causal mechanisms as a narrative *strategy* (Jones et al. 2014), given that causal mechanisms arise out of strategic use of narrative elements, particularly that of the villain and that narrative scholars do not identify causal mechanisms as a component of narrative form.
2. The question of the relevance of public opinion to policy decisions has been discussed in detail elsewhere; see Jones 2010 for an impressive literature review of pertaining to public opinion and policy.

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QUERIES TO BE ANSWERED BY AUTHOR (SEE MARGINAL MARKS)

IMPORTANT NOTE: Please mark your corrections and answer to these queries directly onto the proof at the relevant place. Do NOT mark your corrections on this query sheet.

Chapter 4

Query No.	Page No.	Query
AQ1	76	Please see the sentence starting "The dependent variable, policy opinion change..." Book style is to spell out one to ten when they are used as regular words in a sentence. So we suggest it be either "...sets of six seven-point Likert scale questions..." or "...sets of six 7-point Likert scale questions..." CE Query for Author: "6- and 7-point"? Even better, "6- and 7-point, respectively,"? Second, for consistency, would you prefer "seven-point" as spelled out in Chapter 3? Author's Reply: Likert scale should be capitalized. There are 6 questions, each of which are 7-point Likert scales. So, this is how it should read: "...sets of 6, seven-point Likert scale questions..."