Center for Effective Lawmaking

Foxes vs. Hedgehogs:
Issue Specialization and Effective Lawmaking in the U.S. Congress♠

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Abstract

Members of Congress are naturally generalists, needing to vote on a wide array of issues in each session. In formulating their own legislative portfolios, however, they face greater opportunities to specialize and gain expertise in specific policy areas, perhaps positioning them to be more effective lawmakers. We compare members of the U.S. Congress who have specialized to those with more diverse agendas in both the House and Senate from 1973 to 2016. We find that a balanced legislative portfolio, neither scattered across numerous areas nor focused entirely on a single issue, is associated with the greatest lawmaking effectiveness. This optimal balance varies across settings, with greater specialization being more valuable in the House than in the Senate, and more valuable among subcommittee chairs than among committee chairs. Moreover, the value of specialization has declined in recent Congresses. Finally, we find that the vast majority of lawmakers in Congress have unbalanced legislative portfolios, such that they are insufficiently specialized to cultivate expertise and to achieve their highest lawmaking potential.

Foxes vs. Hedgehogs: Issue Specialization and Effective Lawmaking in the U.S. Congress

The fox knows many things, but the hedgehog knows one big thing.
–Archilochus, Greek poet, 7th century B.C.

Senator Daniel Patrick Moynihan (D-NY) and Congressman Henry Waxman (D-CA) were both remarkably thoughtful policymakers. As a public intellectual, Moynihan moved seamlessly between an academic life (teaching at Harvard and writing 19 books) and a public life (as an ambassador, White House advisor, and Senator). During his time in the Senate (1977-2000), he sponsored numerous pieces of legislation that became law, on topics ranging from energy to truck safety, from the environment to foreign affairs.

Considered a "legislative genius,"[1] Waxman mastered both the oversight (issuing endless requests for information, and inducing tobacco executives to lie under oath) and lawmaking roles of a Congressman. Across his forty years in the House (1975-2014), he played a key role in the advancement of the Affordable Care Act, and penned many other landmark health measures, from the Orphan Drug Act to nutrition labeling laws.

In advancing their numerous successes, Moynihan and Waxman took very different approaches to developing their legislative portfolios for effective lawmaking. Moynihan was what we might refer to as a fox. He had diverse legislative interests and acted on them. He typically introduced bills in more than a dozen major issue areas in any given two-year session of Congress, never dedicating more than a quarter of his sponsored bills to any specific policy area.[2] In contrast, Waxman was a hedgehog, picking a small number of issue areas on which to

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[1] "The Liberal Lion in Winter," *Los Angeles Times Magazine* (Dec. 4, 1994).
[2] Throughout this manuscript, we refer to major issue areas as those developed by the Comparative Agendas Project (e.g., Baumgartner and Jones 1993) and classified for legislation in Congress by the Congressional Bills Project (e.g., Adler and Wilkerson 2013). These codings characterize 19 different

dedicate his legislative portfolio, and giving them his undivided attention. This was particularly true during his service as chairman of the Health Subcommittee within Energy and Commerce (1979-1994). Over this time period, nearly three-quarters of his 350 sponsored bills dealt with health-related matters.

The legislative approaches and accomplishments of these two important lawmakers present the possibility that both foxes and hedgehogs can succeed in Congress. But they also raise a large number of questions that we seek to address here. Are these two lawmakers outliers or are they representative of broader patterns? Put simply, are foxes or hedgehogs more likely to succeed as lawmakers in Congress? And do these patterns differ across institutional settings? Is it better to specialize in the larger House of Representatives and to adopt a more diverse portfolio in the smaller Senate? Is expertise and specialization particularly important among committee or subcommittee chairs? Do members of Congress on average put forward legislative portfolios that are too narrow or two broad, relative to the approach that might bring them the greatest lawmaking success? And, finally, what lessons might newly elected members of Congress draw as they start to develop their own approaches to lawmaking?

To answer these questions, we examine the breadth of each lawmaker's legislative portfolio in both the House and the Senate from the 93rd to the 114th Congress (1973-2016) to assess the approaches that are most conducive to effective lawmaking. In so doing, we find that the most effective lawmakers strike a balance between a specialized issue agenda and a diverse one, typically dedicating around a half of their bills to a single issue area, while spreading the rest more broadly. Relative to the optimal levels, however, most lawmakers are out of balance in their legislative portfolios, with about 90% being insufficiently specialized to take advantage of

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issue areas; and Moynihan sponsored legislation across most of them in each Congress in which he served.

opportunities for gains from increased expertise. We also find that the optimal level of issue specialization, for the purposes of effective lawmaking, varies between the House and the Senate, across institutional positions, and over time, in ways that reflect the value of expertise in different congressional settings.

Benefits of Being a Fox or a Hedgehog

Published in 1951, Isaiah Berlin's thin, though widely-cited, volume entitled *The Hedgehog and the Fox* engaged directly (although briefly) with Archilochus's typology, when he noted that the hedgehog-fox distinction "can mark one of the deepest differences which divide writers and thinkers, and, it may be, human beings in general" (Berlin 2013, 2). He argues that "there exists a great chasm between those, on the one side, who relate everything to a single central vision [hedgehogs] … and, on the other side, those who pursue many ends, often unrelated and even contradictory, connected, if at all, only in some de facto way [foxes]." While Berlin pointed to prominent thinkers and authors whom he believes fell into each category (e.g., Dante was a hedgehog, Shakespeare a fox), he did not claim that one perspective necessarily dominates the other. His essay, however, has served as the foundation for a wide range of scholarship and debates in fields such as psychology, management, and leadership studies, over which and what kinds of leaders are hedgehogs or foxes (e.g., Zaleznik 2008), as well as whether it is better to be a generalist or a specialist in a variety of contexts.[3]

Turning to Congress, it is very reasonable to argue that there are many benefits from gaining expertise on a specific issue, as well as from diversifying one's portfolio across policy

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[3] As readers of Berlin's essay will likewise note, his use of the hedgehog-fox distinction served as a springboard for an in-depth analysis Leo Tolstoy's approach to studying and writing about history (drawing on numerous illustrations from *War and Peace*). Hence, contrary to how it is often portrayed in contemporary accounts, Berlin's essay did not offer a definitive perspective on the causes and consequences of being a hedgehog or a fox.

areas, if one's goal is to be an effective lawmaker. With regards to specialization, the role of information and expertise has long played a central role in scholarly discussions of Congress. Krehbiel (1992), for example, advances the argument that Congress is organized in such a way as to provide its members with information about the consequences of the legislation that they consider and advance. Legislative procedures such as closed rules help ensure that the cultivation of expertise in committees is not undermined by popular but ill-informed positions on the floor. Committee hearings and expert testimony helps lawmakers to specialize and gain expertise over time. Battaglini et al. (2019) provide experimental evidence for such an informational role of committees (building on Gilligan and Krehbiel 1989); and to the extent that Congress is an institution that is focused on problem solving (e.g., Adler and Wilkerson 2013), the cultivation of expertise becomes paramount.

To support its quest for policy-relevant information, Congress has, from time to time, developed a number of offices that provide guidance and expertise to its members, ranging from the Congressional Budget Office, to the Congressional Research Service, to the Office of Technology Assessment (e.g., Bimber 1996). Moreover, by cultivating expertise internally, Congress can enhance its ability to set policy on its own, rather than having to delegate policymaking excessively to the bureaucracy (e.g., Epstein and O'Halloran 1999, Gailmard and Patty 2012).

Likewise, the provision of information to members of Congress is considered to be one of the main roles of lobbyists, who play a significant role on Capitol Hill. Such information helps legislators to know whether or not to support new proposals over the status quo (e.g., Austen-Smith and Wright 1992, 1994; Schnakenberg 2017). But the provision of information also helps legislators develop policies that are more likely to benefit (and less likely to harm) key

constituents. Indeed, lawmakers and lobbyists may work together effectively to advance new legislation in their collective interest, with lobbyists subsidizing legislator efforts (Hall and Deardorff 2006).

In combination, these factors imply that members of Congress who dedicate themselves to cultivating expertise in a specific policy area can exert an oversized influence on policymaking in that area. Their support is sought for proposals in their specialty areas. And their own proposals are taken more seriously, often serving as the vehicles through which others seek to advance their own initiatives. Such independent sources of influence based on expertise are powerful, and therefore may be seen as dangerous to those who wish to centralize control. It is no surprise that House Speaker Gingrich, who led the Republican Revolution in the 1990s, then, shuttered the Office of Technology Assessment and sought to limit the power of committees through term limits on committee chairs and other reforms (Evans and Oleszek 1997). Such informational restrictions have continued even to the point of asking lawmakers to vote on legislation they are not even given time to read – what Curry (2015) refers to as "legislating in the dark."

We have been using the concepts of expertise, information, and issue specialization somewhat interchangeably, despite the fact that there could be instances of non-overlap between these terms. A legislator may be an expert on a particular topic but still have broad interests. And one could concentrate in a single area but never acquire expertise. For our purposes, however, we believe that expertise and specialization are highly correlated. The more time one spends studying something, the more expertise they gain. Those spending more time in and around Congress, studying and writing about the institution, are more likely to become experts than are those who dedicate little time and effort in this area. And as a practical matter of

measurement, one's level of information and degree of expertise in a policy area may be much more difficult to discern than where one dedicates her legislative time and effort.

Because information and expertise play such prominent roles in policymaking in Congress, there is reason to believe that legislators who focus their lawmaking efforts around a single policy, or small set of policy interests, will achieve greater legislative success than those with scattered interests, and thus less expertise. This perspective is entirely consistent with insights from the management strategy literature, including Collins's (2001) analysis of what makes for a successful company. In Collins's view, great companies emerge when their leadership teams can deduce their firms' "Hedgehog Concept," which represents the intersection of what a manager deeply cares about, what she believes drives the firm's economic engine, and where she believes the firm can be the best in the world (Collins 2001, 97). In such a view, the hedgehog, who knows one big thing, will achieve the greatest success in business; and applying these insights to Congress, legislators who are able to maintain singular focus on a very narrow policy portfolio will obtain significant lawmaking success.

> ***Hedgehog Hypothesis****: Legislators with the most focused legislative portfolios will be the most effective at lawmaking.*

As the Hedgehog Hypothesis suggests, investing in the development of policy expertise in a specific area can yield tremendous returns. But, as in the financial markets, all investments carry risk. Suppose a lawmaker specialized and developed expertise in agricultural policy and even eventually rose to become chair the House Agriculture Committee, such as Kika de la Garza (D-TX). Such a lawmaker is well-positioned to advance legislation, but only under the right conditions. Every five or so years, when the Farm Bill needed reauthorization or when agricultural price supports or pesticide regulations became focal issues, de la Garza was a

tremendously effective chair and lawmaker. But following the Farm Bill passage, and when Congress turned its attention elsewhere, much less of his work was valued by party leaders and the chamber as a whole, leaving him with fewer legislative successes.

Such ebbs and flows in policy areas are quite common (e.g., Baumgartner and Jones 1993), as are issues falling by the wayside when a more pressing crisis arises. Over the past two decades, major and minor policy initiatives fell into gridlock, despite the effort and expertise of their sponsors, not due to lack of support but simply because other matters were more pressing. Whether attention was turned to the aftermath of 9/11 in 2001, to the financial crisis of 2008, to the pandemic of 2020, or elsewhere, those who dedicated their careers to other topics were left with few legislative successes. In contrast, lawmakers with diverse portfolios will be more likely to have something to contribute to the hottest issues of the day, with the benefit of appearing highly responsive when crises arise. Indeed, such crises offer them an opportunity to move their legislation that would otherwise have been mired in gridlock (e.g., Hitt, Volden, and Wiseman 2017).

Beyond diversification for the purposes of limiting risk and enabling responsiveness to the most pressing issues of the day, issue diversification also presents further potential lawmaking benefits. Given the complexity of lawmaking, it is often important to strike deals across a wide range of policy areas. The Food Stamps program (now SNAP) was long backed by a formidable coalition of urban interests who were focused on poverty relief and rural interests who were focused on agricultural support (Ferejohn 1986). Lawmakers with diverse interests are in a better position to see what is possible, to build coalitional logrolls, and to benefit from the resulting gains from exchange (e.g., Kau and Rubin 1979, Weingast and

Marshall 1988). They are likely to find legislative successes where those who are more insular may miss the broader picture.

The notion that generalists might find more lawmaking success than specialists finds support in scholarship beyond legislative studies. Consider, for example, Tetlock's (2017) study on the efficacy of expert judgment. In considering the scope of forecasting accuracy among experts about a wide range of political and economic matters, Tetlock (73-75) finds that those who think in a manner more consistent with foxes (i.e., "thinkers who know many small things … are skeptical of grand schemes … and are rather diffident about their own forecasting prowess") consistently outperform those whom he identifies as hedgehogs (i.e., "thinkers who know 'one big thing,' aggressively extend the explanatory reach of that one big thing into new domains, …, and express considerable confidence that they are already proficient forecasters."). In exploring the mechanism behind these findings, Tetlock points to a variety of behavioral differences between the groups, and notes that foxes are generally less-receptive of overarching explanations, to help provide guidance in particular situations, and they likewise tend not to buy-in to their own rhetorical arguments, in comparison to hedgehogs.[4]

Taken together, these findings present a picture of foxes being able to engage in more nuanced evaluation and decision-making in a variety of settings, in comparison to hedgehogs. They may therefore make better decisions, perhaps helping them to advance their policymaking goals in complicated information environments. For all of these reasons, the fox, who knows many things, may be best positioned for legislative success.

> ***Fox Hypothesis***: *Legislators with the broadest and most diverse legislative portfolios will be the most effective at lawmaking.*

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[4] In Page's (2018) terms, foxes may gain the benefits of being multi-model thinkers.

Note that the *Fox Hypothesis* and *Hedgehog Hypothesis* are in competition with one another. If one is true, then the other is false. Of course, both could be false if there is no relationship at all between portfolio diversity and effectiveness. Alternatively, there might be a grain of truth to each of them. While much of the extant research focuses on the benefits of embracing one approach over the other – or showing that highly effective leaders can be found among both foxes and hedgehogs (e.g., Zaleznik 2008) – it seems entirely plausible that there may be benefits from both specialization and diversification. Perhaps the optimal strategy is neither placing all one's eggs in a single basket, nor scattering all seeds to the wind, at the risk of mixing metaphors. Perhaps, instead, the optimal strategy involves a level of balance, gaining the benefits of both expertise and of diversification. Such balance is represented in the following hypothesis:

> **Balanced Portfolio Hypothesis**: *The most effective lawmakers will strike a balance between a focused and a diverse legislative portfolio.*

These three hypotheses might also play out differently across legislative circumstances. As our opening example from Rep. Waxman and Sen. Moynihan hinted at, there may be benefits from being a hedgehog in the House but a fox in the Senate. Specialization may be of greatest benefit for subcommittee chairs, where concentrating on the issues that are central to their institutional positions might be highly valuable. And there may be differences when one is more junior or more senior in Congress, or when one is in the majority or the minority. Although we examine all such patterns below, we consider them to be exploratory rather than areas around which we develop formal hypotheses.

Research Design

To explore our hypotheses, we require measures of the lawmaking effectiveness and the portfolios of members of Congress. For the former, we rely on the *Legislative Effectiveness Scores* (LES) constructed for each member of the House (Volden and Wiseman 2014) and the Senate (Volden and Wiseman 2018). The LES is a weighted combination of the number of bills that each lawmaker sponsors, how far they move through the lawmaking process, and their relative substantive significance. As such, bills that move further towards law, and those that are dealing with the most pressing issues of the day contribute much more to a legislator's score than do more commemorative measures and those that die immediately in committee. These scores are normalized to take an average value of one in each chamber during each two-year session of Congress, and they are available at the end of each Congress, beginning with the 93rd (1973-74).

While the LES offers a parsimonious measure of lawmaking effectiveness, this metric is limited in some ways. For example, as a comprehensive metric, it may not be as clear for the purposes of interpreting the results as might a simpler measure like the number of bills that a member sponsors that become law. As such, we conduct supplemental analyses below, in which we show the robustness of our findings to such alternatives. Additionally, members of Congress who work behind the scenes to move legislation forward do not receive credit in the calculation of the LES for such activities, apart from on the bills that they themselves sponsor. Moreover, the LES does not capture non-legislative activities, such as constituency service or oversight. To the extent that these other activities are likewise linked to specialization and expertise, we would not be able to uncover such patterns in our analysis here.

To measure the degree of focus or diversity of a legislator's proposal, we rely on the issue area codings for each bill that is put forward in the Congressional Bills Project (e.g., Adler

and Wilkerson 2013). Following the coding protocol from Baumgartner and Jones' (1993) Policy Agendas Project, each bill is assigned to one of 19 different issue areas, ranging from Agriculture to Welfare, from Civil Rights and Liberties to Transportation. We then construct a variety of variables using these issue areas to capture the diversity of a legislator's proposals in any Congress, for every member of the House and every Senator from the 93rd to 114th Congress (1973-2016).

The main variable that we construct for our analysis is *Top Issue Proportion*. To construct this variable, we identify the issue area in which the legislator sponsored the most bills. We then divide the number of bills the legislator sponsored in that area by the total number of bills that she sponsored. Theoretically, this variable ranges from a value of 0.052 (if she sponsors an equal number of bills in each of the 19 areas) to 1.00 (if all of her bills are in the same issue area). In reality, there are a number of cases in the House in which lawmakers sponsored a single bill in each of ten or more issue areas, earning a *Top Issue Proportion* under 0.10. There are also instances of lawmakers dedicating their entire portfolio to a single issue, especially, of course, if they only put forward one bill. The most prolific House member with a *Top Issue Proportion* of 1.0 was Melvin Watt (D-NC) in the 112th Congress, who sponsored 57 trade bills and no bills on any other issue. *Top Issue Proportion* takes an average value of 0.343 in the House and 0.266 in the Senate, consistent notion that Senators have more issue diversity, whereas there is more specialization in the House. With respect to our hypotheses, a positive relationship between *LES* and *Top Issue Proportion* would be consistent with the *Hedgehog Hypothesis*, while a negative relationship would support the *Fox Hypothesis*, all else equal.

Beyond this proportion, we also construct a *Number of Issues* variable, which captures the simple count of how many of the 19 issue areas the legislator put forward bills to address.

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Here again, chamber differences emerge, with an average of 6.63 in the House and 10.64 in the Senate. Finally, we construct a comprehensive *Issue HHI* measure, which captures the degree of issue concentration for a legislator in a given Congress. The Herfindahl-Hirschman Index approach was devised to capture the relative concentration of firms in a marketplace (e.g., Hirschman 1945); and it is calculated by taking the square of the market share of each firm and adding them together. The highest value would be an industry dominated by a single firm = $(1.00)^2 = 1.00$, with highly competitive industries featuring values near zero.[5] For *Issue HHI*, in turn, the highest value is one (when a lawmaker sponsors a single issue), whereas it is as low as 0.05 when a lawmaker's portfolio is perfectly balanced across all 19 issues. The average value in the House is 0.239, compared to 0.163 in the Senate, indicating once again greater issue specialization among legislators in the House.

Exploring the relationships between these measures of issue diversity and lawmaking effectiveness requires some care, especially with respect to outliers. One potential threat to the validity of our research design comes from the relationship of the LES and the portfolio diversity measures to the *size* of a lawmaker's agenda. Consider a lawmaker who puts forward a single bill. Even if it is successful, her Legislative Effectiveness Score will be fairly low, relative to those who are near the average of introducing 17 bills in the House or 33 in the Senate. At the same time, she will appear to have a highly concentrated issue portfolio, as her bill will be in a single issue area. On the other end of the spectrum, highly prolific Representatives and Senators likely tend to have legislation touching on more topics, and thus appearing more diverse. All else equal, they also will receive a relatively high LES, especially if the rate of success of those

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[5] The HHI, as commonly employed in industrial organization studies, is calculated as the sum of market shares squared, where market shares range from zero to one hundred. Hence, an HHI of an industry ranges from 0 to 10,000. We scale the highest *Issue HHI* value to be 1.00 to make it more comparable in size to *Top Issue Proportion*.

bills is near the average in Congress. These sorts of outliers, while fairly rare, could result in spurious patterns of support for our hypotheses.

As such, we take two steps to reduce the possibility of outliers interfering with our inferences. First, we set aside the top ten percent and bottom ten percent of legislators, in terms of the number of bills that they sponsor. For the House, this means including only those who sponsor between 4 and 34 bills; and for the Senate, it includes only those who sponsor between 11 and 61 bills. These restrictions are made with an abundance of caution. Looser restrictions yield largely similar results. For example, we explore the effect of removing these restrictions on the support we ultimately find for the *Balanced Portfolio Hypothesis* below, showing that the main results are robust to including those who sponsor very few bills, those who sponsor a large number of bills, or both.[6] Second, because the number of bills sponsored is highly correlated with both the dependent variable and the key independent variables, and yet because it is not a central concern for our hypothesis tests, we include a *Bills Sponsored* counter variable as a control variable in our regressions.[7] In combination, these two modeling decisions result in highly consistent results in our analyses across model specifications, as reported in detail below.

Finally, we control for a large and standard set of variables that have been shown to individually and collectively work to explain lawmakers' *Legislative Effectiveness Scores* in the House and Senate. These variables include whether a legislator serves in the majority party, whether she serves as a committee or subcommittee chair, her level of seniority, and many other

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[6] See Table A3 in the Appendix for details.
[7] Dropping this variable from the final nonlinear analyses, such as from Models A3.5 and A3.6 in the Supplemental Appendix, reveals support once again for the *Balanced Portfolio Hypothesis*. The coefficients on the main variables of interest (linear and squared *Top Issue Proportion*) are cut in half upon excluding *Bills Sponsored*, but they remain statistically significant.

personal and institutional factors. All of these variables, their sources, and summary statistics

are listed in Table A1 in the Supplementary Appendix.

Findings

We begin our analysis with a simple examination of the degree to which members of the

House and Senate advance diverse or specialized legislative portfolios over time. Figure 1

illustrates these patterns in the House, based on the *Top Issue Proportion* variable. For the

figure, we label a lawmaker as a "Hedgehog" is she dedicates half or more of her lawmaking

portfolio to a single issue. We label a lawmaker as a "Fox" if there is no single issue for which

she dedicates a quarter or more of her agenda. And "Balanced" lawmakers are the remainder –

those for whom *Top Issue Proportion* takes values between 0.25 and 0.50.

Figure 1: Changing Specialization over Time (House)
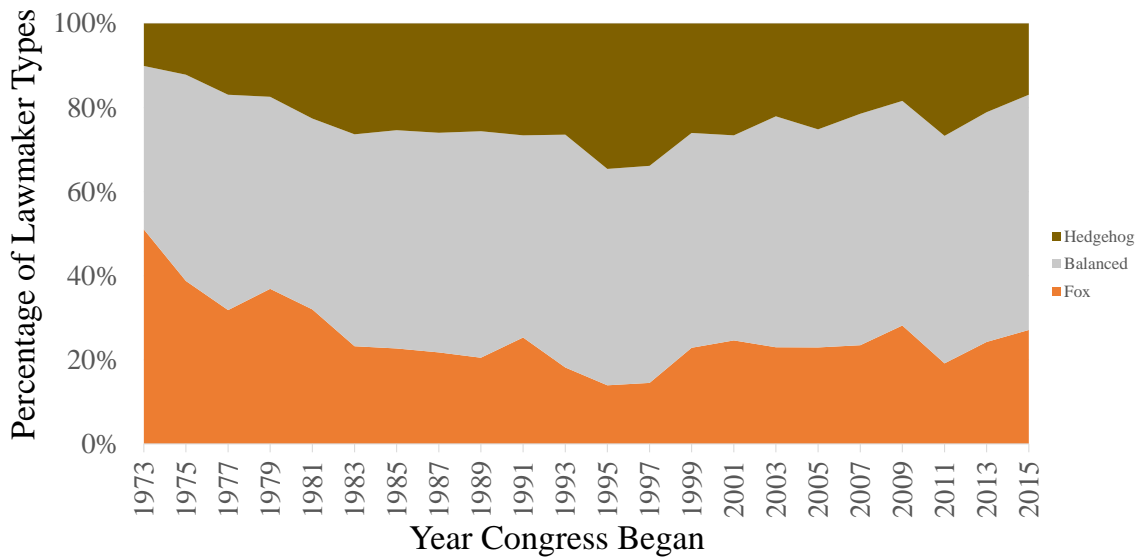
Note: The figure shows the percentage of U.S. Representatives who are "Hedgehogs" with more than half of their bills focused on a single issue, "Foxes" with less than a quarter of their bills on any given issue, or "Balanced" with between a quarter and a half of their legislative agenda focused on their top issue. The figure shows a rise of hedgehog issue specialists from the 1970s to the mid-1990s, generally declining thereafter. These are offset by a decline and then slight rise in generalist foxes, leaving the number of balanced lawmakers fairly steady over time.

The figure reveals that only about 10 to 20% of Representatives are specialists, focusing more than half of their agenda on a single issue. In contrast, about 20 to 30% of Representatives are generalists, with no single issue capturing more than a quarter of their attention. This leaves about half of House members in a middle or "balanced" range. Some changes are evident over time, however. Consistent with the wide range of issues being tackled at the height of "The Great Broadening" (Jones, Theriault, and Whyman 2019), about half of all House members were foxes in the early 1970s. As the broadening came to an end, issue specialists seemed to be on the rise until the Republican Revolution of the 1994 elections. They subsequently declined, consistent with the centralization of power away from experts in committees and subcommittees starting in the 1990s (Curry and Lee 2020).

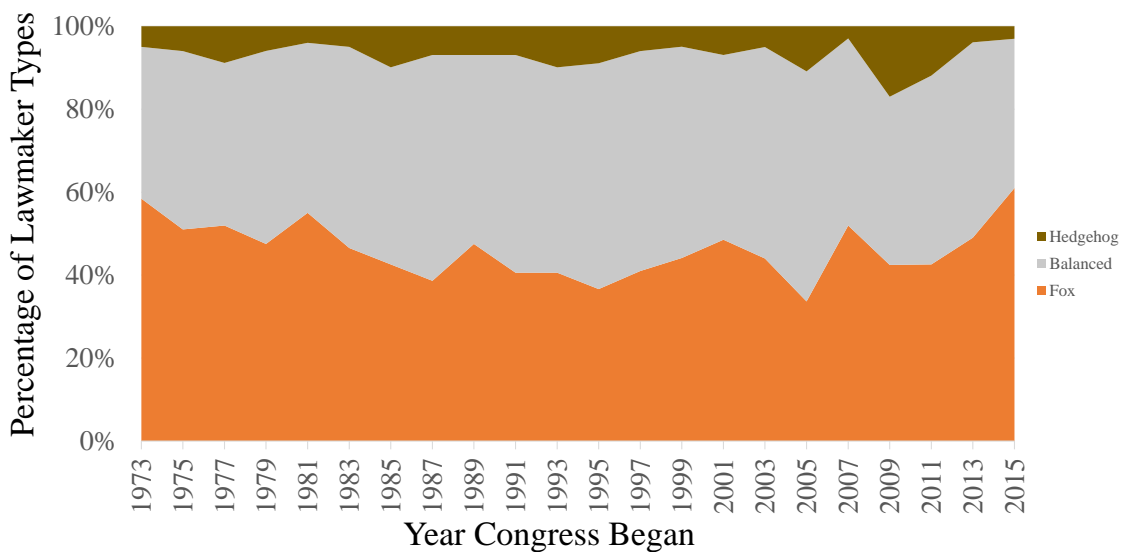## *Figure 2: Changing Specialization over Time (Senate)*

Note: The figure shows the percentage of U.S Senators who are "Hedgehogs" with more than half of their bills focused on a single issue, "Foxes" with less than a quarter of their bills on any given issue, or "Balanced" with between a quarter and a half of their legislative agenda focused on their top issue. The figure shows very few hedgehog issue specialists in the Senate.

Figure 2 offers a similar classification scheme for the U.S. Senate. It shows that very few Senators dedicate half or more of their legislative portfolio to a single issue area. Relative to the House, Senators address a broader array of issues in their proposed legislation. This may be due, in part, to their overall larger legislative portfolios and their different constituencies. Representing entire states rather than (typically) smaller legislative districts in the House involves a broader set of constituents and policies of concern to most Senators. The patterns over time in the Senate are also somewhat reflective of a decline in generalists through the 1990s and a suggestive rise in recent Congresses.

More central to our main hypotheses, we next turn to how legislators' levels of specialization translate into lawmaking success. To do so, as reported in Table 1, we incorporate the *Top Issue Proportion* variable along with a host of control variables in regressions seeking to explain legislators' *Legislative Effectiveness Scores* in both the House (Model 1.1) and the Senate (Model 1.2). A positive coefficient would offer support for the *Hedgehog Hypothesis*, with those dedicating a larger portion of their legislative agendas to a single issue being more effective lawmakers in Congress. In contrast, a negative coefficient would be supportive of the *Fox Hypothesis*.

Across both models, the control variables perform as expected, collectively accounting for about half of the variance in the dependent variable (R^2 near 0.50). For instance, legislators in the majority party, holding committee or subcommittee chairs, with greater seniority, and advancing larger agendas are all more effective lawmakers, according to the *LES*.

Table 1: Hedgehogs Are More Effective

	Model 1.1 House	Model 1.2 Senate
Top Issue Proportion	*0.610***	*0.689***
	(0.105)	*(0.190)*
Bills Sponsored	0.045**	0.025**
	(0.002)	(0.002)
Majority Party	0.432**	0.241**
	(0.038)	(0.053)
Seniority	0.038**	0.018**
	(0.005)	(0.007)
Committee Chair	2.457**	0.647**
	(0.196)	(0.085)
Subcommittee Chair	0.575**	0.180**
	(0.054)	(0.054)
Majority Party Leadership	0.485**	0.038
	(0.117)	(0.097)
Minority Party Leadership	-0.044	-0.049
	(0.050)	(0.051)
Speaker	0.234	-----
	(0.146)	
Power Committee	-0.087*	-0.127**
	(0.040)	(0.039)
Distance from Median	0.060	-0.056
	(0.076)	(0.086)
Female	-0.044	0.015
	(0.037)	(0.060)
African-American	-0.172**	-0.301
	(0.064)	(0.175)
Latino	0.146	-0.248*
	(0.078)	(0.110)
Size of State Congressional Delegation in House	-0.001	-0.002
	(0.001)	(0.002)
State Legislative Experience	0.040	0.003
	(0.059)	(0.080)
State Legislative Experience $\times$ Legislative Prof.	0.142	0.008
	(0.169)	(0.360)
Vote Share	-0.001	0.016
	(0.009)	(0.015)
Vote Share Squared	-0.00001	-0.0001
	(0.0001)	(0.0001)
Constant	-0.473	-0.875
	(0.329)	(0.499)
N	7,511	1,737
Adjusted-R^2	0.48	0.51

Notes: Ordinary Least Squares analyses, dependent variable is a legislator's *Legislative Effectiveness Score*, robust standard errors in parentheses, observations clustered by legislator.
* p < 0.05 (two-tailed), *** p < 0.01* (two-tailed).

Of key interest for our present purposes is the positive coefficient on *Top Issue Proportion* in each of the models. Consistent with the *Hedgehog Hypothesis*, legislators with a more concentrated agenda are significantly more effective lawmakers than are those with a more diverse portfolio of sponsored bills. For example, compared to a legislator with a quarter of her agenda focused on her top issue, a legislator with half of her agenda dedicated to a single issue has a 0.15-point higher *LES* in the House, and 0.17-point increase in the Senate. Such an increase is about equivalent to four to nine terms of additional seniority, as evident by comparing to the coefficients on *Seniority* in the models. In further analyses, not shown in the table, similar patterns emerge when including the alternative independent variables tapping into the breadth of lawmakers' bill portfolios. Specifically, a negative coefficient appears on *Number of Issues*, and a positive coefficient emerges for *Issue HHI*. Both of these results are consistent with support for the *Hedgehog Hypothesis* over the *Fox Hypothesis*.

That said, we do not wish to dwell on the results from Table 1, as they do not yet place all three hypotheses on equal footing. Specifically, if there are benefits from a balanced legislative portfolio, linear relationships will miss such underlying patterns. To allow for nonlinear effects, we include *Top Issue Squared* (a squared version of *Top Issue Proportion*) along with the linear variable. A positive coefficient on the linear variable and a negative coefficient on the squared variable would reveal that lawmaking effectiveness reaches a peak somewhere along a parabolic function. Where that peak occurs will tell us the relative value of being a hedgehog, a fox, or a more balanced lawmaker.

Table 2: Balanced Portfolios Promote Effective Lawmaking

	Model 2.1 House	Model 2.2 Senate	Model 2.3 House	Model 2.4 Senate	Model 2.5 House	Model 2.6 Senate
Top Issue Proportion	2.407** (0.341)	2.322** (0.599)				
Top Issue Squared	-2.058** (0.406)	-2.355** (0.903)				
Number of Issues			0.050** (0.019)	0.042 (0.026)		
Number Issues Squared			-0.0064** (0.0014)	-0.0024 (0.0014)		
Issue HHI					2.316** (0.362)	1.909* (0.758)
Issue HHI Squared					-2.265** (0.447)	-2.951* (1.275)
Controls?	YES	YES	YES	YES	YES	YES
N	7,511	1,737	7,511	1,737	7,511	1,737
Adjusted-R^2	0.49	0.51	0.48	0.50	0.49	0.50

Notes: Ordinary Least Squares analyses, dependent variable is a legislator's *Legislative Effectiveness Score*, robust standard errors in parentheses, observations clustered by legislator.
* $p < 0.05$ (two-tailed), ** $p < 0.01$ (two-tailed).

Such a parabolic function is indeed evident in Models 2.1 and 2.2 of Table 2. All of the

models in the table (and throughout the manuscript) continue to include all control variables

shown in Table 1. The positive coefficient on *Top Issue Proportion* shows a rise in lawmaking

effectiveness accompanying a rise in issue concentration. The negative coefficient on *Top Issue

Squared* shows that such a rise levels out at some point and then declines thereafter. Calculus

teaches us that the peak of such a parabola occurs at the point (–1 × *Top Issue Proportion*)/(2 ×

Top Issue Squared). For the House, that peak is at 0.58 and for the Senate, it is found at 0.49.

As such, the optimal level of issue specialization involves dedicating around half of one's

legislative attention to a single issue. This finding supports the *Balanced Portfolio Hypothesis*,

albeit more on the hedgehog end of the spectrum than the fox end (consistent with the findings in Table 1).

In looking at the House and the Senate, many Representatives and Senators find this perfect mix and use it to their advantage. In the House, for example, Representative Don Young (R-AK) and Representative Raul Grijalva (D-AZ) both had a *Top Issue Proportion* of 0.58 in the 105th and 110th Congress, respectively (and an LES of 10.11 and 2.93, respectively). Interestingly, Rep. Young also found this sweet spot during his second term in Congress (the 94th Congress), achieving an LES of 0.99, which exceeded expectations for a junior minority-party member. Across his career, Volden and Wiseman (2014, Chapter 6) characterize Rep. Young as among the most effective lawmakers in the U.S. House. As another example, in the Senate, Senator Ben Nighthorse Campbell (R-CO) had a *Top Issue Proportion* of 0.49 (and an LES of 3.99) during the 105th Congress.

Finally, in thinking about our motivating examples of Rep. Waxman and Sen. Moynihan, we see that Waxman's average *Top Issue Proportion* across our dataset was approximately 0.52, masking quite a bit of variation across his career. Between the 94th – 103rd Congresses, his average *Top Issue Proportion* was 0.67, but in latter Congresses (104th – 113th) his average declined to 0.38, as he became notably more expansive in his legislative portfolio. In contrast to Waxman, we see that Sen. Moynihan's average *Top Issue Proportion* was 0.18, which reflects a consistent pattern in the scope of his legislative agenda between the 95th – 106th Congresses.

Turning back to the table, we see similar nonlinear patterns in Models 2.3 and 2.4 based on the *Number of Issues* and *Number Issues Squared* variables. These variables' coefficients are highly statistically significant in the House and of borderline significance in the smaller Senate ($p = 0.04$ and $p = 0.06$, one-tailed tests for the linear and squared variables, respectively); and

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they reveal that the highest predicted *Legislative Effectiveness Scores* emerge for those sponsoring bills in four issue areas in the House and nine issue areas in the Senate (out of the full 19 available). Relative to those peaks, the average number of issues that are actually addressed by lawmakers in the House is 7, and 11 in the Senate, thus indicating that legislators are overly broad in their portfolios compared to the approach that would most enhance their lawmaking effectiveness. A similar pattern emerges for the comprehensive *Issue HHI* variable and its square. Peak concentration for lawmaking effectiveness occurs at 0.51 in the House and 0.32 in the Senate, both about double the average values that we observe in the data. On the whole, these results support the *Balanced Portfolio Hypothesis*, while also suggesting that lawmakers in Congress would benefit from greater specialization if they seek to achieve greater lawmaking effectiveness.

Figure 3: Effectiveness based on Attention to Top Issue
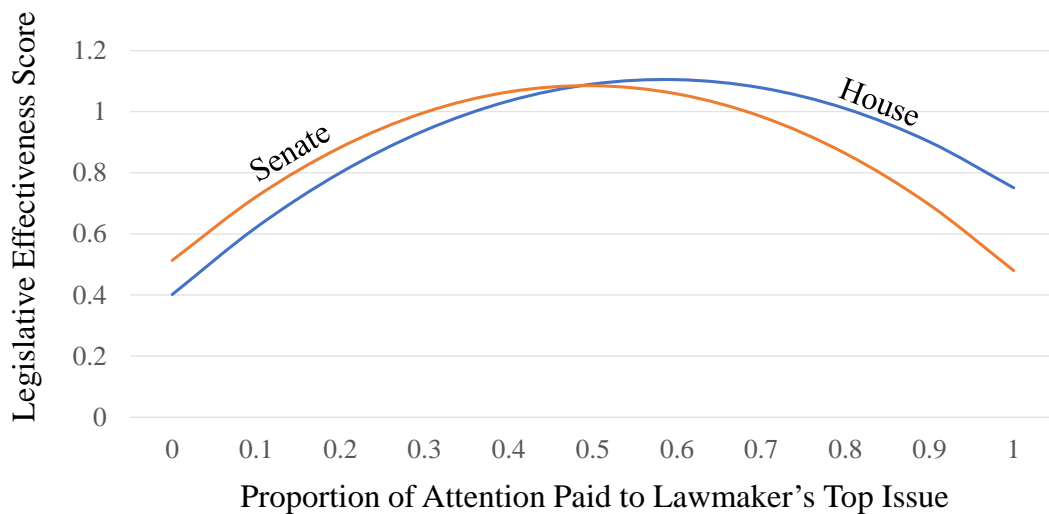
Note: The figure shows predicted values for a legislator's *Legislative Effectiveness Score* based on the proportion of her bills that are dedicated to a single issue area. Predicted values are generated from Models 2.1 and 2.2, holding all other variables at their means. The curvilinear relations offer support for the *Balanced Portfolio Hypothesis*. That said, the peaks take place at higher values than what is typically found among Representatives and Senators, suggesting that greater specialization would enhance their lawmaking effectiveness.

To illustrate the size of the effects uncovered in Table 2 further, in Figure 3 we present the predicted Legislative Effectiveness Scores in both the House and the Senate that follow from varying the *Top Issue Proportion* variable, while holding all other variables constant (at their means). Three findings are evident in the figure. First, the peaks of the curves generally support the *Balanced Portfolio Hypothesis*, with those legislators with the most diverse and the most concentrated agendas performing the worst. Second, these peaks are to the right of where the typical legislators are located. Specifically, the mean values for *Top Issue Proportion* are 0.343 and 0.260 in the House and Senate, respectively. On the figure, such values map to an expected *LES* of just under one. Moving away from those mean values, we see a further decline in lawmaking effectiveness among those with below-average issue specialization, and a rise in effectiveness for those above average in specialization. For example, those who are one standard deviation above the mean in issue specialization outperform those who are one standard deviation below the mean by about 37% in the House and about 28% in the Senate, all else equal. Such effects are sizable – on par with moving from the minority party to the majority party or with attaining a subcommittee chair position, based on the coefficients shown in Table 1. Third, the value of issue specialization is greater in the House than in the Senate. Just as we saw with the examples of Rep. Waxman and Sen. Moynihan, hedgehogs may thrive well in the House with foxes doing somewhat better in the Senate. In both cases, however, striking the right balance in issue specialization yields the highest effectiveness scores.

The finding of strong nonlinear relationships between issue specialization and lawmaking effectiveness raises the possibility that the patterns may be even more complex still, not reflecting a parabolic relationship at all. To explore this possibility, we engaged in an even finer-grained analysis, dividing each key independent variable into small bins that were then entered

as indicator variables in the regression models. Consistent with the nonlinear parabolic effects of Table 2 and Figure 3, we found the indicator variables to show a strong growth in the magnitudes of their coefficients from the lowest values to the middle values, a slowing and leveling out, and then a decline for higher values. Table A2 in the supplemental appendix shows the results of such models with *Top Issue Proportion* broken into five such bins (the lowest being the excluded category). The parabolic nature of the relationships as shown in Figure 3 is evident once again across the coefficients for the bins, lending confidence in using the approach from Table 2 throughout the remainder of our analysis.

Although we believe that the comprehensive *Legislative Effectiveness Score* metric is the best dependent variable to capture lawmaking effectiveness on the whole, in the appendix we also explore whether the findings here are robust to examining simpler metrics. In Table A4, we substitute the number of laws that result from each legislators' sponsored bills (Models A4.1 and A4.2), as well as the number of laws upon excluding commemorative laws (Models A4.3 and A4.4). The models show, once again, consistent support for the *Balanced Portfolio Hypothesis* in both the House and the Senate. Relative to extreme portfolios – either all on a single issue or scattered equally across all 19 issue areas – legislators with balanced portfolios produce about 0.4 more laws in the House and 1.5 more laws in the Senate. Compared to overall averages of 0.7 laws per legislator in the House and 1.3 laws per Senator in any given Congress, these are indeed sizable effects.

The differences between the House and the Senate in Figure 3 suggest that the benefit of issue specialization may vary across institutions and institutional positions. To explore this possibility further, we interacted the *Top Issue Proportion* and *Top Issue Squared* variables with key indicator variables in regression models focused on the House. Specifically, in one model,

we interacted these variables with *Committee Chair*, in another with *Subcommittee Chair*, and in

a third with *Majority*. The results offered predicted values of *Legislative Effectiveness Scores* for

different groups of lawmakers, which we illustrate in Figure 4.

Figure 4: Effectiveness based on Attention to Top Issue, Subgroups
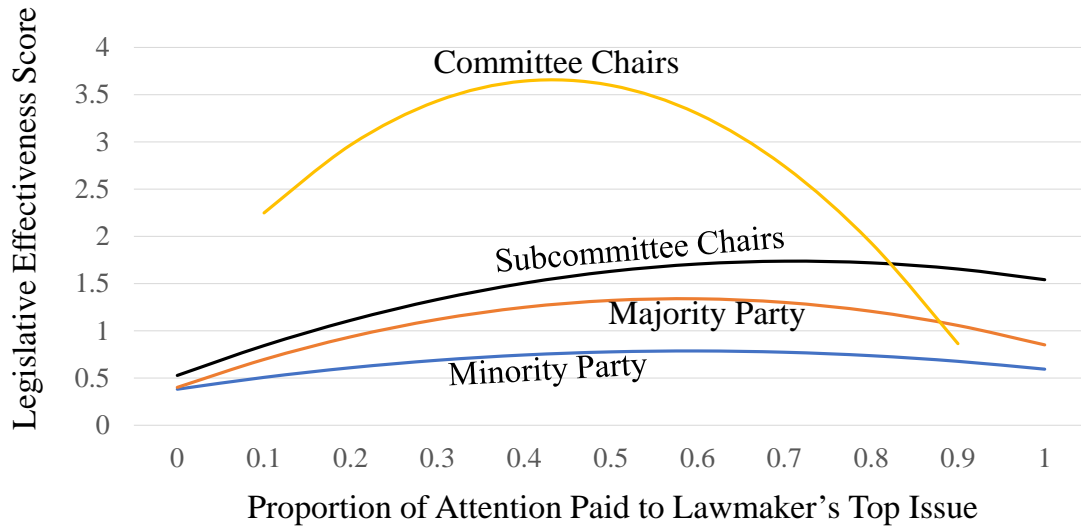
Note: The figure shows predicted values for a legislator's *Legislative Effectiveness Score* based on the proportion of her bills dedicated to a single issue area, for various subsets of Representatives. The curvilinear relations offer support for the *Balanced Portfolio Hypothesis* for each of these groups. That said, the peaks take place at higher values for subcommittee chairs, who seem to benefit from even greater specialization than typical majority- or minority-party legislators. Relative to these groups, committee chairs tend to benefit from somewhat broader portfolios.

The figure shows no difference between typical majority-party and minority-party

legislators in terms of the locations of their peaks. As expected, majority-party legislators

outperform minority-party members. But for both groups, those with the highest effectiveness

scores maintain a *Top Issue Proportion* of about 0.58. More interesting are the findings for

committee and subcommittee chairs. Perhaps due to the broader scope of committees than of

subcommittees, the benefit from issue specialization is much more pronounced among

subcommittee chairs than among committee chairs. The peak value for subcommittee chairs

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occurs at 0.71, compared to 0.43 for committee chairs. This peak is right near the mean value of issue specialization for committee chairs (0.41) who seem to have struck the right balance in issue specialization to maximize their effectiveness. However, the average *Top Issue Proportion* among subcommittee chairs is 0.36, indicating substantial room for them to improve their lawmaking effectiveness through issue specialization. Alternatively, perhaps the subcommittees whose jurisdictions best map onto a single area of expertise are positioned for greater success than are those with broader jurisdictions.[8]

Although not illustrated in the figure, similar analyses in the Senate show broadly similar patterns. Rank-and-file majority-party lawmakers in the Senate and minority-party Senators both receive the highest predicted LES at a *Top Issue Proportion* of about 0.50. The subcommittee chair and committee chair peaks in the Senate are found at 0.70 and 0.43, respectively, right in line with those found in the House.

In additional analyses, we reran Models 2.1 and 2.2 on subsets of our dataset to explore further relationships. In particular, we subdivided the House and Senate datasets to explore whether the lawmaking benefits from issue specialization differed between senior and junior legislators. The median House member is in her fourth term, so we explored those serving four or fewer terms compared to those serving more than four terms. In each subset, the same nonlinear pattern emerged, once again supporting the *Balanced Portfolio Hypothesis*. But the peak level of issue specialization differed somewhat across groups, at 0.52 for junior members and 0.62 for more senior Representatives. This finding suggests that both new and experienced legislators benefit from dedicating most of their bill portfolios to a single issue, but also that the returns from such specialization grow over a legislator's career, consistent with gains from the

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[8] Future work exploring such jurisdictions and lawmaking success by their members and chairs may be fruitful.

expertise that such specialization likely creates. In the Senate, the median Senator is in her second 6-year term. For those with 12 or fewer years in the Senate, the highest *Legislative Effectiveness Score* is associated with a *Top Issue Proportion* of 0.46, which rises a bit to 0.54 for more senior Senators.

We also broke the data into two eras, prior to the 104th Congress (1995-96) and from that Congress onward. Doing so, we find that the peak *Top Issue Proportion* was greater in the earlier era in both the House and the Senate. Such a finding suggests that the lawmaking benefit that legislators experience due to policy specialization today is lower than it was in the past. Perhaps such a pattern is due to the decline of policymaking by experts in committees and the rise of partisan lawmaking, or perhaps because of a greater focus on electioneering than lawmaking (e.g., Lee 2016). Such findings are also consistent with Mann and Ornstein's (2006, 2012) arguments about Congress's declining interest (and ability) in thoughtfully addressing public policies. Lawmakers, in turn, appear to be responding to the changing incentives that they have been facing recently. Crosson et al. (2020), for example, find that lawmakers have been dedicating smaller portions of their office budgets to legislative staff in recent Congresses. And, as we showed in Figure 1, the number of specialist hedgehogs has also been declining since the mid-1990s.

Despite such changes over time, however, the fact remains that lawmakers in both the House and the Senate are, on average, too much like foxes and not enough like hedgehogs, if their goal is to be effective as lawmakers. Put simply, the vast majority would benefit from a greater level of issue specialization. In Figure 5, we illustrate this result by showing the percent of legislators in each Congress with a level of issue specialization below the peaks that we identified in Figure 3 above.

Figure 5: Most Lawmakers Are Insufficiently Specialized
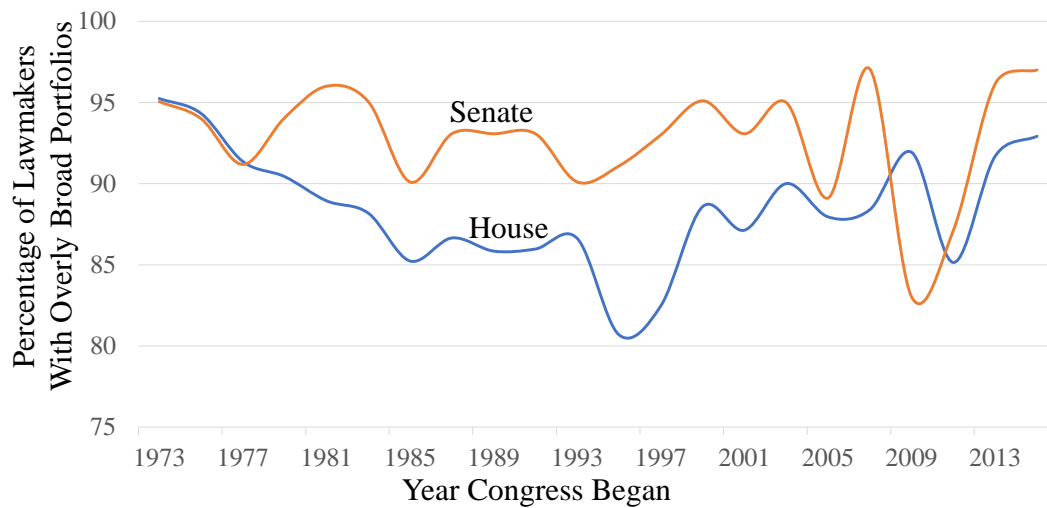
Note: The figure shows the percent of Representatives and Senators in each Congress whose legislative portfolios are less specialized than the optimal levels illustrated in Figure 3. Specifically, the figure reveals that around 90% of Senators' and Representatives' *Top Issue Proportion* is lower than the levels associated with the highest predicted *Legislative Effectiveness Score*. This finding suggests that further attention to their area of greatest interest may offer additional lawmaking benefits for the vast majority of legislators in Congress.

As Figure 5 shows, around 90% of legislators in Congress have been overly scattered in the issues they seek to address in the bills they sponsor. For most of the time series, Senators are even more out of step than are Representatives, with respect to their optimal level of specialization (despite the fact that the optimal level involves a broader portfolio in the Senate). And, consistent with the trends we've discussed above, since 1995 Representatives have become increasingly scattered in their legislative portfolios, eschewing the specialization needed to cultivate expertise and effective lawmaking practices. Raising additional issues may have electoral benefits, appealing to constituents and campaign contributors, as well as coopting competitors' lines of attack (e.g., Sulkin 2005). But dedicating effort in these additional areas comes at a cost, in terms of divided attention and ultimately lower lawmaking effectiveness.

Unlike such factors as seniority, being in the majority party, or serving in chair positions, individual legislators have complete control over the extent to which they choose to specialize in particular issue areas during their time in Congress. The findings we establish here do not simply divide legislators into fixed and unchangeable types – specialists vs. generalists, or hedgehogs vs. foxes – although some legislators remain quite consistent in their degree of specialization across their careers. Rather, in the appendix, we show the results of models that incorporate legislator fixed effects (Table A5), thus controlling for their baseline levels of issue specialization, and capturing the effects of changes from those baselines. Once again, strong evidence emerges that legislators with a *Top Issue Proportion* around 0.6 in the House and 0.5 in the Senate attain the highest effectiveness scores, offering further support for the *Balanced Portfolio Hypothesis*. While it might be difficult for a hedgehog to become a fox or vice versa, there is room for all legislators to modify their degree of specialization toward these optimal levels for effective lawmaking.

Implications and Conclusions

Representatives and Senators have significant discretion in developing their legislative portfolios. Foxes seek to contribute to lawmaking in many areas. They sponsor legislation in areas of interest to themselves, their various constituencies, potential campaign contributors, lobbyists, and others. Doing so presents numerous opportunities for success, depending on which legislative vehicles begin to move at what time. Hedgehogs, in contrast, know one big thing. They dedicate their legislative agenda mainly or exclusively to one policy area. In so doing, they gain expertise, get to know all of the important actors in that area, and position themselves to make a major impact.

By exploring the degree of specialization in the legislative proposals of Senators and Representatives from 1973 to 2016, we find that neither of these approaches in their purest forms is optimal for achieving the greatest legislative success. Rather, legislators who strike a balance between specialization and diversity in their portfolios tend to be the most effective lawmakers. They are seemingly in the best position to gain expertise in a policy area or two, and to simultaneously take advantage of additional opportunities outside of their main area of interest. Specifically, we find that the optimal portfolio for lawmaking effectiveness in the House involves putting forward bills in about four different issue areas, but dedicating about 60% of one's attention to a single main issue. In the Senate, a somewhat broader agenda is associated with the greatest lawmaking effectiveness, involving proposals in nine issue areas but about 50% of one's attention dedicated to her top issue.

Such patterns differ to some extent across institutional positions and over time. In particular, subcommittee chairs benefit from a more specialized legislative portfolio (presumably focused on the main policy area under their jurisdiction) whereas committee chairs benefit from a broader agenda. The benefits of expertise that likely accompany such specialization accrue to a somewhat greater extent among more senior legislators than among junior legislators on average. And the benefits of issue specialization appear to have been in decline since the 1990s.

Relative to the degree of issue specialization associated with the highest level of lawmaking effectiveness, we find that most members of Congress develop overly broad legislative portfolios. Perhaps interested in catering to a wide range of constituent, donor, and lobbyist interests, they put forward legislation across too many topics – many of which have little chance of legislative success, and which may collectively undermine their ability to develop needed expertise in their main policy area.

Such a lack of specialization may be troubling. But it also raises intriguing possibilities for improvement. Legislators who feel that there is little benefit from specialization and the cultivation of expertise may be heartened by evidence that there are returns on such investments, in terms of lawmaking success. At the broader institutional level, there are likely also significant benefits to be gained by providing legislators with the incentives to gain the expertise that comes with issue specialization. Evidence from the past two decades suggests that legislators respond to such incentives – they are turning away from specialization at a time when committees and subcommittees have been declining in power. Were congressional institutions modified to place a greater value in developing policy expertise, such as through more policymaking in committees and subcommittees, through greater support for legislative staff, and through increased investments in organizations that support the cultivation of expertise in Congress, our work suggests that members will follow suit.

While our findings show significant value in scholars focusing on the link between issue specialization and lawmaking effectiveness, they merely scratch the surface of important work that can be done with a focus on legislative portfolios, more broadly considered. For example, future work could fruitfully address such questions as: are diverse portfolios more likely to come from legislators with diverse constituencies, and from those facing more competitive electoral battles? Do those portfolios reflect all district interests equally, or do they exhibit biases? As the lawmaking process progresses, which elements of legislators' portfolios achieve success, and which fall by the wayside? Are those areas supported by campaign contributors and lobbyists much more likely to move through committee and floor stages toward law than those supported by less-well-connected constituents? Scholarly hedgehogs dedicated to answering these questions will undoubtedly benefit from the expertise they acquire in so doing.

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References

Adler, E. Scott, and John D. Wilkerson. 2013. *Congress and the Politics of Problem Solving*. New York: Cambridge University Press.

Austen-Smith, David, and John R. Wright. 1992. "Competitive Lobbying for a Legislator's Vote." *Social Choice and Welfare* 9(3): 229-257.

Austen-Smith, David, and John R. Wright. 1994. "Counteractive Lobbying." *American Journal of Political Science* 38(1): 25-44.

Battaglini, Marco, Ernest K. Lai, Wooyoung Lim, and Joseph Tao-Yi Wang. 2019. "The Informational Theory of Legislative Committees: An Experimental Analysis." *American Political Science Review* 113(1): 55-76.

Baumgartner, Frank R., and Bryan D. Jones. 1993. *Agendas and Instability in American Politics*. Chicago: University of Chicago Press.

Berlin, Isaiah. 2013. *The Hedgehog and the Fox, 2nd Edition*. Princeton, NJ: Princeton University Press.

Bimber, Bruce. 1996. *The Politics of Expertise in Congress: The Rise and Fall of the Office of Technology Assessment*. Albany, NY: State University of New York Press.

Collins, Jim. 2001. *Good to Great*. New York: Harper Collins.

Crosson, Jesse M., Alexander C. Furnas, Timothy LaPira, and Casey Burgat. 2020. "Partisan Competition and the Decline in Legislative Capacity among Congressional Offices." *Legislative Studies Quarterly*. First View.

Curry, James M. 2015. *Legislating in the Dark: Information and Power in the House of Representatives*. Chicago: University of Chicago Press.

Curry, James M., and Frances E. Lee. 2020. *The Limits of Party: Congress and Lawmaking in a Polarized Era*. Chicago: University of Chicago Press.

Epstein, David, and Sharyn O'Halloran. 1999. *Delegating Powers: A Transactional Cost Politics Approach to Policy Making under Separate Powers*. New York: Cambridge University Press.

Evans, C. Lawrence, and Walter J. Oleszek. 1997. *Congress Under Fire: Reform Politics and the Republican Majority*. New York: Houghton Mifflin Company.

Ferejohn, John. 1986. "Logrolling in an Institutional Context: A Case Study of Food Stamp Legislation." In *Congress and Policy Change*, Eds. Gerald C. Wright, Leroy N. Rieselbach, and Lawrence C. Dodd. New York: Agathon Press, pp. 223-253.

Gailmard, Sean, and John W. Patty. 2012. *Learning While Governing: Expertise and Accountability in the Executive Branch.* Chicago: University of Chicago Press.

Gilligan, Thomas W., and Keith Krehbiel. 1989. "Asymmetric Information and Legislative Rules with a Heterogeneous Committee." *American Journal of Political Science* 33(2): 459-490.

Hall, Richard L., and Alan V. Deardorff. 2006. "Lobbying as Legislative Subsidy." *American Political Science Review* 100(1): 69-84.

Hirschman, Albert O. 1945. *National Power and the Structure of Foreign Trade*. Berkeley, CA: University of California Press.

Hitt, Matthew P., Craig Volden, and Alan E. Wiseman. 2017. "Spatial Models of Legislative Effectiveness." *American Journal of Political Science* 61(3): 575-590.

Jones, Bryan D., Sean M. Theriault, and Michelle Whyman. 2019. *The Great Broadening: How the Vast Expansion of the Policymaking Agenda Transformed American Politics*. Chicago: University of Chicago Press.

Kau, James B., and Paul H. Rubin. 1979. "Self Interest, Ideology, and Logrolling in Congressional Voting." *Journal of Law and Economics* 22(2): 365-384.

Krehbiel, Keith. 1992. *Information and Legislative Organization*. Ann Arbor, MI: University of Michigan Press.

Lee, Frances E. 2016. *Insecure Majorities: Congress and the Perpetual Campaign*. Chicago: University of Chicago Press.

Mann, Thomas E., and Norman J. Ornstein. 2006. *The Broken Branch: How Congress is Failing America and How to Get It Back on Track.* New York: Oxford University Press.

Mann, Thomas E., and Norman J. Ornstein. 2012. *It's Even Worse Than It Looks: How the American Constitutional System Collided with the New Politics of Extremism*. New York: Basic Books.

Page, Scott E. 2018. *The Model Thinker*. New York: Basic Books.

Schnakenberg, Keith E. 2017. "Informational Lobbying and Legislative Voting." *American Journal of Political Science* 61(1): 129-145.

Sulkin, Tracy E. 2005. *Issue Politics in Congress*. New York: Cambridge University Press.

Tetlock, Philip E. 2017. *Expert Political Judgment, 2nd Edition*. Princeton, NJ: Princeton University Press..

Volden, Craig, and Alan E. Wiseman. 2014. *Legislative Effectiveness in the United States Congress: The Lawmakers*. New York: Cambridge University Press.

Volden, Craig, and Alan E. Wiseman. 2018. "Legislative Effectiveness in the United States Senate." *Journal of Politics* 80(2): 731-735.

Weingast, Barry R., and William J. Marshall. 1988. "The Industrial Organization of Congress; or, Why Legislatures, Like Firms, Are Not Organized as Markets." *Journal of Political Economy* 96(1): 132-163.

Zaleznik, Abraham. 2008. *Hedgehogs and Foxes: Character, Leadership, and Command in Organizations*. New York: Palgrave Macmillan.

Table A1: Variable Descriptions, Sources, and Summary Statistics

Variable	Description	House Mean (Std. Dev.)	Senate Mean (Std. Dev.)
Top Issue Proportion[a]	Proportion of member's sponsored bills dealing with their top issue	0.343 (0.148)	0.266 (0.109)
Number of Issues[a]	Number of issues contained in member's legislative portfolio	6.63 (2.70)	10.64 (2.92)
Issue HHI[a]	Herfindahl-Hirschman Index based on member's issue shares (0 to 1 range)	0.239 (0.124)	0.163 (0.074)
LES[b]	Member's Legislative Effectiveness Score in current Congress	0.937 (1.27)	0.932 (0.807)
Bills Sponsored[b]	Total number of bills the member sponsored in current Congress	13.72 (7.49)	29.82 (13.11)
Majority Party[b]	1 = member is in majority party	0.571 (0.495)	0.544 (0.498)
Seniority[b]	Number of terms served by member in current chamber in Congress	5.17 (3.99)	5.99 (4.45)
Committee Chair[b]	1 = member served as a committee chair	0.046 (0.209)	0.147 (0.354)
Subcommittee Chair[b]	1 = member served as a subcommittee chair	0.240 (0.427)	0.458 (0.498)
Majority Party Leadership[b]	1 = member served in majority-party leadership	0.019 (0.135)	0.047 (0.211)
Minority Party Leadership[b]	1 = member served in minority-party leadership	0.020 (0.140)	0.046 (0.210)
Speaker[b]	1 = member was Speaker of the House	0.001 (0.029)	
Power Committee[b]	1 = member served on chamber's power committee	0.245 (0.430)	0.722 (0.448)
Distance from Median[b]	|Member's DW-NOMINATE score – Median's DW-NOMINATE score|	0.380 (0.254)	0.333 (0.219)
Female[b]	1 = legislator is female	0.113 (0.317)	0.080 (0.272)
African-American[b]	1 = legislator is African American	0.068 (0.252)	0.006 (0.079)
Latino[b]	1 = legislator is Latino/a	0.040 (0.195)	0.005 (0.072)
Size of Congressional Delegation[b]	Number of districts in state's congressional delegation in the House	18.6 (14.5)	8.44 (8.86)
State Legislative Experience[b]	1 = member served in state legislature	0.497 (0.500)	0.416 (0.493)
State Legislative Experience × Legislative Prof.[b]	Level of state legislature's professionalism for members who served there (= 0 otherwise).	0.146 (0.184)	0.083 (0.116)
Vote Share[b]	Percentage of vote received in previous election	67.7 (13.5)	59.7 (9.55)

[a]Constructed by authors, as described in text.
[b]Data from Center for Effective Lawmaking (www.thelawmakers.org).

Table A2: Robustness of the Balanced Portfolio Hypothesis, with Segmented Proportion Variable

	Model A2.1 House	Model A2.2 Senate
Top Issue Proportion = 20% to 40%	0.235** (0.034)	0.135** (0.033)
Top Issue Proportion = 40% to 60%	0.371** (0.042)	0.255** (0.078)
Top Issue Proportion = 60% to 80%	0.361** (0.077)	0.133 (0.164)
Top Issue Proportion = 80% to 100%	0.240* (0.116)	0.113 (0.447)
Controls?	YES	YES
N	7,511	1,737
Adjusted-R^2	0.49	0.51

Notes: Ordinary Least Squares analyses, dependent variable is *Legislative Effectiveness Score*, robust standard errors in parentheses, observations clustered by legislator.
* p < 0.05 (two-tailed), *** p < 0.01* (two-tailed).
The models show the results upon dividing the *Top Issue Proportion* variable into five bins, with the case of a proportion below 20% being the excluded category. Relative to that excluded category, lawmaking effectiveness increases with an increase in specialization until a peak in the 40-60% range and a decline thereafter. The consistent pattern of the results across bins indicates that the parabolic structure of the models used throughout the manuscript appropriately characterize the nonlinear relationship between issue specialization and lawmaking effectiveness, while providing additional support for the *Balanced Portfolio Hypothesis*.

Table A3: Robustness of the Balanced Portfolio Hypothesis, including Potential Outliers

	Model A3.1 House Including Low Sponsors	Model A3.2 Senate Including Low Sponsors	Model A3.3 House Including High Sponsors	Model A3.4 Senate Including High Sponsors	Model A3.5 House Including All Sponsors	Model A3.6 Senate Including All Sponsors
Top Issue Proportion	1.942**	1.921**	2.872**	2.909**	2.426**	2.158**
	(0.209)	(0.346)	(0.494)	(0.650)	(0.328)	(0.426)
Top Issue Squared	-1.516**	-1.795**	-2.545**	-3.498**	-2.140**	-2.424**
	(0.180)	(0.402)	(0.602)	(0.979)	(0.269)	(0.520)
Controls?	YES	YES	YES	YES	YES	YES
N	8,325	1,963	8,505	1,964	9,319	2,190
Adjusted-R^2	0.49	0.53	0.48	0.56	0.48	0.58

Notes: Ordinary Least Squares analyses, dependent variable is a legislator's *Legislative Effectiveness Score*, robust standard errors in parentheses, observations clustered by legislator. Relative to the restrictions from the main models throughout the manuscript, Models A3.1 and A3.2 add back in those lawmakers who sponsor very few pieces of legislation. Models A3.3 and A3.4 add back in those who sponsor the largest portfolios. And Models A3.5 and A3.6 include all lawmakers.

* $p < 0.05$ (two-tailed), ** $p < 0.01$ (two-tailed).

On the whole, the results show that support for the *Balanced Portfolio Hypothesis* is robust in both the House and the Senate to including those who sponsor very few pieces of legislation, those who sponsor the most pieces of legislation, and both.

Table A4: Balanced Portfolios Promote the Production of More Laws

	Model A4.1 House All Laws	Model A4.2 Senate All Laws	Model A4.3 House Non-Commem. Laws	Model A4.4 Senate Non-Commem. Laws
Top Issue Proportion	1.358**	6.118**	1.488**	5.598**
	(0.309)	(1.306)	(0.276)	(1.283)
Top Issue Squared	-1.194**	-6.183**	-1.207**	-5.476**
	(0.309)	(1.911)	(0.320)	(1.889)
Controls?	YES	YES	YES	YES
N	7,511	1,737	7,511	1,737
Adjusted-R^2	0.27	0.24	0.31	0.23

Notes: Ordinary Least Squares analyses, dependent variable of number of laws produced, robust standard errors in parentheses, observations clustered by legislator. Commemorative laws are included in Models A4.1 and A4.2, excluded in Models A4.3 and A4.4.
* $p < 0.05$ (two-tailed), ** $p < 0.01$ (two-tailed).
The results show that support for the *Balanced Portfolio Hypothesis* based on analyzing *Legislative Effectiveness Scores* is robust to looking instead at the number of laws produced by legislators, on the whole or excluding commemorative laws, in both the House and the Senate.

Table A5: Robustness of the Balanced Portfolio Hypothesis, with Legislator Fixed Effects

	Model A5.1 House	Model A5.2 Senate
Top Issue Proportion	*1.345***	*2.270***
	(0.318)	*(0.571)*
Top Issue Squared	*-1.129***	*-2.358***
	(0.352)	*(0.859)*
Bills Sponsored	0.052**	0.026**
	(0.002)	(0.002)
Majority Party	0.594**	0.258**
	(0.068)	(0.053)
Seniority	0.054**	0.018**
	(0.005)	(0.006)
Committee Chair	2.291**	0.645**
	(0.067)	(0.081)
Subcommittee Chair	0.514**	0.165**
	(0.037)	(0.051)
Majority Party Leadership	0.361**	0.042
	(0.098)	(0.090)
Minority Party Leadership	-0.081	-0.072
	(0.096)	(0.044)
Speaker	0.075	-----
	(0.393)	
Power Committee	-0.277**	-0.118**
	(0.051)	(0.037)
Distance from Median	0.221	-0.041
	(0.143)	(0.083)
Size of State Congressional Delegation in House	0.009	-0.002
	(0.009)	(0.002)
Vote Share	0.009	0.009
	(0.009)	(0.014)
Vote Share Squared	-0.0001	-0.00004
	(0.0001)	(0.0001)
Constant	-1.404	-0.950*
	(0.393)	(0.477)
N	7,511	1,737
Adjusted-R^2	0.46	0.51

Notes: Cross-sectional, time-series linear regression analyses, with legislator fixed effects. Dependent variable is *Legislative Effectiveness Score*.

* $p < 0.05$ (two-tailed), ** $p < 0.01$ (two-tailed).

Results show support for the *Balanced Portfolio Hypothesis* to be robust to inclusion of legislator fixed effects. This suggests that the main findings throughout are not merely the result of differences across legislators, but also that individual legislators themselves are more effective when they advance legislative portfolios that strike the right balance between a narrow and broad agenda. Specifically, the peak legislative effectiveness is associated with lawmakers dedicating 59.6% of their agenda to their main issue of interest in the House and 48.1% in the Senate.