

Freedom of the Press and Thermostatic Responsiveness

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Thermostatic responsiveness is contingent on there being a sufficient amount of clear and accurate information about policy change available to citizens. Past work has highlighted the importance of issue salience and vertical divisions of power. Here, we focus on another institution that plays a central role in informing citizens about policy: the mass media. Using new measures on spending preferences from Wave 4 of the Comparative Study of Electoral Systems, merged with OECD data on government spending and Freedom House measures of freedom of the press, we assess how openness facilitates public responsiveness to policy. We find evidence that when media are weak, so too is public responsiveness to policy, highlighting the critical role that mass media play in modern representative democracy.

Background

Thermostatic Public Responsiveness

There is now a considerable body of work on thermostatic responsiveness of public preferences to policy (see, e.g., Eichenberg and Stoll 2003; Erikson et al. 2002; Jennings 2009; Jennings and John 2009; Pacheco 2013; Page and Shapiro 1992; Stimson et al. 1995; Soroka and Wlezien 2010, Wlezien 1995; 2004). The basic model is straightforward, wherein the public's preference for "more" policy – its relative preference, R – represents the difference between the public's preferred level of policy (P^*) and the level it actually gets (P):

$$R = P^* - P. \tag{1}$$

The model typically is applied across time. Here, the public's relative preferences change when either the public's preferred level of policy changes or policy itself changes, unless of course those changes cancel out. But the model also applies across space, as has been shown in past work comparing states and countries (i.e., Goggin and Wlezien, 1993;

Wlezien and Soroka 2012). Preferences for more or less policy in each state depend on whether, and the extent to which, the public's preferred level is greater than policy itself in the different contexts.¹

A regular, responsive link between what governments provide and what publics demand is central to representative democracy. It follows that effective representative democracy depends on a public that is at least minimally informed, and at least partly responsive to what governments do. Indeed, in the absence of thermostatic responsiveness it is not clear that governments would seek to represent public opinion: not only would opinion be ill-informed, but the public would be incapable of holding governments accountable for their actions. It is of some significance, then, that the existing literature cited above finds evidence of thermostatic responsiveness across a range of countries and domains, and across both time and space.

That said, the degree to which Equation 1 characterizes measured opinion-policy relationships varies widely across publics, policy domains, and political institutions. This is in large part because P is not always clear – citizens do not always know about recent levels of policy. There are several reasons why we might expect that to be the case. First and foremost is issue salience. The degree to which the public cares about and is attentive to an issue influences the demand for policy information, which presumably also influences the supply. This clearly augments the degree to which a public is informed about a policy domain; and it thus makes sense that past work finds limited public responsiveness in low-salience domains (Wlezien 2004; Soroka and Wlezien 2010; see also related work by Burstein 2013). Second, federalism also appears to be important. Here, the influence is not on the quantity of information but on the quality, particularly insofar as multiple governments are involved in the same policy areas. When various layers of government are involved in policymaking, the policy signal sent to the public is complicated and correspondingly mutes public responsiveness (e.g., Wlezien and Soroka 2011; Wlezien and Soroka 2012; Pacheco 2013).²

In short, the kind of public responsiveness suggested in Equation 1 depends on a sufficiently large stream of accurate information about what governments are doing. While past work has focused on the role that political institutions play in this regard, research exploring thermostatic responsiveness has dealt with mass media only in passing (e.g., Soroka and Wlezien 2010). This is true in spite of the fact that there is a long-standing

¹ In practice, because it is difficult to measure P^* , directly estimating Equation 1 across states or countries can be challenging, though see Goggin and Wlezien (1993) for one empirical application.

² There also are reasons to expect that political competition matters: insofar as inter-party competition increases the information available to the public, it will tend to improve the likelihood of public responsiveness.

and vast literature arguing for the importance of these media in representative democracy (see citations below), and the fact that public responsiveness to policy – often well beyond citizens’ own personal experiences – almost certainly must rely, at least in part, on mass-mediated information.

The Role of Mass Media

What would we require of mass media in order for there to be thermostatic responsiveness to policy? One concern is that media coverage must include a sufficient amount of accurate information about policy. Work has found that newspaper content in the US provides a surprisingly high number of cues about the direction of policy change, at least in some domains (Neuner, Soroka and Wlezien 2015). This fits with work suggesting that people can and do learn about policy when there is sufficient media coverage (e.g., Barabas and Jerit); with research that finds some areas in which the public actually has relatively high policy-specific knowledge (e.g., Delli Carpini and Keeter 1997); and with evidence that information-rich environments tend to reduce the knowledge gap between the information-rich and the information-poor (Fraile 2013).

We focus here on a different but related concern about mass media, one that is higher up the causal chain: freedom of the press. Note that a concern about freedom of the press may be less about the availability of policy information, and more about the accuracy of that information. An unfree press (or media, we will use the terms interchangeably here) may well provide lots of policy information, after all, but the accuracy of that information is more suspect. Either way, it makes sense that there is work suggesting that political knowledge increases alongside freedom of the press. Citizens in countries with few to no press restrictions tend to know more about their government (Leeson 2008); this is line with a well-established literature on the role that a free press plays in informing citizens and holding government accountable (McQuail 1997; Mulgan 2003; Coyne and Leeson 2004; Besley and Prat 2006; Norris 2006; Leeson and Coyne 2007). We accordingly argue here that more controls on press freedoms can lead to less accurate (and perhaps also less frequent) signals about policy change. This can make it more difficult for citizens to hold accurate opinions and, consequently, more difficult for citizens to hold their governments accountable. This may also lead to reduced, or even non-existent, thermostatic responsiveness.

Our particular interest in the impact of a free press is driven in part by recent events in the United States. Scholarship makes clear that US press coverage of policy issues has always been imperfect. This is almost by definition in the US, and everywhere else: media coverage is necessarily a sample, and so it contains the error associated with sampling. But there are also vast literatures chronicling a range of systematic biases in news coverage (e.g., Altheide 1997; Meyrowitz 1994; Patterson 1994; Bennett et al. 2008; Groeling 2013;

Soroka 2012; Dalen et al. 2015; Shoemaker and Vos 2009) and a dearth of information about policy (e.g., Lawrence 2000), particularly on complex scientific issues (e.g., Friedman et al. 1999; Stocking and Holstein 2008). There has nevertheless been no time in the recent past – and certainly not during the period for which analyses of thermostatic responsiveness are feasible – that there has been as much public consternation about limitations to journalists’ access to information, and protection through libel laws. Consider just a small collection of recent headlines: “Donald Trump’s threat to press freedom: why it matters,” (Mirren Gidda and Zach Schonfeld, *Newsweek*, 11 December 2016); “On freedom of the press, Donald Trump wants to make America like England again” (Callum Borchers, *The Washington Post*, 24 October 2016); “Trump threatens to weaken First Amendment protections for reporters” (Jeff Horwitz, Associated Press, 27 February 2016). Add to this what appears to be a recent tendency to provide press access primarily to supportive sources, and Trump’s own claim that journalists are “among the most dishonest human beings on earth.” In this environment, articles reflecting journalists’ concerns should not be surprising. “Reuters says journalists should be prepared to treat US under Trump 'like Iran or Zimbabwe'” (Lizzie Dearden, *The Independent*, 1 February 2017) – *this* may or may not seem a step too far. It nevertheless is clear that we are in a period of heightened concern about press freedoms in the US; and an analysis of the effects of press freedoms cross-nationally thus seems especially timely.

In sum, drawing on past work on political institutions thermostatic responsiveness, alongside work highlighting the importance of a free press to representative democracy, we explore below the possibility that thermostatic responsiveness to policy is contingent on a robust, free media. It is our expectation that thermostatic responsiveness will be stronger in an environment with few press limits. Conversely, strong controls on the press will tend to mute thermostatic responsiveness.

Data

Our analyses focus on Wave 4 of the Comparative Study of Electoral Systems (CSES), a cross-national survey that thus far includes over 30,000 individuals in 27 countries.³ The survey was administered between 2011 and 2016 through a collaboration between the Center for Political Studies at the University of Michigan and the GESIS - Leibniz Institute for the Social Sciences. CSES Wave 4 data are unique in that they include a series of questions on respondents’ preferences for policy change:

³ Countries are as follows: Australia, Austria, Brazil, Bulgaria, Canada, Czech Republic, France, Germany, Greece, Iceland, Ireland Israel, Japan, Mexico, Montenegro, New Zealand, Norway, Poland, Portugal, Republic of Korea, Serbia, Slovenia, Sweden, Switzerland, Thailand, Turkey, and United States of America. Note that Mexico is included in Wave 4 twice, 2013 and 2015. We use the 2013 data.

For the next questions, please say whether you would like to see more or less government expenditure in each of the following areas. Remember if you say ‘more’ it could require a tax increase, or ‘less’, it could require a reduction in those government services.

(Response categories: Much more than now, Somewhat more than now, The same as now, Somewhat less than now, Much less than now)

...Health, Education, Unemployment Benefits, Defense, Old-Age Pensions, Business and Industry, Policy and Law Enforcement, Welfare Benefits

The CSES interviewer instructions include descriptions of each domain, used to clarify the questions for respondents. We include the full question wording along with “help” descriptions in the Appendix. Responses are recoded from -2 to +2, where low values indicate support for less spending, high values indicate support for more spending, and zero indicates support for the “same as now.”

We focus first on the welfare domain only. Our individual-level models include the following demographic variables: gender (binary, female=1), age (in years), and education (binary, some university or more=1). Income is not asked in all countries, so rely on a different question asking how likely it is that respondents’ standard of living will improve in the next 10 years. Responses range on a 4-item scale from “very likely” to “very unlikely.” We recode responses to range from 0-1; the mean is 0.50. Insofar as demographics are related to preferences for welfare spending, we regard them as (partial) proxies for P^* , people’s underlying preferred levels of spending. We have the same view of the standard of living measure, and we expect that those who are less well off will be, *ceteris paribus*, be more supportive of welfare spending (e.g., Hasenfeld and Rafferty 1989; Cook and Barrett 1992).

We include several other measures intended to capture P^* , since, as Equation 1 makes clear, doing so is critical to properly identifying the impact of spending (P) on relative preferences (R). First, we use respondents’ belief that government should reduce differences in income. Response options are on a 5-point scale from “strongly agree” to “strongly disagree.” We recode these responses to range from 0-1 with higher levels indicating stronger agreement; the mean for all respondents is 0.71. Second, we use the 11-point self-identified left-right ideological scale. We recognize that this does not have the identical meaning in each country, but we regard it here only as one (admittedly rough) indication of a commitment (or not) to the redistributive state. The measure is coded 0-10 (left to right) with a mean of 5.43.

We add to these individual-level data a number of country-level variables. First and foremost is our measure of government spending, drawn from the OECD SOCX database.

That database includes indicators of social spending for 22 of the 27 countries in the Wave 4 of the CSES as a per cent of GDP.⁴ Our analysis of welfare relies not on total social spending, which includes health, pensions, unemployment, etc., but rather on “other” spending – the subdomain in the SOCX database that captures most social assistance and welfare programs.⁵ Our measure of current spending is made complex by the fact that elections happen at different times of the year. We take the following approach: if an election study occurs in the first four months of the year, we use last year’s spending; if an election is after April, we use the current year’s spending. (The same rules apply to the inclusion of other country-level variables as well, described below.)

We add to this a measure of mean “other” spending, averaged from 1990 to 2006, which is intended to capture another element of P^* – really, the long-term level of commitment to welfare, in the sixteen years prior to the period during which wave 4 of the CSES took place. We regard this as an additional measure of P^* insofar as there is reason to suppose that average levels of support for welfare spending are “baked in” to average levels of spending across countries.

Finally, we include freedom of the press measures drawn from Freedom House. The three components of their index – economic environment, legal environment, and political environment – are very highly correlated (Pearson’s $r = 0.96-0.98$ in our sample) with the overall measure, and so we rely solely on the overall measure below. Data are available for all countries (in the appropriate year, depending on the timing of elections, as described above). The original index measure ranges from 0-100, with zero representing complete press freedom. For our model, we rescale the index from 0-1.

All models below are simple OLS models, using clustered standard errors, where spending preferences are the dependent variable. We provide basic descriptive data for all variables, by country, in Appendix Table 1.

Freedom of the Press & Responsiveness to Welfare Spending

We begin by exploring public responsiveness to welfare spending. Table 1 shows four models regressing (individual-level) welfare spending preferences on a basic set of demographics and our measure of country-level spending at t . Our focus here is on the coefficient in the top row of the table – the coefficient which captures responsiveness to policy. The coefficient in column 1 is, as we expect, negative, but it also is statistically insignificant. There thus is only a hint of thermostatic responsiveness here.

⁴ Countries that are missing data are: Brazil, Bulgaria, Montenegro, Serbia, and Thailand.

⁵ Detailed descriptions of the SOCX subdomains are readily available at:
<http://www.oecd.org/social/expenditure.htm>.

Table 1. Modeling Relative Preferences for Welfare Spending

	Model 1	Model 2	Model 3	Model 4
Spending	-0.178 (0.189)	-0.755** (0.301)	-0.714*** (0.263)	-1.033* (0.550)
Press Limits				0.997* (0.577)
<i>interaction</i>				3.165* (1.705)
Female	0.079*** (0.017)	0.077*** (0.017)	0.048*** (0.015)	0.047*** (0.013)
Age	0.001 (0.001)	0.001 (0.001)	0.002 (0.001)	0.003** (0.001)
Education	-0.294*** (0.091)	-0.267*** (0.082)	-0.217*** (0.070)	-0.153** (0.066)
Std Living	-0.150 (0.117)	-0.143 (0.100)	-0.011 (0.094)	-0.011 (0.086)
Mean Spending		0.569** (0.238)	0.569*** (0.217)	0.406 (0.251)
Gov Reduce			0.744*** (0.124)	0.730*** (0.105)
Ideology			-0.040*** (0.013)	-0.041*** (0.013)
Constant	0.559*** (0.167)	0.516*** (0.164)	0.104 (0.224)	-0.253 (0.264)
Observations	26,823	26,823	23,622	23,622
R2	0.032	0.050	0.108	0.138

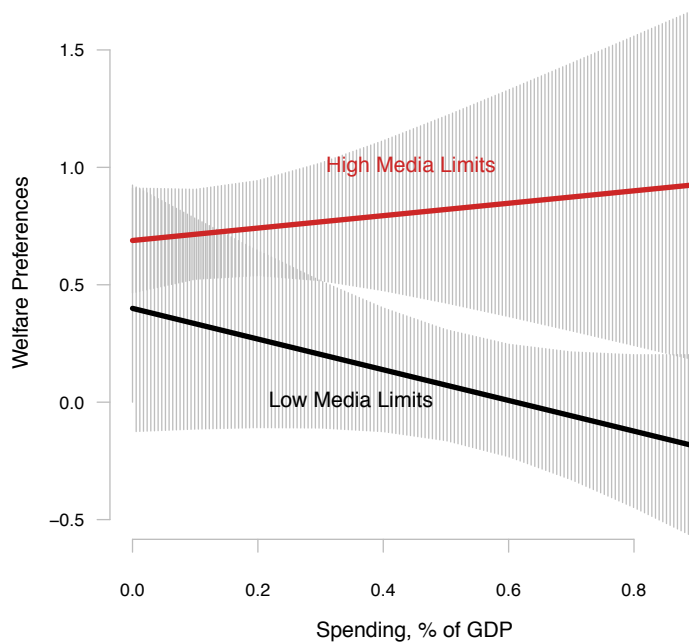
* $p < .05$; ** $p < .01$; *** $p < .001$. Cells contain OLS regression coefficients with clustered standard errors (by country).

That said, the first model makes little effort to control for P^* , and includes only demographic variables. The second and third models in Table 1 incorporate the other predictors: the second model adds our country-level control for P^* , mean spending levels from 1990 to 2006, and the third model adds individual-level measures – support for government reducing income disparities and left-right ideology. All variables have significant effects in the expected direction(s). Moreover, adding these instruments for P^* reveals statistically significant (and substantial) thermostatic responsiveness to current levels of spending. It is mean spending that makes the big difference here; controlling for it alone reveals thermostatic responsiveness in Model 2. Incorporating the individual-level covariates in Model 3 doubles the proportion of variance explained but the impact on thermostatic responsiveness is marginal.

We regard findings in Model 3 as rather striking: they demonstrate thermostatic responsiveness in a large dataset across what it is to our knowledge the broadest, most cross-national sample to date. Even so, our primary interest here is in the possibility that thermostatic responsiveness is moderated by press freedoms. This is the focus of Model

4, which adds our measure of press limits as well as the interaction with spending levels. We have no particular expectations about the direct effects of press limits, but we expect the interaction to be positive (thus reducing negative responsiveness). This is exactly what we observe. The coefficient for spending now captures the magnitude of responsiveness when there are no press limits (when that measure is equal to 0), and it thus is much larger in magnitude than in previous models. As we can see from the coefficient on the interaction, this responsiveness is reduced as we introduce press limits.

Figure 1. Welfare Preferences and Spending, Moderated by Press Freedom



Predicted values with clustered standard errors, based on Model 4 in Table 1.

The interaction is difficult to interpret in Table 1, so Figure 1 shows the estimated impact of increases in spending on welfare preferences (R). We expect the line to decrease from left to right; that is, we expect that relative preferences for spending will move downwards as spending increases. We plot predictions for two levels of press freedoms: low media limits, where press limits are set to the 10th percentile of the measure in our data (0.12), and high media limits, where press limits are set to the 90th percentile (0.41). Results in this figure are relatively clear: under low media limits, increasing spending is associated with decreased preferences for more spending; under high media limits, this is not the case.

Robustness Checks

The prior section sets out what we regard as very clear evidence of our expectations. We find in our estimation of welfare preferences strong evidence of thermostatic responsiveness

to spending, across a very broad sample; but we also find that this is conditional on freedom of the press. Our interest in the welfare domain in particular is that it is a relatively salient, and important, domain across a good number of countries. It is also a domain for which we have spending preferences (R), reliable measures of spending (P), and reasonable proxies for preferred levels of policy (P^*).

Welfare is not the only domain for which this is true, however. The CSES also asks respondents about their preferences on healthcare and old-age pensions, and these are domains for which the OECD SOCX database also provides reliable spending data. The weakness in both cases is that we do not have a good substitute for respondents' belief that government should reduce differences in income. We still are able to rely on the country-level measure of P^* , average spending levels from 1990 to 2006, which may be a reasonable indication of policy preferences in the welfare domain but not necessarily for health and pensions. We accordingly proceed with what we suspect is a gap in our measures for P^* , and have somewhat more reserved expectations as a consequence.

Table 2. Modeling Relative Preferences for Health Spending

	Model 1	Model 2	Model 3	Model 4
Spending	-0.096*** (0.034)	-0.263*** (0.054)	-0.271*** (0.055)	-0.397*** (0.095)
Press Limits				-1.717** (0.847)
<i>interaction</i>				0.505** (0.251)
Female	0.126*** (0.022)	0.127*** (0.022)	0.125*** (0.021)	0.129*** (0.023)
Age	0.001 (0.001)	0.001 (0.001)	0.002 (0.001)	0.002* (0.001)
Education	-0.036 (0.113)	-0.024 (0.104)	-0.051 (0.101)	-0.043 (0.082)
Std Living	0.010 (0.078)	0.028 (0.068)	0.057 (0.071)	0.082 (0.070)
Mean Spending		0.207*** (0.070)	0.204*** (0.072)	0.218*** (0.075)
Ideology			-0.031*** (0.008)	-0.029*** (0.007)
Constant	1.345*** (0.221)	1.317*** (0.143)	1.517*** (0.157)	1.912*** (0.357)
Observations	28,317	28,317	24,928	24,928
R2	0.029	0.049	0.058	0.067

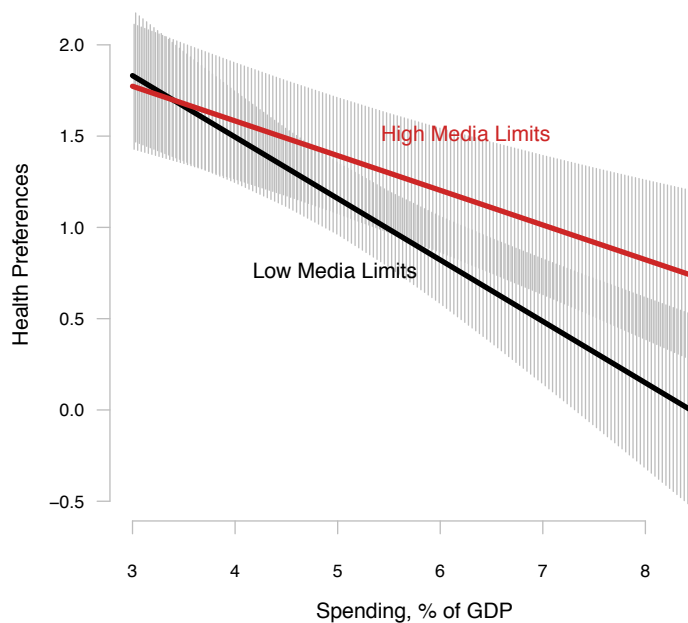
* $p < .05$; ** $p < .01$; *** $p < .001$. Cells contain OLS regression coefficients with clustered standard errors (by country).

Table 2 presents the models for health spending – near-replications of what we have seen in Table 1, though in the health domain. Model 1 finds a coefficient for spending that is both negative and statistically significant, indicative of a thermostatic response. Adding measures of P^* in Models 2 and 3 reveals both the significant impact of mean government

spending and ideology, and strengthened estimates of thermostatic responsiveness. And Model 3 again doubles the proportion of variance explained from the first model.

As for the analysis of welfare preferences, the most important column in our examination of health preferences is Model 4. Here, again, we find a significant positive coefficient on the interaction term of press freedom alongside a larger (more negative) coefficient for spending. Figure 2 shows the estimated effects on health spending preferences at the same low and high media constraints as Figure 1, and results are similar to what we saw for welfare, though not with the same separation between the two estimates. In this instance, both lines decrease from left to right. Even so, the connection between spending and relative preferences is strongest when press limits are low.

Figure 2. Health Preferences and Spending, Moderated by Press Freedom



Predicted values with clustered standard errors, based on Model 4 in Table 2.

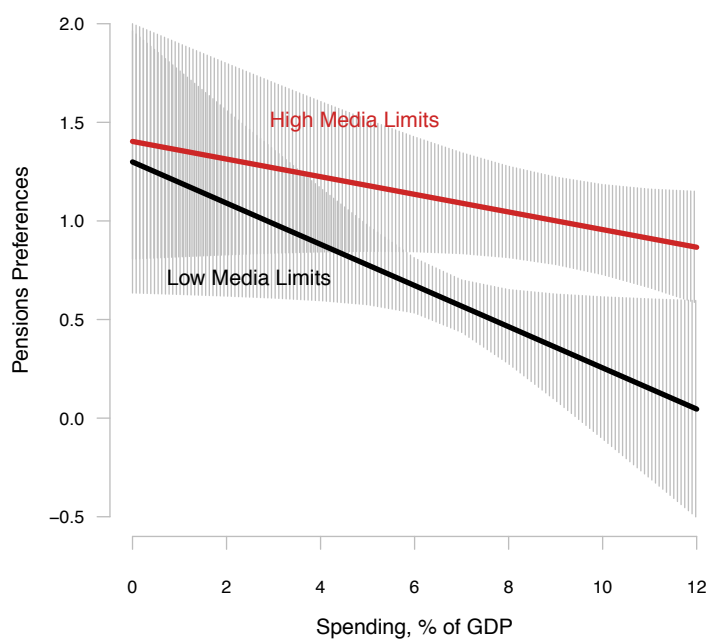
Next we turn to old-age pensions. Table 3 presents the same basic models again. Much as we saw above, Model 1 only hints at thermostatic response, as the coefficient for spending is negative but non-significant. – In contrast with what we have seen for welfare and health, adding measures of P^* in Models 2 and 3 does not reveal the same kind of robust results for spending. The coefficient remains negative but non-significant, thus only hinting at thermostatic response. Adding press limits in Model 4 makes a big difference, however. It so reveals significant thermostatic responsiveness moderated by press limits. Figure 3 plots the interactive effects from Model 4 for pensions spending. As we saw for health, both lines again decrease from left to right, and the relationship weakens with stronger press limits.

Table 3. Modeling Relative Preferences for Pensions Spending

	Model 1	Model 2	Model 3	Model 4
Spending	-0.011 (0.012)	-0.028 (0.031)	-0.029 (0.034)	-0.129** (0.057)
Press Limits				0.359 (0.336)
<i>interaction</i>				0.206** (0.094)
Female	0.093*** (0.015)	0.093*** (0.015)	0.093*** (0.016)	0.092*** (0.018)
Age	0.004*** (0.001)	0.004*** (0.001)	0.004*** (0.001)	0.004*** (0.001)
Education	-0.237*** (0.078)	-0.240*** (0.079)	-0.249*** (0.076)	-0.234*** (0.059)
Std Living	-0.109 (0.068)	-0.109 (0.067)	-0.109 (0.072)	-0.107 (0.077)
Mean Spending		0.025 (0.044)	0.028 (0.047)	0.091* (0.053)
Ideology			-0.007 (0.009)	-0.008 (0.009)
Constant	0.763*** (0.130)	0.737*** (0.130)	0.779*** (0.129)	0.681*** (0.216)
Observations	28,224	28,224	24,853	24,853
R2	0.034	0.035	0.036	0.060

* $p < .05$; ** $p < .01$; *** $p < .001$. Cells contain OLS regression coefficients with clustered standard errors (by country).

Figure 3. Pensions Preferences and Spending, Moderated by Press Freedom



Predicted values with clustered standard errors, based on Model 4 in Table 3.

We now have found evidence of thermostatic responsiveness, moderated by press freedoms, across three different social domains. That we obtain similar results for health and pensions offers corroborating evidence for the welfare results focused on above. Even as we find these multiple-domain findings to be compelling evidence that a free press is instrumental to citizens' ability to respond to policy change, we offer two final robustness checks.

First, if it is in fact welfare spending that drives welfare preferences, then we should expect that spending in other domains does not do so. That is, the public would respond to spending in the specific domains and not to spending in other, potentially related areas (also see Wlezien, 2004). The same is true for health and pensions – relative preferences in these domains should be driven by the corresponding spending figures, and not by spending in other domains. This depends on there being at least some independent variation in by-domain spending (and preferences), which there clearly is.⁶

Our test for this is relatively straightforward: we re-estimate Model 3 for welfare (Table 1) using all other spending categories in the OECD database; that is, we use non-welfare social spending in place of welfare spending. We do the equivalent for both health and pensions. For welfare and health, there is no sign of thermostatic responsiveness. For pensions, opinion does seem to respond to non-pensions spending. This gives us rather more confidence in results for the first two domains; but it also highlights the need for further work on the relationships between spending across all nine subdomains in the OECD dataset and on the focus of public responsiveness.

Second, we explore the possibility that it is not press freedoms per se that produce the significant interactions in the preceding tables, but rather other factors highly correlated with press freedoms. The most obvious possibility is that press freedom stands here as a surrogate for freedoms more generally; and that for a wide variety of reasons, countries that are more free exhibit more thermostatic responsiveness. This is a testable proposition, by re-estimating Model 4 substituting other Freedom House measures for press freedom. Using the general indices for civil liberties or political rights yields no significant interactions in any of the three domains examined here.

We take this evidence as further support for our interpretation of the models above. This is not to say that all analyses work out as crisply at the preceding examples, however. Defense spending has played a relatively prominent role in work on opinion-policy relationships (e.g., Eichenberg and Stoll 2003; Hartley and Russett 1992; Wlezien 1996; Soroka and Wlezien 2010), and Wave 4 CSES surveys include a measure of R for defense. While no corresponding measure of spending is available in OECD spending, there is a

⁶ Across the 19 countries included in our estimations, “other” and health spending levels are correlated at 0.28, “other” and pensions at -0.10, and health and pensions at 0.50. Only in the last instance is $p < .05$.

World Bank defense expenditures dataset that provides the relevant data across most countries in the CSES to date. Our preliminary estimation of defense preferences nevertheless finds no evidence of thermostatic responsiveness, with or without the press freedoms interaction. Our suspicion is that an inability to identify responsiveness in this highly salient domain is in this case due to inadequate controls for P^* , since the aggregate-level models of opinion-policy relationships cited above depend in part on a good measure of external threat. This is another area for further analysis.⁷ For the time being, we take the tests here as useful indications of the robustness of our findings in social-welfare domains.

Conclusions

Just how important is a free press to the public's ability to hold a government accountable? Our findings suggest thermostatic responsiveness in welfare, and in health and pensions as well, is moderated by restrictions on the press. When the press is relatively unconstrained there are clear responses to policy change. When there are controls on the press, citizen response to policy change is muted. We view this as evidence of the importance of media to public responsiveness, and thus to representative democracy.

We also regard these findings as a contribution to conversations about trends in media freedoms around the world. Freedom House's most recent report warns that press freedoms are at their lowest point in 12 years, with marked declines in countries such as Turkey, Egypt and France.⁸ We also write this paper in the midst of an increasingly fraught relationship between the Trump administration and the media. Regardless of one's position in that debate, it seems increasingly likely that the media-White House relationship is changing, in the direction of less rather than more transparency.⁹ In short, the quality of policy information reaching citizens around the world is not obviously getting better. The preceding results make clear the significance that this may have for both public responsiveness and political representation.

⁷ We also suspect that defense media coverage may not be changed by limits on press freedom in quite the same way as spending in other domains, though we have no firm hypotheses, or evidence, at present.

⁸ <https://freedomhouse.org/report/freedom-press/freedom-press-2016>

⁹ Note that government-media relations are just one way in which the quality of information about policy may be waning. Consider for instance ongoing debates about whether news consumers exhibit increasingly selective exposure via online, and increasingly partisan, media outlets (the recent literature is vast, but see, e.g., Iyengar and Hahn 2009; Stroud 2008, 2010; Garrett 2009; Messing and Westwood 2014), and whether this dynamic is ameliorated or worsened through the algorithms in search engines and social media (e.g., Bakshy et al. 2015; Flaxman et al. 2016). Although our focus is on the impact of freedom of the press in particular, our results may speak to the possible impacts of a broad range of both provision- and consumption-related dynamics limiting the quality of information reaching citizens.

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Appendix

Question Wording and Descriptions, Spending Questions

For the next questions, please say whether there should be more or less public expenditure in each of the following areas. Remember if you say "more" it could require a tax increase, and if you say "less" it could require a reduction in those services.

Q: Thinking about public expenditure on HEALTH, should there be much more than now, somewhat more than now, the same as now, somewhat less than now, or much less than now?

HELP: The word "health" is intended to refer to public expenditure related to health care, i.e., public health care programs, public hospitals, clinics, etc.

Q: Thinking about public expenditure on OLD-AGE PENSIONS, should there be much more than now, somewhat more than now, the same as now, somewhat less than now, or much less than now?

HELP: The phrase "old-age pensions" is intended to refer to public expenditure on old age pensions, NOT other spending on programs directed at the elderly.

Q: Thinking about public expenditure on WELFARE BENEFITS, should there be much more than now, somewhat more than now, the same as now, somewhat less than now, or much less than now?

HELP: The phrase "welfare benefits" is intended to refer to public expenditure on welfare programs or social benefit programs

Question Wording and Descriptions, Improving Standard of Living

Q: Over the next ten years or so, how likely or unlikely is it that you will improve your standard of living? Very likely, somewhat likely, somewhat unlikely, or very unlikely?

Question Wording and Descriptions, Government Action Differences in Income

Q: Please say to what extent you agree or disagree with the following statement: "The government should take measures to reduce differences in income levels."

Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree?

Question Wording and Descriptions, Ideology

Q: Where would you place yourself on this scale? 0 – 10 where 0 means the left and 10 means the right.

This question follows a set of similar questions with the prompt: In politics people sometimes talk of left and right. Where would you place [PARTY A] on a scale from 0 to 10 where 0 means the left and 10 means the right?

Appendix Table 1. Basic Descriptives, by Country

	N	% Female	Education	Income	Std. Living	Gov. Reduce
AUS	3953	0.52	0.87	1.88	0.54	0.59
AUT	1000	0.49	0.34	2.03	0.42	0.69
BGR	999	0.51	0.26	2.02	0.37	0.82
BRA	3136	0.52	0.09	1.93	0.65	0.80
CAN	3458	0.56	0.52	1.99	0.53	0.57
CHE	4391	0.52	0.90	1.83	0.44	0.68
CZE	1653	0.51	0.16	1.88	0.35	0.61
DEU	1889	0.51	0.31	2.06	0.33	0.81
FRA	2014	0.55	0.31	1.70	0.44	0.81
GRC	1029	0.40	0.55	1.82	0.45	0.46
IRL	1853	0.50	0.42	1.78	0.55	0.57
ISL	1479	0.49	0.58	2.01	0.61	0.62
ISR	1017	0.51	0.44	1.89	0.58	0.78
JPN	1937	0.53	0.40	2.11	0.35	0.75
KOR	1000	0.50	0.00	NA	0.50	0.83
MEX	2400	0.58	0.12	1.92	0.55	0.68
MNE	967	0.45	0.36	1.90	0.51	0.81
NOR	1727	0.49	0.50	1.96	0.57	0.62
NZL	1374	0.54	0.59	1.97	0.52	0.63
POL	1919	0.55	0.16	1.97	0.38	0.81
PRT	1499	0.57	0.11	1.49	0.45	0.79
SRB	1568	0.51	0.17	1.82	0.46	0.84
SVN	1031	0.54	0.33	1.90	0.37	0.81
SWE	832	0.49	0.43	2.00	0.53	0.70
THA	1500	0.49	0.14	1.05	0.70	0.78
TUR	1086	0.49	0.13	2.06	0.46	0.88
USA	1929	0.57	0.37	1.93	0.69	0.48
	Ideology	Welfare Prefs	Health Prefs	Pensions Prefs	Press Limits	Other Spending
AUS	5.15	0.02	1.08	0.87	0.22	0.25
AUT	4.68	0.33	0.56	0.54	0.21	0.37
BGR	5.29	0.76	1.51	1.52	0.38	NA
BRA	6.34	1.09	1.61	1.20	0.45	NA
CAN	5.02	0.14	0.84	0.69	0.19	2.28
CHE	5.11	0.09	0.16	0.34	0.12	0.58
CZE	4.97	0.03	1.14	0.96	0.20	0.21
DEU	4.37	0.50	0.72	0.89	0.17	0.18
FRA	4.65	0.21	0.81	0.80	0.24	0.62
GRC	4.90	0.96	0.87	0.89	0.41	0.45
IRL	6.00	NA	0.98	0.45	0.16	0.31
ISL	5.48	0.69	1.18	1.00	0.14	0.56
ISR	5.99	0.95	1.29	1.25	0.31	0.57
JPN	5.61	0.67	0.58	0.65	0.25	0.28
KOR	5.40	0.76	0.50	0.57	0.32	0.49
MEX	6.63	0.85	1.14	1.02	0.61	0.00
MNE	5.90	0.75	0.87	0.83	0.36	NA
NOR	5.65	0.08	1.03	0.61	0.10	0.68
NZL	5.54	-0.50	0.85	0.38	0.17	0.19
POL	6.01	0.93	1.18	1.33	0.25	0.15
PRT	4.94	0.70	1.22	1.12	0.18	NA
SRB	5.51	1.25	1.18	1.25	0.36	NA
SVN	4.72	0.53	0.70	0.64	0.25	0.56
SWE	5.15	0.27	0.76	0.89	0.10	NA
THA	NA	0.62	0.75	0.87	0.60	NA
TUR	5.94	1.14	1.19	1.50	0.71	NA
USA	6.27	-0.25	0.35	0.61	0.18	0.89

Cells contain sample sizes / mean values, based on the full Wave 4 CSES data, as of spring 2017