Don't Know Much about Foreign Policy:
Assessing the Impact of "Don't Know" and "No Opinion" Responses on Inferences about
Foreign Policy Attitudes

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Abstract

Public opinion surveys on American foreign policy often elicit many "don't know" or "no opinion" responses. Researchers have paid surprisingly little attention to these responses, typically dropping them from their analyses or suppressing them in the survey design. We argue that these practices lead to potentially misleading conclusions about both the level of support for particular foreign policies and the determinants of individual attitudes. We demonstrate these problems using an original survey experiment testing the effect of including a DKNO option on three common questions about international trade, the use of force, and isolationism. Our findings also suggest that taking DKNO responses more seriously in our analyses provides a richer sense of the process through which important covariates actually influence attitudes.

But sometimes I wonder whether in this respect a democracy is not uncomfortably

similar to one of those prehistoric monsters with a body as long as this room and a

brain the size of a pin: he lies there in his comfortable primeval mud and pays

little attention to his environment; he is slow to wrath--in fact, you practically

have to whack his tail off to make him aware that his interests are being disturbed;

but, once he grasps this, he lays about him with such blind determination that he

not only destroys his adversary but largely wrecks his native habitat.

--George F. Kennan (1985 [1951], 59)

Scholars have long argued that public ignorance of, and indifference to, American foreign policy

has important consequences. If one believes that an educated and informed public is vital for the

functioning of a democracy, then the waxing and waning of American popular attention to

foreign policy like that noted by Klingberg (1952) and others is indeed troubling. Scholars of

American politics and public opinion have extensively discussed the significance of "don't

know" and "no opinion" (DKNO) responses to survey questions about policy attitudes. The issue

has received far less consideration in the literature on public opinion and foreign policy. In fact,

many surveys do not give respondents the opportunity to say they don't know in response to

questions about foreign policy. When analyzing surveys that do contain these responses,

researchers--including the authors--have often treated them as missing data, typically without

much comment. This is surprising because these answers are common.

We hope to convince scholars of public opinion and foreign policy to take DKNO

responses more seriously. How one treats DKNO responses in survey design and analysis can

affect inferences about the sources of support and opposition to a particular policy. Dropping or

suppressing these responses can lead one to incorrect estimates of the level of support and opposition as well as erroneous conclusions about the sources of these opinions.

We present evidence of these problems from an original survey experiment involving three widely examined foreign policy issues: trade, the use of force, and American global activism. Our results suggest that we should not regard DKNOs as missing data but rather directly address the fact that many respondents cannot or will not answer questions about foreign policy. In reality, "DKNO" is an opinion that deserves consideration alongside affirmative responses such as "support," "oppose," "yes," and "no." First, scholars should include a DKNO response option on survey questions about foreign policy attitudes. Second, they should model the DKNO responses alongside other responses to these questions. This approach to DKNOs in attitudes toward foreign policies will produce more accurate estimates of levels of support and key covariates of different attitudes. It will also allow researchers to answer a range of important questions about the formation and mobilization of public opinion on foreign policy.

The remainder of this paper has four parts. We will first briefly consider the implications of DKNO responses for survey design and review how they have been treated in previous research on public opinion and foreign policy. Next, we will present our survey experiment. Third, we will illustrate the added value of treating DKNO responses differently by revisiting the analysis of Hainmueller and Hiscox (2006). We will conclude with a discussion of what our results suggest for future research.

DKNO Responses and Studies of American Foreign Policy

Scholars and policymakers like Kennan have long lamented the American public's inability to comprehend and unwillingness to direct its attention to foreign policy issues. Writing at roughly

the same time as Kennan, Gabriel Almond (1950, 5) observed that "[t]here are inherent limitations in modern society on the capacity of the public to understand the issues and grasp the significance of the most important problems of public policy. This is especially true with foreign policy where the issues are especially complex and remote."

While subsequent scholars have questioned many of Almond's and Kennan's claims about public opinion, there is evidence that foreign policy issues are indeed less salient to the public than domestic matters are. The 2012 ANES included a DKNO prompt for seven policy questions, following up each of them with the phrase "or haven't you thought much about this issue?" Few people gave this response when the prompt was not included, mainly because it was difficult to do so in the web version of the survey. Table 1 displays the percentage of respondents who said they did not know or had not thought much about the issue on each of these questions. The only foreign policy question, which concerned limits on international trade, elicited at least three times as many DKNO responses as any other question. Of course, the fact that there was only one foreign policy question raises the issue of whether the higher rate of DKNO responses applied only to international trade or extended to other foreign policy issues.

The ANES has offered a DKNO prompt on additional foreign policy questions in two surveys since the end of the Cold War. In 1992, it added a question about sanctions on South Africa. In 2004, the survey included a question about the use of force. Table 1 also displays the results for domestic and foreign policy issues on these two surveys. The trade question elicited many DKNOs in all three surveys, as did the South Africa sanctions question in 1992. Only the question about the use of force in 2004, during the second year of the Iraq War, closely resembled the domestic policy issues in terms of the number of DKNO responses. Even in this

case, the rate of DKNO responses to the use of force question was higher than all but one domestic policy question.

[Table 1 about here.]

Other research also suggests that public opinion on foreign policy contains plenty of genuine ignorance and indifference. Guisinger (2009) analyzed the 2006 Cooperative Congressional Election Study (CCES). Of 1000 respondents asked to rank the importance of a range of different policy issues, "international trade" received the lowest ranking, with 52 percent of respondents considering trade to be only "somewhat" or "not" important. She found that few voters knew their representative's positions on trade and that this information had little effect on their voting behavior even when they did know. This level of indifference is not confined to trade policy. In the most recent Gallup survey on the most important problems facing the country, no foreign and defense policy issue, including trade, terrorism, national security, war, and other matters, received more than 5 percent of mentions (Gallup 2015).[1]

The question of what DKNO responses mean is substantively interesting and has important implications for survey design. Most attention to this issue has come from scholars of American politics. This work is too extensive and diverse to review in detail here, but two broad positions have emerged. The first arises from Converse's concern about "non-attitudes," pseudo-opinions generated randomly and supplied inconsistently in response to survey questions (Converse 1964). To the extent that DKNO responses represent non-attitudes, providing

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[1] Foreign policy is not the only area where public ignorance may have important consequences. See, for example, Bartels (2005) and Mettler (2011).

respondents with an explicit opportunity to say that they have no opinion should minimize the number of "false" responses: respondents claiming to have an opinion when they do not. Some scholars suggest that it might also lower the rate at which respondents refuse to complete the question or survey, improving overall data quality (Bishop, Tuchfarber, and Oldendick 1986).

A competing position deemphasizes the lack of genuine opinion as a source of these responses. Instead, scholars in this camp view DKNO responses as the product of specific cognitive states (such as lack of available or accessible information), of judgments about the adequacy of the available response options, and of the willingness to provide a response when the respondent does, in fact, hold an opinion (e.g., Herrmann 1995; Beatty, Herrmann et al. 1998; Beatty and Herrmann 2001; Berinsky 2004). From this perspective, genuine non-opinions might not even be a very important source of DKNO responses. Instead, these responses might mask incompletely-formed or weakly-held opinions that are nevertheless of interest to the researcher. If this view is correct, including a DKNO option to a survey question might let respondents "off the hook" too easily when there is something to be learned from pressing them to report their opinions (Krosnick 2001, 99).

In the literature on public opinion and foreign policy, there is little explicit discussion of what to do with DKNOs. This is surprising given the apparent prevalence of DKNO responses to foreign policy questions. Instead, scholars have focused almost exclusively on the determinants of support and opposition to policies of interest. Apart from Berinsky's (2004, 105-26) examination of support for the Vietnam War, little has been written about the reasons for DKNO

responses, or their implications for the analysis of foreign policy attitudes.[2] This does not mean that these questions have not cropped up in practice.

Explicitly or implicitly, foreign policy researchers have handled DKNO responses in two ways. The first is to employ a survey design that minimizes these responses by omitting an explicit DKNO option. Some respondents might still volunteer this response, though this is difficult to do when the survey is administered through a computer interface with a limited set of responses and no human interviewer to record an answer that is not part of this set. A second method, assuming the researcher has data that contain DKNO responses, is to drop them from the analysis. This is the most common approach. Some researchers implicitly do both, using a survey that has few DKNO responses by design, then dropping those that remain. We will argue below that both approaches are likely to produce flawed inferences about the nature and origins of foreign policy views.

It is instructive to review first how this issue has been handled in some major works on three widely considered foreign policy attitudes. A substantial body of research about attitudes toward international trade and trade policy has emerged in the last two decades. In their pioneering work on the issue, Scheve and Slaughter (2001) employed the 1992 American National Election Study (ANES), which offered an explicit DKNO option that roughly one quarter of the respondents selected. Scheve and Slaughter (2001, 276) dropped these responses, noting that they used only those favoring or opposing new limits on international trade. Mayda

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[2] There is more research on DKNO responses to questions about political knowledge (as opposed to opinions), some of which relates to foreign policy. For instance, Guisinger (2009) focuses on knowledge about trade and trade policy. In her analysis, she also models DKNO responses using multinomial logit, as we also recommend.

and Rodrik (2005) used the 1995 International Social Survey Programme (ISSP) and the 1995 World Values Survey (WVS), both of which required respondents to volunteer a DKNO response. Roughly 5 percent did so in both cases. Mayda and Rodrik (2005, 1397) used several different dependent variables, sometimes dropping DKNO responses and sometimes lumping them together with support for, or opposition to, international trade. In their analysis of the effect of education, Hainmueller and Hiscox (2006) followed the practices of Mayda and Rodrik, and Scheve and Slaughter. Mansfield and Mutz (2009, 435) used two surveys that required respondents to volunteer a DKNO response. They treated these responses as a middle category on their trade scale variable. Many other works on attitudes toward international trade note that they dropped DKNO responses from their analysis (e.g., O'Rourke and Sinnott 2001; Baker 2005; Kleinberg and Fordham 2010).

Attitudes toward the use of force are another important focus of research. There is no convention of reporting how DKNO responses were handled in this research area. For instance, Conover and Sapiro (1993) used a variety of questions from the 1991 ANES Pilot Study to construct scales measuring militarism and the fear of war. The questions they employed included no explicit DKNO prompt, so respondents had to volunteer this answer on their own. Like most other work in this area, they do not explain how they treated these responses but they were most likely dropped from the analysis. Most research in this area follows the same practice, saying little or nothing about the issue (e.g., Eichenberg 2003; Burris 2008; Drury, et al. 2010). In some cases, though the authors do not explicitly address the issue, the dichotomous construction of the dependent variable implies that DKNO responses were dropped (Baum 2004, 321-2; Brewer and Steenbergen 2002, 47-8).

There is a similar practice in the literature on support for global activism in American foreign policy, or its opposite, isolationism. Many of these researchers use the isolationism item included on many ANES surveys since 1956. Sometimes this item has included an explicit DKNO prompt, producing many of these responses when this is the case. Regardless, researchers have almost universally dropped DKNO respondents from the analysis. To the extent that they report the handling of this issue, they state that DKNO responses are treated as missing (e.g., Fordham 2008; Urbatsch 2010). In other cases, the construction of the dependent variable suggests that these responses have been handled this way (e.g., Brewer, et al. 2004; Chanley 1999; Conover and Sapiro 1993; Brewer and Steenbergen 2002).

In all of this research, the handling of DKNO responses is an afterthought. Notwithstanding the debate over why respondents say they don't know or have no opinion, it is worth remembering that the ambiguities surrounding these responses do not really distinguish them from other answers to survey questions. They may be top-of-the-head reactions to the most recent information the respondent has received, or products of researchers' phrasing or ordering of the questions. They might reflect what respondents think interviewers want to hear or believe to be socially acceptable. Setting DKNO responses aside on these grounds is not warranted, particularly in an area like foreign policy, where they are so common. In the next section, we hope to convince international relations scholars that they should think more systematically about why people say they don't know, and what these responses mean for the questions researchers are trying to answer.

Potential Inference Problems Arising from the Handling of DKNO Responses

In this section we will outline the potential problems associated with the two common ways of dealing with DKNO responses in the literature on public opinion and foreign policy. These problems pertain to decisions scholars must make at different points in the research process and they have implications for our understanding of the shape and determinants of public opinion.

The first question concerns whether to offer survey respondents a DKNO option. This is a choice about survey design that scholars using preexisting data may not be able to make for themselves. However, they still need to know its implications for the data they are using. As the debate in the American politics literature suggests, the decision to include a DKNO option hinges on the researcher's view of what these responses represent. Omitting it may make sense if the researcher believes that DKNO responses are likely to conceal weakly held opinions that are nevertheless important for the research project, or if concerns about the social acceptability of their opinions might lead respondents to hide them behind a DKNO response. The researcher should also consider how many DKNO responses a specific question is likely to elicit. Existing work suggests that a sizable proportion of respondents to choose the option on foreign policy issues. By itself this is not necessarily a problem if one believes that lacking a DKNO option, respondents will distribute themselves randomly across the remaining answer categories. Suppressing DKNOs would then result in some efficiency loss, but not bias. This is a strong assumption, as we will show below. If the number of potential DKNO responses is large and these respondents are liable to distribute themselves unevenly when a DKNO option is omitted, we might reach incorrect conclusions about the aggregate level of support for particular policy positions. We might also obtain biased inferences about the effect of important determinants of

foreign policy attitudes, particularly when those determinants are also related to respondents' propensity to say they have no opinion.

Because most scholars are interested in explaining positive or negative positions on policy issues, it may be tempting to treat DKNO responses as missing data, dropping them from the analysis. We will argue later that DKNO responses are substantively interesting, but even those who do not share our position need to worry about the consequences for inference of dropping these observations. These responses are not random. Survey respondents have been found to provide "no opinion" responses at higher rates when they have less education (e.g., Bishop et al. 1980), lower income (Berinsky 2004), less interest in and information on the topic (e.g., Rapoport 1982; Krosnick and Milburn 1990), or less personal experience with the issue (Krosnick and Milburn 1990).[3] Previous research has used many of these same variables to predict foreign policy attitudes. Dropping the DKNO responses could thus create a biased sample that could affect inferences about both the aggregate level of support for particular policy positions and the effect of these covariates.

Of course, it is possible that these analytical problems are less important in practice than they appear in theory. In the next section we will evaluate their impact. With the assistance of the Time-Sharing Experiments in Social Science (TESS) program, we conducted a survey about

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[3] Other factors driving these responses relate to survey design, such as the open/closed nature of questions and the availability of fine-grained response options (e.g., Converse 1976), the clarity of question wording (e.g., Faulkenberry and Mason 1978), and whether the survey instrument is administered in person, by telephone, through the internet, or by some other medium (e.g., Groves and Kahn 1979). These considerations are important for anticipating the prevalence of DKNOs, but do not involve substantively important covariates.

attitudes toward trade, the use of force, and American foreign policy activism. Knowledge Networks administered our survey to a national sample of 2,843 respondents in September 2012. The survey included an experiment to assess the effect of offering an explicit DKNO response option. Respondents were randomly assigned to one of two groups. We asked both groups a series of questions about foreign policy issues similar to those included in previous surveys. In addition to other possible responses, respondents in the treatment group received a DKNO option on each question. Respondents in the control group did not. The online appendix includes the full text of the questions and response options.

In order to evaluate the influence of suppressing or dropping DKNOs on inference, we focus on three common predictors of foreign policy attitudes: education, political partisanship, and gender. While previous research on attitudes toward trade, the use of force, and American internationalism has considered a wide range of independent variables, it invariably includes these at least as controls. For our purposes it is noteworthy that these variables have also been shown to predict DKNO responses in surveys. While further research should consider additional predictors, we limit our attention here to this small set in order to simplify our analysis and to facilitate comparison across the three different foreign policy issues.

First, education is among the most widely used predictors of foreign policy attitudes. Though scholars disagree about whether it indicates ownership of human capital, cosmopolitanism, or something else, education is positively related to support for international trade in the United States (e.g., Hainmueller and Hiscox 2006; Kleinberg and Fordham 2010; Mayda and Rodrik 2005; O'Rourke and Sinnott 2001; Scheve and Slaughter 2001). A wide range of researchers has found that education is negatively related to support for the use of force (e.g., Baum 2004; Brewer and Steenbergen 2002; Conover and Sapiro 1993; Nincic 1997). Other

research has found education among the strongest predictors of support for internationalism

(Brewer, Gross, Aday, and Willnat 2004; Brewer and Steenbergen 2002; Conover and Sapiro

1993; Fordham 2008; Holsti 1996, 178; Nincic 1997; Urbatsch 2010). In the analysis that

follows, we will use an education variable with the following four categories: (1) less than a high

school education; (2) high school graduate; (3) some college; (4) college graduate.[4]

Our second predictor, partisanship, has been linked to a variety of foreign policy

attitudes, including the ones we consider here. Holsti (1996, 131-8) found that party

identification was not a strong predictor of foreign policy attitudes when the parties were

ideologically diverse, as they were for much of the Cold War era. More recently, though,

partisan cleavages on foreign policy issues have deepened, becoming a major source of

differences over issues like the Iraq War (e.g., Jacobson 2013). The two parties' positions on

many foreign policy issues have varied over time, and the actual effect of party identification

might depend on whether the respondent shares the president's party (Urbatsch 2010), as well as

the positions of party leaders (e.g., Berinsky 2009, 85-126). Nevertheless, many studies have

used it to predict individual attitudes toward the use of force (e.g., Bartels 1994; Baum 2004;

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[4] Household income is another common independent variable in analyses of foreign policy

opinion. Respondents from wealthier households are more likely to support international trade

and a more liberal trade policy (e.g., Baker 2003; 2005; Mayda and Rodrik 2005). Other studies

have found that these respondents tend to support the use of force (e.g., Brewer, Gross, Aday,

and Willnat 2004; Conover and Sapiro 1993). They also support American global activism more

than their poorer compatriots do (e.g., Brewer and Steenbergen 2002; Fordham 2008; Urbatsch

2010). We will omit this variable from our analysis because education has a strong causal effect

on income (Angrist and Krueger 1991).

Brewer and Steenbergen 2002; Drury, et al. 2010) and foreign policy activism (e.g., Chanley 1999; Wittkopf 1987). Partisanship has been less important in recent studies of international trade, but the two parties once had quite distinctive positions on the issue (e.g., Irwin and Korszner 1999; Hiscox 1999; Weingast, Goldstein, and Bailey 1997). Moreover, O'Rourke and Sinnott (2001) and Mansfield and Mutz (2009) have argued that a variety of ideological considerations continue to influence trade attitudes.

We will use two variables to examine the effect of party identification here, one indicating that the respondent self-identified as a "strong Republican," the other indicating self-identification as a "strong Democrat." Obviously, other specifications of party identification are possible, and one might make a case for using ideological orientation instead. Our purpose here is not to provide a comprehensive discussion of this covariate, but only to test whether the treatment of DKNO responses affects inferences about it.

Finally, we consider inferences about the impact of gender on foreign policy attitudes. While nearly always included as a demographic control variable, some studies on trade attitudes have made gender the focus of their investigations. Women appear to hold more protectionist views than men. This gender gap in trade policy attitudes has drawn significant attention not least because it has proven difficult to explain fully (e.g., Beaulieu and Napier 2008; Burgoon and Hiscox 2008; Guisinger forthcoming; Mansfield, Mutz, and Silver 2015). Women are also less likely than men to support the use of force (e.g., Conover and Sapiro 1993). Though the results are less consistent, women also appear to be less likely support an internationalist foreign policy (e.g., Conover and Sapiro 1993; Fordham 2008; Urbatsch 2010).

Empirical Results

We first consider the effect of offering a DKNO option on inference. Table 2 presents the results of our survey experiment. As on other surveys about foreign policy, a substantial proportion of the treatment group chose the DKNO option they were offered.[5] The inclusion of this option thus affected the apparent level of support for particular policy options, sometimes in substantively important ways. This is most obvious for the question concerning the use of force. In the absence of a DKNO option, a majority of the control group responded that the United States should be "very willing" or "somewhat willing" to use force. In the treatment group, this was not even the modal category, with "very unwilling" or "somewhat unwilling" drawing greater support. The size of the majorities supporting increased trade and foreign policy activism also increased substantially, though the modal response did not change on these questions.

[Table 2 about here.]

These changes in the level of support for the three policies suggest the presence of acquiescence bias among those who would likely have chosen the DKNO option. Denied this option, they tended to express support for the policy in question. Not surprisingly, the weaker support category saw the greatest growth in all three cases. In the use of force question, the increase in the "willing" responses in the control group was roughly 13 times greater than the

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[5] A small proportion of respondents declined to answer the question. This response was slightly more common in the control group, which was not offered the explicit DKNO option. Refusal rates in the control and treatment groups were 0.90% and 1.58% on the trade question, 0.97% and 1.43% on the use of force question, and 1.04% and 1.51% on the internationalism question, respectively.

increase in the "unwilling" responses, which accounts for the reversal in the modal category. This tendency toward acquiescence among respondents who would otherwise have selected the DKNO was also quite strong in the questions on trade and internationalism. In the control group, the increase in the positive responses ran roughly twice as high as the increase in negative responses.

Our survey does not reveal the source of this response bias. Previous research suggests a variety of possible explanations, including respondents' personality traits and cognitive abilities, perceptions of the relative social status of interviewer and respondent, and motivations to satisfice when answering survey questions (see Krosnick 1999 for an overview). Notably, many of these same factors have also been found to predict 'no opinion' responses, raising concerns that suppressing DKNO responses worsens acquiescence bias. How response bias on foreign policy questions compares to other policy areas is an empirical question that deserves further study. In any event, our results suggest that omitting the DKNO option risks overstating public support for particular foreign policies. Given the normative importance of majority support in a democracy, this is a potentially serious issue. For both normative and descriptive reasons, we should arguably regard the opinions of those who would have preferred the DKNO option differently from opinions that respondents would have expressed even when this option was available.

Does the presence or absence of a DKNO response option affect inferences about the effect of theoretically important covariates on these policy attitudes? To answer this question, we estimated two models: a multinomial logit model of support, opposition, and DKNO responses using the treatment group, and a logit model of support and opposition using the control group. Choosing the appropriate model for handling DKNO responses requires us to take a position on

how people answer survey questions. If respondents first decide whether to answer the question,

then perhaps express an opinion, a selection model would be appropriate (e.g., Berinsky 2004).

We are not certain that respondents actually select answers in this hierarchical fashion. Instead,

we assume that they treat all response categories equally, simply making a single decision about

them. This process suggests an unordered choice model, which we implement here.[6] Some

analysts have employed an ordered choice model, treating DKNO responses as a neutral middle

category. This approach implies that the DKNO response indicates ambivalence, as it might

among respondents who have lots of information suggesting both support and opposition to the

policy in question, and remain uncertain as a result. While this might be the case for some

respondents, it is a strong assumption, especially because most DKNO responses come from

individuals with relatively low education and political interest.[7] The unordered choice model

does not require us to make it.[8]

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[6] The online appendix presents two alternatives to the multinomial logit for modeling DKNO

responses: a censored probit selection model and two independent logit models. While we argue

that the multinomial logit is a more natural representation of respondents' decision-making

process, all of these approaches have their strengths and weaknesses. All three produce very

similar inferences.

[7] The online appendix provides evidence that this treatment of DKNO responses frequently

violates the parallel regression assumption in ordered choice models. Bagozzi and Mukherjee

(2012) offer a solution to the related problem of inflation in the number of neutral responses as

respondents who actually have no opinion instead say they are neutral or ambivalent.

[8] While we prefer the multinomial logit model for the reasons set out here, it does require us to

assume the independence of irrelevant alternatives (IIA). Amemiya (1981, 1517) explains that

Table 3 presents the results. The multinomial logit equation comparing support and opposition is the most comparable to the binary logit model. The sign and significance of the covariates of primary interest to us--education, gender, and party identification--are the same in most cases. The only notable exceptions are the effect of Republican Party identification on support for increased trade, which is significant in the treatment group but narrowly misses the threshold for statistical significance in the control group, and the effect of gender on the use of force question, which has the expected effect in the treatment group but not in the control group.

[Table 3 about here.]

The magnitude of the estimated effects is just as important as their sign and significance. Figure 1 displays the marginal effects of our principal covariates on the probability that respondents would express support for the three policies we considered. It shows results from the multinomial logit model alongside those from a binary logit model of the control group, which did not have the DKNO option. (It also displays the results of another binary logit model of the treatment group when the DKNO responses are dropped. We will discuss these results further in the next section.) Here there is greater evidence that the omission of the DKNO response option

violations of this assumption are most likely when the options considered are similar, as in the widely used example of a transportation decision involving a car, a red bus, and an identical blue bus. The similarity of the two buses is the source of the difficulty. The choices of "support," "oppose," and "DKNO" in our survey question do not present this problem. We estimated Small-Hsiao and Hausman-McFadden tests for the violation of IIA for all of our models and found no evidence of a problem. For a useful discussion of this issue, see Long and Freese (2006, 243-6).

produces different inferences. In several cases, the marginal effects from the multinomial logit model of the treatment group are roughly twice as large as those from the logit model of the control group. These include the effect of gender on support for trade, the effect of Republican Party identification on support for the use of force, and the effect of education on support for internationalism. It is worth emphasizing that each of these causal relationships has played a central role in previous research (e.g., Mansfield, Mutz, and Silver 2015; Jacobson 2013; Fordham 2008). Overall, though the estimated effects are similar in most cases, they are substantially different in others. Researchers cannot be confident that surveys with no DKNO option will produce the same inferences about major covariates as those that include this response category.

[Figure 1 about here.]

The differences in marginal effects are due in part to the nature of the models. Some of the covariates' effects on the probability of support or opposition stem from changes in the probability of selecting the DKNO option, something the control group could not do. To illustrate the implications of this point, Figure 2 displays the marginal effects of our principal covariates on all three possible responses to the trade question. A change in "support" in the multinomial logit model does not necessarily imply an equal and opposite change in "opposition," as it does in the logit model. This is most obvious for education, which is associated with large changes in the probability of a DKNO response. The multinomial logit model finds that a move from the lowest to the highest category on this variable is associated with a large increase in the probability of support for increased trade, but no statistically

significant change in the probability of opposition of this outcome. This result implies a different

and perhaps more realistic sense of the process through which education influences opinion on

this issue. Rather than leading people to shift from opposition to support for trade, education

makes them more likely to express an opinion rather than to say they don't know. This opinion is

more likely to be pro-trade. Omitting the DKNO option from the menu of possible responses

precludes us from finding evidence of this process.

[Figure 2 about here.]

The Effect of Excluding DKNO Responses from Analysis

As we have already noted, most foreign policy researchers treat DKNO responses as missing

data when analyzing surveys that contain them. The difficulty with this practice is that it may

create a biased sample by dropping a non-random set of respondents. For example, in our

treatment group, dropping the DKNO responses increases the proportion of college graduates

from 33.7 percent to 36.5 percent. It increases the share of men from 50.4 percent to 53.9

percent. It increases the share of strong Democrats and strong Republicans from 18.4 and 14.9

percent, respectively, to 20.2 and 15.8 percent. Those reporting levels of support for a policy

using such a sample should note that these levels pertain "among those who expressed an

opinion." Readers, in turn, should take this qualifier seriously.

These changes in our sample may not appear overwhelming. Moreover, the inclusion of a

DKNO option in the survey should avoid the response bias associated with its omission. It is thus

worth asking whether an analysis that drops DKNO responses still produces biased inferences

about major covariates. Comparing the results of a multinomial logit model that retains the

DKNO responses to those of a logit model that drops them helps provide an answer. Table 4 presents these logit results.

[Table 4 about here.]

The coefficients in Table 4 are extremely similar to those obtained from the equation of the multinomial logit model in Table 3 that captures the difference between support and opposition. Indeed, many of the coefficients and standard errors are identical. Returning to the marginal effects presented in Figure 1, the results are not so close. For instance, the effect of gender on support for trade is substantially smaller when we drop the DKNO responses. Similarly, the effect of education on support for internationalism is only half as large when the DKNO responses are dropped. The effect of education on the probability of support for the use of force is the most surprising of all, since it is negative when the DKNOs are dropped, but positive (though not significant) when they are included.

As with the logit models of the control group to whom no DKNO option was available, the principal reason for these differences is that an increase in the probability of "support" in the logit model necessarily implies a reduction in the probability of "oppose" because these are the only two possible response options. The effects in the multinomial logit model differ because they permit the possibility that a variable might work primarily by reducing the probability that a respondent will say they don't know. This is at the root of the changed sign on the marginal effect of education on support for the use of force. The logit models imply that higher levels of education make people less likely to support the use of force. The multinomial logit model suggests instead that higher levels of education make people more likely to express an opinion,

usually a negative one. This distinction is perhaps subtle, but it suggests quite a different process than the one embodied in the logit models.

An Illustration: Support for International Trade in the 1992 and 1996 ANES

To illustrate the analytical gains from modeling DKNOs alongside the other responses, we will replicate one part of Hainmueller and Hiscox's (2006) analysis of the 1992 and 1996 ANES. Their study of attitudes toward international trade is especially interesting for our purposes because it focused on the effect of education, a variable that strongly influences respondents' propensity to say they don't know. These two iterations of the ANES have also played a role in other important research on trade attitudes, most notably in Scheve and Slaughter (2001). Our aim here is not to challenge Hainmueller and Hiscox's conclusions but rather to show how we can learn more about the theoretical processes the authors posit if we consider the role of DKNO responses.

Hainmueller and Hiscox (2006) questioned prior claims about why education influences trade policy attitudes. Scheve and Slaughter (2001), Mayda and Rodrik (2005), and others had used education as a measure of human capital endowment. Following the logic of Stolper and Samuelson (1941), these analysts had argued that support for free trade should increase with education in relatively capital-abundant countries like the United States. More educated individuals in these countries should expect to see their income rise as trade increases. Hainmueller and Hiscox pointed out that education actually captures many things other than an individual's stock of human capital, and so its effect on support for free trade might reflect processes other than the one the Stolper-Samuelson theorem suggests. In particular, they suggested two alternatives. The first concerns the economic ideas to which education exposes

people. Building on the work of Walstad (1997) and others, Hainmueller and Hiscox argued that exposure to economic ideas like the theory of comparative advantage, especially in college, can influence opinions about economic policy. "Highly educated respondents are likely to think about international trade in different ways than their less-educated counterparts; the highly educated use a more sophisticated set of ideas about cause-and-effect relationships and more information about the effects of trade for themselves and for others" (Hainmueller and Hiscox 2006, 472). The second causal process that Hainmueller and Hiscox (2006, 473) proposed "focuses on differences in cultural values: highly educated individuals are less prone than others to nationalist and antiforeigner sentiments that are often linked with protectionism in political debates."

Hainmueller and Hiscox used several surveys to test these arguments. Here we will focus on the two ANES surveys, both of which included a DKNO prompt similar to the one we employed in our experiment. Both also elicited a substantial number of DKNO responses: 29.7 percent in 1992 and 44.5 percent in 1996.[9] Following the practice of Scheve and Slaughter (2001), who used the same survey, Hainmueller and Hiscox dropped the DKNOs from their analysis. One of their central findings is that the effect of education occurs mainly at the college level. At lower levels, education has little impact on attitudes toward trade. The authors argue that this threshold effect is more consistent with the impact of economic ideas learned in college than with education's distributional impact through human capital. Here we will show that including the DKNOs in the analysis would provides additional information relevant to the arguments Hainmueller and Hiscox tested.

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[9] Note that this is not the same trade question from the 1992 ANES noted in Table 1, which had a higher proportion of DKNO responses.

We conducted the same analysis we used for our survey data on the two ANES surveys, estimating two models of support for new limits on trade.[10] Figure 3 presents the marginal effects from these models. The first included the DKNOs alongside support and opposition in a multinomial logit model. The second omitted the DKNOs from the analysis, replicating models 5 and 13 from Table 1 of Hainmueller and Hiscox's analysis (2006, 478). These two models used the full sample for each ANES survey, a five-category education variable, and a limited set of control variables.[11] Following Hainmueller and Hiscox, we focus on the probability of support for new limits in reporting marginal effects from a probit model.

[Figure 3 about here.]

The results from the two different iterations of the ANES are remarkably similar. As with our survey, the ANES results show that education greatly reduces the probability of a DKNO response. While perhaps unsurprising, this leads to a more nuanced interpretation of the effect of

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[10] The exact wording of the ANES question is: "Some people have suggested placing new limits on foreign imports in order to protect American jobs. Others say that such new limits would raise consumer prices and hurt the American economy. Do you favor or oppose placing new limits on imports, or haven't you thought much about this?"

[11] The control variables included age, gender, and race. We replicated their limited-covariate model because it was most similar to the models we have presented elsewhere in this paper. Their analysis also included a more extensive set of covariates as well as several subsamples. This limited replication suffices to show the gains from modeling the DKNOs alongside the other responses.

education. Our replication yields results consistent with those of Hainmueller and Hiscox, including a threshold effect for education at the college level. However, by construction, the probit results imply that education can only move respondents from support for new limits on trade to opposing these limits. The multinomial logit results imply a more complex story. Education does not make respondents less likely to support new limits. Indeed, at the high school and "some college" levels, it actually makes them somewhat more likely to take this position. At the college and graduate school level, respondents who would otherwise have said they didn't know are much more likely to oppose new limits on trade, and no more likely to support new limits. This asymmetry creates the threshold effect.

The nuances that the multinomial logit model uncovers allow us to say more about how education might influence attitudes toward trade. The effects of education at the high school and "some college" are most interesting. Compared to those at lower levels of education, respondents in these categories were more likely to express an opinion and somewhat more likely to oppose new limits on trade. However, they are also somewhat more likely to support new limits. If one considers the likely employment outcomes for respondents at these levels of education, the finding that they are a little more likely to support new limits is reasonably consistent with the skill-level hypothesis. The result also sheds more light on the threshold effect, which is created by the fact that education at the college level and beyond no longer makes respondents more likely to express support for new limits on trade, only to oppose these limits. This effect of education is somewhat smoother and more interesting for the purpose of future research than the simpler effect estimated by the probit model.

The multinomial logit results also reveal something about the cultural argument linking education and trade attitudes that is not evident from an analysis that drops the DKNOs.

Hainmueller and Hiscox (2006, 492) found that including measures of cultural tolerance did not alter the effect of education. The multinomial logit results offer an additional reason for skepticism about at least some versions of the cultural argument. As Hainmueller and Hiscox presented it, the argument contains a claim about the attitudes of individuals with low levels of education: that they are more likely to support limits on trade because nationalist and antiforeigner sentiments hold more appeal to them. The finding that individuals at the lowest levels of education are no more likely to express support for new limits on trade than those at the highest levels is inconsistent with this argument. The less educated respondents are indeed less likely to oppose new limits on trade, but this is because they are less likely to express an opinion at all, not because they are more likely to support these limits, whatever their motive for doing so.

Discussion

Studies on public attitudes toward foreign policy have generally focused on the determinants of support and opposition. Understandably, researchers want to know what separates protectionists from free traders, hawks from doves, and internationalists from isolationists. At the same time, scholars have long noted that public ignorance and indifference are an important part of the landscape of American foreign policy. These two phenomena are linked: How we deal with those who say they don't know affects our inferences about those who say they have an opinion.

As scholars of public opinion and foreign policy, we should think more systematically about how we deal with DKNO responses in the survey data we gather and analyze. Should we include DKNO options? Should we treat them as a co-equal response in our statistical analyses? Our findings suggest that the answer to both questions is yes. We do not think our findings will

or should to be the last word on these questions. Our hope is that we can prompt more explicit discussion about how scholars handle DKNO responses. The problems we raise are not new but have received surprisingly little attention in international relations scholarship.

The findings from our survey experiment point to potential problems with two common ways of handling DKNO responses. Suppressing DKNO responses appears likely to introduce significant response bias, affecting inferences about the level of popular support for particular foreign policies as well as inferences about the determinants of these attitudes. We further found that dropping DKNO responses from the sample not only throws out a large amount of potentially interesting information, it could also lead to substantially different inferences about major covariates. In this paper, we have considered only three foreign policy questions, and only three major independent variables. Even across this small set of survey items and covariates, the extent of these problems varied substantially. One important conclusion is that researchers cannot safely set this issue aside.

In view of the potential problems with common treatments of DKNO responses, what should survey researchers do? We have two suggestions. First, an increasing number of researchers are designing and fielding their own surveys. For many issues, including an explicit DKNO response category in these surveys is important. Researchers should consider the likely prevalence of DKNO responses in their area of interest, and what these responses are likely to mean. Some foreign policy issues may be relatively obscure, eliciting many genuine DKNO responses. Suppressing DKNO responses by omitting this option from the menu of possible answers in these cases magnifies the chance of misleading descriptions and errors of inference like those we considered here. Researchers interested in topics where social appropriateness, satisficing, and other processes are likely to generate most of the DKNO responses may have

reasons to omit this response category, as some survey researchers concerned with American domestic political issues advise. In either case, the choice should be informed by the nature of the questions being studied and the population being surveyed.

Second, we believe there are important advantages to modeling DKNOs alongside other responses. We realize that the statistical models necessary to do so require additional assumptions that might not always be justified. In our view, these additional assumptions are worth making if explicitly modeling DKNO responses leads to different inferences than does omitting them from the analysis. Our results suggest that this is often, though not always, the case. At a minimum, we suggest that scholars estimate unordered choice models that include DKNO responses to test the robustness of results obtained from simpler models. This test is especially important when there are many DKNO responses, and variables of theoretical interest for research on other attitudes also predict these responses. Because considerations like education, income, and partisanship are important in the literature on public opinion and foreign policy, this will frequently be the case for research on this topic.

A broader reason to take DKNOs more seriously is that doing so offers a more complex and realistic sense of the process through which covariates influence foreign policy attitudes. This point is especially apparent in our partial extension of Hainmueller and Hiscox (2006). When considering difficult public policy issues, people do not only move from "support" to "opposition." They sometimes also move from disinterest to one of these opinions. Models that include only support and opposition implicitly set aside this substantively interesting aspect of the attitude formation process. Our results suggest that these models underestimate the actual effects of covariates like education as a result. Just as importantly, they make it more difficult for us to answer questions about the role of public indifference that have long preoccupied scholars

of American foreign policy. Understanding who really holds no opinion has implications for both

theory and policy, not least because it allows us to think about what factors may mobilize

Kennan's "prehistoric monster."

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Table 1.
DKNO Responses to Issue Questions in the American National Election Study

Issue	1992	2004	2012
New limits on foreign imports	63.6%	37.7%	45.0%
Sanctions on South Africa	65.6		
Use military force or diplomatic pressure to solve international problems		13.9	
Increase or decrease defense spending	13.5	12.5	11.8
Equality for women in business, industry, and government	4.4	4.1	
Urban unrest and rioting	14.5		
Improving the social and economic position of blacks	9.5	10.2	12.2
Government-provided health insurance	13.5	8.2	7.4
Government-guaranteed jobs and standard of living	12.6	9.0	7.3
Provide more or fewer government services	18.7	12.5	11.2
Protect the environment or protect jobs		15.6	15.6

Note: All questions invited respondents to provide a DKNO response using the phrase "or haven't you thought much about this issue" at the end of the question. We have dropped the "no answer" responses, many of whom did not receive the question, and added the small number of volunteered "don't know" responses to the "haven't thought much about this issue" category.

Table 2.
Experimental Results

Question: Do you favor or oppose increasing trade with other nations, or haven't you thought much about this issue?			
	Strongly support/ Support	Strongly oppose/ Oppose	Don't know/ No opinion
Treatment Group	0.57	0.20	0.23
Control Group	0.72	0.28	--

Question: In the future, how willing should the United States be to use military force to solve international problems, or haven't you thought much about this issue?			
	Very/ Somewhat willing	Very/ Somewhat unwilling	Don't know/ No opinion
Treatment Group	0.38	0.48	0.14
Control Group	0.51	0.49	--

Question: "It will be best for the future of the country if we take an active part in world affairs." Do you agree or disagree with this statement, or haven't you thought much about this issue?			
	Agree/ Somewhat agree	Disagree/ Somewhat disagree	Don't know/ No opinion
Treatment Group	0.61	0.23	0.15
Control Group	0.72	0.28	--

Note: Cell values are proportion of the sample in the response category. Probabilities may not sum to 1 due to rounding.

Table 3.
Models of Foreign Policy Attitudes for the Treatment and Control Groups

|	Trade			Use of Force			Internationalism		
	Multinomial logit (Treatment group)		Logit (Control group)	Multinomial logit (Treatment group)		Logit (Control group)	Multinomial logit (Treatment group)		Logit (Control group)
	DKNO	Support	Support	DKNO	Support	Support	DKNO	Support	Support
Education									
High school	-0.40	0.29	0.38	-0.61*	-0.24	-0.25	-0.55	-0.08	0.02
	(0.29)	(0.29)	(0.23)	(0.29)	(0.27)	(0.22)	(0.31)	(0.28)	(0.24)
Some college	-0.31	0.76*	0.38	-1.30*	0.04	-0.15	-0.98*	0.33	0.14
	(0.29)	(0.29)	(0.22)	(0.30)	(0.27)	(0.22)	(0.31)	(0.28)	(0.24)
College	-0.28	1.34*	1.52*	-1.81*	-0.39	-0.65*	-1.46*	0.82*	0.71*
	(0.31)	(0.30)	(0.24)	(0.31)	(0.26)	(0.21)	(0.34)	(0.28)	(0.24)
Wald test	χ^2 (3 d.f.) = 0.64	χ^2 (3 d.f.) = 13.70*	χ^2 (3 d.f.) = 20.61*	χ^2 (3 d.f.) = 16.70*	χ^2 (3 d.f.) = 3.10*	χ^2 (3 d.f.) = 6.01*	χ^2 (3 d.f.) = 7.93*	χ^2 (3 d.f.) = 10.28*	χ^2 (3 d.f.) = 7.21*
Democrat	-0.58*	0.03	0.18	-0.60*	-0.09	-0.24	-0.07	0.53*	0.65*
	(0.24)	(0.19)	(0.17)	(0.24)	(0.15)	(0.14)	(0.27)	(0.19)	(0.18)
Republican	-0.62*	-0.53*	-0.33	-0.06*	1.20*	0.94*	-0.47	0.28	0.16
	(0.24)	(0.19)	(0.17)	(0.30)	(0.17)	(0.17)	(0.30)	(0.19)	(0.18)
Male	-0.15	0.86*	0.40*	-0.58*	0.24*	0.02	-0.65*	-0.01	0.15
	(0.17)	(0.14)	(0.12)	(0.17)	(0.12)	(0.11)	(0.18)	(0.13)	(0.12)
Age	-0.02*	0.02*	0.007	-0.03*	0.001	-0.003	-0.02*	0.02*	0.02*
	(0.01)	(0.004)	(0.004)	(0.01)	(0.004)	(0.003)	(0.01)	(0.004)	(0.004)
Constant	1.43*	-0.77*	-0.19	1.66*	0.38	0.42	1.76*	-0.33	-0.29
	(0.35)	(0.35)	(0.27)	(0.34)	(0.32)	(0.25)	(0.37)	(0.34)	(0.28)
N	1,435		1,373	1,434		1,375	1,433		1,374

Note: The omitted category in the multinomial logit models is "oppose." Standard errors in parentheses. * $p < 0.05$.

Table 4.
Logit Models of Foreign Policy Attitudes Dropping DKNO Responses

	Trade	Use of Force	Internationalism
Education			
High school	0.31	-0.23	-0.03
	(0.29)	(0.27)	(0.28)
Some college	0.75*	0.04	0.35
	(0.29)	(0.27)	(0.28)
College	1.35*	-0.38	0.85*
	(0.30)	(0.26)	(0.28)
Wald test	χ^2 (3 d.f.) = 13.15*	χ^2 (3 d.f.) = 2.98*	χ^2 (3 d.f.) = 9.96*
Democrat	0.02	-0.09	0.53*
	(0.19)	(0.15)	(0.19)
Republican	-0.52*	1.20*	0.29
	(0.19)	(0.18)	(0.19)
Male	0.86*	0.24*	-0.02
	(0.14)	(0.12)	(0.13)
Age	0.01*	0.001	0.02*
	(0.005)	(0.004)	(0.004)
Constant	-0.76*	0.38	-0.32
	(0.36)	(0.31)	(0.34)
N	1,111	1,226	1,211

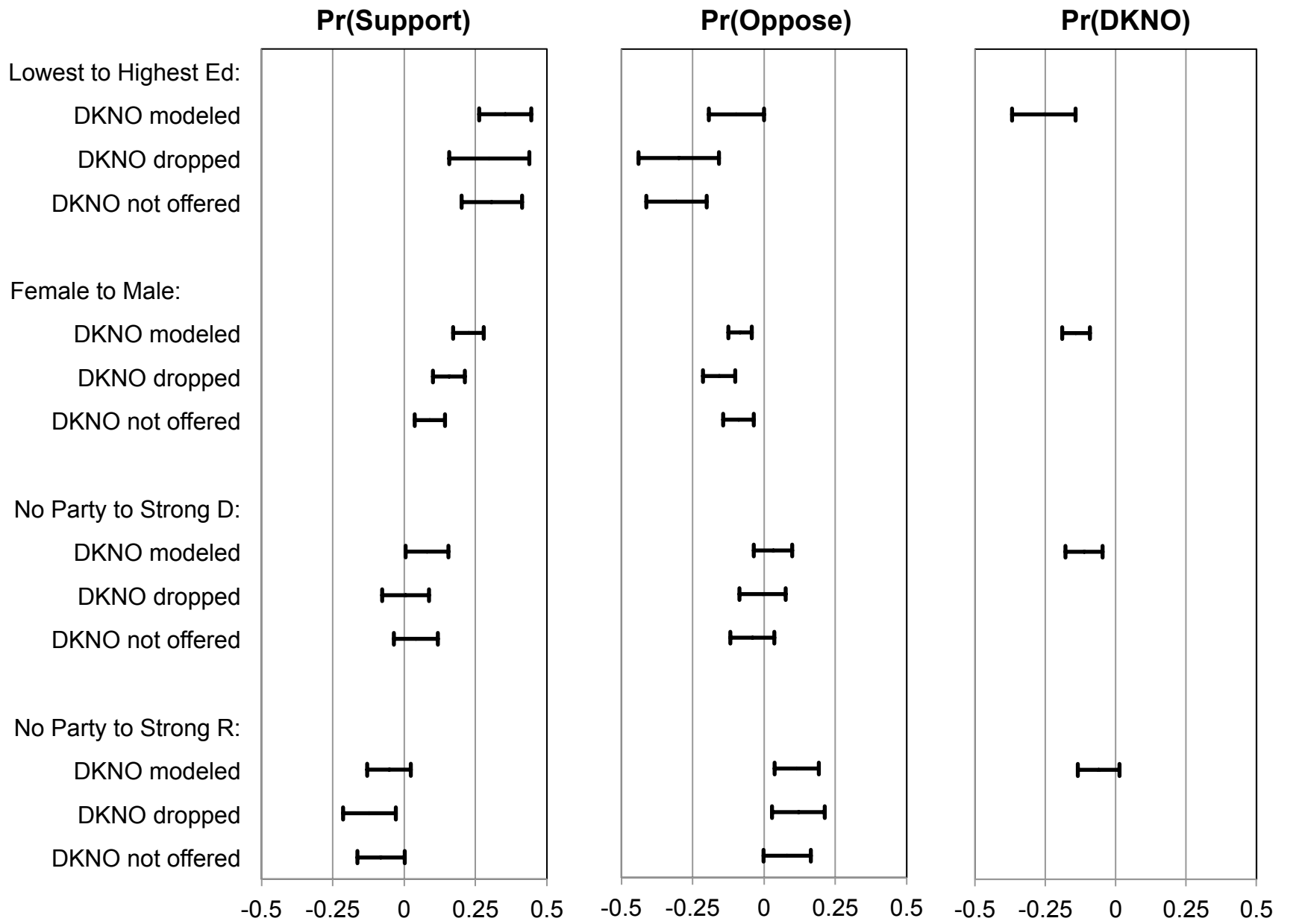Note: Standard errors in parentheses. * $p < 0.05$.

Figure 1.
Marginal Effects with Different Treatments of DKNO Responses
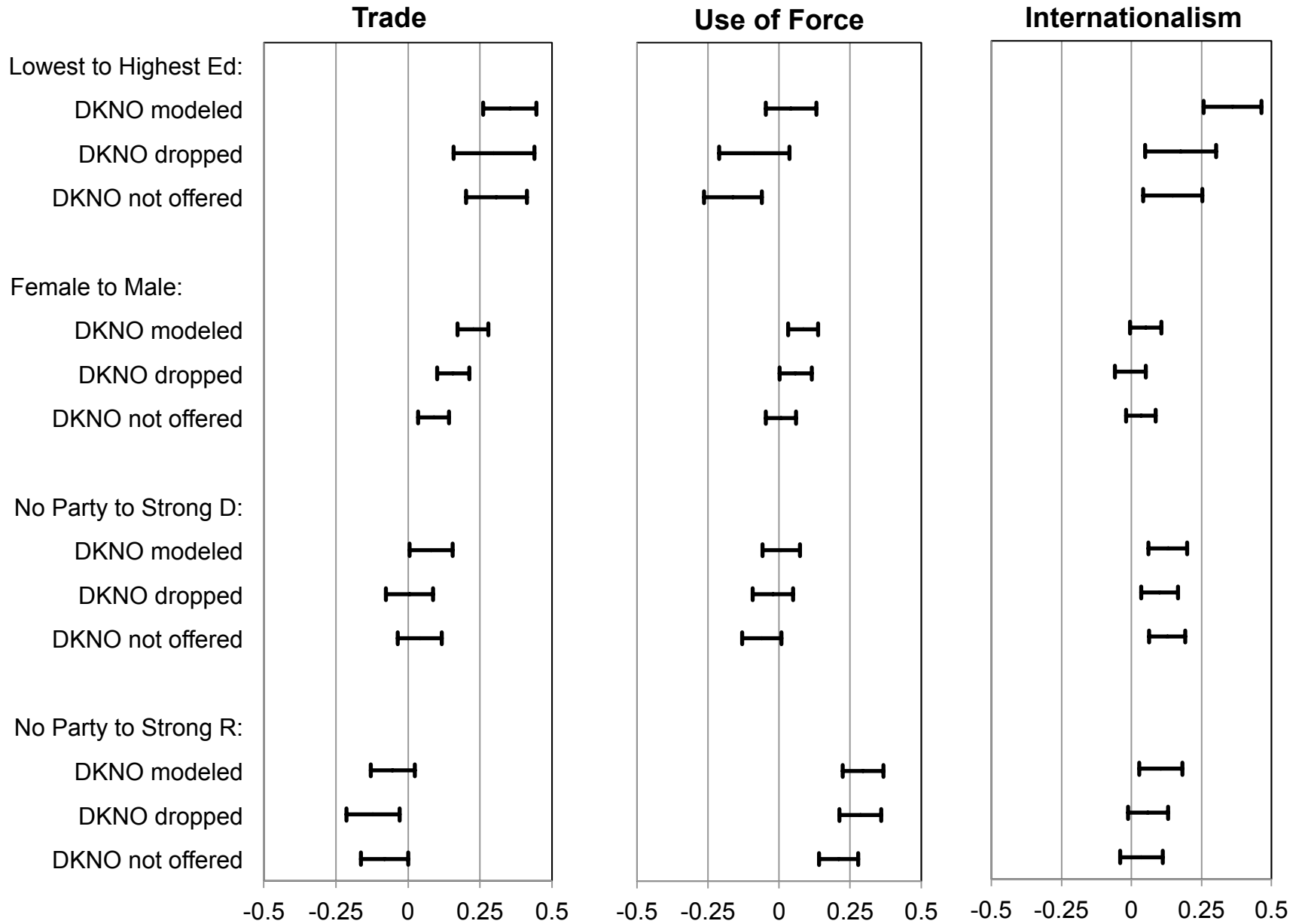
Bars indicate 95-percent confidence intervals for change in probability of a "support" response

Figure 2.
Marginal Effects on All Responses to Trade Question

Pr(Support)	Pr(Oppose)	Pr(DKNO)

Lowest to Highest Ed:
- DKNO modeled
- DKNO dropped
- DKNO not offered

Female to Male:
- DKNO modeled
- DKNO dropped
- DKNO not offered

No Party to Strong D:
- DKNO modeled
- DKNO dropped
- DKNO not offered

No Party to Strong R:
- DKNO modeled
- DKNO dropped
- DKNO not offered

-0.5 -0.25 0 0.25 0.5   -0.5 -0.25 0 0.25 0.5   -0.5 -0.25 0 0.25 0.5

Bars indicate 95-percent confidence intervals for change in probability of a indicated response to trade question

Figure 3.
Marginal Effects for Education Effect Estimated in Hainmueller and Hiscox (2006)

Bars indicate 95-percent confidence intervals for change in probability of a indicated response to trade question