Using a regression discontinuity design, we show that personal experience with public health insurance programs exerts a causal influence on attitudes toward both Medicare and the Affordable Care Act. However, we argue that the conditional dynamics of these policy feedback effects differ from standard models of opinion formation and change. Specifically, we find that personal experience can shape preferences among those whose partisanship might otherwise make them resistant to elite messaging; in the case of support for health policy, we find effects of public programs are most pronounced among Republicans. In addition, we find that the effects of personal experience, unlike attempts to shape attitudes through elite political messaging, are concentrated among low-information voters who might otherwise not be attuned to the political environment.

Studies of partisan bias and political learning have consistently shown political attitudes and information to be endogenous to partisanship. This is because individuals filter new information through existing schemas, resulting in reinforcement (rather than change) of their existing preferences; when it comes to politics, people are more likely to accept information that conforms to their extant partisan attitudes and reject information that challenges their pre-existing partisan beliefs. This is particularly true of high-information voters, who generally have well-developed cognitive political frameworks and are more attentive to political life. In contrast, low-information voters are more likely to be open to new ideas, but they are less attuned to the political environment and therefore less likely to be reached by political messaging (Zaller 1992).

These findings on the conditional nature of opinion formation and change are drawn primarily from studies of political messaging via elites, the media, and other secondary sources of political information. However, a large body of research makes clear that individuals also learn about politics from their direct personal experiences with public policies, creating "policy feedback" that shapes citizens’ attitudes and patterns of political engagement (e.g., Campbell 2005; Lerman and Weaver 2014; Mettler 2007; Mettler and Milstein 2007; Soss 2002). In this paper, we assess whether the influence of personal experience on public attitudes is likewise conditional on partisanship and political knowledge.

We operationalize this question by examining the effects of experience with public health insurance programs on support for two distinct policies that sustain or expand the government’s role in the health insurance market: Medicare and the Affordable Care Act (ACA, also called “Obamacare”). Employing a regression discontinuity design, we show that personal experience exerts a powerful causal influence on public attitudes toward both programs. Importantly, however, our results suggest two ways in which conditionality in policy feedback is distinct from the standard two-stage model of reception and acceptance (Zaller 1992). First, direct experience can inform a wider swath of individuals, exerting effects on those with otherwise low levels of generalized political knowledge. Second, direct experience does not only, or even primarily, reinforce the attitudes of co-partisans, but can instead lead to meaningful opinion formation or attitude change among out-party individuals.

These findings help bring together two important streams of scholarship that have not been previously in convera-
tion: research on opinion formation and change, on the one hand, and studies of policy feedback, on the other. Decades of research in political psychology have shown that both political information and partisanship condition political learning from elite discourse and media messages. Our results contribute to current understandings of public opinion formation and change by testing whether standard information processing models operate in the same way when citizens are learning more directly, that is, through personal experience with public programs. We suggest that the answer is no.

Our study likewise adds substantial nuance to existing theories of policy feedback. The burgeoning study of policy feedback has shown convincingly that individuals learn through experiences in myriad policy domains: through Social Security (Campbell 2002, 2005), surveillance and punishment (Lerman 2013; Lerman and Weaver 2014), welfare (Soss 2002), and education (Mettler 2007), to name just a few. However, these studies have focused more on participation than policy attitudes, and they have been more attentive to main effects than heterogeneity. As such, we do not yet have good evidence on whether and how policy feedback effects on public opinion vary along partisan lines or across levels of political knowledge. In this study, we find that these social cleavages are central to understanding how policy feedback occurs.

Taken together, the results we present here thus also help explain how policy feedback leads to the entrenchment of public policies (Hacker 1998, 2002; Pierson 1993, 1994; Skocpol 1992). We know that policies once implemented are harder to roll back because they create constituencies (Campbell 2005) and because losses are weighted more heavily than gains (Pierson 1994). Our findings suggest that public policies may also become entrenched because direct experience, unlike other pathways of political learning, can build support that cuts across the political spectrum and bridges the information divide.

POLITICAL LEARNING, PARTISAN BIAS, AND PUBLIC OPINION

A large proportion of Americans simply do not receive political messages. Most citizens do not watch the news on a regular basis, do not pay much attention to politics, and generally are not attuned to political messages from elites. Indeed, the majority of Americans express limited interest in political life. As a result, they tend to know very little about government (see Galston 2001). One review of political knowledge found that no more than half of citizens at any time over a 50-year period could accurately answer basic factual questions concerning political leaders and parties, institutions, or public policies (Delli Carpini and Keeter 1996). Another study finds that fully 35% of high school seniors hold “below basic” knowledge about politics (Lutkus et al. 1999), “indicating near total-civic ignorance” (Galston 2001, 221).

Americans likewise know little about public policy. Low-information citizens do not have a sophisticated cognitive framework or belief structure that organizes a set of coherent policy attitudes. As a result, their preferences are neither consistent nor coherent (Converse 1964). This may also help to explain why a sizable proportion of Americans do not always appear to hold attitudes that reflect their particular self-interest (Sears and Funk 1990). It is only when they are specifically primed to think about their self-interest, or when their stake in a policy is especially high, that their preferences are more likely to reflect personal costs and benefits (Chong, Citrin, and Conley 2001).

In contrast, individuals with higher levels of general political knowledge are more likely to be exposed to messages from political elites and information about particular public policies (Zaller 1992). These “political sophisticates” tend to have higher levels of education overall, are more likely to express interest in politics, and are more likely to hold ideologically consistent political beliefs (Converse 1964). However, even those who are regularly exposed to political information might not express attitudes that are objectively rational. Instead, a variety of cognitive motivations, including partisan biases and motivated reasoning, may serve to either obfuscate or supersede personal self-interest when it comes to the formation of political attitudes.

Specifically, many citizens filter political messages through partisan “perceptual screens” (Campbell et al. 1960), and this has consequences for both information acquisition and processing (Zaller 1992). Strong partisans are more likely to seek out information that conforms to their existing views (Druckman, Fein, and Leeper 2012; Iyengar and Hahn 2009; Lodge and Taber 2000) and also to accept and retain confirmatory information more easily than information that challenges their predispositions (Lodge and Taber 2000; Taber and Lodge 2006). This is true even when the information in question is inaccurate (Bullock 2007; Kuklinski et al. 2000), as well as when specific attempts to correct the misinformation have been made (Nyhan and Reifler 2010). These partisan biases in political learning occur even (and, in fact, particularly) at high levels of political knowledge (Nyhan 2010). Rather than rationally calculating their expected net benefits from a particular public policy, individuals may just reflexively adopt the position of their preferred party (Cohen 2003; Lenz 2009).

POLICY FEEDBACK AND CONDITIONAL EFFECTS

In contrast to these well-established features of political preference change, there has been scant theoretical attention to
how the dynamics of cognition work where policy feedback is concerned. This is puzzling, given the vibrant scholarship on policy feedback and the “vast theoretical and empirical literature” showing that personal experience can be important in shaping political attitudes and beliefs (Campbell 2012, 334; see also Mettler and Soss 2004). The term “policy feedback” describes the process through which public policies shape political outcomes, which in turn either reinforce or undermine the policy itself. As E. E. Schattschneider famously asserted, “New policies create a new politics” (1935, 288).

Public policies can prompt changes in the political landscape through a variety of mechanisms, including shaping the resources, incentives, and capacities of social groups (Pierson 1993, 1994, 2004; Skocpol 1992). Most obviously, policies can construct new constituencies who organize to defend the personal benefits that policies and programs provide. For instance, Andrea Campbell ties the political mobilization of senior citizens to the benefits this group receives from Social Security. She argues that the program gave elderly Americans a self-interested stake in the political process (2002, 2005). Policies can also provide resources, both monetary and symbolic, which groups may then leverage to meet their shared political objectives (Campbell 2005; Mettler 2007). Conversely, policies can elicit resistance from groups who bear their costs and are therefore motivated to fight for their reversal (Häusermann 2010; Patashnik 2008; Skocpol 1992). Public policies can also remove resources, stigmatize, and effectively demobilize their target populations (Lerman and Weaver 2014; Schneider and Ingram 1993).

An underlying assumption of many of these studies is that individuals who directly benefit from a given policy will like and support it and that those who bear the costs will evidence opposition. However, extant policy feedback studies have focused primarily on political participation and civic engagement rather than how policies shape public opinion. We suspect, however, that direct experience may increase the degree to which individuals can detect imminent, clear, and personal benefits from a policy when such benefits exist. Under these conditions, self-interest is likely to be weighed more heavily than other group interests or partisan considerations in the formation of political attitudes (Sears and Citrin 1985; Sears and Funk 1990). Conversely, when individuals experience acute policy losses such as the reduction of services and benefits, they are especially likely to mobilize (Pierson 1994; Sears and Funk 1990). Our first expectation is therefore:

H1. Personal experience significantly increases support among beneficiaries of a given policy.

At the same time, we know that learning via traditional pathways, such as through messages received from political elites, varies across individuals according to their political partisanship and level of political information. There is reason to suppose that policy feedback effects might be similarly conditional on features of the electorate. However, we suspect that the conditional dynamics of policy feedback will differ from traditional two-stage messaging models (Zaller 1992), as well as main effects models of policy feedback, in three important ways.

First, we expect learning through policy feedback to operate similarly across levels of generalized knowledge, although still most strongly among those who know less about politics writ large. In the modern media environment, it is increasingly easy for Americans who are not interested in politics to “opt out,” choosing instead from a plethora of non-political media sources (Prior 2007). Thus, citizens can easily avoid exposure to policy-relevant information, including specific details of how a given policy might benefit them personally. In contrast to selective exposure to political messaging, individuals are arguably less likely to sort into public policy provision based on their interest in politics. Instead, they sort primarily according to other criteria, such as policy eligibility or need. In this way, direct learning might extend information to individuals who are less likely to be exposed to information from other sources, such as from elite political rhetoric.

Both low- and high-information individuals who gain experience within a particular policy domain can learn how that policy operates, what it costs, and what benefits it provides. However, by increasing personal salience, this might be especially consequential for amount of factual knowledge that individuals with traditionally low levels of political knowledge have about an issue. Indeed, those who attach high levels of personal importance to an issue, including groups with traditionally lower levels of generalized political knowledge, have been found to be more knowledgeable about the issue relative to other groups (Iyengar 1990). These “issue publics” are more likely to seek out relevant information (Iyengar et al. 2008), and are more likely to remember what they learn (Holbrook et al. 2005). For example, African Americans are more informed than whites about civil rights and criminal justice policy, despite on average being less conversant than whites in other areas of civic knowledge (Iyengar 1990, 2008). Existing research supports the idea that the provision of policy-specific information can lead to opinion formation, even among those who have moderate or low levels of generalized political knowledge (Campbell 2011), and that when individuals possess factual information about public policy, this in-
information can influence their attitudes at least as much as messages from partisan elites (Bullock 2011; Gilens 2001). Our second hypothesis is therefore:

**H2.** Personal experience will result in opinion change, across levels of political information but especially among low-information individuals.

Relatedly, we suspect that experiences within a given policy domain are translated through a framework of policy, not politics. As individuals interact with bureaucrats, nonprofits, or private interests within a given policy domain, they are not necessarily considering the positive and negative aspects of these encounters as part of a broader political framework or filtering their impressions through a political lens. Instead, we suspect that what people learn through public policy experience is more contingent on dimensions of the policy itself. In particular, we expect policy experience to help individuals understand whether and how a given policy provides costs and benefits to one’s self, family, or community and how salient that policy is to one’s own life and well-being (Mettler 2011). For example, previous work finds that those who indicate feeling worried about their medical expenses, even among strong Republicans, were less likely to oppose healthcare reform in both 2008 and 2010 (Henderson and Hillygus 2011). Consistent with this, Campbell (2015) finds that Republicans who view Medicaid as personally important are more opposed to reducing Medicaid spending. Our third expectation is therefore is:

**H3.** The more salient the costs and benefits of a policy are to an individual, the more likely it is that personal experience will influence his or her preferences.

Finally, we do not expect the effects of experience to be concentrated only among those who are already likely to be supportive of a policy. As already discussed, traditional models of political messaging posit that individuals selectively expose themselves to, retain, and accept information. In particular, they prioritize partisan-consistent information, or they simply learn and adopt the positions of their preferred party (Lenz 2009). “Consistency” pressures (Kunda 1990) can even motivate individuals to infer or construct factual beliefs about policies that are consistent with and help justify their extant preferences.

In contrast, interactions within a policy environment might plausibly serve as a less mediated way for individuals to learn about how policies function. First, personal experience with government programs and policies may reduce or eliminate the role of selective exposure. That is to say, we presume individuals are somewhat less likely to selectively expose themselves to only those experiences with policies, programs, and services that align with their party’s ideology.1 In addition, however, policy experiences are less likely than political messages from elites to come from clearly partisan actors or to be accompanied by obvious partisan cues. For instance, a welfare client or a Social Security recipient does not generally know the partisan identification of the bureaucrat who handles his or her claims, and information provided by the caseworker or the SSI office does not usually indicate a particular party as its source. Our last expectation, then, is:

**H4.** Personal experience will result in opinion change, especially among out-party individuals.

**TESTING HYPOTHESES**

To test our hypotheses, we examine the causal effect of personal experience with public health insurance programs on attitudes toward both Medicare and the ACA. Medicare is the federal health insurance program for individuals over age 65 as well as for younger individuals who qualify due to disability or specific illnesses. The program is long-standing and well established. Public support for Medicare is not universal, however, and partisans differ in their preferences over Medicare reform. For instance, only 31% of Republicans believe that Medicare should be maintained as it is today rather than privatized, while support is more than twice that (65%) among Democrats (Kaiser Family Foundation 2011). Similarly, Democrats are roughly 12 percentage points more likely than Republicans and Independents to oppose increasing the Medicare eligibility age for future retirees (Kaiser Family Foundation 2013), and when asked whether they would consider cutting Medicare spending under a variety of conditions, Democrats are consistently more likely than Republicans to express opposition (Kaiser Family Foundation 2011).

Following directly on the hypotheses described above, we expect personal experience with Medicare and the ACA to increase support for maintaining current levels of Medicare spending. We expect these effects to be particularly pronounced among those in poor health, for whom health insurance policies are most salient. Moreover, we expect that the effects of personal experience will not primarily reinforce partisan positions; rather, the causal effect of personal expe-

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1. Some partisans may still opt out of program participation, however, choosing to forgo public benefits based on ideological opposition (see, e.g., Lerman and Sadin 2016).
rience will be concentrated among Republicans. Finally, we expect that personal experience will exert effects among those who possess both high and low levels of generalized political knowledge.

We also assess the effects of personal experience on support for the Affordable Care Act. In comparison with Medicare, partisanship is an even stronger predictor of mass attitudes toward the ACA. This is likely due to the fact that political elites are so fiercely divided (Claassen and Highton 2006). In addition, Democrats are more likely to hold favorable information about the ACA, while Republicans are more likely to hold negative information (and misinformation) about the reform package. For instance, in 2013, Republicans were 10 percentage points more likely than Democrats to be aware of the increased Medicare payroll tax for upper-income Americans, and Republicans were 24 points more likely than Democrats to believe incorrectly that the ACA creates end-of-life government panels (i.e., “death panels”; Kaiser Family Foundation 2013). These differences in policy-specific information help explain partisan distinctions in levels of support; one recent study notes: “Most people have favored most of the [central] elements of the ACA . . . but not everyone recognized that these elements were all in the plan.” The study concludes that if Americans were able to accurately identify the key provisions of the ACA, support for the policy might more than double (Gross et al. 2012, abstract).

The ACA was signed by President Obama in 2010, but it will not be fully implemented until 2018. However, its specific provisions related to Medicare were phased in earlier than many other parts of the healthcare law. Within the first two years after its passage, the reform mandated that Medicare provide free preventive services, launched a Community Care Transitions Program to reduce hospital readmission rates for high-risk Medicare beneficiaries, and instituted a steep discount on some brand-name drugs as part of Medicare prescription coverage. Thus, as with support for Medicare more broadly, our expectation is that personal experience will have a causal effect on support for the ACA. Again, we argue that this is because Medicare beneficiaries receive direct, and in some cases very salient, health-related benefits from the ACA. We likewise expect these effects to accrue among both Republicans and low-information voters. Despite the highly polarized political messaging surrounding the ACA, direct experience offers an alternative, less politically-mediated pathway through which individuals can gather accurate, policy-specific information about how the ACA benefits them personally.

To summarize: we hypothesize that preference formation as a result of personal policy experience will be conditioned by salience, political partisanship, and political information. Specifically, we expect to find that:

1. Personal experience with public health insurance programs will have a positive, causal effect on support for both Medicare and the ACA.
2. These effects will accrue across levels of generalized political knowledge, but will be stronger among low-information individuals who are generally less attuned to the political environment.
3. These effects will be stronger among individuals for whom insurance is more salient, such as those in poor physical health.
4. These effects will be most pronounced among Republicans, who are less likely to already support these policies.

DATA AND METHODS

Our primary analyses draw on data from the 2012 Cooperative Congressional Election Study (CCES; see Ansolabehere 2012). The 2012 CCES was conducted online by YouGov/Polimetrix and includes 54,535 respondents. The CCES asks Americans for their views on a wide range of political issues. The survey also includes questions regarding one’s ideology, partisanship, and political knowledge. In addition, the survey asks respondents to report what type of health insurance they have and to assess their current health status.

We utilize two dependent variables to capture public opinion toward health policies. First, the CCES asks respondents if they support the ACA. We use this variable as a dichotomous indicator (1 = Support; 0 = Oppose) in the analyses to follow. In a separate section of the survey, respondents are told that the federal budget deficit is approximately $1 trillion this year and that “If the Congress were to balance the budget it would have to consider cutting defense spending, cutting domestic spending such as Medicare and

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2. Given relatively high rates of support for Medicare among Democrats overall, we expect learning through personal experience to be limited by ceiling effects among this group.
3. We analyze the Kaiser Family Foundation data in multivariate logistic models. Model details are provided in appendix A1.
4. In particular, neither the expansion of Medicaid nor enrollment in the healthcare exchanges would begin until 2013.
5. Political knowledge captures general knowledge about government and political processes and is measured using the number of correct answers to six factual questions. See the Codebook, available online, for details.
Social Security, or raising taxes to cover the deficit.” Respondents are then asked which they would least prefer. We employ this second survey question as a dichotomous indicator of whether a respondent opposes cuts to Medicare relative to other priorities (1 = Don’t Cut Domestic Spending such as Medicare and Social Security; 0 = Otherwise).

The data as a whole confirm expectations from previous surveys on health reform. In the CCES, Democrats and liberals are more likely than Republicans and conservatives to support the ACA and to want to protect Medicare spending. In contrast, responses are similar across individuals with different insurance types; we find roughly equivalent levels of support for those who report having no health insurance compared to those who have either public or private insurance. This suggests that partisanship, as opposed to objective self-interest, best predicts attitudes toward government health insurance programs in the public as a whole.6

However, health insurance is not randomly assigned to individuals, and many of the factors that predict if one has public, private, or no health insurance (e.g., race and income) may also predict partisanship and political views on health policy. Thus, health insurance—and direct experience within this policy domain—is an endogenous independent variable. To account for this, our analyses exploit a discontinuity in the provision of health insurance based on an individual’s age. When an individual turns 65, he or she becomes eligible for Medicare, and nearly all individuals over age 65 enroll.7 In addition, a majority choose to enroll in Medicare immediately upon eligibility, in the initial enrollment period directly surrounding their 65th birthday, because individuals who wait to sign up for either Part A or Part B may be penalized with additional fees.8 Thus, the shift in age from 64 to 65 serves as an exogenous “encouragement” for seniors to adopt Medicare, which leads to a substantial increase in the proportion of individuals who report public health insurance (vs. private or no health insurance).

As the 2012 CCES survey was fielded from October to November, we describe those born in 1946 and 1947 as 63- and 64-year-olds and those born in 1948 and 1949 as 65- and 66-year-olds. We find that 71% of those born in 1946 and 1947, who are just past the eligibility threshold for Medicare, report having public health insurance. By comparison, only 24% of those born in 1948 and 1949 say they have public health insurance.9 We see a concurrent decrease in the proportion of older individuals who have only private insurance after becoming eligible for Medicare. This difference is less pronounced, as some individuals keep their existing private insurance or add supplemental private insurance to their Medicare plan.10 Figure 1 displays the discontinuity in the proportion of individuals with publicly provided insurance as individuals turn 65 years old (1946–47 vs. 1948–49) relative to much smaller shifts in the proportion with public insurance across other age categories. As expected, only at the “true” discontinuity do we see a sharp increase in the proportion of individuals who receive public insurance. This suggests that an individual’s age is a strong encouragement for insurance type only at the 65-year-old discontinuity.

Our analyses leverage this cut-point in eligibility using a regression discontinuity design (RDD). Regression discontinuity analyses allow researchers to compare average outcomes of groups that are similar on all factors except for being on either side of a rule, threshold, or other type of exogenous arbitrary shock that determines or influences whether they receive a treatment. Because these individuals differ only on the dimension of the treatment, an RDD can identify a causal average treatment effect among individuals at the point of the discontinuities (Angrist and Pischke 2008).

In our analysis, RDD allows us to compare views on the ACA and Medicare among those individuals who receive public insurance (the treatment) against the views of a statistically similar sample of individuals who report having private insurance (the control). Essentially, we can think of this as approximating an experimental research design. Among those just above and just below the threshold for Medicare eligibility, assignment to Medicare benefits is “as if” random. Those just above the threshold are “treated” with public health insurance program experience through Medicare and the ACA. Those just below the threshold, who we should expect to be

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6. Descriptive data are shown in appendix A2.
7. Health Care Financing Administration (2000) estimates that 97% of seniors are on Medicare.
8. Individuals who are working and have employer-based plans as their primary coverage when they turn 65 will not be penalized so long as they sign up for Medicare when their employment ends or their health plan expires.
9. The survey captures only subjective beliefs about how insurance is provided, and some individuals may not recognize Medicare benefits as being “public” (Mettler 2011). However, we are reassured by the strong empirical discontinuity at the age of Medicare eligibility that at least most individuals recognize a shift in how their insurance is provided.
10. To account for this in our primary analyses, we code the dependent variable as public (with or without private insurance) vs. only private insurance. In addition, individuals born in 1946 and 1947 with public insurance may include those who previously had no health insurance when they were ages 63 and 64 or already had another form of public insurance. Details of insurance coverage for each group are provided in appendix B1, and robustness checks using other specifications are described in appendix C.
statistically indistinguishable from those just above, with the exception of insurance status, serve as the control group.\textsuperscript{11}

More specifically, we compare the effect of having public insurance among individuals just above the 65-year-old age cutoff to those just below it in a “fuzzy” RDD.\textsuperscript{12} Birth year is treated as a dichotomous indicator of whether an individual was born in 1946 or 1947 (= 1, just over age 65) versus 1948 and 1949 (= 0, just below 65).\textsuperscript{13} All other respondents are omitted from the data. This regression discontinuity is “fuzzy” because turning 65 does not deterministically result in the receipt of public insurance; rather, it substantially increases the probability of reporting public versus private insurance. In our analysis, we therefore use birth year as an instrument for the dichotomous endogenous treatment variable of public (= 1) versus only private (= 0) health insurance. We follow the Angrist and Pischke (2008) discussion of dichotomous instrumental variables and utilize two-stage least squares linear estimation. That is, in a first-stage regression, we predict insurance status using birth year and exogenous covariates as explanatory variables. In the second stage, we then regress views on the ACA and Medicare onto the predicted values of insurance status and the exogenous covariates included in the first stage. We interpret the second-stage coefficient on public versus private insurance as the local average treatment effect.

For birth year to be a successful instrument, it must satisfy several important assumptions. One assumption is clearly met: figure 1 demonstrates that age and insurance type are highly correlated. A more difficult assumption we make here for the purpose of instrumenting is that age only affects views toward our dependent variables through its relationship with insurance type. It is possible that this exclusion restriction could be violated in multiple ways.

First, individuals become more susceptible to a variety of health conditions as they age, which might affect their personal views toward healthcare policy. This is not an especially pressing concern in our analyses, as we focus only on individuals who are just above or below the age threshold of 65 (i.e., those born in 1946 and 1947 vs. those born in 1948 and 1949). Within this narrow window of 63–66 years old, we can more safely assume that individuals face similar physical health challenges, even though their experience or quality of healthcare may be different based on their differing eligibility status for Medicare. For instance, Card et al. (2009) find that individuals just above and just below age 65 experience

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure1.png}
\caption{Discontinuity in public versus private insurance, by birth year. Source: 2012 Cooperative Congressional Election Study. Proportions are weighted according to CCES Common Content sample weights.}
\end{figure}

\textsuperscript{11} Card, Dobkin, and Maestras (2008, 2009) similarly use age (above or below 65) as a threshold for Medicare eligibility in a regression discontinuity design to assess the effect of Medicare on health-related outcomes.

\textsuperscript{12} For an example of fuzzy RDD, see Angrist and Lavy (1999) on the effects of student class size.

\textsuperscript{13} In the full CCES sample, 1,272 respondents were born in 1946; 1,464 in 1947; 1,648 in 1948; and 1,506 in 1949.
similar rates of hospital admissions (using a measure that is independent of insurance status) and have similar comorbidities; however, the ability of individuals to use particular health services differs due to Medicare uptake. Similarly in the CCES sample, there are no consistent differences in the health challenges individuals in the 63–66 age range report facing; individuals born in 1946 and 1947 list slightly more health conditions (e.g., diabetes, asthma) than individuals born in 1948 and 1949, but they also believe they are in better overall health (on a scale from “poor” to “excellent”).

Another potential concern for the exclusion restriction would be if those in the narrow window around the Medicare age eligibility threshold differ in ways beyond insurance type. We can confirm across a host of observable covariates that these two age groups are similar on almost every dimension, with the exception of insurance. Figure 2 displays difference-in-means tests comparing those born in 1946 and 1947 with those born in 1948 and 1949. As the figure shows, there are negligible age-group differences in partisanship, ideology, political participation, marital status, religiosity, and family income. Younger individuals appear to have slightly higher levels of political knowledge and interest in news; however, these differences of 0.12 and −0.05 are substantively small.

Two significant age differences that may pose a concern are that individuals born in 1948 and 1949 are roughly 9 percentage points more likely than those born in 1946 and 1947 to report being employed full-time or part-time, as well as about 15 percentage points less likely to report being retired. It is worth noting that the increase in retirement is much smaller than the sharp increase in public insurance acquisition at age 65, because individuals in our sample begin retiring at higher rates starting at approximately age 60 and continuing through age 70. However, age 65 still represents a common age for individuals to retire and begin collecting

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14. Health conditions include pre-diabetes or diabetes, heart disease, asthma, arthritis, depression or anxiety, high blood pressure, and high cholesterol. While the differences on both measures are significant, they are substantively small.

15. About 12% of CCES respondents indicated that they “prefer not to say” their family income, but missing data are fully balanced across age groups (p = .97). We use listwise deletion in subsequent analyses for cases with missing data on income and other covariates. All other covariates in the main analysis contain less than 3% missing data.
Social Security benefits. Given that our dependent variable on Medicare spending also explicitly mentions spending on Social Security, age may affect views toward Medicare spending through the shift in one’s employment status and receipt of Social Security payments—not just through the shift in an individual’s insurance type and the personal policy experience that the new insurance can provide.

This does not substantially change our theoretical model; we might reasonably think of age here as an instrument for entry into a new social category—which we capture through our measure of public health insurance adoption—that leads individuals to experience government-provided benefits in a more personal, direct, and potentially salient way. In an additional analysis, we collapse employment and insurance status into a single three-point scale that captures whether a respondent has either retired or adopted public insurance, or done neither or both. This analysis reduces the dimensionality of the regression, so that birth year can serve as the instrument for entry into the new social category as a whole. To more directly adjudicate this issue empirically, however, we also run our analyses first controlling for and then sub-setting by employment status. This allows us to explore whether and how this variable affects the relationship between insurance type and views on the ACA and Medicare. Our initial results continue to hold in these alternative specifications.

As one further way to assess this concern, we turn to a second data set. In a June 2011 Pew Research Center telephone survey of a national sample of adults (N = 1,502), respondents were asked if someone in their household received Medicare benefits and also if someone in their household received Social Security payments. We use these separate variables in a regression analysis to help disentangle whether the effects we find can be traced specifically to the receipt of Medicare benefits. Our results replicate in this alternative data set, and again they confirm the significance of personal experience with public health insurance programs. We are similarly able to replicate our results for the ACA, using a series of monthly, nationally representative telephone surveys conducted by the Kaiser Family Foundation throughout 2011 and 2012. These and other robustness checks confirm the reliability of our results and the validity of our empirical strategy, and they suggest that changes in health insurance status have a causal effect on policy attitudes, independent of changes in employment or receipt of Social Security.

RESULTS
Table 1 displays regression coefficients and F-statistics from the first-stage estimation for each dependent variable, where age serves as an instrument for insurance type. In both models, age is a significant explanatory variable, and the F-statistics suggest that it is a strong instrument. Our analyses control for a wide range of factors in the first- and second-stage regressions, and table 1 also displays coefficients for key independent variables in the second stage of the relationship. In these models, party identification and ideology remain significant predictors of views on the ACA and Medicare after accounting for the effect of personal experience. Republicans and conservatives are more likely to oppose the ACA and less likely to resist cutting Medicare spending; Democrats and liberals exhibit the opposite pattern. Not surprisingly, partisan differences are particularly pronounced on the ACA.

However, consistent with our expectations, we find a significant causal effect of personal experience on attitudes toward health insurance provision. Specifically, we find that those who report public insurance (relative to private only) are more likely to support the ACA and more likely to oppose cutting Medicare. These results confirm our expectation

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16. A comparison of the discontinuities on retirement and insurance coverage is provided in appendix B2.
17. Details of these and related robustness checks are provided in appendix D.
18. The Pew Survey uses a combination of landline and cell phone random digit dial samples provided by Survey Sampling International.
that individuals who have personal experience with public insurance become more supportive of both Medicare spending and the ACA than individuals who are otherwise similar but lack personal experience.19

We also hypothesized that the effects of personal experience would be most pronounced among those who interact with the healthcare system (and their health insurance provider) most frequently and who, subsequently, are better able to perceive the personal costs and benefits of health insurance-related policies. To test this expectation, we regress views on Medicare and the ACA on the interaction of insurance type and respondents’ self-reported general health (rated from excellent to poor). The results for Medicare spending support our hypothesis (see fig. 3). The difference in opposition to cutting Medicare spending among individuals with and without personal experience (measured by public vs. private insurance type) is more pronounced among individuals in poor relative to excellent health. The interaction term is in the same direction, though not statistically significant, in models predicting support for the ACA.

We then examine the effects of insurance type on views toward the ACA and Medicare when we subset respondents by political party. Figure 4 displays the second-stage coefficient for public (vs. private) insurance in predicting views toward the ACA and Medicare within Republican, Democratic, and Independent subgroups. The results suggest that the effect of insurance tends to work in the same direction across partisan groups, though with important distinctions.20 Those with public insurance are more likely than those with private insurance to indicate they would least prefer to cut Medicare spending, and these results are statistically significant for the Republican subset only. Among Independents, personal experience with government appears to have a causal effect on attitudes toward the ACA, though this falls shy of statistical significance (p < .10).

We next test the effect of experience across levels of political knowledge. Political knowledge here captures a generalized level of information about politics rather than specific information about healthcare policy. Figure 5 displays the results of the instrumental variables analysis for those with high and low political knowledge. As expected, the effect of personal experience with insurance type appears to accrue most strongly among those with otherwise low levels of political knowledge: the coefficient on public insurance for support of the ACA is 0.01 and is not statistically significant among those with high political knowledge. For those with low knowledge, the coefficient is more than 10 times larger and is significant at conventional levels (p < .05). In models predicting opposition to cutting Medicare, personal experience is a significant predictor at both levels of information,

19. Full controls include partisanship, ideology and ideological strength where applicable, gender, race and ethnicity, family income, education, occupation, whether one is a public employee or from a military household, marital status, whether one is a homeowner or has recently moved, whether one is registered to vote, whether one voted in 2008, employment status, whether one has a child under age 18, following news on government and public affairs, religiosity, and whether one is born again. The results hold in models that omit covariates.

20. For details, see appendix F. The results in fig. 4 include average effects for each party. It is possible that there is unexplored within-party heterogeneity in the size and the direction of the effects.
but the coefficient among those with low knowledge is about twice as large.

Our final set of analyses examines the effects of personal experience subset by both partisanship and knowledge together. The results of our instrumental variables models again confirm that the effects of personal experience are most pronounced among Republicans, particularly those with low levels of political knowledge. This is true of both Medicare and the ACA. When we further divide political knowledge into terciles, effects on support for the ACA are still statistically

Figure 4. Causal effect of insurance type on support for the ACA and Medicare, by party. Dependent variables are dichotomous. Shown are coefficients for public (vs. private) insurance in two-stage least squares regressions. Birth year (1948–49 vs. 1946–47) is the instrument for insurance; 95% confidence intervals with robust standard errors.

Figure 5. Causal effect of insurance type on support for the ACA and Medicare, by political knowledge. Dependent variables are dichotomous. Shown are coefficients for public (vs. private) insurance in two-stage least squares regressions. Birth year (1948–49 vs. 1946–47) is the instrument for insurance; 95% confidence intervals with robust standard errors. Additional details are in appendix H.
significant among low-information Republicans, and Medicare effects are significant among Republicans with moderate levels of information.\textsuperscript{21}

\textbf{ADDITIONAL ANALYSES}

Our analyses confirm our hypotheses that personal experience with public insurance has a significant effect on health policy preferences. We then conduct two placebo tests to assess whether the effects of personal experience on support for the ACA and Medicare do not exist where our theory and hypotheses predict we would not find them. First, in a reduced-form regression—where we regress our dependent variables directly on our instrument (birth year) and other exogenous covariates—we should observe a significant single-stage effect of an age-based instrument only at the 65-year-old discontinuity. As figure 6 shows, among five distinct age cutoffs, the 1946–47 versus 1948–49 threshold is the only cutoff that exhibits a statistically significant effect on the dependent variables. Individuals above the age cutoff for Medicare eligibility are more supportive of the ACA and Medicare than individuals below this cutoff.\textsuperscript{22}

In a second test, we estimate two-stage regressions predicting policy support with insurance type, using birth year as an instrument and the same set of covariates as in previous models, but we use alternative policy areas as our dependent variables. Our logic is straightforward: our empirical findings confirm that personal experience with government health insurance programs increases support for health-related policies like Medicare and the ACA. We would not, however, expect to see an effect of personal experience with health insurance on attitudes toward other unrelated issues. We estimated four two-stage least squares regressions using the following placebo dependent variables: support for increased border controls, support for allowing companies exemptions from covering birth control due to their religious beliefs, support for same-sex marriage, and support for the Keystone pipeline. As expected, none of these effects are statistically significant; personal experience influences attitudes only toward policies that are directly relevant to that particular experience (see fig. 7).

We then return to the question of whether our results are driven by changes in insurance type or by other things that are likely to change concurrently when individuals turn 65, such as entering retirement or receiving Social Security. In this test, we rely on the June 2011 Pew Research Center survey, both to

\textsuperscript{21} Details are provided in appendix G.

\textsuperscript{22} It is possible that individuals change their attitudes or insurance status at age 63 or age 64 in anticipation of receiving benefits once they turn age 65. If individuals systematically anticipated benefits prior to age 65, then we should expect a reduced form effect on attitudes between individuals just approaching the Medicare eligibility threshold (those born in the period 1948–1949) and those slightly younger (those born in the period 1950–51); we see no such differences in the reduced-form model in fig. 6. However, even if the anticipation of benefits occurs for some subpopulation, this would likely lead to an attenuation, making our results a conservative estimate of true effects.
confirm that we are able to replicate our results in a distinct data set and to help disentangle the effects of Medicare benefits from Social Security payments. The dependent variable used here is similar to the outcome employed in our primary analysis: “What is more important, taking steps to reduce the budget deficit or keeping Social Security and Medicare benefits as they are?” where 1 = “Keeping Social Security and Medicare benefits as they are” and 0 = “Taking steps to reduce the budget deficit.” Individuals also report whether “you or anyone in your household currently receives” Medicare benefits, Social Security payments, and/or is covered by a private health insurance plan. In the survey, individuals report their age in years, which allows us to compare individuals just above 65 (= 1) to those just below 65 (= 0). Due to the much smaller number of respondents in this survey ($N = 1,502$), we test multiple age bandwidths. This allows us to increase statistical power by expanding the number of observations around the age 65 cutoff.

We first replicate the reduced-form regression by regressing the dependent variable on age, and we then replicate the main instrumental variables two-stage least squares regression by using age as a dichotomous instrument for receipt of Medicare benefits (replicating table 1). The results confirm a positive causal effect on preserving Social Security and Medicare benefits (see table 2). We then regress the dependent variable on whether a respondent (or someone in the household) receives Medicare, Social Security, and/or is covered by private insurance, limiting the data to only individuals in the age range around the 65-year threshold. Even when controlling on receipt of Social Security payments, the results (shown in table 2) indicate that receiving Medicare benefits has a positive effect on wanting to preserve Medicare and Social Security benefits and is significant at the three largest bandwidths. Conversely, being covered by private health insurance has a negative and significant effect on the outcome.

We are similarly able to replicate results for ACA preferences in an alternate data set. The 2011–12 Kaiser Family Foundation surveys asked respondents: “As you may know, a health reform bill was signed into law in 2010. Given what you know about the new health reform law, do you have a generally favorable or generally unfavorable opinion of it?” This was followed by, “Is that a very favorable/unfavorable or somewhat favorable/unfavorable opinion?” We code “very/somewhat favorable” as 1 and “very/somewhat unfavorable” as 0. Respondents also indicated their “main” source of health insurance coverage. Individuals who rely on Medicare as their primary insurance are coded 1 and individuals with private insurance or those without insurance are coded 0.23 While standard political knowledge questions are not available, respondents did report their level of education, which we use as a proxy for political knowledge. In table 3, we replicate the left panel of figure 5 by conducting a two-stage least squares regression of ACA favorability onto Medicare receipt.

23. This differs from the CCES where individuals are coded as “public” even if they also receive private insurance.
instrumented by age. Due to the smaller number of observations per survey, we again report results for multiple age bandwidths.

Among all respondents, we find a positive effect of the receipt of Medicare on ACA preferences, though the effect does not reach significance at conventional levels. However, among individuals who are least likely to be attentive to politics (measured here as those with a high school degree or less), there is again a positive and statistically significant effect of receiving Medicare on ACA favorability. Consistent with the results in figure 5, the effect is smaller and nonsignificant for individuals with some college or a college degree.

CONCLUSION

On October 1, 2013, America’s federal government failed to open for business. The implementation of the Affordable Care Act was central to the events that preceded this extraordinary shutdown; Eric Cantor (R-VA) went so far as to say that the Republican strategy was “first and foremost a delay of Obamacare” (Rowley and Tiron 2013). In public statements, Republicans argued that the ACA was simply not ready for full implementation and that postponement was just good public policy (FoxNews.com 2013). But was postponement also good political strategy?

Our findings provide compelling evidence that it was. Scholars have well established that individuals must both receive and accept new information in order to inform their policy attitudes or update their political preferences (Campbell et al. 1960; Zaller 1992). In the case of traditional messaging from the media and elites, low-knowledge individuals often fail to form or update their attitudes in meaningful ways because they are not attuned to these political sources. High-knowledge individuals are also unlikely to experience meaningful attitude change, because, although they are attuned to political messaging, they are less likely to accept new information when it conflicts with their existing attitudes (Zaller 1992).

In contrast to these findings, the evidence we have presented here suggests that personal experience can shape policy preferences and that this alternative pathway might be less subject to both information sorting and partisan biases. Specifically, we find that personal experience with public health insurance programs leads to greater support for Medicare and the ACA. While the direction of the effect is similar across partisan groups,
effects appear most pronounced for Republicans. Moreover, in contrast to the standard "Reception-Acceptance" model of traditional political messaging, personal experience appears able to reach those with otherwise low levels of political attentiveness.

These findings suggest important insights for scholars concerned with policy feedback, as well as those concerned with policy preference formation and change. For those interested in the former, our findings underscore the wisdom of attending to conditional, not just main, effects. For those studying the latter, our findings suggest that existing models of media and elite messaging may not translate to less politically mediated venues for learning, such as personal experience with public policy, where partisan biases and political attentiveness may be less of a factor.

We offer an important qualifier to our results: we cannot generalize from our causal analyses to the population as a whole. The RDD identification strategy allows us only to estimate effects among a subset of seniors, those who fall just above and just below the age threshold for Medicare eligibility. This small group may be somewhat different from the total Medicare beneficiary population (e.g., including those who receive Medicare at an earlier age due to disability), as well as from the elderly more broadly. Likewise, older Americans are politically distinct from the populace as a whole; on average, they are somewhat more conservative, participate in politics more frequently, and are more politically interested and politically aware (Delli Carpini 2005; Wolinger and Rosenstone 1980). We might productively build on this research by examining whether our theories hold among other subgroups of Americans, as well as among the public more generally.

In addition, a fruitful avenue for future research will be to examine whether the effects of policy feedback might be conditional not only on features of the individual, such as partisanship and levels of political information, but also on features of the policy itself. We found some differences in the pattern of effects between support for Medicare and support for the ACA. In particular, support for the ACA does not appear responsive to personal experience among high-knowledge citizens, and policy salience (captured by assessments of current health status) appears to interact with experience in shaping support for Medicare but not for the ACA.

One explanation for this is that our data come from 2012, before enrollment began through the healthcare exchanges or Medicaid funding was expanded through the ACA. Thus, our treatment indicator does not capture the full extent of personal experience with the ACA but only the small portion of the ACA that added benefits to Medicare. This is important because whether the receipt of public health insurance leads to support for the ACA may be contingent on individuals being able to perceive a close link between their own insurance and the benefits they received from the 2010 health reform law.

We find some support for this explanation in evaluating support for the ACA among those just above and just below the Medicare eligibility threshold using the Kaiser Family Foundation Health Tracking Polls. Consistent with our findings from the CCES, Medicare recipients in the early period following the law’s passage (2011–12) were more likely to view the ACA favorably. During this time period, recipients were also more likely to be aware of the ACA’s provision that closed the Medicare “donut hole” gap, providing a direct positive benefit to seniors. In the later period, from 2013 to 2014, however, these results are attenuated; once the healthcare exchanges launched, Medicare recipients were less consistently supportive of the ACA relative to those with other forms of insurance, and they were not more likely to know about the ACA’s “donut hole” gap provision.

This suggests that, even with personal experience, individuals may still rely on information from elites to help connect their experience to policy. Despite the ACA having popular Medicare-related provisions, Republicans continually launched...
attacks claiming Democrats cut more than $700 billion from Medicare to pay for "Obamacare." As the more controversial (and costly) parts of the ACA were phased in, this message might have resonated with Medicare recipients. During this later period, Medicare recipients might also have become more focused on non-Medicare-related provisions of the ACA to inform their preferences. As they did not need to take advantage of the health insurance exchanges (since they were already receiving Medicare), they may have perceived the ACA as imposing net costs post-2013.

This points to a second important difference between the two policies. Despite concerns about its overall efficiency (e.g., Cannon 2009; Skinner et al. 2001), Medicare is generally regarded by its recipients as a quality health insurance program that delivers a high standard of care and sufficient choice (North Star Opinion Research 2013). We do not yet know whether various provisions of the ACA—especially the insurance options offered through newly established state and federal healthcare exchanges—will likewise be perceived by participants as being of high quality.

More broadly, it remains to be seen whether the politics of the ACA will ultimately come to look like those of Medicare or will remain more contentious (Skocpol and Jacobs 2010). However, our results provide important insights into how patterns of support might unfold. Political observers have suggested that a key reason the ACA failed to garner widespread support is that the president and his administration did not do enough to raise awareness about the reform package (Patashnik and Zelizer 2013). Yet while the dissemination of political information by the White House may matter, political sorting and partisan biases make it unlikely that this will lead to vastly more accurate information among the politically unaware or do much in the way of increased support among Republicans. In contrast, our results suggest that public opinion may change as people accrue positive personal experience with the ACA’s benefits and that these changes may take hold remarkably fast. Despite being limited to looking at just one to two years after receipt of public insurance, our analyses show fairly robust effects of personal experience on attitudes toward Medicare and also toward the ACA.

In sum, we offer here a useful framework for thinking about the interactions between partisanship, information, and personal experience in shaping public attitudes. For reasons that have been well explored in previous literature, the receipt and processing of political information is complicated by both levels of political interest and partisan perceptual biases. However, our analyses suggest that direct experience may be a more direct and politically unmediated way to inform individuals about the personal costs and benefits of particular policies. In the case of Medicare, our results suggest that experience with the policy may make benefits particularly appealing for those in poorer health, who are likely to more heavily rely on their health insurance, as well as for Republicans who are not predisposed to support public health insurance programs like Medicare and the ACA. Personal experience may also be an effective way to reach those with otherwise relatively low levels of political information, who are less likely to gather policy information through other means. By bringing theories of policy feedback together with insights from traditional models of preference formation and change, our study builds on and extends existing knowledge within each of these vibrant streams of research.

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