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Policy design receptivity and target populations: A social construction framework approach to climate change policy

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Abstract

The public-elite policy feedback mechanism of the Social Construction Framework (SCF) postulates that the public rewards policymakers for the appropriate distribution of benefits and burdens to target populations. In this article we test a key part of this dynamic by examining public receptivity to policy design features as a function of target population choice. We conduct a national survey experiment of approximately 3350 Americans. Our instrument asks respondents to indicate support or opposition to a range of policy tools in a suite of six climate change policies, but varies who would be responsible for options based upon Schneider and Ingram's idealized types. Our research design tests the independent effects of deservingness and power foundational to the construction of target populations in the SCF. We find, in general, deservingness to be a stronger predictor of support for policy tools than notions of power. We also identify situations where deservingness acts independently of power in ways not anticipated by the SCF—notably public favor for burdens on powerful groups. Our findings offer implications for theoretical and empirical development of the SCF regarding the influence of policymakers' perceptions of public acceptance of policy design in crafting public policies.

KEYWORDS

climate change, deservingness, policy design, policy tools, social construction framework

INTRODUCTION

Prior to 2022, efforts to enact significant federal policy aimed at explicitly addressing climate change had largely proved futile. In 2009, Democrats attempted and failed to pass the American Clean Energy and Security (ACES) Act, a cap-and-trade bill, despite holding significant majorities in both chambers of Congress and control of the White House. In 2014 and 2015, facing Republican opposition, the Obama administration promulgated rules in the clean power plan (CPP) which required electric utilities to reduce their carbon emissions which ultimately failed. With far thinner majorities in Congress

and a smaller margin of victory at the executive level, Democrats managed to pass a massive $369bn (at least) in climate investments in the 2022 Inflation Reduction Act (IRA) amounting to the most significant climate US federal climate policy in history. There are numerous potential reasons why the IRA succeeded where other efforts failed, but a significant part of the story lies in the competing policy designs—specifically in the tools in use and the targets at which these tools are directed. Where the ACES Act and CPP contained regulations directed at specific targets (utilities), the IRA has few. While ACES offered subsidies to individuals and certain industries, these were constrained to the electricity sector and partially dependent upon redistributing revenues from one group (again, utilities) to another (such as low-income Americans and local utilities). Instead, the IRA predominantly leverages tools that subsidize a range of industries, governments, and groups of people for a range of policy goals across carbon dioxide mitigation as well as adaptation.

Tool choices are critical to the efficacy of policy design and the legitimacy of public policy interventions. Policy tools are crafted based on behavioral assumptions of the populations they target and, in so doing, are political value proclamations regarding target groups. Mismatches between tools and target populations can produce policies that fail to achieve their objectives and mischaracterize target populations. The literature on policy design, specifically the social construction framework (Schneider & Ingram, 1993, 1997; Schneider & Sidney, 2009), has shown over the past 30 years that the feedback effects of policy designs target population values are influential over target populations' sense of political power and efficacy. There are two mechanisms of policy feedback within the social construction framework (SCF): (1) feedback from the target population in terms of political participation and power; and (2) feedback from the mass public who rewards or punishes policymakers for applying appropriate tools to target populations. Though the research on the feedback effects of policy designs on target populations is strong (Boothe & Harrison, 2009; Mettler, 2002; Mondou & Montpetit, 2010; Soss, 1999), there is less research that matches policy design theory with responses from mass publics. The policy design literature places elites as the reinforcement mechanism for social constructions, but Bell's (2020, 2021) work shows public opinion to be an important as a legitimizing tool for policy choices by elites. The SCF expects that misapplication of policy design elements to undeserving target populations results in less public receptivity to policy tools. Empirical work testing this claim is relatively limited. In this article we ask: Do target population choices influence preferences for policy tools?

We are motivated by Schneider and Sidney's (2009) call for new theoretical and empirical approaches to the SCF. Theoretically, our article advances the study of feedback within the framework. The SCF feedback mechanism argues that the messages that policies send to target populations regarding their deservingness and power are also received by the mass public. Policymakers are rewarded by the public for policy designs that are congruent with target population constructions (Boushey, 2016). Our article expands the framework's existing policy feedback logic by assessing the receptivity of different types of tools as a function of their application to different target populations. We develop hypotheses for the independent and combined influences of Schneider and Ingram's target population dimensions—deservingness and power—on public receptivity to tool choice in policy designs. We hypothesize that the public is generally supportive of policy designs that correspond to notions of deservingness; but, for power, we test competing hypotheses. First, feedback based on congruence suggests that notions of power reflected in social constructions should reverberate throughout the public, too. Second, however, the public views powerful groups, particularly those that are seen as not deserving, with suspicion and favor a distribution of benefits and burdens distinct from expectations from SCF. Knowing when the public favors regulating the powerful is important for understanding some limitations of policy feedback and also elucidates the disconnect between public opinion and public policy.

Empirically, our research examines target populations in climate change policy design. We conducted a nationwide survey ($N = 3358$) that assessed attitudes toward seven policy tools using Schneider and Ingram's (1990, 1997) policy tool typology that provide benefits or burdens: authority (require-burden, exempt-benefit), capacity (provide funding-benefit), learning (research-benefit), hortatory (positive information-benefit, negative information-burden), and incentive (punish-burden). Our instrument applies each of these tools to six climate policy interventions: emissions reduction, electric vehicle

adoption, renewable energy installation, water use reduction, facility location, and extreme heat preparation. Within this survey, we implemented an experiment that varies the populations targeted by the policy tools representing SCF's four constructions: advantaged, contending, dependent, and deviant. We find the SCF conception of deservingness is a reliable predictor of attitudes toward tool-target associations, but power is less so. We find that respondents prefer to regulate and punish powerful groups more than weak groups—even those groups that are constructed as deserving.

Our work contributes to the furtherance of policy process theory and strategies to create policies to address climate change. For policy process theory, we provide a methodology to understand part of the dynamics of mass feedback as envisioned by the social construction framework—variation in receptivity to policy design tools as a function of power and deservingness of target populations. Additionally, we show the ways in which target population construction does not manifest in public sentiment toward policy design, offering opportunities to consider the mechanisms of the social construction framework in the future. Finally, our work leads to three implications for climate policymakers who should: (1) not shy away from regulations, (2) be unafraid of creating strong enforcement of those regulations, and (3) largely avoid creating exemptions to these rules.

SOCIAL CONSTRUCTIONS OF TARGET POPULATIONS AND POLICY FEEDBACK

Schneider and Ingram's (1993, 1997) SCF contends that policy designs both create and reflect assumptions regarding the power and deservingness of target populations. The distribution of benefits and burdens to target populations betrays governmental attitudes toward those groups as deserving of design features. The framework articulates a feed forward mechanism (also found at the macro level in policy feedback theory—see Campbell, 2012; Mettler, 2002; Pierson, 1993) that the aggregation of design elements toward groups manifests in a real sense of power which contributes to groups' participation in the political process. Over time, these social constructions influence the capacity of target populations to organize and advocate for policy design features on their own behalf.

Widely known to the policy literature are the four categories of target populations that sit within the two-by-two framework of deservingness and power: advantaged, contenders, dependents, and deviants. As seen in Figure 1, advantaged groups have (or are given) great amounts of political power and are viewed as deserving; contenders, too, have (or are given) great amounts of power but are viewed as undeserving; dependents have less (or are not given) power, but are viewed as deserving; and deviants have less (or are not given) power and are viewed as not deserving. Subsequent iterations of the framework found in empirical work (e.g. Lawrence et al., 2010, 2013) and chapters in two (but not the most recent) editions of the influential *Theories of the Policy Process*. Schneider et al. (2014) have appropriately noted that the dependent-power typology represents a kind of continuum rather than a strict categorization and that target populations can move over time as a result of shifts in policymaking and other political circumstances.

Reinforcement of target population construction occurs at the elite level of policymaking where the political power of groups is more directly manifest in government actions and it is at the elite level where social construction framework scholarship is primarily aimed. Empirical work in this space has focused on all populations but has a particular focus on tools directed at deviant (Donovan, 1997, 2001; Owens & Smith, 2012; Whitford & Yates, 2009) and dependent (Drew, 2013; Hynes & Hayes, 2011; Whitford & Yates, 2009) populations. Studies examining the power dynamics of policy design and target populations are primarily focused on the participatory effects of degenerative policymaking on specific target populations (e.g. Liang, 2016, 2018; Schneider & Ingram, 2019). In considering the impacts that social constructions have on policy designs toward populations, benefits and burden prescriptions can be thought of in terms of visibility, the capacity of target to bear, the extent to which populations must prove they are worthy, and control. The SCF predicts that advantaged groups will be overly prescribed benefits and receive few burdens. Further, when advantaged populations are prescribed burdens, the

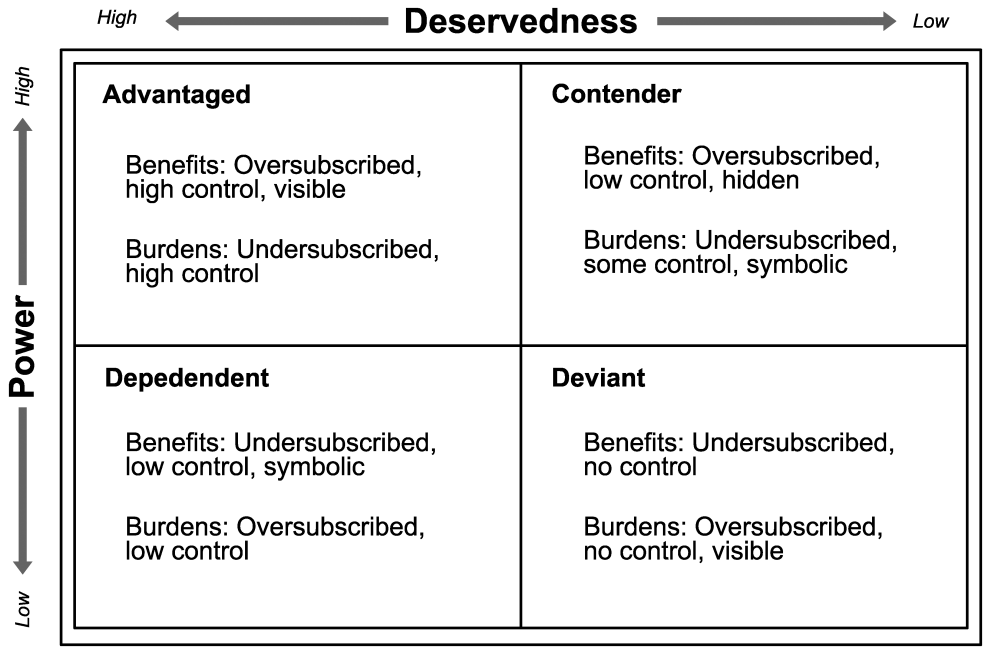

FIGURE 1 Social construction framework target population types and predicted distribution of benefits and burdens. *Source*: Author reconstruction of fig. 2 from Schneider and Ingram (1993).

tools in use will largely allow for flexibility, a light touch, and even voluntary actions rather than true burdens relative to capacity to bear them. Contender populations are able to extract benefits from government, but officials are not likely to extend this publicly. To the extent that contender populations are prescribed burdens, these will typically be well within the capacity of the population to conform and the burdens themselves will be oversold to the public. Policymakers will make visible benefit provision to dependent populations for the sake of the broader population, but these benefits will ultimately be undersubscribed and the target population itself will have little control over the distribution of these benefits. Burdens to dependent populations, according to SCF, will be oversubscribed and framed as in their interest. Finally, policymakers will visibly overly subscribe burdens to deviant populations, whether they have the capacity to bear them or not. To the extent that benefits are provided, policymakers will disavow responsibility.

POWER, DESERVINGNESS, AND POLICY RECEPTIVITY

Policy feedback within the SCF occurs in two general forms: target population political participation from elite characterization of target populations through policy design (elite-target) and mass public reward or punishment of elites for policy designs directed at target populations (public-elite). The SCF literature has widely analyzed elite-target feedback (Liang, 2018; Soss, 1999; Yates & Whitford, 2009). SCF studies have shown that policy designs imbue target populations with political power through a sense of value and real material resources which then influence their participation patterns.Public-elite feedback in which policymakers, notably elected policymakers, are benefited by prescribing particular policy designs to target populations has seen far less scholarly attention. This feedback has two stages: public receptivity to policy designs and policymakers' policy decisions based upon this receptivity. In their work studying criminal justice and welfare policy, Kreitzer et al. (2022) examine the latter and find that conceptions of deservingness drive policy design choices at the state level. Our efforts focus on the former: receptivity to policy designs directed at specific target populations based upon the congruence

of that policy design with broadly held constructions of target populations. According to the SCF, key sources of publicly held attitudes regarding the appropriateness of policies directed at target populations are previous government policies. However, it is also true that public and elite attitudes about policy design differ which can be viewed as a feature or a bug of representative democracy.

There is very little empirical work that tests (other than Kreitzer et al., 2022) receptivity and congruence in SCF feedback. The exceptions, though, are notable and inform our inquiry. Boushey's (2016) extensive longitudinal study of state policymaking finds that policy designs that are "congruent" with social constructions of target populations are more likely to diffuse and be adopted by state legislatures. More specific to public perceptions, recent work by Bell (2020, 2021) suggests that public receptivity to policy designs depends in part on public perception of the appropriateness of target populations' receipt of benefits and burdens. Bell's (2021) work on social construction of target populations and education policy argues that political elites "strategically choose policy tools and target populations (p. 271)" because they must provide "justifications of public policies to constituents in order to be elected (p. 271)." Thus, reinforcement of target population social construction comes in the form of systems of elite choice—most obviously, democratic elections. These empirical studies coupled with the logic from the SCF pertaining to elite reward motivate our overarching hypothesis regarding public attitudes toward policy design as a function of social constructions:

> **H1. Congruence**. Public attitudes toward policy tools are reflective of the *congruence* of target population construction and the distribution of benefits and burdens.

Target population construction is an exogenous and endogenous process. The primary logic of social construction theory suggests that populations are constructed from public policies and that this construction is reinforced by public policies. In H1, we follow SCF logic to argue that political receptivity to tool choice reflects the congruence of a combination of deservingness and power. Untested in the literature is the extent to which these constitutive elements bring to bear different weights on tool choice. Presumably, deservingness and power have individual effects on public perceptions of the appropriateness of tools. Variance in these individual effects is attributable to a conscious opinion of groups as specifically deserving or powerful as well as the unconscious feedback effects of policy designs that create target populations. But we can also envision citizen attitudes toward the matching of tools and targets as an explicit test of the predictive power of policy feedback in the social construction framework.

Deservingness has a clearer relationship to policy design-target population congruence. Deservingness in the mind of the public is more about whether a population *should* receive benefits or burdens rather than whether they actually *do*. Populations seen as deserving are likely to generate support for benefits and opposition to burdens distributed to those populations. Insofar as deserving populations receive burdens or do not receive benefits, undeserving populations should receive more burdens and fewer benefits. As we assume that public perceptions of deservingness of target populations should be congruent with expectations from the SCF, we hypothesize the following:

> **H2. Deservingness**. The public support tools that burden target populations that are perceived as undeserving and tools that benefit target populations perceived as deserving.

Attitudes toward policy designs should also follow a public-elite congruence on the power dimension. However, given the range of benefits distributed to the powerful irrespective of deservingness, the power dimension is less predictive of public-elite congruence in support for policy design. We can think of public attitudes toward the powerful as endogenously driven by a status quo bias and exogenously driven by capacity to be regulated. The endogenous explanation is a more direct test of the SCF suggesting that citizens' expectations of policy tool choice ought to reinforce the extant distribution of policy burdens and benefits. In this scenario, the powerful, even if disliked, are still perceived to deserve more benefits and fewer burdens than the weak. The public in a democratic society may view power with suspicion, but certain powerful groups are perceived as deserving of that power. The exogenous

explanation emerges from a desire of the public in a democratic society to exert control over entities that have misplaced power. In addition, powerful groups can afford to pay for burdens and do not really need benefits. The preceding logic informs the following competing hypotheses:

H3. Endogenous Feedback. The public support tools that benefit the powerful and burden the weak.

H4. Exogenous Feedback. The public support tools that burden target populations perceived as powerful and benefit target populations perceived as weak.

Deservingness and power form target population construction, but the logic we offer in H3 and H4 assumes that power is more difficult for citizens to use as a lens through which to identify the appropriateness of matching tools to targets. Such a disconnect suggests that the mechanism of public choice complicates the congruence hypothesis assumed within the SCF. Plainly, this means that groups seen as deserving likely are receiving less than the public believe should be the case and groups seen as powerful are likely receiving too much. This logic informs our final research hypothesis:

H5. Deservingness over Power. Public tool receptivity is more a function of deservingness than power.

Public perceptions of who benefits from policy design and actual government policy differ from reality. In Schneider and Ingram's early work, this very notion is part of the logic that builds to the SCF, but empirical tests of the relationship between public policies and the constitutive components of power and deservingness are rare. Presumably, each dimension drives citizen receptivity to policy designs insofar as the tools of policy are congruent with each dimension. In the next section, we offer a means of operationalizing tools in policy designs to test our hypotheses.

USING POLICY TOOLS TO OPERATIONALIZE THE RELATIONSHIP BETWEEN DESIGN AND TARGET POPULATIONS

Our hypotheses, summarized in Table 1, represent relationships between target population characteristics and policy design elements–notably tools that burden and tools that benefit. We contend that mass preferences for policy designs depend upon the congruence of tool choice with target populations (see hypothesis H1). Previous investigations (e.g. Bell, 2021) of target population congruence with policy tools have chosen to test opinions toward (typically) a single specific

TABLE 1 Hypothesized interactions of policy tools and target.

Hypothesis	
H1: Congruence	Public attitudes toward policy tools are reflective of the congruence of target population construction and the distribution of benefits and burdens
H2: Deservingness	The public support tools that burden target populations that are perceived as undeserving and tools that benefit target populations perceived as deserving
H3: Endogenous feedback	The public support tools that benefit the powerful and burden the weak
H4: Exogenous feedback	The public support tools that burden target populations perceived as powerful and benefit target populations perceived as weak
H5: Deservingness versus Power	Public tool receptivity is more a function of deservingness than power

benefit or specific burden directed at the four archetypal target populations: advantaged, dependent, contender, and deviant. Instead of a single policy, we generate a series of expectations regarding citizen support for the five policy tools Schneider and Ingram (1990, 1997) typologize based on the extent to which those tools distribute benefits and burdens in conformance with public sentiments toward the deservingness (hypothesis H2) and power (hypotheses H3 and H4) of target populations.

First, authority tools respond to the scope of power that individuals feel within a democratic system. Authority tools grant permission, prohibit, or require certain kinds of actions to address a behavior assumption that individuals are not engaging in a preferred behavior because there are rules prohibiting that action or that the rules allowing said action are unclear. Second, incentive tools are deployed when governments assume target populations are motivated by some "tangible payoff" (Schneider & Ingram, 1990, p. 515). Features of policy design that contain some kind of explicit payoff for action, such as reduced regulatory burden, reduced taxes, subsidies, and grants; but also include negative financial burdens, such as fees, for noncompliance and other forms of coercive punishment, such as force. Third, capacity tools are used when governments assume the barrier to behavioral change is a function of a lack of information or resources on the parts of target populations. Capacity tools can include financial assistance, such as subsidies and grants, or education, such as information about potential harms associated with actions. Fourth, hortatory tools assume that targets' behaviors are a function of values that constrain or influence decisions. Hortatory tools represent symbolic actions often using terms such as justice, fairness, equality, and other normative statements to exhort action. Fifth, learning tools intend to inform future policy design related to problems that have been identified but without obvious conclusions about behaviors contributing to those problems. Learning tools are designed to encourage investigation for future decision-making and provide mechanisms to feed information back to governing bodies.

Our expectations for target-tool matching are summarized in Tables 2 and 3. Our primary hypothesis (H1) contends that congruence between tools and target population constructions will drive attitudes toward tool choice. Deservingness (H2) and power (H3 and H4) combine to produce constructions, but also operate independently in influencing attitudes toward tool choice. As we state in the previous section, we offer two competing hypotheses—endogenous feedback (H3, found in Table 3) and exogenous feedback (H4, found in Table 4)—regarding the connection between perceptions of power and the distribution of benefits and burdens to target populations. The combination of our feedback hypothesis with our final hypothesis—(H5) that deservingness drives receptivity more than power—conforms to the broader expectations of social construction theory. Deservingness determines the distribution of benefits and burdens, while power determines the extent. However, H4 contends that citizen attitudes toward policy may be distinct from policy outcomes (indeed, this is very often the case) and, as such, citizens' preferences for controlling the powerful may upend relationships within and between undeserving and deserving populations. We describe the data and methods we use to test our hypothesis next.

TABLE 2 Expected support for tool types by target populations in the endogenous feedback (H3) scenario.

Treatment	Research	Require	Exempt	Capacity	Hortatory Positive	Hortatory Negative	Punish
Advantaged	++	−−	++	++	++	−−	−−
Dependent	+	−	+	+	+	−	−
Contender	−−	+	−	−	−	+	+
Deviant	−−	++	−−	−−	−−	++	++

Note: Symbols + and − indicate positive or negative directionality, double symbols (++ or −−) indicate magnitude of directionality.

TABLE 3 Expected support for tool types by target populations in the exogenous feedback (H4) scenario.

Treatment	Research	Require	Exempt	Capacity	Hortatory positive	Hortatory negative	Punish
Advantaged	++	−−	++	++	++	−−	−−
Dependent	−	−	−	−	−	+	+
Contender	+	−	+	+	+	−	−
Deviant	−−	++	−−	−−	−−	++	++

Note: Symbols + and − indicate positive or negative directionality, double symbols (++ or −−) indicate magnitude of directionality.

TABLE 4 Descriptive statistics.

Variable	Unit	Mean	Std Dev	Min	Max
Capacity	5-point Likert scale	3.07	1.18	1	5
Exempt	5-point Likert scale	3.28	1.02	1	5
Hortatory—Negative	5-point Likert scale	3.10	1.16	1	5
Hortatory—Positive	5-point Likert scale	3.21	1.16	1	5
Punish	5-point Likert scale	2.98	1.20	1	5
Require	5-point Likert scale	2.93	1.11	1	5
Research	5-point Likert scale	2.71	1.13	1	5
Importance of climate change	5-point Likert scale	3.12	1.36	1	5
Ideology	5-point Likert scale	3.09	1.20	1	5
Gender	Binary	1.51	0.50	1	2

RESEARCH DESIGN

To test our hypotheses, we conducted a survey experiment of attitudes toward climate policy tools as a function of a) tool type and b) targets of those tools. In the sections that follow, we describe why climate policy serves as an exemplary case to examine social construction feedback mechanisms, our survey sample, our survey design, and our analytical methods.

Case: Climate policy design

Climate policy is a good case for survey research given the high level of salience that climate change occupies in political discourse and the range of policy solutions to climate change about which respondents are aware. National and local debates about climate change have created an awareness of specific challenges associated with climate change, notably efforts to reduce emissions and to respond to a warming planet. A particular challenge rests in the inherent distributive justice component of climate change. Simply put, not all target populations will be affected equally by climate change and not all target populations have the capacity to adapt to it. Further, some target populations have benefited and continue to benefit from processes that emit or contribute to the emission of greenhouse gasses, while others are saddled with the externalities of a changing climate.

We believe the question of climate policy design with a specific focus on target populations is an excellent fit for our analysis of attitudes toward tool use. Issues related to climate change affect virtually all target populations. In addition, nearly all target populations have the potential to bear the costs of climate change solutions. Governments already treat target populations in the climate space differently in ways that we might expect: oil companies are subject to regulations, but also get tax breaks; agricultural interests are largely given subsidies; programs intended to green the electric grid are often targeted as those who are already financially stable, such as rooftop solar systems for

existing homeowners; everyday people, especially the poor, bear a disproportionate burden of rising energy costs; poor communities in locations affected by natural disasters enhanced by climate change are often ignored by government programs; and so on. Because climate change is such an encompassing issue, the number of tools and target populations are vast leading to myriad possible combinations in policy designs.

Sample

A sample of 3358 adults in the United States was collected through a non-probabilistic web panel method administered by YouGov. YouGov maintains a representative web panel designed to be representative of adults in the United States. Respondents are invited to participate in the survey via an email link with incentives offered for participation. Data were collected online over an approximately two-week period, December 15, 2021 through January 3, 2022. Following survey data collection, YouGov develops post-stratification weights based on distance of survey data profile from US Census profiles for the population being studied. All results in these analyses rely on these weights with exceptions where noted. While survey research has faced increasing challenges in recruitment and survey completion rates, the use of web panels with post-stratification has been found to be an appropriate way to balance challenges of increasing refusal rates and maintaining short and rapid data collection efforts. This sample was weighted according to gender, age, race, and education based on the American Community Survey, conducted by the U.S. Bureau of the Census, as well as 2020 Presidential vote, and registration status. Participants in the panel are awarded points for completing surveys which can be redeemed once a minimum balance is earned. The value of the points awarded for this survey was approximately $1.50. YouGov in particular has been recognized as developing both panels and weights that perform closest to traditional probability-based sampling approaches based on a comparative analysis by the Pew Research Center (2016).

Survey design

The survey includes three main areas of questions. First, we ask about general attitudes on climate change and climate change policy to assess respondents' overall perspective on climate change before testing different policy options. We ask: "How important is the issue of climate change to you personally?" Using a Likert scale, respondents could select, "Extremely important", "Very important", "Somewhat important", "Not too important", and "Not at all important".

Next, we asked respondents to rate the level of power and deservingness across 26 groups or populations. Included in these 26 are the four target populations used in this study. To assess the perceived level of power and deservingness, respondents read a short introductory passage on power and deservingness and then rate groups using a sliding "thermometer" that displayed values from 0 to 100. We developed these passages based on previous efforts to empirically test power and deservingness scales in public opinion surveys (Kreitzer & Smith, 2018). The full text of these questions is provided in the Supplemental Materials.

Finally, we asked respondents to share their agreement or disagreement with six of policy issues across seven policy tools. This resulted in each respondent rating 42 different policy tool and issue combinations. The policy issues included:

1. Increasing Renewable Electricity Use
2. Reducing Emissions
3. Planning for Areas that are Highly Vulnerable to Climate Change
4. Taking Steps to Protect from Extreme Heat Events
5. Reducing Water Consumption
6. Increasing Electric Vehicle Usage

For each of these issues, items were developed to explore the following seven policy tools:

1. Government Supported **Research**
2. Government **Requirements**
3. Governmental **Exemptions**
4. Government Funding to Increase **Capacity**
5. Government Ad Campaigns to Highlight **Positive** Activities of Target Population (**Hortatory Positive**)
6. Government Ad Campaigns to Highlight **Negative** Activities of Target Population (**Hortatory Negative**)
7. Government Fines (**Punish**)

Note that the terms in bold above are used in the discussion of tools later. Each of these questions were tailored to each target population in the experiment. For example, the Research policy tool question for increasing renewable energy use for Small Farms was worded as follows:

The government should research the most effective ways to expand renewable electricity installations, such as solar panels on buildings, for small farmers.

The underlined portions of the question were changed for each policy tool, policy issue, and target population.These 42 combinations were adapted using the five target populations to change who would benefit or be responsible for the policy. For each of the 42 items, respondents were asked to rate their agreement or disagreement on a five-point Likert scale of: "Strongly agree (5)", "Agree (4)", "Neither agree nor disagree (3)", "Disagree (2)", and "Strongly disagree (1)". Note, the scale included numerical values presented to the respondents to indicate the relative level of agreement or disagreement. For a complete listing of the questions and the treatments, see the Supplemental Materials.

The instrument was administered with five different treatments assigned randomly to the survey respondents. The treatments varied the framing of climate change policy choices in terms of the nature of what populations or groups would benefit from the policy, or be forced to comply with the policy. We asked the five different groups of respondents to give their opinions of the tool-climate strategy match based on a specific target population (approximately 670 respondents each). We choose representative target populations based upon previous studies that measure groups by deservingness and power (Kreitzer & Smith, 2018; Schneider & Sidney, 2009): Military (advantaged), Small Farmers (dependent), Large Technology Firms (contenders), and Undocumented Immigrants (deviants). Prior to survey administration, we conducted a pilot survey to test our instrument design and target population framing. In November 2021, we conducted a pilot study ($n = 600$) with a focus on assessing respondents' general impressions of power and deservingness. The pilot study also included a test of applying four target population treatments plus "Everyone" as a control. Due to findings from this pilot, we adjusted the target populations used in this larger national survey. In addition to the four populations, we created one group which we call "Everyone" to assess the universalist appeal of the tool-strategy combination.A final data processing step for these tools was to combine the policy issue responses into a single index for each policy tool. All the policy issues (e.g. emission reduction, increased EV use) were averaged for a grand mean of issues by tool. This provides us an index for the tools for analysis in the sections that follow. Prior to developing these indices, we examined whether the underlying items were appropriate to combine. We first calculated the Cronbach's alpha for each proposed index to assess index validity. Values for Cronbach's alpha ranged between 0.91 and 0.97 for each index, demonstrating high internal constancy. However, a high Cronbach's alpha is not necessarily evidence that there is a strong single dimension across the items. The second test we applied was to use principal component analysis (PCA) for each index by treatment. Here we found all items for each index load onto a single factor, and eigenvalues are below 1 for all factors after the first factor.

In addition to these substantive policy and attitudinal questions, we also utilized gender and ideology as covariates from the YouGov panel data. Gender has been found to explain variation in both rates of self-assessed knowledge and concern around climate change, with women reporting both more

knowledge and concern (McCright, 2010). Climate change perspectives are also heavily influenced by ideology, with climate change increasingly a component of polarized views from broader political debates in the United States (Dunlap & McCright, 2008; McCright et al., 2015). In particular, because policy tools hinge in some part on attitudes about the proper role of government in society and the economy, ideology is a critical variable to control for in order to understand the relative effects of treatments on perceptions with regard to the policy tools.

Analytical methods

To test the relationships between tools and the treatments, we first explore differences in means across the policy tool indices and by treatment. Next, we formalize testing using a generalized linear model (GLM) with robust standard errors. We conduct data analysis in the R statistical language using the Survey package for complex survey design (Lumley, 2010; R Core Team, 2020). We construct seven models, one for each policy tool as the dependent variable. We handle treatments as factored level variables, providing comparisons of treatment for target population to the universalistic "Everyone" category. We use the GLM approach due in part to the use of weighted survey data in the *R* statistical environment. However, the GLM model we develop uses a Gaussian distribution and thus behaves similar to an ordinary least squares model. As we discuss later, we calculate goodness-of-fit by comparing deviance measures with a null model for each specification providing a pseudo-R^2.

Comparisons here are primarily between treatments within tools. The indices constructed for each tool allow for comparisons across tools, both in terms of difference of means and between coefficients for treatments across tools. Note that for interpreting results, in all cases, positive values indicate increasing agreement or support with the statement. In some cases, this agreement might be with a punishing or requiring tools—thus agreement may reverse in direction when compared to increasing capacity (providing funding) or exhorting through hortatory tools that are positive.For the importance of climate issues, we construct a dummy variable where responses of "very" or "extremely" important are coded as one and the remaining responses are coded as zero. We also code gender as a dummy variable with women respondents coded as one and men zero. Finally, we code "Very Conservative" or "Conservative" ideologies as one and all other values as zero.

FINDINGS

Power and deservingness scores by population

We first explore the distribution of power and deservingness scores for target populations. Based on previous research and our pilot survey, we sought to find four realistic groups or populations that fall into each of the four quadrants of typology developed by Schneider and Ingram (1993). Figure 2 plots each unweighted response from the thermometer question on power and deservingness. This figure shows the general concentration of values we would mostly expect for each target population. Small Farmers and the Military cluster quite well as predicted by theory. Large Technology Companies also cluster well with some respondents seeing them as more deserving than anticipated. Undocumented Immigrants as a category presents some challenges. First, unlike the other categories, we suspect that there are a number of images or models of Undocumented Immigrants that make thinking of them as a singular community difficult. Figure 2 in the lower right-hand corner shows an interesting dispersion of points. Some respondents see Undocumented Immigrants as having more power or being more deserving than we anticipated. Points plotted along the lower bounds and to the right of the plot show this pattern. However overall, the greatest concentration of values for Undocumented Immigrants is in the lower power and deservingness corner, as anticipated.

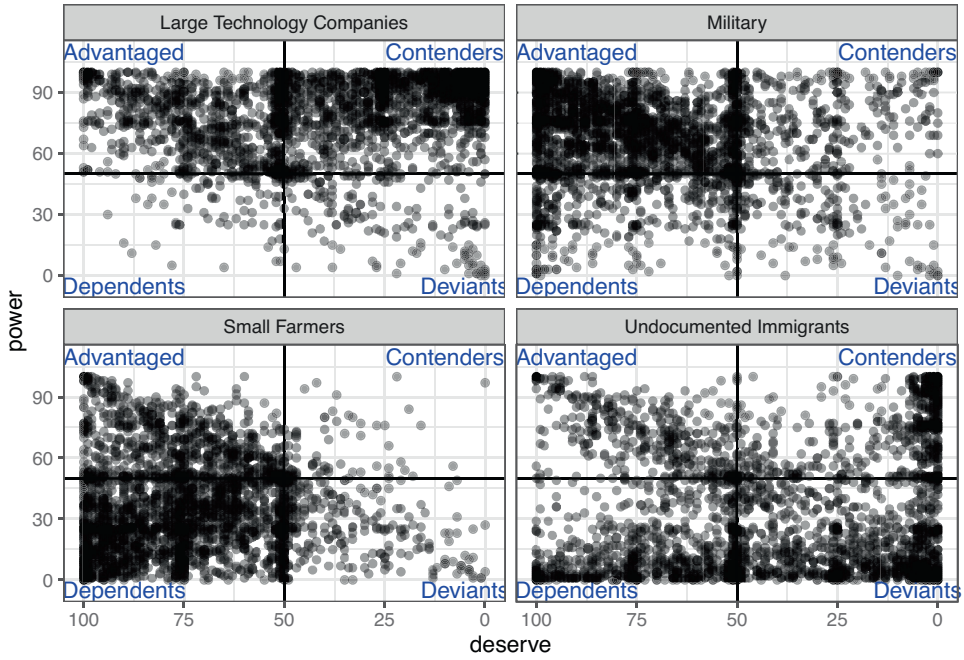

FIGURE 2 Individual power and deservingness scores for large technology companies, military, small farmers, and undocumented immigrants.

Using the weighted survey data, we also calculate the mean score for these groups across all respondents and plot them in Figure 3. Also included in this plot are the mean scores for the population groups: "Myself" and "My Town or City."[1] Here we find the population means falling into the categories as predicted. Despite the broader distribution of the Undocumented Immigrant scores, the mean is still within the "Deviant" quadrant as anticipated.[2]

Tool receptivity by population treatment

Before examining the results from the survey, we developed hypothesized levels of support or opposition for each policy tool by treatment. We anticipated that those in the Advantaged or Dependent quadrants would garner more public support for tools that benefit these types of groups. While those in the Contender and Deviant groups would face opposition when resources or policies treated them favorably, but these groups would be more likely to be seen as needing punishment or requirements under climate policy tools (refer back to Tables 2 and 3).

We display summary statistics of the weighted survey data across the tools in Table 4. This table presents the units used for each variable as well as the mean, standard deviation, and minimum and maximum values. The lower portion of the table includes our independent variable summaries used in the analysis presented below.

We then calculate means from the tools indices by treatment, shown in Table 5. Means reported in the table also include tests for significance. We use a generalized linear model for each tool to test for significance, allowing for tests of significance between control and treatments (Lumley, 2010, p. 98). The mean score relative to the control treatment often matches expectations.

For example, research programs are favored for Small Farms (dependents) and the Military (advantaged), while Large Technology Companies (contenders) and Undocumented Immigrant (deviants)

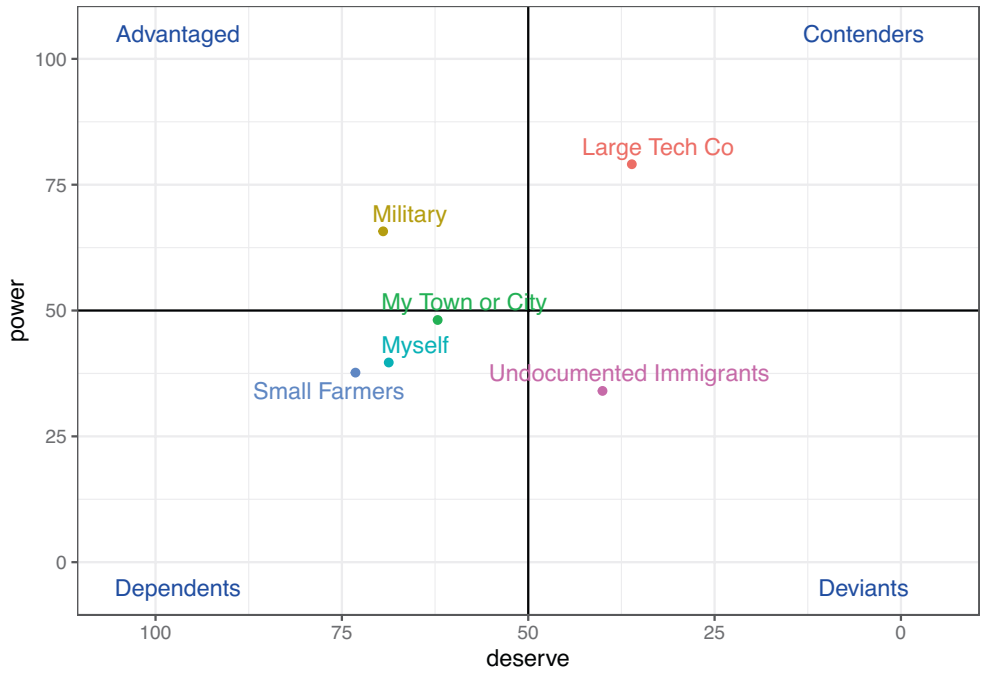

FIGURE 3 Aggregated power and deservingness scores for large technology companies, military, small farmers, undocumented immigrants, respondents (myself), and respondents' community (my town or city).

are less supported.[3] However, we begin to see exceptions to general expectations regarding tool-target matching in this first look at the data. For example, the Undocumented Immigrant community framing generates opposition to most tools, even the use of tools that might punish this community or create requirements for their behavior. We see a different trend in the index of issues that the government might require groups to comply with. As expected, respondents do not want to place new requirements on Small Farms, but they are somewhat willing to require the Military and Large Technology Companies to take steps to address climate change.

Interestingly, Undocumented Immigrants are not seen as a group for which we should create new requirements. This could be interpreted as a general sense that Undocumented Immigrants as a community may not have much to do with climate policy, or it could be interpreted as a general animus toward this group. This pattern repeats somewhat more weakly when we look at the final column on tools that punish groups for not taking steps to address climate change. Because Table 6 only reports means between tools and treatments, it does not control for other predictors that may be influencing levels of agreement or disagreement. To address this, we constructed a series of models to understand levels of support for the seven tools.

Modeling support for climate policy tools

The final set of analyses consists of seven models developed for each policy tool as the dependent variable and with a series of covariates discussed in the previous section found in Table 6. We have ordered the presentation of the treatments based on the logic of power and deservingness: dependents (Small Farmers), advantaged (the Military), contenders (Large Technology Companies), and deviants (Undocumented Immigrants). The first two are high on the deservingness scale and tend to share results and significance in the models. The baseline treatment in Table 6 is the "everybody" treatment. Thus, coefficients should be evaluated in relationship to Everybody as a hypothesized mid-point.

TABLE 5 Means by tool and treatment.

	Hortatory						
Treatment	**Research**	**Require**	**Exempt**	**Capacity**	**Positive**	**Negative**	**Punish**
Everyone (control)	3.51	3.03	3.03	3.03	3.04	2.80	2.80
Military (advantaged)	3.48	3.30**	2.89*	3.35**	2.99	2.80	2.92
Small farms (dependent)	3.53	2.87*	3.33**	3.36**	3.10	2.76	2.81
Large Tech (contender)	3.13**	3.38**	2.29**	2.42**	2.79**	3.06**	3.47**
Undocumented immigrants (deviant)	2.81**	2.76**	2.09**	2.49**	2.57**	2.52**	3.09**

Note: Everyone treatment is the reference level, and significance calculated with a generalized linear model. Treatment mean is significant compared to control category at p-value = 0.05 (*) or p-value = <0.01 (**).

TABLE 6 Modeled responses to policy tools across treatments, climate importance, and demographics.

	Dependent variable						
	Research	**Require**	**Exempt**	**Capacity**	**Hortatory Pos**	**Hortatory Neg**	**Punish**
Treatment: Small farms (dependent)	0.008	−0.161***	0.313***	0.327***	0.062	−0.045	−0.001
	(0.053)	(0.054)	(0.050)	(0.056)	(0.059)	(0.062)	(0.060)
Treatment: Military (advantaged)	−0.050	0.249***	−0.130***	0.301***	−0.070	−0.028	0.099*
	(0.049)	(0.050)	(0.050)	(0.052)	(0.057)	(0.058)	(0.059)
Treatment: Large Tech (contender)	−0.396***	0.351***	−0.734***	−0.613***	−0.253***	0.256***	0.662***
	(0.054)	(0.053)	(0.053)	(0.062)	(0.060)	(0.059)	(0.057)
Treatment: Undoc. immigrants (deviant)	−0.708***	−0.278***	−0.931***	−0.542***	−0.473***	−0.290***	0.280***
	(0.056)	(0.057)	(0.053)	(0.060)	(0.061)	(0.065)	(0.066)
Climate change important	0.795***	0.727***	−0.250***	0.577***	0.660***	0.579***	0.676***
	(0.037)	(0.037)	(0.036)	(0.041)	(0.041)	(0.042)	(0.041)
Ideology: Conservative	−0.584***	−0.568***	0.011	−0.546***	−0.531***	−0.523***	−0.498***
	(0.043)	(0.044)	(0.040)	(0.046)	(0.047)	(0.047)	(0.048)
Women	0.035	0.048	−0.007	0.089**	0.087**	−0.003	0.020
	(0.035)	(0.035)	(0.033)	(0.038)	(0.038)	(0.039)	(0.039)
Constant	3.342***	2.871***	3.131***	2.909***	2.878***	2.723***	2.662***
	(0.046)	(0.047)	(0.045)	(0.051)	(0.053)	(0.054)	(0.053)

*$p < 0.1$; **$p < 0.05$; ***$p < 0.01$.

For research tools, the treatments for less deserving groups created significant and strong negative effects when asked about providing research for these groups. In examining the requirement tool, treatments varied as anticipated. However, the deviant treatment created a similar and unexpected finding as found in the means table. Here deviants are treated more favorably than dependents by comparison, with respondents disagreeing with statements that would require Undocumented Immigrants to take steps to address climate change.

The exemption and capacity tools follow the pattern we anticipated, with the more deserving groups seeing more agreement with tools that would supply these groups either an exemption from regulation or the provision of resources to take steps to address climate change. The hortatory tools show relatively weaker effects and are not significant for dependents and advantaged. Deviants again show a different direction than we anticipated for the negative hortatory tools. Respondents were more likely to disagree with proposals to expose or advertise climate change actions that are generally seen as negative by this group. Finally, punishment extends this pattern with the more deserving treatments being weak and not significant, but agreement being positive for contenders and deviants.Respondents who view climate change as an important issue strongly favor all policy interventions, except for exemptions which are negatively favored. Gender is broadly not associated with attitudes toward policy tools, though women are slightly more likely to support capacity and positive hortatory tools. As we stated previously, the literature investigating gender and climate policy is mixed. Ideology has a strong negative impact on tool choices across the board, with exception to exemptions. The magnitude of effect is fairly consistent indicating that conservatives are less likely to favor climate intervention of any kind.

Fundamental beliefs about target populations may condition attitudes toward tool-target populations. We know from Table 6 that conservatives, on balance, are less likely to favor most tools irrespective of their positions regarding the importance of climate change. In Table 7, we present results from interactions between target populations and ideology. Certain target populations and tools have heterogeneous effects based on ideology. Here we suspect that underlying attitudes to the specific populations such as Undocumented Immigrants, or specific tools such as government funding for target groups, are influencing outcomes alongside the social constructions of deservedness and power. Including these interactions helps to explain insignificant findings in Table 6 for certain policy tools.

However, the main effects regarding attitudes toward target populations and tool choice largely hold (no differences for requirements, exemptions, or capacity) with a few exceptions in research, hortatory tools (positive and negative), and punishment. Attitudes toward research tools that target advantaged populations move from not significant to negative as do attitudes that match the advantaged with hortatory positive tools. By and large, the general patterns from Table 6 remain: dependent populations largely favored and unburdened; advantaged populations largely favored, but with some burdens; contender populations largely unfavored and burdened; and the deviant population largely unfavored, but with few burdens. We discuss these results in the context of our hypotheses next.

DISCUSSION

The results of this study somewhat conform to expectations embedded within the social construction framework regarding the acceptability of policy tools along axes of deservingness and power articulated in hypothesis H1. However, the extent to which power and deservingness individually account for perceptions of policy tool congruence among respondents varies in notable ways. From our results, three findings emerge. First, we see deservingness as a strong driver of attitudes toward tools that benefit and burden target populations (supports H2). Second, however, power at times complicates the relationship between tool choice and target populations hypothesis as respondents favor some burdens for advantaged populations while not favoring some burdens for deviants (supports H4). Third, stepping back, we find that our congruence hypothesis (H1) is challenged by the results, with deservingness a better predictor of policy design preference than SCF categories. We expand on these points in the discussion that follows.

TABLE 7 Modeled responses to policy tools across treatments conditioned on ideology.

	Dependent variable index						
	Research (1)	Require (2)	Exempt (3)	Capacity (4)	Hortatory positive (5)	Hortatory negative (6)	Punish (7)
Treatment: Small farms	−0.045	−0.210***	0.104*	0.216***	−0.016	−0.152**	0.006
	(0.058)	(0.059)	(0.054)	(0.061)	(0.067)	(0.071)	(0.067)
Treatment: Military	−0.118**	0.206***	−0.401***	0.173***	−0.170***	−0.125*	0.105
	(0.053)	(0.056)	(0.055)	(0.056)	(0.064)	(0.066)	(0.067)
Treatment: Large Tech	−0.481***	0.296***	−0.793***	−0.828***	−0.386***	0.214***	0.676***
	(0.060)	(0.057)	(0.061)	(0.072)	(0.070)	(0.067)	(0.063)
Treatment: Undocumented immigrants	−0.735***	−0.517***	−0.846***	−0.616***	−0.528***	−0.481***	−0.021
	(0.063)	(0.063)	(0.058)	(0.069)	(0.069)	(0.074)	(0.072)
Climate change important	0.794***	0.722***	−0.246***	0.575***	0.658***	0.575***	0.669***
	(0.037)	(0.037)	(0.036)	(0.041)	(0.041)	(0.042)	(0.040)
Ideology: Conservative	−0.735***	−0.821***	−0.275***	−0.891***	−0.768***	−0.804***	−0.679***
	(0.088)	(0.086)	(0.085)	(0.093)	(0.093)	(0.096)	(0.097)
Women	0.035	0.054	−0.013	0.090**	0.087**	0.001	0.028
	(0.035)	(0.035)	(0.033)	(0.038)	(0.038)	(0.039)	(0.039)
Txt: Small farm × Conservative	0.168	0.168	0.639***	0.361***	0.250*	0.340**	−0.001
	(0.125)	(0.126)	(0.112)	(0.132)	(0.132)	(0.137)	(0.138)
Txt: Military × Conservative	0.221*	0.139	0.882***	0.416***	0.325**	0.314**	−0.021
	(0.119)	(0.116)	(0.112)	(0.122)	(0.131)	(0.131)	(0.136)
Txt: Large Tech × Conservative	0.272**	0.181	0.190	0.694***	0.430***	0.137	−0.043
	(0.126)	(0.126)	(0.121)	(0.138)	(0.135)	(0.133)	(0.135)
Txt: Undocumented immigrants × Conservative	0.088	0.790***	−0.291**	0.236*	0.173	0.627***	0.996***
	(0.130)	(0.131)	(0.122)	(0.135)	(0.138)	(0.146)	(0.149)
Constant	3.389***	2.948***	3.220***	3.016***	2.952***	2.809***	2.716***
	(0.048)	(0.048)	(0.045)	(0.052)	(0.056)	(0.058)	(0.055)
Pseudo-R^2	0.31	0.28	0.26	0.27	0.20	0.17	0.22
Observations	3350	3342	3352	3344	3348	3347	3342

*$p < 0.1$; **$p < 0.05$; ***$p < 0.01$.

First, deservingness—as predicted in H2—emerges as an important driver for differentiation in attitudes toward tools that benefit our target populations: learning (research), authority (exempt), capacity (funding), and positive hortatory tools (call out positive actions). The clearest relationship between deservingness and support for beneficial tools is found in capacity tools. Respondents generally favor capacity-building tools for positively constructed groups and are less favorable toward negatively constructed groups; however, respondents show little distinction between weak and powerful groups. Even in cases where advantaged groups are less favored to receive benefits than the control group (research, exempt, hortatory positive), the magnitude of this effect is much less than for negatively constructed groups indicating that deservingness is still important within the context of power.

Second, however, deservingness is only part of the story as power complicates attitudes toward tool-target matches, particularly in the case of burdens. For policies that require actions, the power of target populations emerges as *the* determinant of support rather than notions of deservingness. This is the strongest support for hypothesis H4 which argues that people will favor policies that burden the powerful rather than reinforce existing power structures. There is some minor difference in the magnitude of support for requirements for contenders versus advantaged populations and the same can be said for dependents versus deviants. That said, there is clear support for regulating the powerful and not regulating the less powerful. In our model, advantaged and deviant populations are flipped from what we might expect given the literature and this is particularly interesting given that the vast majority of the social construction literature has investigated the proclivity for policies to burden deviants (Pierce et al., 2014). Strong opposition from respondents to hortatory negative tools directed at deviants adds to this contrary finding.

Power occasionally acts as a kind of graduating effect for the distribution of burdens as well as benefits. In addition to viewing target-tool relationships through the lens of a positive or negative relationship, we think about these findings as a measure of extent. Targeting advantaged groups decreases support for exemptions, but the magnitude of effect is less than for contenders and deviants, respectively. Further, the magnitude of the negative effect on benefits–research and positive hortatory tools–directed at less-deserving populations increases as a function of power in ways that we would expect (deviants greater than contenders, offering some limited support for H3).

Third, while much of our analysis focuses on the independent effects of the elements of power and deservingness in the social construction framework, we also assess the relative alignment of the idealized target population types and distributions of benefits and burdens. While there is some support for hypothesis H1 (congruence) in our results, there exist key patterns of distinction from what we might expect from the SCF. Let us begin by examining the orthogonal categories of dependents and contenders for which the clearest empirical patterns—and support for H1—emerge from our data.

The SCF predicts that dependents ought to receive fewer benefits and more burdens, while contenders ought to receive less visible benefits and highly visible, but symbolic burdens. For dependents in our study, the opposite is true. Dependents (small farms in our study) are generally not seen as deserving of greater burdens in the form of punishments or negative symbolic tools. Dependents are viewed as especially undeserving of rules regarding climate change given that respondents are less likely to support increased requirements for dependent populations and are more likely to support exemptions. This is even more important given that exemptions provoke negative reactions for the three other target population types in our analysis. Respondents are particularly clear-eyed in their attitudes toward contenders (Large Tech Firms). Every policy tool that could be considered a benefit provokes a strong negative reaction from our respondents and every policy tool that could be considered a burden provokes a positive reaction. As with our findings regarding the dependent category, contenders broadly do not fit with the combinatorial power-deservingness expectations in SCF.

The remaining groups in our data are mixed with respect to expectations of the distribution of benefits and burdens as articulated by the SCF. As predicted by the SCF, our advantaged group–the Military–finds support for beneficial policy tools similar to our control group—everyone—and greater support for capacity-building tools. However, in contrast with SCF expectations, tools that exempt advantaged groups, which we term a benefit, are not supported. The same goes, though to a lesser

extent, for research and positive hortatory tools particularly surprising, given expectations that advantaged groups should have few burdens, tools that require positive support among respondents. Deviant groups follow expectations in finding reduced support among respondents for tools perceived as benefits, but curiously find that burdens in the form of requirements and negative hortatory tools are not supported by respondents.

There are many potential explanations for why congruence in target populations is not a stronger predictor of support for policy design, but it is clear that, as predicted by H4 (exogenous feedback), the power dimension of social constructions performs differently in public-elite feedback within the SCF. Thus, deservingness and power of target populations are both strong predictors of citizen attitudes toward policy designs, though not equally so as we argue in hypothesis H5. Deservingness consistently predicts tool-target combinations for dependents and contenders (weak and strong groups, respectively), while also doing fairly well in predicting benefits and burdens applied to deviants. We are somewhat surprised by the willingness of respondents to support policies that burden advantaged groups or not support some policies that are beneficial, but even in this case, advantaged populations are still in a better position than negatively constructed groups in terms of the magnitude of effect of the treatment group on attitudes. Power is less helpful; however, in discriminating among positively constructed groups given that dependents (weak, positive) are in a consistently more benefitted and less burdened position than the advantaged (strong, positive).

CONCLUSION

This work investigates the role that power and deservingness have in shaping attitudes about policy design choices. We build on previous examinations of the role that target population congruence (Boushey, 2016) plays in support for policy tool choices (Bell, 2020, 2021). We implement a nationally representative survey experiment (inspired by Kreitzer & Smith's, 2018 methodology) focusing on seven policy tools designed to address six climate change issues across five target populations (advantaged, contenders, dependents, deviants, and a universal control). We find that, in general, policies that are congruent with the framework's conception of deservingness serve as a better predictor of support for policy interventions than the SCFs conception of power. We show that power is a significant motivator of attitudes toward policy tools, but one that increases support for regulating the powerful. Our work offers an opportunity to understand features of the social construction framework that are currently undertheorized, specifically a portion of the public-elite feedback mechanism described in earlier SCF work.

Schneider and Ingram concluded in their influential 1993 *American Political Science Review* article that

> "[t]he inclusion of social constructions of target populations resolves some of the differences among theories that relate characteristics of policies to patterns of policymaking, including those of Lowi and Wilson (p. 346)," whose scholarship had influenced the previous two decades of scholarly thinking about the relationship between policy change and political conflict. While our work (three decades following Schneider and Ingram) does not presume to alter the field of public policy to this great an extent, we offer scholars an opportunity to further refine the study of the SCF to think of policy feedback in two ways. The first feedback mechanism is already well-known–that of policies shaping target populations' *own* perceptions of deservingness and providing material resources contributing to their actual power. Study after study shows this feedback to influence *within group* feelings of political efficacy and real participation.

The second, largely unstudied (though see Bell, 2020, 2021; Donovan, 2001; Kreitzer et al., 2022), feedback mechanism within the social construction framework is a public-based loop whereby public officials are "sensitive" (Schneider & Ingram, 1993, p. 336) to the constructions of target populations for

the purposes of policy design because of electoral rewards or punishments. Embedded within this feedback loop is an untested assumption that target population images—which are a function of previous policy designs directed at target populations—endure in the broader public. We suggest, if this is true, that these images should influence receptivity to policy designs. In our work, this does not always occur. When constructions do *not* match predicted receptivity to policy design, it is in a particular direction: stronger favorability for greater burdens on the powerful. We find there can be a significant mismatch between what the public wants and what target populations get particularly powerful populations. Our work finds respondents prefer advantaged populations to be required to do more relative to other less powerful populations. Further, our work finds that contender populations are particular targets for harsher tools—from requirements, to punishments, to negative messaging.

Our finding affirms the foundational element of the SCF that dominant groups remain dominant because of resources and power to motivate policymakers. Clearly, these resources and power are aimed directly at the process of creating and enforcing public policy which largely occurs outside elections where public opinion matters most. We hope our findings coupled with other work in this area (particularly Kreitzer et al.'s, 2022 examination of the role of deservingness in state policy choices) will be expanded upon in the future to further identify the dynamism within and across elite-target population and public-elite feedback in the SCF.

Our focus in this article has been on the expansion and development of the SCF; however, we can offer some policy implications associated with climate change policy design. First, our work shows that government research into policy solutions regarding climate change is generally positively favored among all target populations, with the slight exception of our deviant population (see Table 6). This finding alone should be encouraging for climate advocates who are in favor of both universalistic and targeted climate efforts.

Second, there is strong support for regulatory policy tools, particularly regulatory tools that target powerful groups regardless of notions of deservingness. Powerful groups tend to be large emitters of carbon dioxide and are better able to adapt to a changing planet. Our results suggest the public is in favor of requirements for the groups that have the largest impact as well as those better able to pay for behavioral change. Such a finding, coupled with a general disapproval of exemptions for powerful groups and a proclivity for punishing contenders, should embolden policymakers to adopt a stick approach to climate policy rather than the current carrot-dominated portfolio in the United States (at least federal level). Our respondents support a climate policy portfolio that researches solutions, offers assistance to help the deserving, regulates the strong, and punishes the powerful.

Of course, our work is limited in a number of ways. First, our one survey is a snapshot in time. Second, our experimental design enables us to explore multiple dimensions of policy design, but it is extremely complex. Third, the issue of climate change is quite salient, but also polarizing—the most important indicator of policy tool support is simply whether the respondent believes in climate change or not. Further, climate change may not engender the same kind of strong connection between target populations and policy design as might policy areas such as welfare or criminal justice. Fourth, our choices of target populations are somewhat contentious among individual respondents. We make aggregate assumptions regarding target population formation for the purposes of the survey experiment, but these might not correspond directly with individual-level perceptions. Fifth, there are heterogenous treatment effects associated with ideology and treatments, and more work needs to be done to understand ideological processing of policy tools relative to target populations (though see Bell & Lui, 2023). Sixth, more exemplars of Schneider and Ingram's typology would certainly lead to more robust findings and future work might consider a broader range of target populations. Finally, it is possible that a different target population selection method that depends less on respondent perceptions of power and deservingness (rather, some method that assesses some notion of "real" resources and power) might yield different results for attitudes toward tools.

These issues notwithstanding, our article offers methodological and theoretical advances in the study of policy design and the social construction framework. The SCF has not seen the same presence in policy process scholarship as other well-known process theories (e.g. Punctuated Equilibrium

Theory, Advocacy Coalition Framework, Multiple Streams, Institutional Analysis and Development Framework, Policy Feedback, and so on)—perhaps this was the justification for its exclusion from more recent editions of the *Theories of the Policy Process*. However, the SCF not only remains foundational to the link between policy and power but also provides an excellent framework through which to examine current issues related to justice and equity. With this work, we hope to reinvigorate the SCF providing for new theoretical debate and empirical applications.

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ENDNOTES

[1] Respondents were asked to rate "Yourself" or "Your Town or City." For readability we adjust these terms for this paper.

[2] In general, we understand that our aggregating thousands of individuals responses with significant variation creates a kind of artificial certainty regarding target population construction. We use these responses as a tool to validate our choices of treatment groups.

[3] "Neither agree nor disagree" and is a midpoint in this scale.

REFERENCES

Bell, Elizabeth. 2020. "The Politics of Designing Tuition-Free College: How Socially Constructed Target Populations Influence Policy Support." *The Journal of Higher Education* 91(6): 888–926.

Bell, Elizabeth. 2021. "Deserving to Whom? Investigating Heterogeneity in the Impact of Social Constructions of Target Populations on Support for Affirmative Action." *Policy Studies Journal* 49(1): 268–99.

Bell, Elizabeth, and Edith Lui. 2023. "Integrating Identity in Policy Design Theory." *Policy & Politics* 51(1): 2–27.

Boothe, Katherine, and Kathryn Harrison. 2009. "The Influence of Institutions on Issue Definition: Children's Environmental Health Policy in the United States and Canada." *Journal of Comparative Policy Analysis: Research and Practice* 11(3): 287–307.

Boushey, Graeme. 2016. "Targeted for Diffusion? How the Use and Acceptance of Stereotypes Shape the Diffusion of Criminal Justice Policy Innovations in the American States." *American Political Science Review* 110(1): 198–214.

Campbell, Andrea Louise. 2012. "Policy Makes Mass Politics." *Annual Review of Political Science* 15: 333–51.

Donovan, Mark C. 1997. "The Problem with Making AIDS Comfortable." *Journal of Homosexuality* 32(3–4): 115–44.

Donovan, Mark C. 2001. *Taking Aim: Target Populations and the Wars on AIDS and Drugs*. Washington, DC: Georgetown University Press.

Drew, Rachel Bogardus. 2013. "Constructing Homeownership Policy: Social Constructions and the Design of the low-Income Homeownership Policy Objective." *Housing Studies* 28(4): 616–31.

Dunlap, Riley E., and Araon M. McCright. 2008. "A Widening Gap: Republican and Democratic Views on Climate Change." *Environment: Science and Policy for Sustainable Development* 50(5): 26–35.

Hynes, Bernie O'Donoghue, and Noirin Hayes. 2011. "Who Benefits from Early Childcare Subsidy Design in Ireland?" *Journal of Poverty and Social Justice* 66(3): 277–88.

Kreitzer, Rebecca J., Elizabeth A. Maltby, and Candis Watts Smith. 2022. "Fifty Shades of Deservingness: An Analysis of State-Level Variation and Effect of Social Constructions on Policy Outcomes." *Journal of Public Policy* 42(3): 436–64.

Kreitzer, Rebecca J., and Candis Watts Smith. 2018. "Reproducible and Replicable: An Empirical Assessment of the Social Construction of Politically Relevant Target Groups." *PS: Political Science & Politics* 51(4): 768–74.

Lawrence, Eric, Robert Stoker, and Harold Wolman. 2010. "Crafting Urban Policy: The Conditions of Public Support for Urban Policy Initiatives." *Urban Affairs Review* 45(3): 412–30.

Lawrence, Eric, Robert Stoker, and Harold Wolman. 2013. "The Effects of Beneficiary Targeting on Public Support for Social Policies." *Policy Studies Journal* 41(2): 199–216.

Liang, Jiaqi. 2016. "The Shadow of the Politics of Deservedness? The Implications of Group-Centric Policy Context for Environmental Policy Implementation Inequalities in the United States." *Journal of Public Administration Research and Theory* 26(3): 552–70.

Liang, Jiaqi. 2018. "Latinos and Environmental Justice: Examining the Link between Degenerative Policy, Political Representation, and Environmental Policy Implementation." *Policy Studies Journal* 46(1): 60–89.

Lumley, Thomas. 2010. *Complex Surveys: A Guide to Analysis Using R*. New York: John Wiley & Sons.

McCright, Aaron M. 2010. "The Effects of Gender on Climate Change Knowledge and Concern in the American Public." *Population and Environment* 32(1): 66–87.

McCright, Aaron, Riley Dunlap, and Sandra Marquart-Pyatt. 2015. "Political Ideology and Views about Climate Change in the European Union." *Environmental Politics* 25(2): 338–58.

Mettler, Suzanne. 2002. "Bringing the State Back in to Civic Engagement: Policy Feedback Effects of the G.I. Bill for World War II Veterans." *American Political Science Review* 96(2): 351–65.
Mondou, Matthieu, and Éric Montpetit. 2010. "Policy Styles and Degenerative Politics: Poverty Policy Designs in Newfoundland and Quebec." *Policy Studies Journal* 38(4): 703–22.
Owens, Michael Leo, and Adrienne R. Smith. 2012. ""Deviants" and Democracy: Punitive Policy Designs and the Social Rights of Felons as Citizens." *American Politics Research* 40(3): 531–67.
Pew Research Center. 2016. Evaluating Online Nonprobability Surveys. https://www.pewresearch.org/methods/2016/05/02/evaluating-online-nonprobability-surveys/
Pierce, Jonathan J., Saba Siddiki, Michael D. Jones, Kristin Schumacher, Andrew Pattison, and Holly Peterson. 2014. "Social Construction and Policy Design: A Review of Past Applications." *Policy Studies Journal* 42(1): 1–29.
Pierson, Paul. 1993. "When Effect Becomes Cause: Policy Feedback and Political Change." *World Politics* 45(4): 595–628.
R Core Team. 2020. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.
Schneider, Anne, and Helen Ingram. 1990. "Behavioral Assumptions of Policy Tools." *The Journal of Politics* 52(2): 510–529.
Schneider, Anne, and Helen Ingram. 1993. "Social Construction of Target Populations: Implications for Politics and Policy." *The American Political Science Review* 87(2): 334–47.
Schneider, Anne L., and Helen M. Ingram. 1997. *Policy Design for Democracy*. Lawrence, Kansas: University Press of Kansas.
Schneider, Anne L., and Helen M. Ingram. 2019. "Social Constructions, Anticipatory Feedback Strategies, and Deceptive Public Policy." *Policy Studies Journal* 47(2): 206–36.
Schneider, Anne L., Helen Ingram, and Peter Deleon. 2014. "Democratic Policy Design: Social Construction of Target Populations." In *Theories of the Policy Process*, 3rd ed., edited by Paul A. Sabatier and Christopher Weible, 105–50. Boulder, CO: Westview Press.
Schneider, Anne, and Mara Sidney. 2009. "What Is Next for Policy Design and Social Construction Theory?" *Policy Studies Journal* 37(1): 103–19.
Soss, Joe. 1999. "Lessons of Welfare: Policy Design, Political Learning, and Political Action." *American Political Science Review* 93(2): 363–80.
Whitford, Andrew B., and Jeff Yates. 2009. *Presidential Rhetoric and the Public Agenda: Constructing the War on Drugs*. Baltimore, MD: Johns Hopkins University Press.
Yates, Jeff, and Andrew B. Whitford. 2009. "Race in the War on Drugs: The Social Consequences of Presidential Rhetoric." *Journal of Empirical Legal Studies* 6(4): 874–98.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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