Through a Glass and Darkly:

Attitudes Toward International Trade and the Curious Effects of Issue Framing

Michael J. Hiscox
Department of Government
Harvard University
Cambridge, MA 02138
hiscox@fas.harvard.edu

Last Revised: August 2004

Through a Glass and Darkly:
Attitudes Toward International Trade and the Curious Effects of Issue Framing

Abstract

Are most voters opposed to globalization? Are blue-collar workers, in particular, ready to revolt against policies favoring trade liberalization? In the wake of recent political debates about "outsourcing" of jobs and trade agreements like NAFTA, and after a string of protests that have disrupted meetings of the World Trade Organization, these questions have become increasingly salient. A growing body of empirical research, using data from available surveys of public opinion, suggests that anti-globalization sentiments are very strong, especially among blue-collar workers. This paper reports the findings from a new survey experiment aimed at measuring the impact of issue framing on individuals' stated attitudes toward international trade. Respondents given an anti-trade introduction to the survey question, linking trade to the possibility of job losses, were 17% less likely to favor increasing trade with other countries than were those asked the same question without any introduction at all. Curiously, respondents who were given a pro-trade introduction to the question, suggesting that trade can lead to lower prices for consumers, were *not* more likely to express support for trade than those who received no introduction. The experiment also reveals that not all types of respondents are equally susceptible to issue framing. In particular, the responses of less-educated individuals are far more sensitive to issue framing than are those of highly educated individuals. Research that relies upon available survey data to examine the level and determinants of opposition to trade liberalization thus appears to rest on a very unstable foundation. Specifically, any anti-trade framing in the survey questions generating data will lead to a substantial overestimation of the level of opposition to trade, particularly among less-educated voters.

I. Introduction

The dramatic growth in international trade and investment over the past decades has intensified the debate over globalization in American politics. The recent controversy about "outsourcing" of jobs to foreign locales, arguments about NAFTA and other trade agreements, and protests and demonstrations that have disrupted meetings of the World Trade Organization, have all revealed substantial political opposition to trade liberalization. A major political battle over trade policy may well be looming in the near future. Indeed, the idea of an imminent popular backlash against globalization has emerged in a variety of scholarly studies in recent years. Based upon data drawn from the most prominent political opinion surveys, analysts have concluded that roughly 60% of the electorate in the United States and in other western economies are opposed to trade liberalization (e.g., Scheve and Slaughter 2001; Mayda and Rodrik 2004). Taken at face value, this finding is actually quite shocking. In the most developed, democratic economies, where governments have officially championed greater trade openness since the 1940s, almost two-thirds of voters are – apparently – opposed to it. And, according to all the recent studies, the core opposition to trade openness emanates from less-educated, blue-collar workers: opposition is highest among respondents with the lowest levels of education (Scheve and Slaughter 2001; Mayda and Rodrik 2004; Beaulieu 2002) and among those in occupations requiring the least skills (O'Rourke and Sinnott 2002; Balestreri 1997; Beaulieu 2002). What we have on our hands, it seems, is a class war, pitting working-class voters against white-collar elites.

However, public opinion surveys may provide a very imperfect guide to the real attitudes and policy preferences of voters, in so far as top-of-the-head responses to pollsters are strongly influenced by the specific wording of the questions posed and how these words "frame" particular issues. Powerful framing effects have been discovered across a range of policy issues in experimental studies that present subjects with choices that are logically equivalent but differ in whether some purportedly relevant information is presented in various ways (see Jacoby 2000; Nelson and Kinder 2000; Druckman 2001a). Surveys of attitudes toward trade seem especially open to framing effects since trade, like other aspects of

foreign and economic policy, is a complex issue about which many voters are notoriously uninformed, and about which various emotions – such as national pride – are often invoked (see Bauer, Pool, and Dexter 1972, 81-84; Destler 1995, 180). It is not just problematic that respondents' views *in general* are influenced by question framing, it also matters if some groups or types of individuals tend to be more susceptible to question wording than others – one would not want to mistake a sensitivity to framing effects among some group of individuals for genuine antipathy (or sympathy) towards trade. To make reliable inferences about voters' true attitudes toward trade, and about how these views are linked to particular characteristics of individuals, we need a much better understanding of the impact of framing on responses to survey questions about this issue.

This paper presents the findings from a new survey experiment aimed at measuring the impact of framing on individuals' stated attitudes toward international trade. The results demonstrate that issue framing has large effects on responses. Respondents given an anti-trade introduction to the survey question, linking trade to the possibility of job losses, were 17% less likely to favor increasing trade with other nations than those asked the same question without any introduction at all. Since the existing surveys have typically incorporated a similar (anti-trade) wording when posing questions about international trade, this strongly suggests that concerns about widespread opposition to trade among voters have been overstated. Overall, among those administered no introduction at all to the question about trade, 71% favored increasing trade. Curiously, respondents who were given a pro-trade introduction to the question, suggesting that trade can lead to lower prices for consumers, were *not* more likely to express support for trade than those asked the question with no introduction. The most common pro-trade rhetoric thus appears to be ineffective, in the aggregate, in raising support for trade among voters.

The experiment also reveals that not all types of respondents are equally susceptible to issue framing. In particular, the responses of less-educated, blue-collar individuals were far more sensitive to variation in how the trade issue was framed than were those of more highly educated individuals. This

finding strongly suggests that research relying upon available survey data to examine the determinants of attitudes toward trade rests on a very unstable foundation: specifically, any anti-trade framing of the trade issue in the survey questions generating the data, will lead to an overestimation of opposition to trade in general, but among less-educated respondents in particular. A clear distinction must be drawn between individuals' underlying attitudes toward trade and globalization and their sensitivity to the particular ways in which these issues are framed in opinion surveys.

II. Attitudes Toward International Trade

A growing body of research by economists and political scientists has examined survey data on individual attitudes toward trade. These studies have had two types of goals: first, to gauge overall levels of opposition to trade openness among voters to see whether a popular backlash against globalization is imminent; and second, to assess various determinants of individual policy preferences to see whether opposition to globalization is concentrated among particular socio-economic groups.

A. How Much Opposition is there to Trade Liberalization?

Scheve and Slaughter (2001) have recently reviewed a large body of evidence from opinion surveys administered in the United States in past decades, concluding that, in general, a plurality or a majority of Americans have been opposed to policies to liberalize trade, at least since the 1970s. Averaging the results from NES surveys conducted in 1992 and 1996, which they examined in detail, they report that around 62% of respondents favored new trade restrictions. Based upon 1995 survey data from the United States and 22 other western nations gathered by the ISSP, Mayda and Rodrik (2004) and O'Rourke and Sinnott (2002) reach similar conclusions, reporting that some 58% of respondents across these nations support trade barriers. If accurate, this is quite remarkable. Governments in these nations have pursued trade liberalization as a basic component of economic policy for several decades; the surveys suggest that roughly two-thirds of voters are opposed to such liberalization.

How much faith can we place in these findings? The clearest danger, in terms of the validity of the inferences about voters' true trade policy preferences, is that responses to survey questions may be

strongly influenced by the specific ways in which the questions are worded or framed. *Framing* effects are produced when an alteration in the particular words used when presenting individuals with a choice problem causes them to select different options (Druckman 2001a, 227).[1] Strong framing effects have been discovered in a variety of experiments that present subjects with choices that are logically equivalent but differ in whether some critical information is presented in a particular way. Most famously, experiments in the field of psychology have shown that individuals appear to prefer risk-averse alternatives when outcomes are framed in terms of potential gains but prefer risk-seeking alternatives when equivalent outcomes are framed in terms of potential losses – the "loss aversion" effect first noted by Kahneman and Tversky (1979).[2] In political science research, numerous experiments have shown that respondents' choices on a wide range of policy issues are strongly affected by whether some particular aspects of an issue are emphasized rather than others in the wording of the question – the social science equivalent of the lawyer's "leading" question (see Jacoby 2000; Nelson and Kinder 2000; Druckman 2001a). One prominent experiment, for instance, has shown that support for welfare spending varies markedly depending upon whether it is described in terms of raising the chances for poor people to get ahead or in terms of increased taxes (Sniderman and Theriault 1999).

Surveys of attitudes toward trade seem especially fraught with potential for framing effects since trade, like other dimensions of foreign policy, is typically regarded as a complex issue about which voters have little information (Bauer, Pool, and Dexter 1972, 81-84).[3] Indeed, in the past, analysts of U.S. trade politics have usually just pointed out that responses to surveys vary so markedly with changes in question wording that it is extremely difficult to locate where the public stands on the issue (e.g., Bauer, Pool, and

[1] For similar definitions, see Iyengar 1991, 11; Rabin 1998, 36; Page and Shapiro 1992, 168; Zaller 1992, 32. One can also identify framing effects in cases where individuals make similar choices but for different reasons; on these types of framing effects, see Nelson, Oxley, and Clawson 1997.

[2] Researchers in the growing field of "behavioral economics" have been exploring related issues involving tendencies among individuals to make seemingly irrational choices: see Rabin 1998.

[3] By one count, some 45 percent of American survey respondents are unable to define the meaning of a "tariff," casting grave doubt over any surveys asking people's views on whether tariffs or import duties are good or bad (see Pryor 2002). Data reported in Delli Carpini and Keeter (1989, 70) suggest that even simpler terms are problematic: only 39% of respondents to a 1953 survey could define "free trade."

Dexter 1972, 81-84; Destler 1995, 180; Pryor 2002; see also Schneider 1985). This is also the traditional assessment of voter opinions on foreign policy issues more generally (e.g., Lippmann 1922; Almond 1950; Converse 1964).[4]

One immediate question is whether particular surveys, and specifically those that have been used in the most recent studies of attitudes toward trade, employ question wordings that might encourage respondents to answer in a certain way. The NES surveys of 1992 and 1996, examined in detail by Scheve and Slaughter (2001), employed the following wording when asking about the trade issue:

> Some people have suggested placing new limits on foreign imports in order to protect American jobs. Others say that such limits would raise consumer prices and hurt American exports. Do you favor or oppose placing new limits on imports, or haven't you thought much about this?

While this question is designed to provide both sides of the argument to respondents, the ice here seems very thin. Much depends on whether the two opposing sets of considerations are really equivalent in terms of their framing effects. One might suspect that an appeal to protecting American jobs is likely to have much more raw appeal to an uncertain respondent than an argument about consumer prices or American exports; but without some way to gauge the preferences of individuals independently from this particular question wording, it is impossible to tell.

The question on trade in the 1995 ISSP National Identity module, used by Mayda and Rodrik (2004) and O'Rourke and Sinnott (2002), is even more clearly biased by an anti-trade frame. It reads:

> Now we would like to ask a few questions about relations between [*respondent's country*] and other countries. How much do you agree or disagree with the following statement: [*respondent's country*] should limit the import of foreign products in order to protect its national economy?

There is an obvious problem here since the question refers to the benefits of restricting imports but not the costs. It also uses the value-laden language of protecting the national economy, and forces the hesitant pro-trade respondent to disagree with an anti-trade point of view.

[4] Although recent studies suggest there may be more stability in some core attitudes towards foreign policy issues than originally thought: see Holsti 1996, ch.3.

The scholarly work that has applied data from these surveys to make inferences about voters' attitudes toward trade has not overlooked the possibility of framing effects. Mayda and Rodrik (2004), and O'Rourke and Sinnott (2002), acknowledge that the framing of the ISSP question may have biased responses in favor of protectionism, but they are for the most part unconcerned since they are more interested in explaining variation in attitudes across individuals than in gauging overall levels of opposition to trade (Mayda and Rodrik 2004, 8; O'Rourke and Sinnott 2002, 164 n19) – although whether framing effects can be safely ignored in this case is actually quite debatable (an issue discussed in the next section). O'Rourke and Sinnott also suggest that the language used by the ISSP survey is unproblematic since "this is the way protectionist measures are defended in political discourse" (2002, 164 n19). The invocation to "protect" the national economy is certainly one type of framing that appears in political debates about trade, but it is not the only type. At least the NES question includes claims made by those on both sides of the trade issue – we are just left in the dark as to whether these frames are evenly matched in terms of their use in political discourse and in their power to persuade.

Scheve and Slaughter (2001) are more keenly interested in estimating overall levels of support for trade protection among the public and argue that this can be accomplished using existing surveys regardless of framing effects.[5] They compare results from a large variety of surveys administered in recent years in the United States and conclude that, even when questions about trade have been worded quite differently, one can confidently infer that a plurality or majority of Americans are opposed to trade liberalization. They make two key points about why attention to question wording is not critical in this respect. The first of these is that, when asked questions that mention both the costs and benefits of trade, a plurality or majority of respondents choose the answer that emphasizes the costs of trade (2001, 20-26). Here the assumption seems to be that any framing effects set in opposition to one another in the wording

[5] Scheve and Slaughter do acknowledge that question wording does affect survey results; in fact, they point out various ways in which changes in question wording appear to have altered responses to surveys about trade in substantial ways. But they maintain, nevertheless, that a general (majority or plurality) opposition to trade liberalization among voters can be clearly discerned regardless of any variations question framing.

of a survey question are inherently symmetrical. But it is extremely difficult to assess the overall fairness of questions that say something about both sides of the trade argument when we know so little about which particular wordings or types of information have the greatest impact on responses.[6]

The second reason Scheve and Slaughter give for discounting the importance of framing is that, when asked a question that does not mention either the benefits or the costs of trade, a plurality or majority of individuals still oppose trade liberalization (2001, 27-33). On this point, however, the key evidence seems to contradict them.[7] A 1999 poll by the Program on International Policy Attitudes (PIPA), simply asked respondents: "Overall, with regard to international trade, do you think that it should be the goal of the US to: Try to actively promote it; simply allow it to continue; try to slow it down; or try to stop or reverse it." Some 58% of individuals reported that they were either happy with existing trends or would even like to accelerate them.[8] And a much-publicized recent poll by the Pew Global Attitudes Project has found majority support for trade in the United States and in other western nations when respondents were simply asked whether they thought "growing trade and business ties" between their own country and other nations was good or bad for the country. In the United States, some 78% of respondents

[6] Some of the "two-sided" survey questions that Scheve and Slaughter examine actually seem rather unfair, employing wordings tilted in favor of more protectionist responses. A 1996 CNN poll, for instance, presented individuals with two statements: "The United States should tax foreign goods imported into this country in order to protect American jobs and wages." And "The United States should not tax foreign goods imported into this country because this will raise the prices American consumers will have to pay for these goods." It is not surprising that 66% of respondents said they supported taxing foreign goods, as this was the only option consistent with protecting American jobs and wages, and the tax on foreign goods sounds as if it might be something paid by foreigners.

[7] Their prime example is a 2002 Harris poll which asked: "Do you consider yourself to be someone who believes in free trade or trade without any restrictions, someone who believes in fair trade or trade with some standards for labor and the environment, or someone who is protectionist, meaning that there should be rules to protect US markets and workers from imports?" Only 10% of respondents described themselves as "free traders," while 52% favored fair trade, and 37% considered themselves protectionist. Scheve and Slaughter conclude from this that protectionists outnumber free traders by 4-to-1. But how one should count the 52% who chose the middle option is unclear given the way the question is worded, forcing a choice between an extreme free trade position (no restrictions) and options that allow for a large range of viewpoints.

[8] See PIPA 1999. In the same year a PIPA survey generated almost identical results in response to the following question: "I would like to know how you feel about the process of increasing trade between countries through lowering trade barriers, such as taxes on imports. Do you feel this process has been going too fast, too slowly, or at the right pace?" The responses were: Much too fast (12.6%); a bit too fast (17.3%); at about the right pace (38.9%); a bit too slowly (14.2%); much too slowly (9.1%). Thus, some 62% of those polled said that trade liberalization was proceeding at about the right pace or too slowly.

said that the growth of trade was a good thing (Pew 2003). At the very least it seems clear that responses to survey questions about trade shift markedly with changes in the ways those questions are worded.

B. Which Individuals are Opposed to Trade Liberalization and Why?

To date, the analysis of survey data aimed at revealing the determinants of individual attitudes toward trade has focused predominantly on occupational differences among respondents. A principal aim has been to test standard economic models that describe the income effects of trade for different individuals as a function of the types of productive inputs they own and the types of industries in which they are employed. Examining data from recent NES surveys in the United States, Scheve and Slaughter (2001) emphasized the importance of respondents' "human capital" or skills (measured principally by years of education), finding that individuals with lower skills were more likely to support restrictions on imports than those with higher skills. Mayda and Rodrik (2004) and O'Rourke and Sinnott (2002) came to similar conclusions after examining the data from the 1995 ISSP survey: again skill levels, measured either by year of education (Mayda and Rodrik) or occupational categories (O'Rourke and Sinnott), were found to have large effects on attitudes, with lower skilled individuals most protectionist in outlook. In terms of economic theory, these findings have been interpreted as providing strong support for the Stolper-Samuelson theorem (1941), which predicts that trade raises real incomes for those who own factors with which the economy is relatively well endowed (i.e., skills for the US and other developed economies), while disadvantaging owners of other factors (unskilled or low skilled labor).[9] Mayda and Rodrik also found evidence that people in import-competing industries are significantly more likely than others to favor trade protection (see Jones 1971; Mussa 1974) – a finding that better fits the "specific factors" model of the distributional effects of trade which, unlike the Stolper-Samuelson theorem, allows that factors of production are not perfectly mobile between different sectors in the economy, and so the incomes of individuals are tied more closely to the fortunes of the industries in which they are employed

[9] This theorem has been used extensively in the analysis of trade politics: see Rogowski 1989; Hiscox 2002.

or invested.[10] Studies using alternative sources of data on trade-related attitudes in Canada and across Europe have matched both types of findings.[11]

There are other predictors of trade policy preferences besides these standard economic variables, of course, although the theoretical underpinnings for these are typically less clear. Age appears to be significantly associated with support for protection among individuals in some studies (e.g., Mayda and Rodrik; 2004; O'Rourke and Sinnott 2002) but not in others (e.g., Scheve and Slaughter 2001; Beaulieu 2002). Gender shows up as an even stronger and more consistent predictor of views on trade: women seem to be substantially more protectionist than men in almost every study.[12] In addition, various types of self-expressed values appear to affect individuals' trade preferences; in particular, strong attachments to neighborhood and community, feelings of national pride, and distrust of foreigners are all positively associated with support for trade protection (see O'Rourke and Sinnott 2002; Mayda and Rodrik 2004).

Is it reasonable to ignore potential framing effects when making inferences about these types of determinants of attitudes toward trade? Both Mayda and Rodrik (2004) and O'Rourke and Sinnott (2002) suggest that it is, as long as one makes a critical assumption. As Mayda and Rodrik put it when discussing the anti-trade wording in the ISSP survey: "Even though the responses on trade may be biased in one direction, our results will not be affected unless the magnitude of the bias is also correlated with our explanatory variables" (2001, 8). But *there* is the rub: how do we know that sensitivity to issue framing is uncorrelated with the explanatory variables in these studies? This seems especially risky to assume for the core explanatory variable highlighted in all these analyses: the education or skill levels of respondents.

[10] The specific factors approach underpins much of the most recent analysis of the political economy of trade in contemporary advanced economies: see Magee 1980; Grossman and Helpman 1994; Hiscox 2002.

[11] Balistreri (1997) and Beaulieu (2002) have examined data from a 1988 survey by the Canadian National Election Study, which asked respondents their position on the pending Canadian-US Free Trade Agreement, showing that individuals in more "scarce" local occupations and those with lower skill levels were more likely to oppose the agreement; Beaulieu (2002) also finds that respondents employed in industries that were expected to suffer from the agreement were significantly more protectionist than other individuals. Using *Eurobarometer* data from years between 1975 and 1992, Gabel (1998) has reported significant occupational differences in support for European integration, with greater opposition coming from less-skilled individuals.

[12] For a detailed study of the gender gap in trade policy preferences, and its likely sources, see Burgoon and Hiscox (2003).

More educated respondents are more likely to have read and thought about the trade issue themselves, are more likely to understand how trade affects their own lives and the nation as a whole, and thus are more likely to have reached firmer a priori positions on the trade question. More educated individuals should also be more willing to express points of view that challenge those implied in the wording of the question itself. Studies have found that individuals with more political information or knowledge are indeed influenced less by issue framing than others (see Kinder and Sanders 1990; Iyengar 1991, 118; McGraw and Hubbard 1996; Sniderman and Theriault 1999; Haider-Markel and Joslyn 2001), as are those with higher cognitive abilities (see Stanovich and West 1998; Levin et al 1998).[13] Since both knowledge and cognitive abilities are related to education levels, this suggests a potentially large problem for the inferences made in existing analyses.[14] Education aside, research on individual responses to persuasion also suggests that there is considerable variation by age and gender, two of the most important correlates of attitudes toward trade and globalization identified in recent survey-based studies (e.g., Eagly 1981; Perloff 1993). In sum, it seems clear that in order to make reliable inferences about the general trade preferences of voters, or about the connection between particular characteristics of individuals and their responses to survey questions about trade, we need to know much more about the potential biases that framing effects can produce.

[13] There is some debate in the literature on political communication, it might be noted, about how these results should be interpreted. Nelson, Oxley, and Clawson (1997) have argued that *framing*, which they define as "activating" information that respondents have stored as memory, can be distinguished from *priming* (making particular information temporarily more "accessible") and *persuasion* ("adding" new information). They thus expect more informed respondents to be *more* susceptible to framing per se, because they make a better connection between frames and information stored in their own memories, but *less* susceptible to priming and persuasion. In recent experiments, Druckman and Nelson (2003) have found that more informed respondents were more responsive to issue framing, but only controlling for the firmness of a prior opinions (which was highest among the most informed and strongly associated with less susceptibility to framing). The various distinctions made by scholars of political communication are less relevant here than the weight of evidence suggesting that responsiveness to question framing is related to levels of knowledge (and thus, education).

[14] Delli Carpini and Keeter (1989, 144-45, 188-99) have shown that education is the most important single predictor of political knowledge.

III. The Survey Experiment

A. Design

The experiment was conducted through the Time-Sharing Experiments for the Social Sciences (TESS) program.[15] The TESS survey was administered to a random sample of 1,610 American adults by telephone in June and July 2003 by the Center for Survey Research (CSR) at Indiana University.[16] For the core experiment, respondents were randomly allocated to 4 groups, with each group receiving different introductions to the survey questions about international trade. These introductions (read by the interviewer) mentioned some possible beneficial effects of trade, some possible costs, or both types of effects (the fourth group received no introduction at all). The exact wordings are shown below, with percentages indicating the size of the group in relation to the entire sample:

> Group 1 (15%): Pro-trade introduction.
> *Many people believe that increasing trade with other nations creates jobs and allows Americans to buy more types of goods at lower prices.*
>
> Group 2 (15%): Anti-trade introduction.
> *Many people believe that increasing trade with other nations leads to job losses and exposes American producers to unfair competition.*
>
> Group 3 (15%): Both introductions.
> *Many people believe that increasing trade with other nations creates jobs and allows Americans to buy more types of goods at lower prices. Others believe that increasing trade with other nations leads to job losses and exposes American producers to unfair competition.*
>
> Group 4 (15%): No introduction.

In addition to these core experimental groups, 4 separate groups (each comprising 10% of the sample) were assigned the same set of "frames" as above, but were also read an introduction that described the consensus view among experts (economists) that favors increasing trade. This separate experiment was aimed at testing whether advice from an expert third-party source might make a difference to respondents

[15] *Time-Sharing Experiments for the Social Sciences*, NSF Grant 0094964, Diana C. Mutz and Arthur Lupia, Principal Investigators.
[16] An extensive set of pre-survey tests, along with interviewer training, were conducted by CSR in May and June 2003, aimed at making the questions as clear as possible and improving response rates and reliability. For a full description of the TESS/CSR survey process see: http://www.experimentcentral.org

and to their susceptibility to other types of issue framing (results from this additional experiment are reported in the appendix).

The specific claims made in the introductions provided to the different groups about the potential costs and benefits of trade were chosen using the results from Roper polls from the 1970s which asked respondents to rate the most persuasive arguments for and against import restrictions (see Schneider 1985). At the top of these lists were job losses in import-competing sectors and unfair competition from abroad (among arguments in favor of import restrictions), and job creation in exporting sectors and lower prices for consumers (among arguments against import restrictions). While there are many other possible frames that would emphasize different pro-trade or anti-trade considerations, these ones appeared to be the most important ideas mentioned by voters *themselves* in past polls, they are common in political debates over the issue, and they are also reasonably easy to state in simple and clear terms. I tried to create a simple symmetry here too: most importantly, given that "jobs" are the political touchstone, the potential for job creation via export growth is matched here against the potential for job losses as a consequence of import competition.

After the introductions were read, all survey respondents were asked the same core question about their attitudes toward international trade:

Do you favor or oppose increasing trade with other nations?

- Favor
- Oppose
- Don't know
- Refused

Depending on their answer, the interviewer then asked:

Is that strongly favor (oppose) or somewhat favor (oppose)?

- Strongly
- Somewhat
- Don't know
- Refused

Choosing the specific language for this core question was a difficult task. As in most recent surveys, I avoided references to "tariffs" (or "duties") since there is evidence that a large proportion of respondents do not know what a tariff is; I also avoided references to trade "restrictions" and "barriers," since the pre-survey tests revealed similar anxiety among respondents about the meaning of these terms. Asking respondents whether they favored "limits" on imports was the most serious alternative to asking them about increasing trade. But to avoid forcing respondents to choose between an extreme view (no limits) and all other plausible views, one would have to allow for a variety of choice options (e.g., some limits, many limits?), the meaning of which would be rather difficult to interpret.

The reference to increasing trade does not distinguish as to whether this change is (or would be) due to government policies or to other forces (e.g., technological improvements in communication and transportation) not counteracted by government policies. This particular form of ambiguity is a good thing, I think. It allows for respondents to take a position on globalization writ large – the process that is a function of both policy (trade liberalization) and changes in technology – and avoids confusion about the past or potential use of specific types of policy instruments. In terms of the theoretical predictions about the distributional effects of trade drawn from economic theory it makes no substantive difference whether the stated expansion in trade is due to alterations in policy or to other types of changes that lower the costs of international transactions.

One final point is worth making about the core trade question employed here. No question can be entirely "frame-free" in the sense that the language chosen, even if it is not intentionally designed to invoke positive or negative views about the trade issue, may still unintentionally bias respondents toward a particular response. In this case, substantive considerations aside, whether asking people about "increasing trade" with other nations is more likely to elicit positive responses than alternative types of wordings (e.g. a reference to decreasing trade) is unclear. It presumably hinges on whether people are inherently more likely to respond in a positive or negative way to trends. The only point here is that it

would be misleading to describe the question itself, devoid of any of the introductions, as completely unframed or neutral.

B. Framing Effects on Support for Trade

Table 1 reports the simple frequencies of each type of response in each of the 4 core experimental groups. The results confirm that issue framing has large effects on responses. In particular, there are stark differences between Groups 2 and 3, the only respondents who were read anti-trade arguments before they were asked for their own views about trade, and the other groups. Compared to respondents who were given no introduction at all to the question about trade (Group 4), 17% fewer individuals who received the anti-trade introduction (Group 2), and 19% fewer respondents who received both the anti-trade and pro-trade introductions together (Group 3), said they favored increasing trade. Thus, not only did the anti-trade arguments have a large impact on reported attitudes when applied in isolation, they also appear to have trumped the pro-trade arguments when both were read to respondents. In fact, respondents who were read only the pro-trade introduction (Group 1) were actually no more likely to express support for increasing trade than those who received no introduction – the effect was even slightly reversed (negative), although not statistically discernable from zero.[17]

[Table 1]

Table 2 reports the response frequencies in each experiment group categorized according to the intensity of stated support for, or opposition to, increasing trade. Across the board, those respondents who were read the pro-trade introduction (Group 1) did not differ significantly in their stated views, or the intensity of those views, from those who received no introduction (Group 4). Large differences appear, on the other hand, when we compare those groups with respondents who were read the anti-trade arguments alone (Group 2) or in combination with pro-trade arguments (Group 3). What is perhaps most interesting in this regard is that the differences are starkest at the extremes; that is, differences in the way the

question was framed had the greatest impact on the frequency with which respondents stated they were either strongly in favor of, or strongly opposed to, increasing trade. Compared to those who were read no introduction, for instance, among those who heard the anti-trade arguments 13% fewer individuals said they strongly favored increasing trade and 12% more said they were strongly opposed to increasing trade.

[Table 2]

Overall, the results suggest that there is considerably more popular support for trade liberalization than we have been led to believe based upon past surveys. Across all experimental groups, some 61% of respondents stated that they favored increasing trade with other nations, and 24% said that they strongly favored increasing trade. Among those who were asked to state their views without hearing any kind of introduction to the trade question, 71% favored increasing trade (31% strongly). These results fit well with the findings from the recent Pew Global Attitudes Project, which reported majority support for "growing trade and business ties" in the United States. It seems very clear why some prominent alternative surveys – most notably, the NES and the ISSP surveys – have produced very different results suggesting majority opposition to trade. The questions posed in these surveys use wordings that have a powerful effect on responses. The results from the experiment indicate that when common anti-trade arguments frame the trade issue for survey respondents, their stated views about trade are shifted radically in a protectionist direction.[18]

This result will not come as a great surprise to those familiar with opinion surveys (and with surveys on foreign policy issues, in particular). What is perhaps more curious is the very clear finding that

[17] Full estimations of preferences are presented below, with estimates of the effects (with standard errors) of the experimental treatments and other variables, and their interactions, so I do not report separate difference-of-means tests here for all the comparisons of frequencies across groups in Tables 1-6.

[18] It should be noted here that even among those respondents given the anti-trade introduction in the experiment (Group 2), a majority (54%) still favored increasing trade. The difference between this result and the findings from the NES and ISSP surveys might be explained by the other critical differences in the question wordings (e.g. the invocation of "foreign" vs. "American" in the NES question). It is also possible that agreement or acquiescence bias might be a factor: both the NES and ISSP surveys ask respondents whether they agree with (favor) limits on imports, whereas here respondents are asked whether they favor increasing trade. To the extent that individuals are biased toward simply agreeing with any proposition posed by an interviewer, this may have biased the results in opposite ways. On acquiescence bias in surveys see Schuman and Presser 1981.

respondents who were read the pro-trade arguments before being asked to state their own opinion about the issue were not significantly more likely to express support for trade than those asked the question with no introduction at all (and that, among respondents given *both* pro-trade and anti-trade arguments, support for trade was essentially the same as it was among those given *only* the anti-trade introduction). In a nutshell, the most common forms of pro-trade rhetoric, focusing on the creation of jobs in exporting industries and the lowering of prices for consumers, appear to be completely ineffective in raising support for trade among survey respondents!

Why is the pro-trade frame so ineffective here compared with the anti-trade frame? One possible answer is that these specific arguments in favor of increasing trade are not actually the most persuasive ones (despite the findings from the Roper polls in the 1970s). Perhaps we would see bigger effects using alternative arguments, about trade providing competition for protected monopolies, for instance, and spurring development in poorer nations. An interesting related question is whether reactions to the different types of arguments employed in the experiment reflect some version of the famous "loss aversion" effect: when told to expect losses (the job losses in the anti-trade frame) people react more strongly than when they are told to expect gains (the job creation in the pro-trade frame). Unless pro-trade arguments can be stated in terms of meaningful losses (e.g., lost jobs in specific industries due to decreasing trade), they may not be able to compete with anti-trade frames when it comes to influencing the views of wavering individuals.[19] Separate experiments would be needed to test whether such alternative types of messages are more potent.

C. Sensitivity to Framing and the Determinants of Individual Trade Preferences

It seems very clear that any general assessment of public attitudes toward trade must take into account the effects of survey question framing. This brings us to the next issue: whether some groups of

[19] A related issue is the so-called "negativity bias" discussed in the psychological literature. Evidence suggests that people generally tend to expect good things to happen, and when they are confronted with evidence to the contrary, they attach more weight to such "negative" news when updating their prior beliefs than they do to good news: see Kanouse and Hanson 1972; Skowronski and Carlston 1989.

individuals are more susceptible to framing than others. This is critical when it comes to using survey evidence to make inferences about the effects of individual attributes on views about trade. If such attributes also affect sensitivity to framing, inferences about their impact on trade preferences may yield very different results depending on how survey questions are worded; that is, one might easily mistake framing effects for real effects on trade preferences.

The evidence from the experiment is very revealing. First and most importantly, the magnitude of the observed framing effects is strongly related to the education levels of respondents. Table 3 provides a clear picture of this relationship. Looking first at highly educated respondents (i.e., those with at least some exposure to college-level education), comparing across experimental groups shows that the percentage favoring trade was only 6% lower among those receiving the anti-trade introduction than among those who heard the pro-trade introduction (17% lower than among those who received no introduction at all). For respondents with less education (i.e., no college-level education at all), the support for trade was a 21% lower among those who heard the anti-trade introduction than among those who heard the pro-trade arguments (20% lower than among those who heard no introduction).[20] Less educated respondents were more sensitive (in the expected ways) to both types of question framing: the anti-trade frame increased their opposition to trade more dramatically than it did among highly educated individuals, and the pro-trade frame increased (though not significantly) their support for trade while having the opposite effect among more the highly educated. Highly educated respondents were actually prone to "rebel" against the pro-trade arguments, reacting with less evinced support for trade than if they had heard no introduction to the question at all.

[Table 3]

[20] The TESS survey asks respondents to report the highest level of education they have attained, coding these by type of institution. For the basic comparisons I have simply grouped those reporting "some college" or a bachelor's or higher degree as "highly educated," in contrast to all other respondents. Finer distinctions are made in the estimations below.

Comparing the difference between the responses of the highly educated and less educated in each experimental group (reading horizontally in Table 3) highlights the potential danger here: the difference between the support for trade among highly and less educated individuals is only 12% for those receiving the pro-trade frame, but this difference is 23% among those who were read the anti-trade introduction, and 31% among those in the both-introduction group. If one only looked at the responses to the question prefaced with anti-trade arguments, or at the question incorporating both frames, one would have a much larger estimate of the impact of education on trade policy preferences than if examining responses in the other experimental groups (a point explored in more detail in the estimations below).

Education is typically treated as a proxy measure for the skill levels of respondents in tests of whether economic models of the distributional effects of trade accurately predict variation in trade preferences among individuals. Other more direct measures of worker skills can be used in the place of education and may be preferred. Some researchers, for instance, have used occupational classifications to distinguish between the skill levels of respondents (e.g., O'Rourke and Sinnott 2002). The TESS survey included a specific question asking respondents about the training needed for their current job, and we can use it here to separate high skilled from low skilled individuals.[21] Table 4 reports the support for trade among respondents with different levels of skills. High skilled individuals are far less sensitive to question framing than low skilled respondents: for high skilled types, support for trade among those hearing the anti-trade arguments was only 7% lower than it was among those hearing the pro-trade message; for low-skilled respondents, the corresponding difference was 29%. Looking at it a different way, the difference between the percentages of high skilled and low skilled individuals supporting trade was only 13% among those who heard no introduction to the question, but it was 24% among those who

[21] The question asked was: "For your current job, did you have to be trained for specialized skills, either before you were hired or while you were on the job?" Those who answered yes, were then asked: "Do you feel it took a great deal of training, some training, or a little training to learn the specialized skills for your current job?" For the simple comparison here I just grouped those reporting at least some training as "high skilled" in contrast with those reporting little training or none at all. The correlation between the dichotomous "highly educated" and "high skilled" variables is 0.17 (N=577).

were read the anti-trade arguments. If one only examined the experimental group treated with the pro-trade frame one would conclude that low skilled respondents were as likely to support trade as high skilled respondents.

[Table 4]

Age is another variable typically regarded as a predictor of individual trade preferences that may also moderate sensitivity to framing effects. In general, younger subjects are likely to be more suggestible or open to persuasion than older individuals – perhaps reflecting the fact the older individuals tend to be better informed and to have firmer established positions on issues. Table 5 divides respondents again, this time separating those under the age of 34 from those 35 and older. Looking first at the younger sub-sample comparing across experimental groups it is clear that support for trade is very responsive to question framing: support is 19% lower among those read the anti-trade introduction compared with those in the no-introduction group, and 29% lower compared with those who heard the pro-trade arguments. Support for trade varied far less across experimental groups among older respondents who, unlike younger individuals, were not persuaded at all by the pro-trade arguments. The relationship between age and apparent attitudes toward trade (comparing horizontally in the table) is thus very sensitive to the framing of the question.

[Table 5]

Past research has also identified gender as an important determinant of individual attitudes toward trade. Again, however, there is some reason for concern here since it is plausible that female subjects are more responsive to persuasive communications than men. This is now easy to test. Table 6 reports support for trade among men and women in the different experimental groups. While men tend to favor trade more than women, in general, there is no evidence that women are any more susceptible to framing effects in this context than men. For men, support for trade was 16% lower among those who heard the anti-trade introduction when compared with those who heard no introduction at all; the corresponding difference among women was 17%. No matter which type of framing is used (i.e., which experimental

group one examines), the estimated difference between male and female attitudes is almost identical. On the issue of gender bias in attitudes toward international trade, at least, framing effects appear to make no difference at all to the inferences one draws from survey evidence.

[Table 6]

Up to this point, we have just been examining response frequencies for different categories of individuals and comparing across experimental groups. To gauge the impact of question framing in a more precise fashion, we can also estimate individual trade preferences using respondents' answers to the question about whether they favored or opposed increasing trade as the dependent variable (1=favor and 0=oppose). Table 7 reports the results from probit estimations of a series of "benchmark" models that include the core group of explanatory variables (see appendix for descriptive statistics for all the variables used in the analysis). Using the full sample of responses, it is a simple matter to estimate the impact of each different introduction to the trade question, using the "no introduction" treatment as the excluded category here (the first two columns in Table 7). Consistent with the findings above, the estimated effect of the anti-trade introduction is to reduce support for trade by 18% (s.e. 5%); the anti-trade and the pro-trade introductions applied together reduce support for trade by approximately 21% (s.e. 5%); while the pro-trade arguments by themselves have no significant impact on responses. While age appears to have no significant effect on attitudes toward trade in these full-sample estimations, gender has a very strong effect, with women being approximately 11% (s.e. 3%) less likely to favor increasing trade than men. And as reported in previous studies, highly educated respondents (those with any college-level education) are, in general, 20% (s.e. 3%) more likely to support increasing trade than less-educated counterparts. The parallel result is that highly skilled respondents (those with some or a great deal of specialized training) are approximately 12% (s.e. 4%) more likely to favor trade than less-skilled individuals.[22]

[Table 7]

[22] Note that the number of observations is smaller in models that include training here (or other job-related variables below), since these measures are only available for currently employed respondents.

The problem with these full-sample models, of course, is that they impose the constraint that all individuals are equally sensitive to framing effects – an assumption we now know is too restrictive. We need to allow for interactions between the different explanatory variables and the question frames. One way to this, using the full sample of responses, is by estimating separate interaction effects between each of the experimental treatments and each of the explanatory variables. Alternatively, one can simply estimate trade preferences for each experimental group separately. Although the number of observations for each group is not as large as one would hope, this approach has the advantage that it simulates the research problem at issue here: researchers might analyze data generated by a survey question worded in one particular way, without knowing how the results would vary if the question wording had been different. The final eight columns in Table 7 report the results from estimating the benchmark models separately for each experimental group. (Note: the appendix provides the results from full-sample estimations using interaction terms).

The findings here strongly confirm the results from the simple analysis of response frequencies above. The estimated effects of age on attitudes toward trade vary according to how the survey question is framed: in particular, since young respondents tend to be persuaded by pro-trade arguments while older respondents are not, age has a significant negative impact on support for trade among respondents who heard the pro-trade introduction (Group 1) but not among other respondents.[23] Gender has a robust effect on trade preferences across almost all experimental groups (that is, regardless of question framing): female respondents are 10 to 15% less likely to favor trade than male respondents (the exceptional results for Group 3 are discussed below). Most importantly, the estimated effects of education and skill levels vary substantially depending upon the way the question is framed. Specifically, education accounts for 4 to 5 times as much of the variation in responses among those who heard the anti-trade arguments (Groups 2 and 3) than it does among those who received just the pro-trade frame (Group 1). The variation in the

[23] Comparing a 30-year old with a 50-year old respondent in Group 1, the probability of support for trade drops by roughly 5% (s.e. 2%).

estimated effects of skills across experimental groups is even more pronounced. If one only examined the respondents who heard the anti-trade message, one would conclude that highly skilled individuals are 25% more likely to favor increasing trade than their less skilled counterparts; but if one examined the responses from those who heard the pro-trade introduction, the finding would be that skills have no significant effect on attitudes towards trade.

As noted, the results from the estimations for Group 3 appear to be rather unusual – gender seems to have no significant effect on responses in this group, while education has an especially large effect. The experimental groups are small relative to the entire sample size, of course, and randomization in the experimental design offers no guarantee of perfection in terms of the distributions of the key variables, so it is worth digging a little deeper here. Table 8 reports the age, gender, and educational characteristics of respondents in each experimental group. It is immediately apparent that, while the experimental groups are almost identical in most dimensions, Group 3 has by far the largest proportion of highly educated men (almost 20% more men than women are highly educated in this group, a gender difference that is roughly twice as large as the difference in all the other groups). Since both gender and education affect trade preferences, this perturbation complicates the comparisons between Group 3 and the other groups in Table 7. To get a better sense of the impact of the "both introductions" treatment on responses, and how it is related to the education levels of respondents, one simple way around this problem is to restrict the analysis to the female respondents. The age and education characteristics of female respondents are almost identical across the experimental groups. Table 9 reports the results from this exercise.

[Table 9]

The findings from the analysis of just the female respondents are particularly compelling. Here we can see that the estimated effects of education and skill levels are greatest among those hearing the anti-trade claims alone, somewhat smaller when such claims are combined with pro-trade claims, smaller still when no introduction was heard at all, and smallest (indeed, insignificant) among respondents who were read the pro-trade arguments. The differences across the groups are dramatic, and the pattern is exactly

what we would expect given that less educated individuals tend to be more susceptible to question framing: anti-trade framing leads to an substantial overstatement of the positive effects of education and skill levels on support for trade liberalization when compared with more pro-trade question framing. That education and skill levels do generally tend to have positive effects on support for trade is still consistent with the Stolper-Samuelson theorem, but the substantive magnitude of those is effects varies markedly depending upon question framing and can be quite small.

C. Extensions and Sensitivity Analysis

Table 10 presents the results from estimating trade preferences (for both male and female respondents) using a more extensive set of explanatory variables. Again, I have estimated these models for the full sample (the first two columns) and separately for each experimental group. While the standard errors associated with the parameter estimates from the separate groups are now much higher, the core substantive results remain the same. Again, the estimated impact of age on attitudes toward trade varies depending upon question framing. Gender has robust effects, even controlling for a broader range of other individual characteristics, with women significantly more protectionist in outlook than men, regardless of which set of arguments about trade they heard. And the estimated effects of education and skill levels vary markedly across experimental groups: in particular, the effects are much larger among respondents who heard the anti-trade arguments than among those who heard pro-trade arguments. Among the other explanatory variables included here, personal income (measured by a dummy variable indicating an annual income greater than $35,000) appears to have a positive impact on support for trade liberalization, as other studies have reported previously; this effect varies slightly depending on question

framing but not radically (it is always positive).[24] Party affiliation (measured by whether respondents identify themselves as Republicans or not) is not a good predictor of individual attitudes toward trade.[25]

[Table 10]

I have included one additional variable here to capture the more immediate, industry-specific effects of trade on the job security of survey respondents. Previous studies have measured the industry-specific effects of trade in a very indirect way, locating respondents by industry using answers to a standard question about the type of business in which they are employed, then controlling for the aggregate trade positions of those industries (e.g., their degrees of import penetration) when estimating individual trade preferences.[26] There are at least two problems with this approach: first, accurately coding respondents by industry of employment using standard industrial classifications is extremely difficult, as respondents typically give very vague answers to questions about the type of business in which they work;[27] second, aggregate industry measures of import penetration and export dependence may offer more information about policy outcomes than policy preferences and they obscure the obvious variation in positions taken by firms in the sub-categories within each broad industry grouping.[28] The TESS survey asked respondents a very direct question about the likely impact of trade on the security of their particular job, and I have used the responses here to identify those individuals who stated that increasing trade with

[24] The TESS survey also asked respondents to indicate their annual income in more precise terms, but over half the respondents did not provide an answer to this question (nor to the related question that asked about total household income).
[25] Substituting alternative types of measures of respondents' partisan affiliations (e.g., to the Democrats) or ideology (e.g., liberal vs. conservative) made no difference to the results here.
[26] Scheve and Slaughter (2001) examine industry effects using this approach and data supplied in the NES. Mayda and Rodrik (2004) were forced to take an extra step: since the ISSP data does not provide coding by industry, they inferred industry of employment from occupational codes assigned to respondents instead. Beaulieu (2002) makes similar inferences using Canadian National Election Study survey data from 1988.
[27] When the staff at the Panel Study of Income Dynamics checked a random sample of surveys, for instance, they found that industry codes differed across coders in 14% of cases (see PSID 1999).
[28] The standard concern about using import penetration as a measure of an industry's trade policy preference is that low levels of penetration may reflect the effectiveness of a very protectionist lobby (not the absence of concerns about import competition).

other nations makes their own job more secure.[29] Not surprisingly, this measure is strongly, positively related to support for trade liberalization. Compared to others, those who felt their own job was more secure as a consequence of trade were roughly 20% more likely to favor increasing trade.[30]

As reported in previous studies, the results above indicate that education levels have positive effects on support for trade liberalization – although the magnitude of the estimated effects of education is quite sensitive to question framing. How we should interpret this relationship between education and support for trade? The most prominent recent studies that analyze survey data on attitudes toward trade treat the relationship as a powerful confirmation of the Stolper-Samuelson prediction that skilled workers in (skill-abundant) advanced economies should expect to do better from increased international trade than unskilled workers (e.g., Scheve and Slaughter 2001; Mayda and Rodrik 2004). Seen from this perspective, education is simply a measure of skill levels, and it matters only in the way it determines the expected distributional effects of trade. Of course the relationship between education and attitudes toward trade (and globalization more generally) might also reflect the fact that more educated respondents tend to be more informed about the overall efficiency gains for the national economy that are associated with expanded trade, are less prone to nationalist and anti-foreigner sentiments that are often linked with protectionism, and have a broader concept of self-interest that allows for a wider range of beneficial political, cultural, and social effects from trade both at home and abroad (see Schneider 1985, 932).[31] One

[29] The precise question (posed several questions *after* respondents had already stated whether they favored or opposed increasing trade) was: "Do you think that increased trade with other nations makes your own job more secure, less secure, or does it have no clear effect?" Answers to this question were originally coded as: 1=trade makes respondent's own job less secure, 2=no clear effect, and 3=more secure. Some 17 percent of respondents felt that increased trade made their own job more secure, while only 10 percent felt that trade made their job less secure. For ease of interpretation here I have simply used a dummy variable indicating whether an individual stated that trade made his or her own job more secure (all the substantive results are identical using the categorical variable).

[30] If the categorical measure is included here rather than the binary variable, the estimated probability of support for increasing trade is some 45% higher among those for whom trade raises job security compared with only those reporting that trade makes their job *less* secure (with all other variables set to mean values). Including alternative types of controls for industry characteristics, such as import penetration and revealed comparative advantage, made no difference to the key substantive results, and none of these alternative measures is a reliable predictor of individual preferences. Full results are available from the author.

[31] On these points also, see also Bauer, Poole, and Dexter 1972, 103; Holsti 1996, 87-88. There is a similar question about the importance of personal economic versus other motivations as reasons why more educated individuals tend

step that can help shed some light on the issue involves examining more detailed measures of the educational attributes of survey respondents. In the analysis above I have used a simple binary distinction between "highly educated" respondents (with some exposure to college education) and all others. Most recent studies of survey data have used years of education as the primary measure of respondents' educational background (e.g., Scheve and Slaughter 2001; Mayda and Rodrik 2004).[32] This latter approach seems fine if one assumes that each additional year education (of any type) improves an individual's skills (and changes his or her attitudes) by a roughly constant amount. It is less appropriate if education has other, nonlinear types of effects associated with the ideas and information individuals possess about way the economy works or the kinds of values and preferences they develop.

Data gathered by the TESS survey on the highest levels of education attained by respondents can be used here to make finer distinctions between different types of educational qualifications. Table 11 presents the results from re-estimating the benchmark models, replacing the binary variable for "highly educated" with an array of dummy variables indicating whether the highest level of education attained was a high school diploma, a degree from a vocational or technical school, a degree from a community college or a nursing school (TESS codes these identically), some college education (but no college degree), a bachelor's degree from a college or university, or an advanced degree from a college or university. The excluded category here is those respondents who did not receive a high school diploma.

[Table 11]

It seems very clear that there are substantial nonlinearities in the effects of education on attitudes toward increasing trade. Almost all of the education effect is actually a "college effect." Whether or not

---

to look more favorably upon immigration: see Fetzer (2000). A large body of research shows that increased education tends to socialize students to have more tolerant, pro-outsider views of the world (e.g. Campbell et al. 1960, 475-481; Erikson, Luttbeg, and Tedin 1991, 155-5; Espenshade and Calhoun 1993). One empirical finding that fits with a broader, non-economic interpretation of the role of education here, and runs counter to the Stolper-Samuelson predictions, is that more educated individuals in (skill-scarce) developing nations also appear to be more supportive of trade and globalization than less educated counterparts (see Graham 2002; Baker 2003).

[32] It should be noted here that I have replicated all the key results from the analysis above using years of education (and an alternative categorical indicator of educational attainment) in place of the binary variable for highly

an individual graduated from high school has no significant effect on attitudes toward trade in any of the estimations. And high school graduates who also received degrees from vocational or technical schools were no more likely to support trade than high-school drop outs (or other high school graduates) – in fact, among those who heard the pro-trade introduction to the trade question, they were significantly *less* likely to favor trade than their less-educated counterparts. Individuals who had some exposure to college courses (even at the community college level) were 20-30% more likely to support trade than those who did not finish high school in the full-sample estimates (columns one and two in Table 11). These estimated effects are the same, regardless of whether one controls for whether individuals identified themselves as highly trained (i.e., undergoing some or a great deal of training for their jobs), suggesting that the effects of education may indeed be capturing quite a bit more than the effects of worker skills. The estimated effects of different educational qualifications do vary substantially in magnitude, however, across experimental groups. Again, the estimated differences between highly educated individuals (those with one type of college degree or another) and others are largest among those respondents who heard the anti-trade arguments in one form or another before they were asked about their attitude toward trade; and the differences were smallest among those who only heard the pro-trade introduction to the question – the same pattern discovered in the simpler analysis of framing effects above.

IV. Conclusions and Implications

Just how strong is the opposition to trade liberalization among voters? And how deep are the divisions over trade between particular groups in society? These are important political questions at a time when multilateral trade negotiations have stalled and controversy about the "outsourcing" of jobs to foreign countries has come to dominate media coverage of the trade issue and policy debates in the United States. Is a major political battle over trade policy really looming, and if so, what are the major lines of battle? If opposition to trade openness is widespread, and is uniting low skilled, blue-collar

---

educated. The latter was preferred for ease of interpretation. All results from the alternative models are available from the author.

workers, as recent studies suggest, then proposals for a new protectionism could become critical in future election campaigns (and would be especially attractive for left-wing political parties and candidates). The political backlash toward globalization might even be strong enough to produce a "de-globalization," ending the current era of liberalization in much the same way the first great era of globalization was reversed by political pressures that surfaced in the last decade of the nineteenth century (see O'Rourke and Williamson 2000, 287).

The findings reported here suggest that recent studies have overstated the extent of opposition to international trade among voters, as well as the concentration of that opposition among the low skilled workers, due to biases in the ways in which questions about trade are posed in standard surveys. In the survey experiment summarized here, respondents hearing anti-trade arguments were far less likely to favor increasing trade with other countries than those asked the same question without introduction. Curiously, respondents who were read pro-trade arguments were no more likely to express support for increasing trade than those who heard no introduction to the trade question. Perhaps most importantly, the experiment shows that the responses of less educated and less skilled individuals were far more sensitive to framing effects than those of highly educated and highly skilled individuals. Recent studies that rely upon surveys that incorporate anti-trade arguments into the question they pose to respondents are thus likely to have substantially overstated the relationship between education and skill levels and individual trade preferences, as well as the general level of opposition to trade openness. The results from the experiment indicate that the available data on public attitudes toward trade offer much less support for the Stolper-Samuelson theorem than has been suggested in previous studies, since the magnitude of the estimated effects of education and skills on trade preferences varies markedly with changes in question wording (and these effects themselves are even more consistent with alternative explanations for why college education, specifically, leads people to be more supportive of trade and globalization).

Given that issue framing has such large effects on survey responses, this raises a variety of questions about whether and how these effects carry over into real world politics. The traditional view is

that voters are very susceptible to manipulation by politicians and by the media, who have more information about key issues and can shape the language and concepts employed in public debates (see Lippman 1922; Almond 1950), and recent work on political communication and public opinion have highlighted this possibility (e.g., Bartels 1998; Manheim 1991, 4-5; Riker 1986; Zaller 1992, 95). Thus trade politics, like other areas of politics, may best be viewed as a competition in framing – a competition that is revealed in the intimate relationships that have developed between news organizations and the media experts (or "spin doctors") employed by governments, political parties, and special interests to frame issues in ways that benefit them most (see Nelson, Oxley, and Clawson 1997, 224). The intense politicking in the media during the debate over NAFTA in 1993 may provide the best example of this type of competitive framing in trade politics (see Holsti 1996, 52). That contest arguably reached its climax (or nadir) when Al Gore presented Ross Perot with a framed picture of Senator Reed Smoot and Representative Willis Hawley during their televised debate on CNN, driving home the message that opposition to NAFTA was akin to endorsing the famously protectionist Smoot-Hawley Tariff of 1930 and the Great Depression which followed it.

Although the NAFTA debate was won for trade liberalization, this media-driven scenario is not a happy one for supporters of trade openness. While there is an almost unshakeable consensus among economists on the benefits of trade openness, the counterintuitive loveliness of the law of comparative advantage ironically makes it much more difficult to convey the principal case for trade to the general public. There has long been a concern among economists that the case for trade openness, while stronger theoretically and empirically than arguments in favor of trade barriers, is actually much harder to make rhetorically (see Krugman 1993). Indeed, in the survey experiment described here the common arguments in favor of trade openness, that focus on job creation in export industries and lower prices for consumers, had no positive effect on overall levels of support for trade. If anything, the rhetorical attack on trade liberalization has only been stepped up in recent years, with self-styled populists like Ralph Nader and Patrick Buchanan attacking globalization by invoking voter antipathy towards large corporations and

foreigners, in roughly equal measure (Irwin 2002, 1-2). During the past year, the public debate about trade has been cast almost exclusively in terms of the "outsourcing" of American jobs to foreign nations, with heads of companies engaging in the practice labeled "Benedict Arnold CEOs" by one presidential candidate.[33]

There are some grounds, however, for supporters of globalization to take heart. Future research may reveal that alternative types of pro-trade arguments – especially those that employ a "loss" frame when discussing the effects of new protection for export sectors and consumers – may be more powerful than the arguments tested in this experiment. In addition, new research on political communication has suggested that issue framing, while having large effects on responses to surveys and questions asked in laboratory experiments, has a more limited impact in real political contexts (see Druckman 2001a). In particular, studies have shown that framing effects are mitigated when individuals have access to cheap information that can help them decide how they should make their political choices. Most importantly, voters can take cues from experts, political parties, and other organizations that they perceive to be knowledgeable and trustworthy sources of advice on policy issues (see Popkin 1994; Lupia and McCubbins 1998; Sniderman 2000; Druckman 2001b, 2001c). Similar results seem likely for framing effects and attitudes toward trade and globalization. Indeed, preliminary tests do indicate (see appendix) that knowledge of the endorsement of trade openness by economic experts does mitigate framing effects while raising overall support for trade liberalization.

[33] The statement about CEOs was made by Senator John Kerry on February 4th, 2003. In the same month, Gregory Mankiw, Chairman of the President's Council of Economic Advisers, was forced to retract (and apologize for) comments he made describing outsourcing as just another aspect of international trade that benefits the American economy. See *The Economist*, "The Great Hollowing-Out Myth," February 19th, 2004.

Appendix

A. The Expert Endorsement Experiment

The purpose of this separate experiment, following work by Druckman (2001a, 2001b), is to test whether advice about trade from a third-party source might influence the degree to which respondents are swayed by issue framing. The idea here is that, while framing might have a large impact on the way individuals respond to survey questions on issues about which they have little information, when making choices in the real world (say, about whether they should vote for a particular ballot initiative or electoral candidate), individuals can seek advice from sources of information they trust. Recent research suggests that voters rely heavily upon informational "cues" from political parties and other organizations (Popkin 1994; Lupia and McCubbins 1998). Experiments conducted by Druckman (2001b) show that framing effects are mitigated to a large degree when respondents can observe endorsements of one policy option or another by political parties (see also Sniderman 2000). Druckman also demonstrates that framing effects are reduced when subjects in experiments observe an endorsement of one choice option or another by some set of credible experts – the specific case he examined involved a choice between types of medical treatments for cancer (surgery versus radiation), with one option being endorsed by "a group of lung cancer specialists" from a well-known medical research institution.

I have adapted this latter experiment to the trade issue, testing whether the framing effects observed in the main experiment are reduced for respondents who can observe that most economists favor increasing trade. Another 4 experimental groups were created for this experiment (each comprising 10% of the total TESS sample) and, as before, these were read pro-trade, anti-trade, or both types of introductions, or no introduction at all; but now, before being read the assigned introduction, all respondents in these groups were read the statement:

> According to the New York Times, almost 100 percent of American economists support increasing trade with other nations. In 1993 over a thousand economists, including all living winners of the Nobel Prize in economics, signed an open letter to the New York Times urging people to support efforts to increase trade between the United States and neighboring countries.

The assumption, of course, is that economists, especially Nobel Prize winning ones, are generally regarded as credible and trustworthy sources of information about the effects of economic policies. Table A1 reports the results from this experiment.

[Table A1]

The most obvious effect of the expert endorsement was to raise support for trade across the board. Overall, those stating that they favored increasing trade rose from 61%, in the main experiment, to 72% among those who received the extra information about economists. The endorsement had the largest impact on those who were also given the anti-trade introduction, either alone (the endorsement pushed support for trade up by 19% among those respondents) or in combination with the pro-trade introduction (11%). The endorsement had the smallest effect on those who received only the pro-trade introduction (6%), presumably because the new information was less divergent from the information already available to those respondents. Most importantly, the expert endorsement does seem to mitigate the impact of other types of issue framing. Among those who received the anti-trade introduction, for instance, 17% fewer favored increasing trade compared with those who heard no introduction at all in the main experiment; once the expert endorsement was introduced, that difference fell to just 7%. Support for trade was 12% lower among those who heard the anti-trade introduction compared with those who heard the pro-trade introduction in the absence of the endorsement; with the endorsement, the differences was only 8%.

These findings suggest that issue framing is less critical for predicting choices by voters in the real world of politics, where citizens can obtain cheap information about which choices are best for them from numerous sources, than it is a problem for interpreting the results from opinion surveys, which require

that respondents render their views with no time for reflection and no access to advice or information from trusted third-party sources. It does leave open the question, of course, about which types of sources individuals regard as trustworthy or credible on the trade issue.

B. Descriptive Statistics and Estimations with Framing Interaction Effects

Table A.2 presents descriptive statistics for all variables used in the analysis reported in the text.

[Table A.2]

Table A.3 presents the results from estimating the benchmark and extended models describe din the paper, using interaction effects to control for variation in the effects of each frame by age, gender, and education. These substantive results here match those reported from the estimations for separate experimental groups (shown in Tables 7, 9, and 10). Most importantly, the interaction between age and the pro-trade introduction is significant and negative indicating that, compared with the estimated positive effect of age on support for trade in the baseline "no-introduction" group, the effect of age in the pro-trade treatment group is significantly lower (negative, in fact). The impact of gender on support for increasing trade is not conditioned in any significant way framing effects. On the other hand, the effects of education are quite sensitive to framing. Again, the interaction effects are largest for the pro-trade frame: compared to the estimated positive effect of high education on support for trade in the excluded "no-introduction" group, the effect of education in the pro-trade treatment group is significantly lower (and statistically indistinguishable from zero).

References

Almond, Gabriel. 1950. *The American People and Foreign Policy*. New York: Harcourt Brace.

Baker, Andy. 2003. Why is Trade Reform so Popular in Latin America? *World Politics* 55 (3):423-455.

Balistreri, Edward J. 1997. The Performance of the Heckscher-Ohlin-Vanek Model in Predicting Endogenous Policy Forces at the Individual Level. *Canadian Journal of Economics* 30 (1): 1-17.

Bartels, Larry M. 1998. Democracy with Attitudes. Paper presented at the Annual Meeting of the American Political Science Association, Boston, MA.

Bauer, Raymond A., Ithiel de Sola Pool, and Lewis Anthony Dexter. 1972. *American Business and Public Policy: The Politics of Foreign Trade.* 2nd ed. Chicago: Aldine-Atherton.

Beaulieu, Eugene. 2002. Factor or Industry Cleavages in Trade Policy? An Empirical Analysis of the Stolper-Samuelson Theorem. *Economics and Politics* 14 (2): 99-131.

Burgoon, Brian, and Michael J. Hiscox. 2003. The Mysterious Case of Female Protectionism: Gender Bias in Attitudes Toward International Trade. Paper presented at the Annual Meeting of the American Political Science Association, Philadelphia, PA, August 28th-31st, 2003

Campbell, Angus, Philip E. Converse, Warren E. Miller, and Donald E. Stokes. 1960. *The American Voter: Chicago*. University of Chicago Press.

Converse, P. 1964. The Nature of Belief Systems in Mass Publics. In *Ideology and Discontent*, ed. D. Apter. New York: Wiley.

Delli Carpini, Michael X. and Scott Keeter. 1989. *What Americans Know About Politics and Why It Matters*. New Haven. Yale University Press.

Destler, I.M. 1995. *American Trade Politics* 3rd ed. Washington DC: Institute for International Economics.

Druckman, James, N. 2001a. The Implications of Framing Effects for Citizen Competence. *Political Behavior* 23 (3): 225-256.

Druckman, James, N. 2001b. Using Credible Advice to Overcome Framing Effects. *Journal of Law, Economics, and Organization* 17 (1): 62-82.

Druckman, James, N. 2001c. On the Limits of Framing Effects. *Journal of Politics* 63: 1041-1066.

Druckman, James, N. and Kjersten R. Nelson. 2003. Framing and Deliberation. *American Journal of Political Science*, 47, 4: 729-745.

Eagly, Alice, H. 1981. Recipient Characteristics as Determinants of Responses to Persuasion. In *Cognitive Responses to Persuasion*, ed. R. Petty, et al. Hillsdale, NJ: Lawrence Erlbaum Associates.

Erikson, Robert S., Norman R. Luttbeg, and Kent L. Tedin. 1991. *American Public Opinion: Its Origins, Content, and Impact.* 4th ed. New York: Macmillan.

Espenshade, Thomas J., and Charles A. Calhoun.1993. An Analysis of Public Opinion Toward Undocumented Immigration. *Population Research and Policy Review* 12: 189-224.

Fetzer, Joel S. 2000. *Public Attitudes Toward Immigration in the United States, France, and Germany*. Cambridge: Cambridge University Press.

Gabel, Matthew J. 1998. *Interests and Integration: Market Liberalization, Public Opinion, and European Union*. Ann Arbor: university of Michigan Press.

Graham, Carol. 2002.*Happiness and Hardship: Opportunity and Insecurity in New Market Economies*. Washington DC: Brookings Institution.

Grossman, Gene, and Elhanan Helpman. 1994. Protection for Sale. *American Economic Review* 84: 833-850.

Haider-Markel, Donald P., and Mark R. Joslyn. 2001. Gun Policy, Opinion, Tragedy, and Blame Attribution. *Journal of Politics* 63, 2: 520-543.

Hiscox, Michael J. 2002. *International Trade and Political Conflict*. Princeton: Princeton University Press.

Holsti, Ole. R. 1996. *Public Opinion and American Foreign Policy*. Ann Arbor: University of Michigan Press.

Irwin, Douglas A. 2002. *Free Trade Under Fire*. Princeton: Princeton University Press.

Iyengar, Shanto. 1991. *Is Anyone Responsible? How Television Frames Political Issues*. Chicago: University of Chicago Press.

Jacoby, William G. 2000. Issue Framing and Public Opinion on Government Spending. *American Journal of Political Science* 44, 4: 750-767.

Jones, Ronald. 1971. A Three-Factor Model in Theory, Trade, and History. In *Trade, Balance of Payments, and Growth*, ed. Jagdish Bhagwati, Ronald Jones, Robert A. Mundell, and Jaroslav Vanek. Amsterdam: North-Holland, 3-21.

Kahneman, Daniel, and Amos Tversky. 1979. Prospect Theory: An Analysis of Decision Under Risk. *Econometrica*, 47 (2): 263-191.

Kanouse, D. and L. Hanson. 1972. Negativity in Evaluations. In *Attribution: Perceiving the Causes of Bahavior*, E. Jones et al. (eds.). Morristown, NJ: General Learning Press.

Kinder, Donald R., and Lynn M. Sanders. 1990. Mimicking Political Debate with Survey Questions: The Case of White Opinion on Affirmative Action for Blacks. *Social Cognition* 8: 73-103.

Krugman, Paul A. 1993. What Do Undergrads Need to Know About Trade? *American Economic Review* May: 23-26.

Levin, Irwin P., Sandra L. Schneider, and Gary J. Gaeth. 1998. All Frames are not Created Equal: A Typology and Critical Analysis of Framing Effects. *Organizational Behavior and Human Decision Processes* 76: 149-188.

Lippmann, Walter. 1922. *Public Opinion*. New York: Macmillan.

Lupia, Arthur, and Mathew D. McCubbins. 1998. *The Democratic Dilemma: Can Citizens Learn What they Need to Know?* New York: Cambridge University Press.

Magee, Stephen. 1980. Three Simple Tests of the Stolper-Samuelson Theorem. In *Issues in International Economics,* ed. P. Oppenheimer. London: Oriel Press, 138-153.

Manheim, Jarol M. 1991. *All of the People All of the Time: Strategic Communication and American Politics*. Armonk, NY: M.E. Sharpe, Inc.

Mayda, Anna Maria, and Dani Rodrik. 2004. Why are Some People (and Countries) more Protectionist than Others? *European Economic Review*. Forthcoming.

McGraw, Kathleen M., and Clark Hubbard. 1996. Some of the People Some of the Time: Individual Differences in Acceptance of Political Accounts. In *Political Persuasion and Attitude Change*, edited by Diana C. Mutz, Paul M. Sniderman, and Richard A. Brody. Ann Arbor: University of Michigan Press.

Mussa, M. 1974. Tariffs and the Distribution of Income. *Journal of Political Economy*. 82:1191-1203.

Nelson, Thomas E., and Donald R. Kinder. 1996. Issue Frames and Group-Centrism in American Public Opinion. *Journal of Politics* 58, 4: 1055-1078.

Nelson, Thomas E., Zoe M. Oxley, and Rosalee A. Clawson. 1997. Toward a Psychology of Framing Effects. *Political Behavior* 19, 3: 221-246.

O'Rourke, Kevin H., and Jeffrey G. Williamson. 2000. *Globalization and History: The Evolution of a Nineteenth-Century Atlantic Economy.* Cambridge: MIT Press.

O'Rourke, Kevin, and Richard Sinnott. 2002. The Determinants of Individual Trade Policy Preferences. In *Brookings Trade Forum*, edited by Susan M Collins and Dani Rodrik. Washington DC: Brookings Institution.

Page, Benjamin I., and Robert Y. Shapiro. 1992. *The Rational Public: Fifty Years of Trends in Americans' Policy Preferences*. Chicago: University of Chicago Press.

Panel Study of Income Dynamics. 1999. 1968-1980 Retrospective Occupation-Industry Files Documentation. Survey Research Center. University of Michigan. Ann Arbor.

Perloff, Richard M. 1993. *The Dynamics of Persuasion*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Pew 2003. The Pew Global Attitudes Project: Support for Free Trade. Released November 20. http://people-press.org/pgap/

Popkin, Samuel. 1994. *The Reasoning Voter: Communication and Persuasion in Presidential Campaigns*. 2nd ed. Chicago: University of Chicago Press.

Program on International Policy Attitudes (PIPA). Various years. International Trade. http://www.pipa.org/

Pryor, Frederic. 2002. General Discussion. In *Brookings Trade Forum*, edited by Susan M Collins and Dani Rodrik. Washington DC: Brookings Institution.

Rabin, Matthew. 1998. Psychology and Economics. *Journal of Economic Literature*, 36: 11-46.

Riker, William H. 1986. *The Art of Political Manipulation*. New Haven: Yale University Press.

Rogowski, Ronald. 1989. *Commerce and Coalitions*. Princeton: Princeton University Press.

Scheve, Kenneth F., and Matthew J. Slaughter. 2001. *Globalization and the Perceptions of American Workers*. Washington, DC: Institute for International Economics.

Schneider, William. 1985. Protectionist Push is Coming from the Top. *National Journal* 27 April.

Schuman, H. and S. Presser. 1981. *Questions and Answers in Attitude Surveys: Experiments in Question From, Wording, and Context*. New York: Academic.

Skowronski, J. and D. Carlston. 1989. Negativity and Extremity Biases in Impression Formation. *Psychological Bulletin*, 105 (1): 131-142.

Sniderman, Paul M. 2000. Taking Sides: A Fixed Choice Theory of Political Reasoning. In *Elements of Reason: Cognition, Choice, and the Bounds of Rationality,* edited by Arthur Lupia, Mathew D. McCubbins, and Samuel L. Popkin New York: Cambridge University Press.

Sniderman, Paul M., and Sean M. Theriault. 1999. The Dynamics of Political Argument and the Logic of Issue Framing. Paper presented at the Annual Meeting of the Midwest Political Science Association, Chicago, IL.

Stanovich, Keith E., and Richard F. West. 1998. Individual Differences in Framing and Conjunction Effects. *Thinking and Reasoning*, 4: 289-317.

Stolper, W. and P. Samuelson. 1941. Protection and Real Wages. *Review of Economic Studies* 9:58-73.

Zaller, John. 1992. *The Nature and Origins of Mass Opinion*. New York: Cambridge University Press.

TABLE 1: Percentages of Respondents Who Favor Increasing Trade

Question: ***Do you favor or oppose increasing trade with other nations?***

All Respondents (N=950)	61%
Pro-trade Introduction (Group 1: N=259)	66%
Anti-Trade Introduction (Group 2: N=227)	54%
Both Introductions (Group 3: N=228)	52%
No Introduction (Group 4: N=236)	71%

TABLE 2: Intensity of Respondents' Attitudes Toward Increasing Trade

Question: ***Is that strongly favor (oppose) or somewhat favor (oppose)?***

	Opposed to Increasing Trade:		Favor Increasing Trade:	
	Strongly Oppose	Somewhat Oppose	Somewhat Favor	Strongly Favor
All Respondents (N=950)	16%	23%	37%	24%
Pro-Trade Introduction* (Group 1: N=259)	14%	19%	39%	27%
Anti-Trade Introduction (Group 2: N=227)	23%	23%	36%	18%
Both Introductions (Group 3: N=228)	17%	31%	33%	19%
No Introduction* (Group 4: N=236)	11%	18%	41%	31%

* Percentages do not sum to one hundred due to rounding.

TABLE 3: Education and Sensitivity to Framing of the Trade Issue

Question: ***Do you favor or oppose increasing trade with other nations?***

	Percentages Who Favor Increasing Trade:		
	Highly Educated (≥Some college)	Less Educated (No college)	Difference
Pro-Trade Introduction (Group 1)	70% N=137	62% N=122	12%
Anti-Trade Introduction (Group 2)	64% N=123	41% N=104	23%
Both Introductions (Group 3)	65% N=134	34% N=94	31%
No Introduction (Group 4)	81% N=122	61% N=114	20%

TABLE 4: Job Skills and Sensitivity to Framing of the Trade Issue

Question: ***Do you favor or oppose increasing trade with other nations?***

	Percentages Who Favor Increasing Trade:		
	High Skilled (≥Some training)	Low Skilled (≤Little training)	Difference
Pro-Trade Introduction (Group 1)	72% N=110	70% N=50	2%
Anti-Trade Introduction (Group 2)	65% N=86	41% N=39	24%
Both Introductions (Group 3)	57% N=99	43% N=37	14%
No Introduction (Group 4)	77% N=91	64% N=55	13%

TABLE 5: Age and Sensitivity to Framing of the Trade Issue

Question: ***Do you favor or oppose increasing trade with other nations?***

	Percentages Who Favor Increasing Trade:		
	Age 18-34 yrs	Age ≥35 yrs	Difference
Pro-Trade Introduction (Group 1)	80% N=69	62% N=190	18%
Anti-Trade Introduction (Group 2)	51% N=55	55% N=172	-6%
Both Introductions (Group 3)	60% N=48	50% N=180	-10%
No Introduction (Group 4)	70% N=57	72% N=179	-2%

TABLE 6: Gender and Sensitivity to Framing of the Trade Issue

Question: ***Do you favor or oppose increasing trade with other nations?***

	Percentages Who Favor Increasing Trade:		
	Men	Women	Difference
Pro-Trade Introduction (Group 1)	74% N=110	61% N=149	13%
Anti-Trade Introduction (Group 2)	61% N=88	49% N=139	12%
Both Introductions (Group 3)	58% N=97	48% N=131	10%
No Introduction (Group 4)	77% N=111	66% N=125	11%

TABLE 7: Individual Support for Increasing Trade – Benchmark Models

Dependent variable =1 if respondent favors increasing trade with other nations (=0 if opposes).[a]

	Full Sample		Group 1: Pro-Trade Introduction		Group 2: Anti-Trade Introduction		Group 3: Both Introductions		Group 4: No Introduction	
	a.	b.	a.	b.	a.	b.	a.	b.	a.	b.
Pro-Trade Introduction	-0.05	-0.003								
	(0.05)	(0.06)								
Anti-Trade Introduction	-0.18***	-0.15**								
	(0.05)	(0.06)								
Both Introductions	-0.21***	-0.20***								
	(0.05)	(0.06)								
Age	-0.002	-0.000	-0.005***	-0.004	0.002	0.005	0.001	-0.007	0.001	0.005
	(0.001)	(0.002)	(0.002)	(0.003)	(0.002)	(0.004)	(0.002)	(0.004)	(0.002)	(0.003)
Female	-0.11***	-0.10**	-0.12**	-0.10	-0.14**	-0.11	-0.04	-0.02	-0.13**	-0.15**
	(0.03)	(0.04)	(0.06)	(0.07)	(0.07)	(0.09)	(0.07)	(0.09)	(0.06)	(0.08)
Highly Educated	0.20***		0.06		0.23***		0.31***		0.21***	
	(0.03)		(0.06)		(0.07)		(0.07)		(0.06)	
Highly Trained		0.12***		-0.001		0.25***		0.13		0.15*
		(0.04)		(0.08)		(0.09)		(0.10)		(0.08)
Pseudo R^2	0.06	0.04	0.04	0.02	0.05	0.05	0.07	0.02	0.06	0.06
Observations	942	563	257	158	225	124	228	136	232	145

a. Probit estimations: marginal effects ($\partial F/\partial x$) are shown with standard errors in parentheses. * p<0.10 ** p<0.05 *** p<0.01

TABLE 8: Experimental Groups – Age, Gender, and Educational Characteristics

	Men:			Women:		
	Total (%)	Avg. Age (yrs)	Highly Educated (%)	Total (%)	Avg. Age (yrs)	Highly Educated (%)
All Respondents (N≈960)	42	47.4	59.2	58	48.7	51.1
Pro-Trade Frame (Group 1: N≈260)	42	47.1	60.3	58	47.6	47.7
Anti-Trade Frame (Group 2: N≈230)	39	48.4	56.0	61	48.3	54.1
Both Frames (Group 3: N≈230)	42	46.3	70.1	58	50.3	51.4
No Frame (Group 4 N≈240)	47	47.9	51.4	53	48.8	51.2

TABLE 9: Individual Support for Increasing Trade – Benchmark Models (Women Respondents Only)

Dependent variable =1 if respondent favors increasing trade with other nations (=0 if opposes).[a]

	Full Sample		Group 1: Pro-Trade Introduction		Group 2: Anti-Trade Introduction		Group 3: Both Introductions		Group 4: No Introduction	
	a.	b.	a.	b.	a.	b.	a.	b.	a.	b.
Pro-Trade Introduction	-0.06	-0.03								
	(0.07)	(0.08)								
Anti-Trade Introduction	-0.17**	-0.17*								
	(0.07)	(0.09)								
Both Introductions	-0.26***	-0.27***								
	(0.07)	(0.09)								
Age	0.000	-0.004*	-0.002	-0.004	0.002	0.012*	0.006*	0.006	-0.000	-0.003
	(0.001)	(0.002)	(0.003)	(0.005)	(0.003)	(0.007)	(0.003)	(0.006)	(0.002)	(0.003)
Highly Educated	0.23***		-0.04		0.45***		0.38***		0.18**	
	(0.05)		(0.08)		(0.10)		(0.10)		(0.08)	
Highly Trained		0.13**		-0.11		0.41***		0.23*		0.11
		(0.06)		(0.10)		(0.15)		(0.13)		(0.10)
Pseudo R^2	0.07	0.06	0.006	0.02	0.17	0.13	0.12	0.04	0.04	0.03
Observations	403	263	109	70	87	53	97	62	110	78

a. Probit estimations: marginal effects ($\partial F/\partial x$) are shown with standard errors in parentheses. * p<0.10 ** p<0.05 *** p<0.01

TABLE 10: Individual Support for Increasing Trade – More Extensive Models

Dependent variable =1 if respondent favors increasing trade with other nations (=0 if opposes).[a]

	Full Sample		Group 1: Pro-Trade Introduction		Group 2: Anti-Trade Introduction		Group 3: Both Introductions		Group 4: No Introduction	
	a.	b.	a.	b.	a.	b.	a.	b.	a.	b.
Pro-Trade Introduction	0.01	0.01								
	(0.06)	(0.06)								
Anti-Trade Introduction	-0.14**	-0.13**								
	(0.06)	(0.06)								
Both Introductions	-0.21***	-0.20***								
	(0.06)	(0.06)								
Age	0.000	0.000	-0.003	-0.003	0.001	0.003	-0.004	-0.006	0.005*	0.007**
	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.004)	(0.003)	(0.003)
Female	-0.07*	-0.07*	-0.11	-0.11	-0.11	-0.09	0.06	0.04	-0.12	-0.12
	(0.04)	(0.04)	(0.08)	(0.08)	(0.09)	(0.09)	(0.10)	(0.11)	(0.08)	(0.08)
Highly Educated	0.17***		0.02		0.17*		0.30***		0.24***	
	(0.04)		(0.08)		(0.10)		(0.09)		(0.08)	
Highly Trained		0.11**		-0.01		0.24**		0.08		0.24**
		(0.05)		(0.08)		(0.10)		(0.11)		(0.09)
Income >$35,000	0.09*	0.10**	0.06	0.07	0.16	0.14	0.03	0.08	0.08	0.10
	(0.05)	(0.05)	(0.08)	(0.08)	(0.10)	(0.11)	(0.10)	(0.10)	(0.08)	(0.08)
Trade Improves Own Job Security	0.19***	0.19***	0.17*	0.17*	0.17	0.17	0.30***	0.29**	0.14*	0.17*
	(0.05)	(0.05)	(0.08)	(0.08)	(0.13)	(0.13)	(0.10)	(0.10)	(0.07)	(0.07)
Republican	-0.05	-0.03	-0.15*	-0.15*	0.02	0.08	0.002	0.05	-0.09	-0.14
	(0.05)	(0.05)	(0.08)	(0.09)	(0.11)	(0.11)	(0.10)	(0.10)	(0.09)	(0.10)
Pseudo R^2	0.09	0.08	0.07	0.07	0.07	0.09	0.11	0.06	0.17	0.16
Observations	552	552	155	155	123	123	131	131	143	143

a. Probit estimations: marginal effects ($\partial F/\partial x$) are shown with standard errors in parentheses. * p<0.10 ** p<0.05 *** p<0.01 Each model also includes dummy variables for Census regions (West, South, and Midwest, with East set as the excluded region); effects not shown here.

TABLE 11: Individual Support for Increasing Trade – Effects of Education by Type

Dependent variable =1 if respondent favors increasing trade with other nations (=0 if opposes).[a]

	Full Sample		Group 1: Pro-Trade Introduction	Group 2: Anti-Trade Introduction	Group 3: Both Introductions	Group 4: No Introduction
	a.	b.				
Pro-Trade Introduction	-0.06 (0.05)	-0.03 (0.06)				
Anti-Trade Introduction	-0.18*** (0.05)	-0.18*** (0.06)				
Both Introductions	-0.21*** (0.05)	-0.23*** (0.06)				
Age	-0.001 (0.001)	-0.000 (0.002)	-0.005*** (0.002)	-0.001 (0.002)	0.001 (0.002)	0.001 (0.002)
Female	-0.11*** (0.03)	-0.10** (0.04)	-0.11* (0.06)	-0.14** (0.07)	-0.05 (0.07)	-0.15** (0.06)
High School Diploma	0.08 (0.06)	0.10 (0.10)	0.03 (0.12)	0.13 (0.13)	0.06 (0.14)	0.07 (0.10)
Vocational or Technical School	-0.02 (0.10)	0.06 (0.12)	-0.37* (0.20)	0.05 (0.19)	0.07 (0.21)	0.11 (0.12)
Community College or Nursing School	0.24*** (0.05)	0.26*** (0.07)	0.18 (0.11)	0.21 (0.14)	0.18 (0.15)	0.28*** (0.05)
Some College (No degree)	0.19*** (0.06)	0.20** (0.08)	0.01 (0.13)	0.17 (0.13)	0.34*** (0.12)	0.23** (0.08)
College Degree (BA)	0.27*** (0.05)	0.31*** (0.07)	0.06 (0.12)	0.39*** (0.10)	0.36*** (0.12)	0.25*** (0.07)
Advanced Degree (MA or PhD)	0.34*** (0.04)	0.34*** (0.06)	0.23* (0.09)	0.39*** (0.09)	0.41*** (0.10)	0.31*** (0.05)
Highly Trained		0.07* (0.05)				
Pseudo R^2	0.09	0.10	0.09	0.09	0.08	0.12
Observations	942	563	257	225	228	232

a. Probit estimations: marginal effects ($\partial F/\partial x$) are shown with standard errors in parentheses. * p<0.10 ** p<0.05 *** p<0.01.

TABLE A1: Percentages of Respondents Who Favor Increasing Trade – Endorsement Experiment

Question: ***Do you favor or oppose increasing trade with other nations?***

	Main Experiment (No endorsement)	With Pro-Trade Expert Endorsement*	Difference
All Respondents	61% N=950	72% N=628	+11%
Pro-Trade Introduction (Group 1)	66% N=259	72% N=161	+6%
Anti-Trade Introduction (Group 2)	54% N=227	73% N=154	+19%
Both Introductions (Group 3)	52% N=228	63% N=160	+11%
No Introduction (Group 4)	71% N=236	80% N=153	+9%

* Before being read an introduction and asked to answer the question, each respondent was read the following: "According to the New York Times, almost 100 percent of American economists support increasing trade with other nations. In 1993 over a thousand economists, including all living winners of the Nobel Prize in economics, signed an open letter to the New York Times urging people to support efforts to increase trade between the United States and neighboring countries."

Table A.2: Descriptive Statistics

	Obs.	Mean	Std. Dev.	Min.	Max.
Favor Increasing Trade	950	0.6116	0.4876	0	1
Pro-Trade Introduction	970	0.2721	0.4453	0	1
Anti-Trade Introduction	970	0.2423	0.4287	0	1
Both Introductions	970	0.2402	0.4274	0	1
No Introduction	970	0.2454	0.4305	0	1
Age	962	48.1715	16.7532	18	93
Female	970	0.5773	0.4942	0	1
Highly Educated	970	0.5454	0.4982	0	1
Highly Trained	577	0.6846	0.4651	0	1
Income (>$35,000)	931	0.4834	0.5000	0	1
Trade Improves Own Job Security	576	0.1823	0.3864	0	1
Republican	970	0.3186	0.4662	0	1
High School Diploma	970	0.2505	0.4335	0	1
Some College (No degree)	970	0.1970	0.3979	0	1
Vocational or Technical School	970	0.0402	0.1965	0	1
Community College or Nursing School	970	0.0897	0.2859	0	1
College Degree (BA)	970	0.2072	0.4055	0	1
Advanced Degree (MA or PhD)	970	0.1371	0.3441	0	1

TABLE A3: Individual Support for Increasing Trade – Framing Interaction Effects

Dependent variable =1 if respondent favors increasing trade with other nations (=0 if opposes).[a]

	Full Sample:		Women Respondents:	
	(1)	(2)	(3)	(4)
Pro-Trade Introduction	0.32**	0.40**	0.15	0.19
	(0.12)	(0.14)	(0.18)	(0.26)
Anti-Trade Introduction	-0.04	0.003	-0.24	-0.48
	(0.16)	(0.24)	(0.24)	(0.36)
Both Introductions	-0.29*	0.08	-0.61***	-0.57*
	(0.17)	(0.24)	(0.17)	(0.30)
Age	0.001	0.005	-0.001	0.004
	(0.002)	(0.003)	(0.003)	(0.004)
Age*Pro-Trade Introduction	-0.007**	-0.009*	-0.001	0.001
	(0.003)	(0.005)	(0.004)	(0.007)
Age*Anti-Trade Introduction	-0.003	-0.002	-0.001	0.005
	(0.003)	(0.005)	(0.004)	(0.008)
Age*Both Introduction	-0.000	-0.009*	0.006	0.004
	(0.003)	(0.005)	(0.004)	(0.007)
Female	-0.15**	-0.14*		
	(0.07)	(0.08)		
Female*Pro-Trade Introduction	0.02	0.05		
	(0.09)	(0.12)		
Female*Anti-Trade Introduction	0.01	0.02		
	(0.10)	(0.12)		
Female*Both Introduction	0.11	0.16		
	(0.9)	(0.10)		
Highly Educated	0.25***	0.27***	0.22**	0.23*
	(0.07)	(0.09)	(0.15)	(0.13)
Education*Pro-Trade Introduction	-0.19**	-0.29**	-0.28**	-0.48**
	(0.10)	(0.13)	(0.15)	(0.19)
Education*Anti-Trade Introduction	0.02	-0.10	0.19*	0.18
	(0.10)	(0.13)	(0.09)	(0.12)
Education*Both Introduction	0.05	0.02	0.12	0.09
	(0.09)	(0.13)	(0.12)	(0.15)
Income >$35,000		0.09		-0.01
		(0.05)		(0.07)
Trade Improves Own Job Security		0.19***		0.21***
		(0.05)		(0.06)
Republican		-0.06		-0.07
		(0.05)		(0.06)
Pseudo R^2	0.08	0.11	0.11	0.21
Observations	942	552	403	258

a. Probit estimations: marginal effects ($\partial F/\partial x$) are shown with standard errors in parentheses. * p<0.10 ** p<0.05 *** p<0.01 Models (2) and (4) also include dummy variables for Census regions (West, South, and Midwest, with East set as the excluded region); effects not shown here.