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How to conduct a Narrative Policy Framework study

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ABSTRACT

The Narrative Policy Framework has a growing number of researchers seeking to apply the framework in policy process scholarship. This article is intended to assist those interested in conducting an NPF study that is 'clear enough to be wrong' (Sabatier, 2000). While graduate programs offer critical methodological training, this article focuses on the specific application of the NPF to research inquiries about the role of policy narratives in the policy process. We approach our discussion by examining various decisions in the research process and include a detailed discussion of specifying the model and obtaining narrative data. We also point out areas for further investigation.

1. Introduction

Policy process research endeavors to unpack the complexity of temporal interactions between public policy and policy actors, events, contexts, and outcomes (Weible, 2017, p. 2). As theories of the policy process (e.g., Weible & Sabatier, 2017) become more precise in specifying their models, there is a concurrent exigency for clear research methods as these theories are applied across various policy domains. Masters and Ph.D. programs train students broadly in methods and data analysis but questions about specific policy process applications persist over matters such as operationalization of concepts, sampling, data collection, and appropriate methodology. Importantly, these questions are agnostic to rigor of methodological training. As such, addressing the range of questions becomes critical to achieve both validity and replicability, the building blocks of scientific knowledge.

The alpha and omega of scientific inquiry is theory. The Narrative Policy Framework (NPF), a policy process framework, has two major expositions detailing core assumptions, levels of analysis, hypotheses, and definitions of narrative concepts (Jones, McBeth, & Shanahan, 2014; Shanahan, Jones, McBeth, & Radaelli, 2017).[1] As a result of these and other publications, there is a growing community of researchers devising NPF studies to address the framework's central research question: what is the role of policy narratives in the policy process? Increasingly, we are receiving inquiries about our methodologies that basi-

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[1] While we assume minimal knowledge, these expositions are worth having on hand as you work your way through this article and your NPF project.

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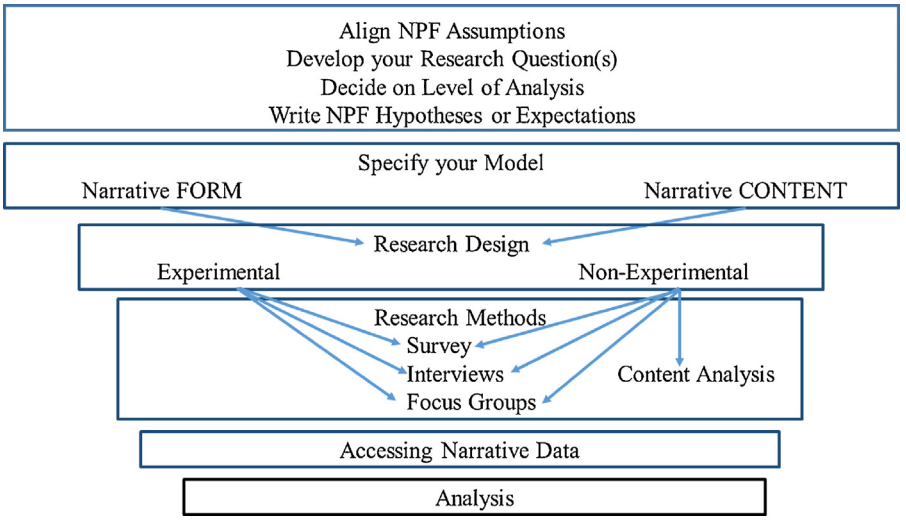

Fig. 1. Research approach in the Narrative Policy Framework.

cally come down to this question: How do I conduct a good scientific NPF study?[2]

Some readers may find this expose useful from top to bottom, and others may find particular sections enlightening. We thus approach answering how to conduct a good scientific NPF study through a series of decision points in the research process (Fig. 1). We also recognize that these choices are presented in a linear or hierarchical order and yet the research process is more of an iterative venture, with some ideas developed concurrently and not necessarily bound by any order we might try to impose here.

2. Is the NPF the right choice for your research?

2.1. Alignment of NPF assumptions and your research approach

The NPF is not a one-size fits all for research projects centered on narratives. While most research design and methods texts give a nod to the importance of theory, what is often more obtuse in these texts is an articulation of why theories matter in the first place. Embedded in theories are assumptions about how the world works. In the policy literature, theoretical work on narratives is based on different and contrasting assumptions, e.g., the model of the individual, what constitutes reality.[3] The NPF articulates five core assumptions that you must consider before making the decision to apply the NPF:

1) *Social construction.* Meaningful parts of policy reality are socially constructed.
2) *Bounded relativity.* The meaning of those social constructions vary to create different policy realities, but this variation is bounded (e.g., by belief systems, ideologies etc.) and thus is not random but, rather, has some stability over time.
3) *Generalizable structural elements.* Narratives have specific and identifiable structures.
4) *Three interacting levels of analysis.* Narratives operate at three interacting levels, micro (individual), meso (group), and macro (cultural and institutional).
5) *Homo narrans model of the individual.* Narrative is understood to play a central role in human cognition and communication, i.e., people prefer to think and speak in story form.

A major departure from any of these assumptions means the NPF is not right for your research. For example, if your research assumes a narrowly defined instrumental rational actor driven by preferences generated by their environment and an objective world independent of human perceptions, then this is a fatal flaw for NPF research due to violation of NPF assumptions #5, #2, and #1. The point is to think carefully about your research assumptions and ensure that they are aligned with those of the NPF.

3. Finding your research compass

3.1. Develop NPF research questions

With a sense of the assumptions that guide your research, the next decision point is the development of the research question. All NPF research questions in some way address the role of narratives in the policy process. Whether inspired by an interest in a specific policy issue, readings from the literature, or a colleague, we have found specific NPF research questions typically lead down one of two paths. One route is policy-centered by examining the

[2] We focus here exclusively on what might be termed "traditional" applications of the NPF, referring to building both qualitative and quantitative NPF applications rooted in the scientific method. NPF applications interested in alternate epistemologies such as interpretivism should see Jones and Radaelli (2015) and Gray and Jones (2016).

[3] See Jones and McBeth (2010) for an overview of these differences and Shanahan, Jones, and McBeth (2015) for a discussion of NPF's philosophy of the science of narratives.

Table 1
Level of analysis in NPF research questions.

Level of Analysis	Generic Research Question	Examples
Micro	What influence do narratives have on individual preferences and cognitions? What influence do narratives have on individual decision making?	What is the effect of different types of causal mechanisms on an individual's policy opinions when presented with a congruent and breaching narrative? (Shanahan, Adams et al., 2014)
Meso	How do groups construct policy narratives?	In Indian nuclear power debates, do winning and losing coalitions employ different narrative strategies? (Gupta et al., 2014)
	What is the effect of policy narratives in the policy process?	During the Arab Spring, how were expert and legislative narratives deployed and to what effect? (O'Bryan et al., 2014)
Macro	What are the conditions under which macro level narratives develop and change?	How did the education policy change after World War II and how did the macro narratives affect policy learning? (Veselkova & Beblavy, 2014)

policy process of a policy issue through narrative elements and strategies. A second path is theory-centered by exploring the role of narratives in the policy process. In any case and in some form or another, NPF research projects begin with a question inspired by a policy area or theory/theories that include but are not limited to the NPF.

4. Identifying your study's locus: micro, meso, macro

4.1. Decide on your level of analysis

With a question related to some policy area of interest and amenable to the NPF and perhaps other theories, the next decision point is to determine your level of analysis. We have discerned from the questions that we have received over the years that there is confusion concerning three aspects: the importance of the level of analysis, what the level of analysis means, and the difference between level of analysis and unit of analysis. The importance of identifying the level of analysis is to designate the scale of your research.[4] For the NPF, each level of analysis provides a vantage point for examining the role of narratives in the policy process; the level of analysis helps to identify the social group (individual, group, institution) or population upon which the research is focused. Level of analysis is distinct from unit of analysis, as the latter refers to the specific observation in the study from which or about which data are gathered (interest group public consumption documents; individual interviews, etc.) In sum, the level of analysis sets your research scope and should be discernable in your research question.

In the NPF, there are three levels of analysis: micro, meso, and macro. At the micro level, the research location is that of the individual. The accompanying research focus is on how individuals both form narratives and are shaped by narratives. At the meso level, the research scales up to policy actors in the policy subsystem (e.g., groups, coalitions, organizations). The research focus here is on how policy actors construct and communicate narratives to influence the policy process. The macro level of analysis centers on policy narratives that permeate institutions, society, and cultural norms. The research focus for macro level NPF inquiries is to understand how changes or stability in macro policy narratives—embedded in cultures and institutions—influence public policy. Table 1 highlights some examples from published research questions with accompanying levels of analysis.[5]

The NPF levels of analysis are not theorized to operate independently; what this means is that the framework is dynamic. For example, Jones' (2014) work on the importance of heroes as the primary emotional motivator within policy narratives at the micro-level informs conclusions about the importance of hero-focused policy narratives in achieving policy goals at the meso-level (Shanahan, Jones, McBeth, & Lane, 2013). Exploring the nature of the narrative linkages between levels of analysis is ripe area of research. Findings at the micro level may be relevant to the meso level or visa-versa; certainly, macro level narratives influence the parameters of meso level debates.

5. Testing your research question

5.1. Articulating your NPF hypotheses or expectations

The NPF has several hypotheses at the micro and meso levels (see Shanahan, Jones et al., 2017). These hypotheses are intended to advance both the understanding of policy process complexities over time as well as advance the NPF framework through testing the power of narratives. These hypotheses have improved over time, as the NPF has become better and more consistent with operational definitions of NPF concepts. However, NPF scholars are not limited to these hypotheses. We expect that as the NPF matures, additional theories and/or information will be brought to bear upon the NPF to generate new and innovative hypotheses.

While most NPF scholarship has been hypothesis driven, qualitative researchers have also effectively used the NPF (e.g., Ney, 2014; O'Bryan, Dunlop, & Radaelli, 2014). For these types of studies, qualitative NPF researchers might not test hypotheses; rather, they may choose instead to

[4] Levels of analysis have varying taxonomies across disciplines. For example, in political science, the levels of analysis are typically conceived of as the individual, the state, and the global. In sociology, there are a micro and macro levels of analysis.

[5] Jones, Shanahan et al. (2014) is a compilation of NPF studies at all three levels of analysis.

Table 2
Core NPF narrative components.

Policy narrative	
Policy narrative form: narrative elements	Policy narrative content
Setting: space and time	Belief system: set of values or beliefs
Characters: heroes, villains, victims	Strategies: manipulate/control policy processes
Plot: organizes action	
Moral of the story: policy solution	

articulate "expectations" (pp. 112–113) or specify theoretical propositions (e.g., Yin, 2014) that allow the exploration of policy narratives by way of qualitative techniques. Such studies have generated important findings in helping us better understand the power of policy narratives and have also proved invaluable in generating additional hypotheses for further quantitative inquiries.

6. Specifying your model

6.1. Operational definitions of NPF variables

NPF concepts are the building blocks for any NPF study. The detail in this section will assist you in the operationalization of NPF concepts, as consistency across NPF studies is critical to a scientific approach to build knowledge about the role of narratives. Yet, we also understand that NPF scholars, over time, also may add or amend concepts and operational definitions and that some concepts may simply be found to be unimportant.

Policy narratives are the heart of NPF (Shanahan, McBeth, & Jones, 2014, pp. 251–253), but what, exactly, is a policy narrative? This is a non-trivial question, but it is a question that *must* be answered in an NPF study, because how you answer this question will fundamentally guide your research design. While the NPF is open to alternative definitions operationalizing the structures of a policy narrative, the approach taken within the framework to define discrete narrative components has leveraged a distinction common in literary studies: narrative form and narrative content (Table 2; McBeth et al., 2014; Shanahan, Jones et al., 2017). Narrative form is the manifestation of assumption #3 within the framework—policy narratives have discernible characteristics differentiating them from other non-narrative texts or communications such as lists or chronologies. Narrative content refers simply to what a story is about. It is through content that assumption #2 is realized: the variation in social constructions of policy realities is not random, but, rather, stable over time. NPF concepts are theoretically anchored in narrative form and content.

6.1.1. Policy narrative form

While the NPF remains open to the possibility of more or less narrative components, those identified in Table 2 are the standard invoked within most NPF studies. Defining the narrative components of a policy narrative is absolutely essential in guiding your research. Without clearly and transparently specified components, it is impossible to discern policy narratives from non-narratives or to assess the persuasiveness of various policy narratives on a given population. The components listed in Table 2 have shown a robust body of findings (Pierce, Smith-Walter, & Peterson, 2014), helping researchers study policy narratives in a range of settings, applying diverse methods, and examining all three levels of analysis.

Characters that populate a narrative are those entities who act or are acted upon. Characters are often individuals, agencies, and/or groups (public and private). Operationally, a hero is the potential fixer of the policy issue. A villain is the entity causing the policy problem. A victim is the one harmed by the villain. While the three main archetypes of characters listed in Table 2 are the most common, other scholars have introduced different types of characters: "beneficiary," those who benefit from the proposed policy solution (Weible, Olofsson, Costie, Katz, & Heikkila, 2016); "allies," those aligned with the hero (McBeth, Shanahan, & Jones, 2005); "opponents," an entity opposing a policy but distinct from a villain (Merry, 2016a).

One question that has arisen surrounding the definition of characters is whether they must have human agency in order to take action or if characters can be non-human entities. Can "global warming" be a villain in sustainable energy debates? Are "bison" victims in the Yellowstone debates over brucellosis and cattle? Can a form of governance like "democracy" be a hero? Some (Weible et al., 2016) have argued that if an entity cannot literally take action or do harm, then it cannot be a character, as those entities cannot make decisions or *do* something in the policy arena. We have leaned toward the intention of the author of the narrative itself, which often is to treat abstract principles or non-human characters as having agency. That is, narrators seem to not have a problem with crowning democracy a hero, proclaiming global warming an enemy, or labeling the bison a victim. For the story recounted, these entities are characters; as such, non-human characters retain their character status in most NPF applications.

We have found that the nature of the characters are anchored in the verb, adjectives, and/or descriptors associated with character references, as the verb attaches action and the adjectives/descriptors label the narrative's affective orientation. For example, "Global warming is a threat to our children's future. Our cities and state governing bodies must pass policies that incentivize reductions in carbon emissions." The narrative description of global warming as a 'threat' attaches a negative marker to 'global warming', thus creating a villain. The 'threat' is to 'our children's future', thus constructing a victim. The hero would be city and state governing bodies, as they are the ones to "pass policies" and thus fix the problem.

Setting is the space where the action of the story takes place over time. The purpose of a setting is to focus the audience attention to a particular space and time (Shanahan, Raile, French, & McEvoy, 2017). Settings may be understood in at least two ways. First, settings can be the spatial context of immediate surroundings (Ronen, 1986), like a fracking site. Second, settings may be a broader social–economic–geographic–political context (Phelan & Rabinowitz, 2012), such as the American West. Both levels of setting operate at the same time to provide the policy

context. One policy narrative may traverse across multiple physical settings and maintain the broader setting context as a constant.

Plot is the narrative element that links characters to each other as well as to the setting. Plot organizes actions, drawing attention to facets of the setting and often highlighting the moral of the story. Shenhav (2015, p. 32) asserts that plot is more than a sequence of events, as plot "keys in on the content of the story and what it is about." Much of the previous NPF literature uses Stone's (2012) story lines as plots: stories of power/control or stories of change (e.g., McBeth, Shanahan, Anderson, & Rose, 2012). The operational definition of plots may be expanded to include other plot types used in literature or Hollywood, such as rebirth, rags-to-riches, and doomsday (O'Bryan et al., 2014, p. 121).

Moral of the Story is typically the policy solution in the policy narrative, frequently culminating in a call to action. The policy solution is typically cast as the action of the hero to create a beneficiary or protect a victim from harm. However, many policy narratives do not directly state policy solutions but rather offer intermediary steps (e.g., contact your representative) to the larger policy solution (e.g., change a law or regulation) or a reference to a policy (e.g., this policy idea is bad/good for the economy).

6.1.2. The policy narrative

What narrative components are necessary to constitute a policy narrative? Policy narratives may include all or some narrative components (see narrativity index below), but to date the NPF has defined a policy narrative as needing at least two features. First, a policy narrative must have at least one character. This foundational narrative element is what differentiates a narrative from non-narrative, such as a chronology or report (McBeth et al., 2014; Shanahan et al., 2013). Yet, this requirement is not as evident as it may appear. For example, do slogans or bumper stickers constitute narratives? "Coexist"; "Peace"; "Live Free or Die". When reading these phrases, the onus is on the reader to infer its meaning: respect all people no matter the religious affiliation; let's all just get along; liberty through limited government is best and worth fighting for. However, these words or short phrases have a Rorschach quality, as the inferred meaning rendered by the reader may not be the intended meaning of the slogan-bearer than a more "complete" narrative. At this juncture, we would say that these phrases are not narratives, because the characters, who more clearly shape the intentions of the story, are simply not manifest. What about Twitter? YouTube? Memes? Some NPF studies have turned to such social media outlets as sources of narratives (e.g., Lybecker, McBeth, Husmann, & Pelikan, 2015; McBeth et al., 2012; Merry, 2016a), but at each turn, the NPF scholars have included the manifest identification of a character.

Second, a policy narrative must also refer to the public policy of interest. This could be a full-blown proposed policy solution or something simply related to the policy such as a policy-related behavior, potential consequence, or references to contested science in the policy setting. For example, a story on hydraulic fracturing advocating for a ban on this kind of drilling clearly has a policy solution; a story on the same issue articulating economic benefits of such drilling is not proposing a specific policy solution, but, rather, a reference to the public policy. In sum, a policy narrative must have at least one character and a reference to the policy in question.[6]

6.1.3. Policy narrative content

While narrative elements are the structural building blocks of narrative, policy narrative content infuses meaning into these narrative elements to create policy realities. Prior to the advent of the NPF, many narrative approaches in public policy have asserted that this content variation is so nuanced that the researcher must assume each narrative is unique. The NPF acknowledges that this problem of narrative relativity (see Jones, McBeth et al., 2014) is an issue but also argues that it is not insurmountable. Assumption #2 states that the variation in policy realities is not random but, rather, is measurable because it is bounded by predictable belief systems and strategies. As such, the meanings constructed in narratives can be measured through narrative content, as beliefs and strategies can be assessed via larger theoretical constructs.

Belief systems are a set of values or beliefs that orients individuals, groups, coalitions, and societies (Sabatier & Jenkins-Smith, 1993; Shanahan, Jones, & McBeth, 2011; Shanahan et al., 2013, p. 459). The NPF assumes these belief and value orientations are not generated spontaneously, but, rather, that people are more or less stable in their orientations toward values (e.g., equality, liberty, security). Since these orientations do not vary from moment to moment, NPF scholars have turned to them to understand individual and group interpretations and communications of policy narrative content. It is thus important to think about and identify the operating beliefs systems influencing your policy debate and attach these beliefs to their theoretical equivalents. Examples of belief systems leveraged in previous NPF studies that shape policy realities are: the relationship between humans and nature (Pinchot-Muir debate; e.g., Shanahan, Jones et al., 2011), federalism (compact-national theory; e.g., McBeth et al., 2005), political ideology (Lakoff, 2010), religion and science (conflict thesis), and cultural theory (Ripberger, Gupta, Silva, & Jenkins-Smith., 2014; Thompson, Ellis, & Wildavsky, 1990).

Narrative Strategies are another way narrators shape policy realities. That is, policy narratives that are externally communicated (vs internally held; see Shanahan, Raile et al., 2017) are created with purpose: to persuade, to recruit, to dampen or inflame conflict, etc. Such purpose is manifest within the NPF as the intended manipulation of narrative elements in the service of the narrator's goals. The NPF sees narrative strategies as another way to come to terms with narrative relativity by looking for repeated patterns of narrative elements and the effects of those patterns. The NPF has examined a number of narrative strategies over time; importantly, these strategies are

[6] We have received questions about the transportability of the NPF to narrative contexts outside of policy, such as campaigns. In this case, the definition of a narrative may potentially be reduced to simply one character. However, in order to be considered a *policy* narrative, the narrative must have both at least one character and some reference to the policy.

based in existing theory. The three most common strategies are scope of conflict, causal mechanisms, and the devil-shift.

Informed by Schattschneider (1960) and Wilson (1973), the NPF defines scope of conflict as a narrative strategy that distributes the costs and benefits of a proposed policy to the array of characters in the policy narrative (e.g., Gupta, Ripberger, & Collins, 2014; McBeth, Shanahan, Arnell, & Hathaway, 2007). Losing coalitions tend to identify costs to a broad spectrum of victims and benefits to the elite few, typically the villain; in contrast, winning coalitions tend to attribute benefits to a large population of victims and costs to the few, sometimes cast as villains and sometimes cast as entities who can simply bear the cost.

Causal mechanisms are a narrative strategy, whereby the narrative posits a causal relationship within the policy issue through strategic use of the characters in the narrative. The NPF has typically used Stone's (2012) theoretical definition of causal mechanisms: intentional, inadvertent, mechanical and accidental. With intentional causal mechanisms, the villain is acting with purpose; for accidental, the cause is not villainous because the issue was accidental in the first place; for inadvertent, the villainization of the person who created the problem is softened because the externalities were unanticipated. Elaborating on Stone's work, Crow and Berggren (2014) operationalized causality through the use of 'blame' in the narrative. Importantly, the choice of verbs in the narrative may help identify the intent of action and thus may be a way to operationalize causal mechanisms.

A relatively new narrative strategy being explored over the narrative arc in policy debates is that of the devil–angel shift (Heikkila, Weible, & Pierce, 2014; Merry, 2016a; Shanahan et al., 2013). The devil-shift is used in the Advocacy Coalition Framework (Sabatier, Hunter, & McLaughlin, 1987) to describe situations when the power of the 'evil' opposition is emphasized while the power of the 'good' side is minimized. Leach and Sabatier (2005, p. 502) operationalized a continuum of devil–angel shift through the proportion of powerful stakeholders identified as villains or allies. The narrative corollary for the devil shift is the narrative casting of villains as the victors over the heroes; for the angel shift, the narrative strategy is the casting of the hero as the winner, with the audience frequently transported into that role. Current understanding in the NPF is that losing narratives tend to strategically construct narratives with the devil shift, whereas the narrative arc of winning coalitions shifts their narrative strategy to the angel shift.

6.1.4. Narrativity index

The extent to which a policy narrative contains these policy narrative components (narrative form and content) is called a narrativity index (Crow & Berggren, 2014; McBeth et al., 2012; Merry, 2016a). The intent of assessing narrativity is to understand the robustness of any given narrative or set of narratives, but the effect of higher and lower narrativity is yet to be known (e.g., Are policy narratives with higher narrativity more persuasive than policy narratives with low narrativity?).

7. Going from theoretical operationalization to empirical testing

7.1. Research design and research methods in NPF studies

Your research design is your overall strategy in answering your research question and testing your hypotheses or propositions. For purposes of our discussion of research designs within the NPF, we demarcate two general categories: 1) experimental and quasi-experimental and 2) nonexperimental. We briefly discuss the principles of various research designs and then consider how they are applied in NPF research.[7]

7.2. Experimental and quasi-experimental designs

While some argue otherwise (e.g., Heckman & Smith, 1995), the experiment is generally considered the gold standard in scientific research. The idea behind the experiment is straightforward and, if set up correctly, can be a powerful tool in illuminating relationships between independent and dependent variables by holding all external factors to that relationship constant while introducing a stimulus or experimental treatment. The researcher then analyzes the effect of the stimulus. While experiments are truly elegant in their simplicity, for a myriad of reasons, implementing a "true" experiment in the social sciences can be prohibitively difficult. That is, limitations related to data, resources, randomization, human agency, ethical concerns, time, etc., often necessitate a modified variant of the experiment for most social science experimental research designs. Consequently, in applying the NPF in an experimental setting you may find a host of quasi-experimental designs to be useful (Table 3).

NPF studies utilizing some iteration of experimental design (Table 3) are typically micro level NPF studies. Whether within or between subjects research designs, what these studies tend to have in common is the use of a control group exposing subjects to a non-narrative condition and one or more policy narrative experimental treatments. These treatments will vary in content depending on the research question (e.g., manipulation of causal mechanisms or characters). In these NPF experiments, the narratives or individual narrative components are the independent variables of interest where the researcher attempts to discern their effect on dependent variables focused on in the study; the dependent variables are typically related to some aspect of the policy process (e.g., strength of individual policy preference).

7.3. Non-experimental designs

Oftentimes an NPF researcher will find that an experimental design is either undesirable insomuch that the research question is not amenable to experimentation

[7] It is obviously important to read and use good social science research methods texts when conducting any research; the summary here is cursory, providing a brief orientation for the readers but importantly linking this fundamental knowledge with NPF theory and concepts.

Table 3
NPF experimental and quasi-experimental research designs.

Design	Generic research question	Control/treatment	Example
True experiment	What is the effect of one IV on one DV?	Non-narrative is control; one level of narrative is treatment. Random assignment. Pre-post test.	None to date
Within subject	How do different IVs (narrative treatments) affect subjects?	May or may not include non-narrative control; includes one or more narrative treatments. Non-random assignment. Post-test only.	Lybecker et al. (2016)
Between subjects	Do different levels of IVs affect DV?	Non-narrative is control; multiple levels of narrative is treatment (causal mechanism; Cultural Theory). Random assignment. Pre-post test.	Shanahan, Adams et al. (2014), Jones (2014)
Quasi experiment	Do narrative treatments affect the DV?	No control; two or more narrative treatments. Random assignment. Pre-post test.	Shanahan, McBeth et al. (2011)

Note: we recognize that there are other research designs not addressed here, such as natural experiment, multi-group, and factorial design.

Table 4
NPF non-experimental research designs.

Design	Generic research question	Examples
Case study/comparative case study	How do narrative components explain X phenomenon in one case or across multiple cases?	Shanahan et al. (2013) (meso) O'Bryan et al. (2014) (meso)
Cross sectional/panel/time series	How do narrative components explain X phenomenon at X point(s) in time?	Lybecker, McBeth, and Kusko (2013) (micro) McBeth et al. (2013) (meso)

(e.g., what policy narratives are most frequently used by an advocacy coalition?) or that an experiment is simply unattainable given the project's constraints (e.g., inability to conduct a pre–post treatment). In such a situation, you would opt for a non-experimental design (Table 4).

The case study is a non-experimental design used in many meso level NPF inquiries. Sometimes, the goal is to describe the policy process for one case (e.g., bison management or installation of windmills in the ocean). There is a growing interest for NPF scholars in comparative case studies (Shanahan, Jones et al., 2017), comparing the role of narratives across policy domains and geographies. Typically, case studies will invoke many different types of evidence and data (e.g., interviews, descriptive statistics, and secondary sources) as well as varied qualitative and quantitative analyses (Yin, 2014).

NPF non-experimental research designs also include cross-sectional, panel, and time series designs. These research designs focus on how and when the independent and dependent variables are measured. Cross sectional analyzes the role of narratives at one point in time. Panel studies would examine repeat a narrative measurement with the same respondents at different points in time. In time series research designs, a narrative component is measured over time, indicating what the narrative arc in a policy debate may be (e.g., how the devil–angel shift is used over time; Shanahan et al., 2013).

The research designs discussed here may be used at different levels of analysis in order to structure your approach to answering your NPF research question and testing your hypotheses or propositions.

7.3.1. Research methods for NPF studies

As with any research, your research methods are your transparent, replicable data collection and analysis approaches. The methods detailed in this section, while organized by level of analysis, should be read with the understanding that there is indeed a synergistic relationship between research design and research methods that must be articulated by the researcher. The methodologies detailed below may be used in an array of designs, beyond the exemplars presented here. In what follows, we address three of the most common methodologies applied in NPF studies. We start with *survey* and *interview/focus group* methods that are used at the micro-level and continue with *content analysis* typically used in meso-level studies.

Survey methods have been primarily deployed in NPF research at the micro level of analysis and often in conjunction with a variation of the experimental design (e.g., Jones, 2014; McBeth, Lybecker, & Stoutenborough, 2016; Shanahan, Adams, Jones, & McBeth, 2014; Shanahan, McBeth, & Hathaway, 2011). In such designs, the typical NPF use of the survey has been to present a narrative experimental treatment (IV) within the survey (e.g., characters, causal mechanism, policy beliefs), and then measure the narrative effects on dependent variables of interest (e.g., risk perception or policy opinion). Of course, the research question and hypotheses drive survey content.

In considering survey methods, it is crucial to think through your sampling. Surveys are most valid when using a randomized call, email, or mailing list to obtain a sample of your population. Yet, it usually requires grant funding to pay for this gold standard in sampling. As such, many NPF surveys are conducted with convenience samples (typically university students, even Mechanical Turk), or the more affordable representative samples offered by many survey companies such as YouGov or Survey Sampling Inc. Caution, however, must be taken when generalizing from non-randomized sampling procedures.

Interviews and Focus Groups are methodologies that can also be used to obtain policy narrative data. The protocols for these methodologies must be carefully considered to best elicit narrative data. One successful approach is to

structure questions in such a way that targets specific narrative components.

> "We had another [focusing event] recently, and the debate about [policy issue] has risen once more. Please tell me your perspective on this issue." [problem definition; plot; setting]
>
> "Who do you see as the cause of this problem?" [villain]
>
> "Who do you see as being hurt?" [victim]
>
> "Who can or should fix the problem?" [hero]

Asking such direct questions receives some criticism whereby the responses are artifacts of the instrument. Unstructured, thick description interviews without such direct structuring targeting of NPF concepts may allow for narrative components to emerge more organically, but analyses of these data are typically more interpretive and usually less reliable.

Because the purpose of focus groups is the engagement of participants, consider whether your NPF research question centers on the heterogeneity or homogeneity of the group. Jones, Shanahan, Smith-Walter, Peterson, and Hammer (2015) used a pre-test to assign homogenous groups to assess the co-creation of group policy narratives. Heterogeneous groups would allow for different types of narrative inquiries such as leveraging different groups to examine the antagonisms of narrative meaning making or perhaps to form a collaborative policy narrative persuasive to folks with varied belief system orientations. Homogeneity or heterogeneity may be determined via policy preference or some other pre-tested characteristic (e.g., cultural theory, political ideology).

The NPF has its roots in the method of *content analysis* (McBeth et al., 2005) and the bulk of the current meso level NPF scholarship employs content analysis. We have distilled eight considerations to take into account prior to conducting your research with content analysis:

1. The codebook.

The meso level content analysis NPF codebook has become stable over time (Appendix A), with many scholars applying it across varied policy domains (Jones, Shanahan et al., 2014; Lybecker et al., 2015; Merry, 2016b). Depending on your research questions and hypotheses, you may choose to focus on only some of the narrative components, and therefore use an abbreviated NPF codebook. You might also choose to develop your own coding framework for NPF variables. For example, you may devise a new way to operationalize plots that move beyond NPF's historic use of Stone's (2012) work. In the interest of transparency and replication, whenever possible NPF codebooks are published with analyses and findings.

2. Census vs sample.

When you collect your narrative data (e.g., documents, newspaper articles, YouTube videos, speeches; addressed below), how much data do you have? How much time (and money to pay students) do you have? Content analysis is very labor intensive. At times, all the sources can be analyzed, but in other circumstances, a random sample may be more feasible (see Shanahan, McBeth, Hathaway, & Arnell, 2008).

3. Unit of Coding Analysis:

Narrative dataset in hand, you now need to decide upon your unit of analysis of the narrative documents/videos, guided by your research question: headline, sentence, paragraph (all or just the first, which media readers are most likely to read), document or collection of documents? Many NPF studies aggregate raw counts of narrative elements (e.g., heroes and villains) within individual documents (e.g., McBeth et al., 2005; Shanahan et al., 2013). These raw counts should be weighted by length of narrative, to standardize the presence of a narrative element or strategy. More recently, NPF content analyses researchers have experimented with different levels of coding and aggregation. For example, Smith-Walter, Peterson, Jones, and Marshall (2016) code the presence or absence of narrative components (binary coding of 0 or 1) at the paragraph level. Additionally, coding at a smaller unit of analysis allows for aggregation to higher levels of analysis (sentence to paragraph to document) while moving from a larger to a smaller unit of analysis always requires additional coding.

4. Human vs automated coding.

To date, NPF studies have only used trained human coders. Given such varied narrative contexts, automated coding has proven difficult. Consider the following: "Barack Obama has single handedly fixed (or ruined) the U.S. economy and he has helped (harmed) average Americans." In one case, Obama is a hero, in the other he is a villain. "Average Americans" are either beneficiaries or victims. It might be possible to use technology to make these distinctions, but human coders can perhaps better use context or associated verbs and adjectives to provide more valid codings. Pursuit of the automated coding endeavor is important if aspirations of analyzing big narrative data sets are to be realized. For now, however, NPF meso level scholarship continues to use human coders, trained by the researcher.

5. Use independent coders.

With an eye toward inter-coder reliability (see Section 7 below), coding is an iterative process. The trained coders (two or three) typically read a small amount of the total narrative data (~5 to 10), code them independently, and then meet to reconcile their codes. The process of reconciling coding means coders compare their codes for agreement; we like to use Excel as it is very transportable later in the research process to popular data analyses and management software like R, STATA, SPSS, or SAS (note that NVivo exports coding references to Excel). These early reconciliation sessions are deep discussions over application of the operational definitions of NPF variables within the narrative data. When disagreements are reconciled, a decision rule is made for that particular code. Decision rules are then recorded and abided by; for example, do characters include non-human entities? You can expect fairly wide discrepancies in coding at first, with narrowing discrepancies over time. Coders may need to code another small amount of narratives using the agreed upon decision rules and reconcile again to ensure that there is appropriate understanding between coders of the application

of the codebook to the policy narratives. Once you have established a strong, mutual understanding of operational definitions and coding rules, you are ready to code the remaining narrative data.

6. Time.

In coding the rest of the narrative data, plan more time than you think and take breaks. Reconcile independent codes after every 25–50 narratives, to keep your thinking fresh when you discuss your disagreements. Keep track of your agreements and disagreements; disagreements should be reconciled where agreement can be reached for the final data set.

7. Reliability testing.

When the coding and the reconciliation are completed, intercoder reliability needs to be assessed. Many NPF studies use percent agreement as the reliability test; a common critique is that chance agreements are not accounted for in this assessment (e.g., McHugh, 2012). More stringent reliability tests (see Lombard, Snyder-Duch, & Bracken, 2002 for an excellent summary) such as Scott's pi, Krippendorff's alpha, and Cohen's Kappa coefficient have been applied more recently (e.g., Smith-Walter et al., 2016).

8. Coding Visual Narrative Data.

To date, most NPF content coding has been focused on textual data. However, forays into coding visual data such as YouTube videos (e.g., Lybecker et al., 2015; McBeth et al., 2012) have revealed important considerations specific to visual data. Because narrators that use visual mediums are prone to rely on visual representations (pictures, body language, etc.) to convey their message, coders are frequently put in a position where it is beneficial to code for what they believe is the implied meaning of the visualization. For example, a video about Yellowstone bison may never have the narrator mention that bison are being harmed (victimized), but imagery and events in the video help lead the audience to that conclusion. Thus, the coders are advised to be clear and careful about decision rules for coding visual narrative data and are advised to reconcile more often in the early stages, as interpreting visual data is open to greater variance. Nevertheless, visual coding is well worth tackling given the importance of video as a narrative storytelling medium.

Choices in research design and methods in the conduct of NPF research are more art than formula. The way in which researchers bring operationalization of NPF concepts to bear in a compelling research design and methodology is what makes NPF research both unique and dynamic. As a relatively new framework, the NPF is seeking both innovation *and* stabilization of NPF concepts in a variety of research designs and methods. Importantly, the methodological standards for NPF research do not deviate from social science standards of rigor, transparency, and replicability.

8. Accessing narrative data

8.1. Where can you find narrative data?

Given that narratives are fundamental to the human condition, narrative data are all around us. The NPF provides three levels of analysis as a way to organize thinking about narrative data.

8.1.1. Micro-level narrative data

Recall that micro-level NPF is concerned with the relationship between policy narratives and individuals. Such a focus might guide you to a range of data sources, from surveys focused on public opinion to media interviews (e.g., Anderson Cooper) or your own interviews of stakeholders. In order for these data to be considered narrative data, you must assess whether the interview or focus group data constitutes a policy narrative as per NPF's definition.

Another source of micro-level narrative data are those narratives specifically constructed as treatments for experimentation. When assembling these narrative treatments, there are some important considerations. First, it is best to draw on real-world narratives for validity. Second, you should ensure equivalency among the narratives. For example, in order to isolate effects of a particular narrative component, you must ensure that other aspects are the same across all of your narrative treatments: length (number of words), language use, order of sentences etc. (see narratives in Appendix in Shanahan, Adams et al., 2014; Jones, 2014). Third, approach what you are manipulating like a Mad Libs—filling in the blanks in the narrative with the different aspects of the same narrative component of interest (e.g., different characters or different plots). Finally, pilot your narratives to ensure validity.

8.1.2. Meso level narrative data

Meso level NPF research is concerned with policy narratives from policy actors (e.g., officials, organizations, groups, coalitions). Because many policy debates occur in the public domain, there are many *free* sources of narrative data on the internet: interest group websites and newsletters, editorials, media accounts, social media, speeches, legislative records, legislative testimonies, court opinions, and more.

As with micro level interview data, the first step is to assess whether the meso level data you have collected are indeed policy narrative data. To truly build theory about the role of narratives, the scholarly community must be committed to applying a clear definition of what constitutes a narrative (NPF narrative or otherwise) to the texts and visual data gathered. Some of what you collect will not meet the standard of "policy narrative." For example, because YouTube is used for entertainment and other purposes (not just politics and policy), you can expect to initially capture a lot of non-policy narrative videos. For transparency sake, acknowledge how you accessed the data, what decision rules you applied to include and exclude texts and images for your analysis (e.g., what definition of narrative), and what the numbers of inclusion and exclusion are based on your search criteria.

The second step is to collect policy narratives over some reasoned period of time. Most studies examine policy narratives over the known length of the policy debate (typically 8–10 years; e.g., McBeth, Shanahan, Tigert, Hathaway, & Sampson, 2010; Shanahan et al., 2013). The import to collecting narratives over a span of time is to understand

any changes in the narrative arc of the policy debate. However, some policy debates arise for only a short period of time (e.g., Kear & Wells, 2014). At other times, the research interest may be at one point in time (e.g., a particular year of a policy debate; McBeth, Clemons, Husmann, Kusko, & Gaarden, 2013). In sum, be transparent regarding how you choose to bracket the time-span of your narrative data collection.

1. Interest group data.

Early research articles leading to the development of the NPF (McBeth et al., 2005, 2007) found policy narratives in "public consumption documents" produced by interest groups. While the original idea of these articles was that researchers wanted to study how policy narratives were used by interest groups to communicate with the public at large, you could also examine how these groups communicate with their members, each other, legislative bodies, and how these communication strategies vary. The internet has made such data collection possible, as interest groups often archive their newsletters online and give public access.

2. Newspapers.

Media outlets are also a good source for narratives, as they contain editorials, news stories written by newspaper staff, and AP articles. However, you must provide a rationale driven by your research question as to what types of media coverage you include and exclude (e.g., Shanahan et al., 2008). Additionally, to obtain some media accounts, archival research may be necessary, as some smaller local papers or interest groups do not have electronic archives. In fact, newspapers are often the best early source for policy narratives about local issues or issues with a particular geographic domain such as disasters, given that policy actors form groups much later in the policy process. While newsletters and media accounts are written public consumption documents, it is critically important to apply NPF's definition of a policy narrative to these texts to determine inclusion and exclusion in your sample, as not all newsletters and media accounts are policy narratives.

3. Other sources: transcripts, speeches, digital media.

It is possible to access transcripts of TV news programs from sources such as Lexis-Nexis, which includes panel shows on cable TV channels such as Fox, CNN, and MSNBC. Speeches by elected officials, candidates, and other lay leaders or charismatic individuals (e.g., the Pope) are often transcribed and readily available online as well. Access to digital media (e.g., YouTube) is increasingly popular in NPF studies.

New NPF research (e.g., Gupta, Ripberger, & Wehde, 2016; Merry, 2016b) mines such sources as Facebook and Twitter for policy narratives. These new sources provide unique challenges in obtaining your narrative data. For example, many personal and interest group Facebook pages are not accessible without friending. Twitter is an intriguing option for NPF researchers, though the short nature of tweets and access to tweets can be a problem. Merry (2016a) conducted the first NPF study using Tweets, finding that Tweets were best coded as a stream of Tweets over the course of a week, thus increasing narrativity when viewed in terms of a week's aggregation. Given the increasing importance of social media in policy related discussions, digital and social media sources are ripe areas for policy narrative research, with the caveat that there are unique challenges to be addressed and worked out in your research.

8.1.3. Macro level narrative data

NPF's macro narrative has sister terms: meta narrative, grand narrative, and master narrative. While there are slight nuances that differentiate these terms, each focusses on a narrative operating at a large-scale. Specifically, the NPF approaches macro level narratives as expressions of shared societal or cultural values that are found within institutions and cultures. While Lyotard (1984) simultaneously named and then railed against meta narratives, the NPF does not engage in the normative question of the justness of these narratives, but rather embraces an empirical approach to the study of the influence of macro narratives in shaping public policy. Macro level narratives may be found in three ways: around historical events (Büthe, 2002) such as war or a technological change; historic debates (Cook, 2014) such as Constitutional debates, and cultural orientations such as Cultural Theory (Thompson et al., 1990 used in Ney, 2014). Importantly, these data are *narratives*, replete with narrative elements, beliefs, strategies.

9. Analyzing narrative data

9.1. What techniques are appropriate?

NPF scholarship has relied most heavily on statistical analyses to test hypotheses to answer research questions. These statistics range from descriptive statistics (frequencies, measures of central tendency, and standard deviation) to association/relational measures (correlation statistics, chi-square, odds-ratios), to differences of means (t-tests, ANOVA), to more predictive tools (OLS, Probit/Logit), and, finally, to network analysis. Statistics used in NPF research range from simple to more complex, depending on the question that is being answered or the hypothesis tested. Ultimately, you must determine the most appropriate statistics for your NPF project. While we provide a general discussion of statistical techniques below, we acknowledge that there are both qualitative and additional statistical analytical tools not covered here that are completely appropriate for NPF analyses.

9.1.1. Descriptive statistics

What should you describe statistically in NPF studies? First, we recommend being clear about the distribution of your narrative data by source and/or narrative component (e.g., Shanahan et al., 2008, p. 123). Second, higher level statistics require descriptive statistics, which can often simply be presented in the same table (e.g., Shanahan, Adams et al., 2014, p. 77). Being transparent about the variance in your variables helps with interpreting your results. Finally, using descriptive graphs or figures can help illustrate trends or relationships (e.g., Shanahan et al., 2013, pp. 464–465 and p. 470).

9.1.2. Relational statistics, differences of means, and predictive tools

The bulk of meso level NPF scholarship to date has employed nonparametric statistics such as Chi-Square (e.g., Crow & Berggren, 2014) and Chi-Square with Odds-Ratios (e.g., McBeth et al., 2007). Coded meso level narrative data tend to have nominal and ordinal level of measurements, with research questions and hypotheses centered on association. Occasionally, some interval level variable, such as narrativity, give rise to correlational association measures (e.g., McBeth et al., 2012). Other narrative variables may result in interval-level variables, such as simple counts of use of narrative elements (weighted by word count) or the construction of additive indices through survey questions (e.g., Shanahan, Adams et al., 2014) or computations of policy beliefs from narrative elements (e.g., McBeth et al., 2005). Difference of means tests (e.g., *t*-test, ANOVA) are often used with these data to understand intra-coalitional and inter-coalitional differences on any number of interval-level narrative components (Shanahan et al., 2013) or changes to a dependent variable given a narrative intervention (e.g., Shanahan, Adams et al., 2014).

NPF researchers ultimately aim to use narrative elements and strategies as independent variables in a regression equation to best understand the power of these components on policy decision making; NPF research in this capacity is nascent. Ordinary least squares regression calculations have been used to regress narrative elements or strategies on public opinion and risk perception (Shanahan, Adams et al., 2014 and Jones, 2014, respectively). Probit models have been used to understand what variables relate to how stakeholders choose either one of two policy narratives or a science statement as a preferred method of communicating with the public (Lybecker, McBeth, & Stoutenborough, 2016). These efforts represent cautious but first steps in using more powerful statistical tools to understand the power of narratives in the policy process.

9.1.3. Network analysis

Network analysis has been used in NPF scholarship to visualize narrative differences between coalitions (e.g., Heikkila et al., 2014). Before launching into the application of network analysis in NPF research, we begin with what network analysis means. Networks are a way of visualizing the relationships among the entities in a social system (e.g., coalitions) (Borgatti, Everett, & Johnson, 2013). In traditional network analysis, the 'entities' are people or actors that are termed nodes; these nodes typically have some characteristic or attribute (e.g., coalition affiliation). Nodes, in turn, are mapped to nodes through some specification of their relationship called ties (e.g., sharing of information, partnerships). The result is a web of ties between nodes that is called the network.

Use of network analysis is in its infancy in NPF scholarship, with nodes typically constituting the meso level narrative documents themselves. For example, the extent of intra-coalitional narrative cohesion and inter-coalitional narrative disparity on use of characters or policy definitions can be simply pictured descriptively (e.g., Heikkila et al., 2014, p. 194) or measured quantitatively using network measurements of centrality (how central are specific narrative components to the narrative) and density (network cohesion) of the use of these narrative components. Another approach to narrative network analysis could be mapping the ties between character (hero or villain) and action (policy solution) and beneficiary (victim) (Weible et al., 2016). Similar to network analysis, Jones and Song (2014) apply hierarchical cluster analysis to determine how tightly or loosely subjects group narrative elements related to climate change after being exposed to climate change policy narrative experimental treatments. We expect that the use of network analysis to grow in NPF research, as these analyses move beyond siloed approaches to narrative components and represents the dynamic nature within the policy narrative itself.

10. Future considerations

10.1. Big data, test–re-test, and generalizability

Conducting an NPF study requires a deep understanding of the NPF framework, congruence between research approach and NPF assumptions, clarity with the level of analysis, research questions, and methods. At least two issues loom large in the future of NPF scholarship.

10.1.1. Big data

As the volume of and access to social science data are increasing with digitization, there is a concurrent interest in the role of big data in policy decision making (McNeely & Hahm, 2014).[8] Big data typically refer to issues surrounding the collection, management, and analysis of, well, big amounts of data. As the repositories of big data include text, images, and video data, Twitter data has become a go-to source for big data computation (e.g., Guo & Vargo, 2015). Such new research endeavors will certainly have implications for narrative data and the NPF.

10.1.2. Test–re-test and the generalizability of the NPF

NPF research is an iterative enterprise that seeks to both explain policy processes in distinct ways from other policy process theories as well as test and build NPF theory. "As with any scientific endeavor, it requires a community of researchers to refine the operationalization of policy narrative concepts and to test and re-test NPF hypotheses, ultimately to build scientific knowledge about the role of narratives in the policy process" (Shanahan, McBeth et al., 2014; p. 247). Indeed, all too often in the social sciences, we do not spend enough time re-testing hypotheses or replicating study designs. This unfortunate reality hurts the building of good social science frameworks. Iterative work is essential to the future of the NPF. Many of the references in this treatise come from our book, *The Science of Stories* (Jones, Shanahan et al., 2014), an edited volume that represents a beginning at such iterative NPF work. Continued

[8] While a detailed discussion of the challenges, possibilities, and vulnerabilities of big data are beyond the scope of this article, there is a symposium on big data in the social sciences in *Review of Policy Research* Volume 31, Number 4, 2014.

testing of NPF hypotheses and replication of study designs across varied policy contexts will increase the reliability of the NPF and its concepts.

In tandem with building reliability of NPF concepts, this endeavor at generalization also means building models with policy decisions as the dependent variable. This is a challenge, as how is a policy decision operationalized? By percent voting 'yes'? By dichotomous 'yes' or 'no' passing of legislation? As NPF scholars establish reliability of NPF concepts, and as we amass big narrative data sets, we hope to build models to best understand the power of policy narratives in the policy process—which at some point must include a direct look at the relationship between policy narratives and policy decisions.

11. Conclusion

While a relatively new framework, the NPF is maturing in its methodological approach. We expect that researchers will apply different methods and empirical analyses than are presented here. However, there are sideboards that we wish to impose to NPF research: alignment of your research approach with NPF assumptions, clarity with your level of analysis, and transparency with your model specification (including NPF's definition of policy narrative), research approach, and data so as to be "clear enough to be wrong" (Sabatier, 2000). Yet, there are many choices in research designs, methodologies and analytical techniques associated with different levels of analysis when conducting NPF research. We hope that this article, in conjunction with the three recent major NPF writings that detail the theoretical constructs that constitute the framework (Jones, McBeth et al., 2014; Shanahan, Jones et al., 2017; Shanahan, Raile et al., 2017), will assist you to continue to test, refine, and further develop the NPF as a theory of the policy process.

Appendix A. Example NPF guidelines and codebook.

General rules (examples): Establish coding guidelines and document decision rules.

- Code by unit of analysis (sentence, paragraph, document).
- Only code manifest content; do not leave any excel cells blank (use "0" if none).
- Only code for characters once per document, even if mentioned multiple times.
- A single plot code should be chosen per excerpt.
- Multiple instances of causal mechanisms may be found in each excerpt, although only one code may apply to an individual portion of an excerpt.
- Anytime that 99 "Other" code is used, please enter explanation in the notes column.

Sheet 1: policy narrative demographics

Column A: Policy narrative number [if coding multiple documents/videos].

Column B: Date of narrative.

Column C: Coder initials.

Column D: Coalition (for meso-level) or P1 (for micro-level).

Column E: Narrative author (for meso-level).

Column F: Document type (press release; newsletter; editorial; YouTube; speech; Other).

Column G: Unit of analysis (sentence, paragraph, document).

***What is reflected in the following codesheet are examples of operational definitions of NPF concepts. Thus, your codebook guidelines may be different, depending on your operational definitions.

Use a separate excel sheet for coding each narrative component. **Column A** on all sheets is labeled as the unit of analysis to be coded (sentence, paragraph), and each row in the first column contains the narrative text of that unit of analysis.

Sheets 2, 3, and 4: narrative elements: Characters Hero, Villain, Victim

While there are typical categories of characters, e.g., government, private individual, you may also identify the categories of characters unique to your policy issue.

Hero definition: Those who take action with purpose to achieve or oppose a policy solution.

Villain definition: Those who create a harm, or inflicts damage or pain upon a victim or, in other cases as one who opposes the aims of the hero.

Victim definition: Those who are harmed by a particular action or inaction.

Coding schema: 0 = absence; 1 = presence.

Column B and on: Labeled with a character to be coded, e.g., "Hero: Businesses," "Villain: Businesses", "Victim: the economy".

Sheet 4: narrative elements: Moral or Policy Solution

Coding schema: 0 = absence; 1 = presence.

Column B and on: Labeled with the range of a policy solutions: "Moral: Policy Solution X", "Moral: Policy Solution Y".

Sheet 5: narrative elements: Plot

Column B–H: For "Plot" select from the following:

0—If no plot is present.

1 for "Story of Decline" if the plot describes how in the beginning things were good, but got worse, and are now so bad that something must be done.

2 for "Stymied Progress," if the plot describes how things were terrible, got better due to a hero, but are getting worse because someone/thing is interfering with the hero's work.

3 for "Change-Is-Only an Illusion" if the plot describes how everyone always thought things were getting worse (or better) but they were wrong the whole time, and how things are actually going in the opposite direction (decline or improvement was an illusion).

4 for "Story of Helplessness and Control" if the plot describes a situation as bad, and that it has always been believed the situation must be acceptable because it was unchangeable, but describes how can change can occur.

5 for "Conspiracy" if the plot describes a story moving from fate to control, but also having a twist ending that a certain small group knew how to control it all along and have been keeping control for their own benefit.

6 for "Blame the Victim" if the plot describes a story moving from fate to control but locates the control in the hands of those suffering from the problem.

Sheet 6: narrative strategies: Causal Mechanism

Coding schema: 0 = absence; 1 = presence.

Column B: "Casual Mechanism: Mechanical Cause," does the excerpt associate intended consequences by unguided actions with a policy problem? EX: a bad policy might be explained as resulting from an unthinking bureaucracy.

Column C: "Causal Mechanism: Intentional Cause," does the excerpt associate intended consequences by purposeful actions with a policy problem? EX: policymakers might be accused of making policies to increase their personal wealth.

Column D: "Causal Mechanism: Accidental Cause," does the excerpt associate unintended consequences by unguided actions with a policy problem? EX: climate change might be explained as a natural occurrence having nothing to do with human action.

Column E: "Causal Mechanism: Inadvertent Cause," does the excerpt associate unintended consequences by purposeful action with a policy solution? EX: the American Recovery and Reinvestment Act of 2009 might be explained as having raised inflation.

Sheet 7: narrative strategies: Cost-Benefit Distribution

Coding schema: Total number (0 for none); also identify entities coded.

Column B/C: Who benefits from the proposed policy solution?

Column D/E: Who benefits from the opposed policy solution?

Column F/G: Who bears the cost from the proposed policy solution?

Columns H/I: Who bears the cost from the opposed policy solution?

Other codes may include what science/evidence is cited in the narrative and for what purpose (support argument; refute opposition's argument; matter-of-fact).

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