Motivated Reasoning and the Constraining Power of Prior Opinions:
Insights from a Two-Wave Panel Experiment on Trade Policy-Preferences

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Abstract

Mass public opinion can often become a key challenge to international cooperation efforts. In the run-up to such decisions, stakeholders usually fight for the hearts and minds of the public based on arguments about the consequences of different policy options. But to what extent do citizens' preferences change when exposed to such information? How does this depend on the information being congruent or contradictory to pre-existing preferences; and to what extent do prior preferences act as a constraint in this respect? Based on a two-wave panel survey experiment fielded in Germany and the United States we address these questions in the context of what is widely regarded as the most important international trade liberalization effort currently under way, the Transatlantic Trade and Investment Partnership (TTIP). The experiment focuses on the three most contentious issues in the TTIP negotiations, economic benefits, harmonization of standards, and dispute settlement. In contrast to previous research on motivated reasoning, our results point to updating of opinions. However, prior opinions clearly set a limit to the degree to witch citizens update their opinions about TTIP as individuals update but do not change their opinion on TTIP. The results also show that negative information on TTIP's consequences clearly has a stronger effect than positive information supporting arguments about negativity bias and loss aversion.

Introduction

In recent years, numerous international cooperation efforts were not only accompanied but rather completely challenged by the general public in different countries, such as the Transatlantic Trade and Investment Partnership (TTIP), the Transpacific Trade Partnership (TPP) but also the European Union more generally as the Brexit referendum illustrates. In their efforts to influence public opinion, policy-makers and other stakeholders offer differing argumentations on what the economic, political, social, or other consequences of particular policy choices are likely to be. As the current state of affairs of some of these examples show, mass public opinion often acts as an important constraint or facilitator in policymaking rendering it crucial to understand how individuals react to different types of argumentation. But to what extent do arguments about the consequences of policy choices actually affect the preferences of citizens? To what extent do citizens' prior opinions constrain updating processes of people's preferences based on new information about policy consequences? Does it matter whether new information is congruent or opposed to existing opinions?

These and related questions have spurred a growing line of research (Kahan et al. 2012; Nyhan and Reifler 2015a; Taber and Lodge 2006) to which we contribute by examining whether and how new information about policy consequences affects policy preferences among the mass public, contingent on prior opinions and preferences. Our goal is thereby to better understand whether individuals indeed update their opinion according to new information or whether the updating process of prior opinions is subject to a range of unconscious biases designed to support people's existing preferences, a process political psychologists have labeled 'motivated reasoning' (Kunda 1990, Lodge and Taber 2000, Taber and Lodge 2006). An enhanced understanding of these processes has important policy consequences for political communication, as the above examples of Brexit and TTIP illustrate.

The empirical focus of this paper is on international trade policy, and the TTIP process in particular. Deadlock in the World Trade Organization's Doha round, which aims at global trade liberalization, and the global economic downturn starting in 2008 motivated the European Union and the United States to initiate negotiations on a new bilateral trade agreement, the TTIP, in summer 2013. If it materializes, TTIP will liberalize trade in a combined market of 800 million consumers. Besides its economic importance, it is also widely seen as a blueprint for a "new generation" of trade agreements; notably because it deals not only with trade-liberalization in the traditional sense (reducing tariffs, quotas, and non-tariff barriers), but also with a wide range of trade-related policy issues, such as

environmental, health, and safety standards, and dispute settlement (Elvire 2014). These high stakes have led to heated public debates over the implications of TTIP, not only for economic growth and employment, but also for the environment, consumer safety, and national sovereignty. As noted by some authors, TTIP has become "the most contested acronym in Europe and the US" (Traynor and Rice-Oxley 2015).

Supporters praise TTIP as a unique opportunity to create greater prosperity on both sides of the Atlantic, and to become a template for a new generation of welfare enhancing global trade agreements. Opponents of TTIP question its economic benefits, express strong concerns over what they think will be negative effects on environmental and consumer protection, and are worried that the proposed investor-state dispute settlement system (ISDS) envisaged for TTIP will weaken national governments and courts vis-à-vis foreign investors. Public opinion polls in several countries point to strong skepticism towards TTIP and interest groups have sought to mobilize the wider public in favor or against TTIP ever since negotiations on TTIP started.[1] This skepticism also reveals itself in more manifest expressions of public discontent. For instance, more than 150,000 people marched on the streets of Berlin in October 2015 to voice their criticism of TTIP, and more than 3 million people across Europe signed a Europe wide online petition asking the government to stop TTIP (European Citizens' Initiative 2016, Zalan 2015).

Consequently, we consider TTIP to be the perfect test case to further our understanding on how citizens holding differing views on an issue, TTIP in our context, – i.e. opponents, supporters, and neutrals in particular – update their existing opinions in light of new information on the consequences of the TTIP agreement. By means of a two-wave panel survey experiment we captured respondents' prior opinions towards TTIP in a first survey wave. In the second survey wave, we then examined how citizens process information that is congruent with or challenges their existing opinions. This approach allows us to tease out the role of motivated reasoning in individuals' information processing and which factors determine the extent to which an individual is more likely to engage in motivated reasoning. Previous studies describe 'motivated reasoning' as a person's unconscious bias to process information to fit conclusions that support an end or goal (e.g., Gaines et al. 2007, Kahan 2013, Kunda 1990, Redlawsk 2003, Taber and Lodge 2006). In the context of the TTIP, we would observe instances of motivated reasoning if respondents do not change their opinion stated in the first survey after receiving information that challenge their existing opinionss in

[1] For example, a survey by the Bertelsmann Stiftung (2016) shows that only 17 percent of Germans believe the TTIP agreement is a good thing, a sharp decrease from 55 percent two years ago. In the United States, 18 percent support the trade deal compared to a high of 53 percent in 2014.

the second survey. In addition, previous studies have also found evidence of a so-called backfire effect, i.e. when new incongruent information strengthens respondents' prior opinions.

More generally, the research presented in this paper contributes to explaining the likelihood of opinion change or polarization among supporters and opponents of particular policies. We contribute to the existing literature on this subject in several respects. First, although there exists a huge literature on individual level trade preferences (e.g., Baker 2003, 2005; Beaulieu 2002; Beaulieu et al. 2005; Blonigen 2008; 2011; Fordham and Kleinberg 2012; Mansfield and Mutz 2009; Mayda and Rodrik 2005; O'Rourke and Sinnott 2001; Scheve and Slaughter 2001) the question how and under what conditions individuals update or change their opinion has not been looked at. Correspondingly, by incorporating insights from the literature on political behavior we offer a model of opinion update in the context of trade policy.

Second, the few studies on the subject of opinion change to date deal primarily with vaccination (Nyhan and Reifler 2015a), and climate change (Kahan et al. 2012). However, both of these topics, vaccination and climate change, are characterized by high salience and by rather clear-cut evidence. This means that, for example, in the case of climate change, science agrees that human-made climate change is occurring and hence the question underlying most research is why individuals still consider climate change a myth given the clear scientific evidence. Trade policy, in contrast, is a topic characterized by different opinions on its pitfalls and benefits. It therefore lends itself nicely for studying opinion change in contrast to correcting misperception. Consequently, our theoretical model and empirical testing strategy allow for an analysis of whether individuals with varying prior opinions on trade policy react differently to positive or negative information on the consequences of trade agreements.

Third, in studying trade policy, and TTIP in particular, we focus on a policy issue that is mainly considered to be of low salience to the general public (Guisinger 2009). This should make it generally easier for citizens to update their opinion in line with new information because both prior opinions and emotional attachment to this issue are potentially rather weak. At the same time, however, international trade agreements, such as TTIP, are composed of different sub-policy fields with different implications for countries and their citizens, and these implications may vary in salience. Our study design allows us to examine three types of sub-policy fields and thus three potential implications of TTIP within the same survey experiment –TTIP's economic effects, standards harmonization, and investor-state dispute

settlement, ISDS, provisions. This allows us to study whether new information on sub-policy fields that potentially vary in their salience affect the likelihood of opinion update.

Fourth, our research investigates the mediating role of the strength of individuals' existing opinion. Because of its focus on misperception, existing research divided the world in those perceiving an issue correctly and those who misperceive it (Nyhan and Reifler 2015a; Kahan et al. 2012). However, our interest in trade policy, and TTIP in particular, allows to leverage on variation in individuals' prior opinion by studying individuals with strong prior opinions about TTIP, but also individuals with no or neutral (indifferent) prior opinions on TTIP. Taber and Lodge (2006: 757), for example, argue that an individual's likelihood to engage in motivated reasoning is conditional on, inter alia, the strength of her prior opinion. Specifically, the authors assume that citizens with strong prior opinions are most prone to reject new information that challenges their prior opinions. Our design thus allows us to examine how less polarized respondents differ from individuals who report strong prior opinions.

Finally, by theoretically and empirically modeling opinion change, we are able to investigate the different effect of positive versus equivalent negative information about potential consequences of TTIP. Numerous studies have shown that in forming their opinions people generally weigh negative information more heavily than positive information (Jordan 1965, Lau 1982). For example, Cobb and Kuklinski (1997) show that negatively framed arguments are consistently more persuasive than positively framed arguments, even when they advocate the same position. In particular, individuals tend to pay more attention to negative information suggesting the prospect of losing something than to positive information (Ohman and Mineka 2001). This notion is consistent with one of the key arguments of prospect theory describing individuals' tendency to weight losses more than gains (Kahneman and Tversky 1979). Including both positive and negative information about TTIP we can therefore better identify what types of information draw strong internal reactions.

To empirically analyze motivated reasoning in the context of TTIP, we conducted a survey experiment in Germany and the United States, the two largest countries in the TTIP negotiations. Instead of using a simple pre- and posttest design within one survey, we conducted a two-waves survey design. Specifically, we ask for respondents' prior opinion in the first survey (t_1) and administered the survey experiment separately and documented respondents' opinion change (or the lack thereof) in a second survey wave (t_2). The experiment included randomly assigned information treatments for each of the three aforementioned issue areas. These treatment conditions were based on existing popular

arguments from various interest groups, research institutes, labor unions, and non-governmental organizations, which either support or oppose TTIP. The treatments either highlighted possible positive or negative consequences of TTIP. Consequently, this design allows identification of whether citizens update their opinions about TTIP based on new information, whether the size and direction of these reactions vary depending on the respondent's prior opinions, and whether positive or rather negative information updates evoke stronger reactions.

In contrast to other research on motivated reasoning (e.g. Nyhan and Reifler 2015a), our results point to updating of opinions. Both supporters and opponents of TTIP adjust their opinions towards TTIP following our information treatments. However, prior opinions clearly set a limit to the degree to which citizens update their opinions towards TTIP. While opponents to TTIP became somewhat less negative and proponents became somewhat less positive when reading positive or negative information on TTIP respectively, they did not change their opinion completely. Hence opponents did not turn into supporters and vice versa. Furthermore, negative information on TTIP's consequences clearly has a stronger effect than positive information therefore supporting arguments on negativity bias and loss aversion (Kahneman and Tversky 1979).

When do individuals change their opinion?

In this project we aim to understand whether, and if so, how existing opinions in the context of trade regulation change in light of new information. The existing literature offers contrasting views on this question. One strand of the literature sees individuals as Bayesian updaters (re)-evaluating their prior opinions in light of new information and thus updating their existing opinions accordingly. In other words, individuals' prior opinions serve as an anchor for the evaluation of new information, which depending on the type of information results in an upward or downward adjustment of existing opinions (Anderson 1981). The Bayesian updating rule therefore requires the overall evaluation to be incremented when learning positive information and to be decremented if the new evidence suggests otherwise. For example, Gerber and Green (1999) using longitudinal survey data observe that Democrats and Republicans – while differing in their evaluations at any point in time – move in parallel in their assessments of the economy and their approval ratings of presidents over time at nearly identical rates. For the authors, these trends imply significant responsiveness and objective learning among voters.

Bartels (2002) argues, however, for Bayesian updating to take place partisan evaluations

should converge to the presumably correct figure rather than move in parallel. Thus, a lack of convergence in the presence of new information should be interpreted as biased updating even when trends in the two groups' evaluations look similar. This departure from a Bayesian characterization of information processing reflects the cautioning by various political psychologists that the process of updating prior opinions may be subject to a range of unconscious biases designed to support people's existing preferences (Kunda 1990, Lodge and Taber 2000, Taber and Lodge 2006). Such "motivated reasoning" refers to people's unconscious tendency to fit the way they process new information to conclusions that suit some end or goal. Instead of approaching evidence and arguments about controversial issues in a purely rational and even-handed manner, an individual's prior opinions and her political ideology strongly bias how she responds to these arguments through selective exposure, attention, comprehension, and recall (Kunda 1990, Lodge and Taber 2000, Lord et al. 1979, Taber and Lodge 2006, Taber et al. 2009).

For example, in an experiment by Taber and Lodge (2006) respondents received a balanced set of pro and contra arguments about affirmative action or gun control. The authors find that respondents tend to evaluate arguments congruent with their prior opinions as stronger than incongruent arguments. In addition, when reading pro and contra arguments, participants counter-argue the contrary arguments and uncritically accept supporting arguments. And when respondents are free to self-select the source of the arguments they read (via a so-called information board) they looked out for confirmatory evidence rather than contrary evidence.

Biased information processing can be motivated by various goals and needs (Kahan 2011). A widely cited motive is the idea that individuals seek out information they anticipate to agree with in order to avoid the cognitive costs of holding inconsistent views and thus individuals try to maintain cognitive consistency among their opinions (Festinger 1957). Kahan (2011) identifies additional goals motivating biased information processing, including financial or related interests as well as more intangible stakes, such as the need to sustain a positive self-image or protect connections to people with whom the individual is intimately connected.

For instance, of particular interest to political science scholars has been the question to what extent political ideology colors the way people process the same set of information. Evidence for such a partisan bias in people's information processing is documented by Campbell et al. (1960). As the authors contend: "Identification with a party raises a perceptual screen through which the individual tends to see what is favorable to his partisan orientation." (1960: 133). Extending this argument, Zaller (1992) shows that among the more politically

aware segments of the public, partisan resistance causes voters to filter out information that do not conform to their existing political predispositions.

Going further than simply discrediting or ignoring new contradictory information, some studies also observe motivated reasoning leading to opinion polarization or so-called backfire effects. In Lord et al.'s (1979) classic experiment, the views of proponents and opponents of the death penalty diverged further when they were shown an identical set of mixed evidence. As "simple" biased information processing predicts, opponents of the death penalty were more likely to find fault with a study suggesting that it deters serious crime, while supporters were similarly resistant to the opposite conclusion. However, the authors' findings show that the exposure to discordant evidence even reinforced respondents' prior opinions. Thus, instead of bringing the views of these two groups closer, the new information caused the groups to polarize further. More recently, research in the context of vaccination shows that providing individuals who originally do not support vaccination with information to correct these misperceptions even increases these individuals' intention not to rely on vaccination (Nyhan and Reifler 2015a, Nyhan et al. 2014). This seems to imply that the cure makes matters even worse, lending support to a so-called "backfire" effect.

In short, "the questions of who updates in real-world settings, what they update, and with what effects remain unsettled." (Gaines et al. 2007: 959). Similarly, Taber and Lodge caution that the empirical evidence is far mixed and qualified and can "best be characterized as uncertain" (2006: 756).

Information updating in the context of TTIP

In this section we provide a theoretical framework on information updating in the context of trade policy. Following the discussion in the last section, we model information updating as a function of individuals prior opinions and the content of the argumentation. In a first step, we argue that due to trade policy being a low salience issue and a matter of debate, i.e. no clear wrong or right points of view, individuals should update their opinion in the context of new information. Subsequently, however, we propose two constraints to this updating process: The strength of prior opinions and the type of argumentation – negative vs. positive argumentation and causality of the claim.

What happens if individuals receive new information on a trade agreement, such as TTIP? While previous experiments have focused on highly salient and contentious issues (death penalty, gun control, vaccination, etc.), trade policy is typically described as a policy area of low issue salience (Guisinger 2009). In addition, Hiscox asserts that similar to other aspects of

foreign and economic policy, international trade "is a complex issue about which many voters are notoriously uninformed." (2006: 756). Hence in general trade policy can be characterized as a complex topic of little interest to most people.[2]

Furthermore, the consequences of TTIP are not clear-cut but mostly a matter of debate.[3] One example concerns the envisaged standards harmonization. Pro-TTIP advocates, such as the European Association of Automobile Manufacturers (ACEA), argue that the elimination of costly "tariffs and non-tariffs barriers through regulatory convergence will increase economic prosperity."[4] In contrast, critics of standard harmonization, including members of civil society and consumer advocacy groups, argue that EU countries will be forced to adopt less-safe US standards. One illustration of this fear is the "chlorine chicken"[5] debate. Similarly, German trade unions and their affiliates have expressed concerns that the TTIP process aims at further deregulation, which they fear will lower worker and union rights.[6] As the registration text of the European Citizens' Initiative (ECI) "Stop TTIP" claims: "We want to prevent employment, social, environmental, privacy and consumer standards from being lowered and public services (such as water) and cultural assets from being deregulated in non-transparent negotiations."[7] Hence the debate on TTIP is characterized by various arguments pertaining to different points of views.

Given this plurality of opinions and the fact that international trade issues typically do not elicit strong affective responses, we expect respondents to engage in information processing and to update their prior opinions consistent with the message provided in the information treatment. This is characterized by the positive likelihood of opinion update for all individuals in Figure 1 independent of their prior opinion.

Figure 1 about here

[2] While this may seem in some contrast to the high number of protesters, our results as well as many other surveys show that the number of uninformed individuals is rather high (in our case up to 30%). Hence TTIP is on the one hand an issue of low salience to many but highly polarizing for those who tend to care. Therefore, we argue it is an ideal testing case for the constraining effects of prior opinions.

[3] Notably, one of the main criticisms raised by objective observers of the negotiations to TTIP has been the lack of transparency and information about key aspects of the trade deal. This is why many positive and negative claims cannot be substantiated paving the way for exaggerations from supporters and opponents of TTIP to continue dominating the debate (Giegold 2015).

[4] Quote by ACEA's President Carlos Ghosn at a press conference on February 6, 2015. Cited in: "European car manufacturers back TTIP deal." Euractiv. http://www.euractiv.com/section/trade-society/video/european-car-manufacturers-back-ttip-deal/.

[5] US poultry is often processed with chlorine to prevent salmonella and other bacteria.

[6] Verbraucherzentrale Bundesverband. 2014. "TTIP: DGB und vzbv fordern Kurswechsel bei Verhandlungen." http://www.vzbv.de/13642.htm. July 14.

[7] European Citizens' Initiative "Stop TTIP". https://stop-ttip.org/registration/. Last accessed: July 17, 2016.

Certainly, the extent to which respondents should update their opinions is likely to vary across the three selected issue areas covered by the TTIP agreement: 1) Economic benefits of TTIP, 2) Standard harmonization and 3) ISDS. Although these issue areas are all part of one and the same trade agreement, they differ in their level of emotionality attached to them in the public debate. For instance, while arguments about the economic implications of TTIP are considered to be rather neutral arousing less emotional reactions among citizens, the proposed standard harmonization (while objectively a highly technical issue) touches on food safety and cultural norms that are known to arouse stronger affective responses. Individuals might find it more difficult to change their opinion with regard to the environmental or health effects of TTIP, but find it less difficult to accept that TTIP will allow firms to reap efficiency gains in the different markets and thus lead to job creations. Nonetheless, at a general level, *we predict that individuals will update their opinions consistent with the new information – Hypothesis 1*.

However, prior opinions should clearly set a limit to opinion update in at least two respects. First, we expect a decreasing marginal effect of information that is in line with an individual's prior opinion. This means that someone who is already strongly in favor of the TTIP agreement should not become much more positive when reading about positive consequences of TTIP simply because she is already very positive about the agreement and vice versa.

Second, and more importantly, the strength of a person's prior should also play a significant role in encouraging an individual to resort to motivated reasoning. For example, those with greater issue involvement or with strongly held opinions should be less likely to modify their opinions when confronted with new information and so will frequently ignore and misinterpret ideologically incongruent arguments (Johnson and Eagly 1989). Other studies assert that the strength of individual's prior opinions also increases the likelihood of backfire or polarization effects. More specifically, individuals holding strong prior opinions become attitudinally more extreme on reading pro and con arguments because they assimilate congruent evidence uncritically but vigorously counter-argue incongruent evidence (Ditto and Lopez 1992, Lord et al. 1979, Rucker and Petty 2004). Reporting results from two experiments, Taber and Lodge (2006) show that on reading a balanced set of pro and con arguments about affirmative action or gun control, rather than moderating or simply maintaining their original opinions, respondents who feel the strongest about the issue and are the most sophisticated strengthen their opinions in ways not warranted by the evidence.

Hence, we predict that *respondents with stronger prior opinions about the issue at hand*

are more likely to discount new incongruent information, leading to limited opinion updating or even opinion polarization – Hypothesis 2. This hypothesis is illustrated by the inverted U-shape between the likelihood of opinion update and the strength of prior opinions in Figure 1. Especially those with a neutral prior opinion towards TTIP, i.e. those situated right in the middle of the x-axes in Figure 1, should have the highest probability to update their opinion given new information on TTIP.

A substantial amount of research suggests that – next to the constraint by prior opinion – informational updating significantly depends on the type of information, i.e. whether it is positive or negative information. Numerous studies demonstrate that people assign greater weight to negative information than to equal positive information in the formation of opinions. Cobb and Kuklinski (1997), for example, exposed respondents to arguments about several policy issues, for which they varied the structure of the argument in various ways. In one of the variations, they exposed subjects to either an argument that was in favor of the policy or an argument that was against the policy. The authors find that "con arguments win the day." (1997:115). Similarly, Cobb et al. (2013) suggest that it makes a difference whether a positive or a negative prior opinion is challenged. For example, they find that when correcting false negative information on politicians, e.g. by telling people that a certain scandal is not true, these false opinions seem to persist, i.e. people still think the scandal has some factual background. However, when correcting false positive information on politicians, e.g. that a certain politician who was attributed to have sponsored a positively received bill was actually not the sponsor of this bill, individuals tend to react by overcompensation and end up with an even more negative opinion about the respective politician than before they received the positive information.

In the decision-making literature, Kahneman and Tversky (1979) have shown that people exhibit loss aversion in nearly all realms of their lives. When making decisions, the authors observe that individuals tend to place greater emphasis on avoiding potential losses than obtaining potential gains. Thus, they tend to pay greater attention to negative information, especially those that emphasize the possibility of losing something dear. Besides this loss-aversion argument, Lau (1985) offers a second (perceptual) explanation for the negativity bias in opinion formation. According to his "figure-ground" hypothesis, the figure represents the negative information, which people contrast with a positive background. Because of its relative infrequency negative information appears to be more salient than positive information (Lau 1982: 372). An additional explanation provided by Cobb and Kuklinski refers to the conflictual nature of arguments made in politics (1997: 91). Since politics, in essence, deals

with the allocation of scarce resources, just about everyone stands to lose as a result of new policy initiatives at one time or another. Consequently, large parts of the electorate become particularly wary of new policy proposals, which are highly complex and their future consequences uncertain.

Nonetheless, a few studies have also shown that negative information does not always have a greater impact on opinion formation than positive information. Specifically, Takemura (1994) argues that the negativity bias in information processing is not likely to take hold, when individuals consciously evaluate available considerations. In other words, when processing information in greater depth, individuals spend less time focusing on less salient information. Experimental results show that, indeed, when study participants are asked to contemplate about a question before providing an answer or to provide reasons for their response choices, negative frames are not more effective than equivalent positive frames (Miller and Fagley 1991, Takemura 1994).

As noted above, however, with a highly complex issue like the TTIP agreement, citizens are not likely to immerse themselves in elaborate conscious evaluations about the issues and arguments pertaining to the TTIP debate. Moreover, politicians have not engaged in active campaigning for or against TTIP that would motivate citizens to systematically process the information they are presented. Rather, citizens are more likely to act as passive receiver of the contrasting arguments presented in mass media and by interest groups. In such an environment the negativity bias in information processing is more likely to prevail. We, therefore, predict that *respondents react more strongly to negative information emphasizing adverse consequences of TTIP than to positive arguments stressing advantages of the agreement – Hypothesis 3.* This is illustrated in Figure 1 by the higher likelihood of opinion change for those individuals with positive prior opinions towards TTIP. Since for those individuals with a negative prior opinion towards TTIP negative information only reinforces their prior opinions, we expect a stronger effect for those individuals with prior positive opinion and who receive negative information on TTIP.

Another aspect, which may influence the likelihood of respondents to engage in biased information processing is concerned with the depth of the information. For example, Nyhan and Reifler (2015b) find that providing individuals with a causal explanation rather than simply trying to correct the false information can lead to people changing their opinion. The authors show that informing individuals that a politician has resigned at first and then that he was accused of bribery leads individuals to think that bribery was the cause of his resignation. Interestingly, it is difficult to correct this opinion even if individuals receive information that

the bribery accusation has no factual basis. However, if, in addition, individuals receive information on the real cause of the politician's resignation they are willing to change their opinions. Similarly, distinguishing between framing effects – the result of emphasizing salience on some aspects of a topic – and the provision of object-relevant information on people's likelihood to change their opinion, Leeper and Sloothus (2016) find that information shifts citizens' opinions far more and far more consistently than simply placing emphasis on a particular dimension of consideration. This suggests that moving citizens' to reevaluate their prior opinions on an issue may require political leaders and message providers to go beyond the surface and provide arguments and evidence on support of their positions. In particular, when it comes to complex issues such as the proposed standard harmonization, citizens may be more willing to reevaluate their prior opinions when presented with an explanation of why this may be a good or a bad thing. In addition, the provision of causal explanations may perhaps be even more necessary in cases where the individual holds particularly strong prior opinions. Thus, we expect that *respondents are more likely to update their prior opinions when the new information includes a causal explanation – Hypothesis 4.*

Empirical approach

We conducted our survey experiment with 1,600 respondents each in Germany and the United States from May to June 2016. Germany and the United States were selected for their economic size and for their prominent role in trade negotiations. These countries will be the two largest national markets covered by the TTIP if the agreement is ratified. Furthermore, results from two earlier surveys conducted by the Pew Research Center in Germany and the United States reveal that while there is a similar level of support for the TTIP agreement in these countries, there is significant divergence over specific details. This includes the proposed standard harmonization and ISDS (Pew Research Center 2015). These surveys have also indicated that the public discourse on the TTIP differs between the two countries.

Our survey experiment is, in essence, a two-wave approach that combines a within-subject and a between-subject survey design. Existing empirical investigations of motivated reasoning has largely been administered in one survey measuring the opinion change (or the lack thereof) as the difference between individuals' pre- and post-treatment response. Such an approach obviously limits the researcher's ability to administer the experimental stimuli on a fresh mind, but respondents are likely to be influenced by the pre-treatment questions. Conducting our survey experiment in two separate survey waves allows us to mitigate such

biases and to better observe whether and to what extent respondents update their prior opinions.

To this end, Wave 1 of the survey assessed prior opinion towards the TTIP agreement with regard to one the three issue areas[8]– economic rationale, standard harmonization, and ISDS,[9] as well as many demographic variables, such as respondents' gender, age and level of education. Wave 2 included the information treatments in which respondents received information about potential impacts of TTIP in the three selected issue areas and also assessed the very same outcome questions asked in Wave 1. The experimental treatment was designed in the following way: In Wave 2, each respondent was assigned to the same issue area she was randomly assigned to in Wave 1. Each respondent was further randomly assigned to receive either a positive or negative treatment text containing information on the TTIP agreement in the assigned issue area or no such information. The specific information treatments discuss the effects of the TTIP agreement on each of the three issue areas. In the positive-effects treatment condition respondents learn about positive outcomes of TTIP in the specific issue area. The negative-effects treatment condition informed respondents about negative consequences of TTIP in the specific issue area. Respondents assigned to the no-information group did not receive any additional information about TTIP. We ensured that the information provided in both conditions (positive and negative) is equivalent and that the "complexity" of the information is about the same, i.e. the number of words and the number of sentences are held constant. Table 1 provides an overview of the various treatments.

Table 1: Overview of Experimental Treatments

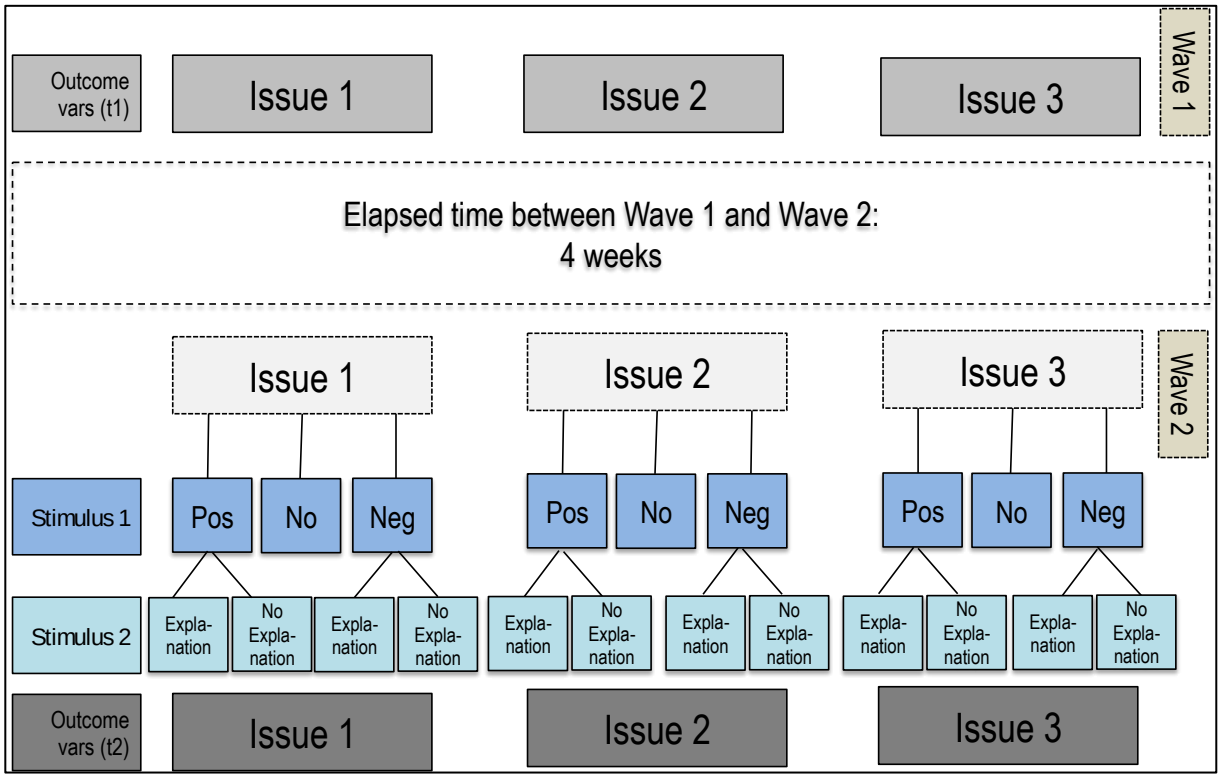
Issue area	Positive	Negative
1) Economic rationale	• foster economic growth • create new jobs	• not foster economic growth • lead to job losses
2) Standards	• increase consumer protection (e.g. in food safety) • improve environmental protection	• weaken consumer protection (e.g. in food safety) • weaken environmental protection
3) ISDS	• improve legal protection of foreign investors • increase attractiveness of *Country* for foreign investment	• undermine sovereignty of *Country's* government • create a foundation for legal abuse by foreign investors

[8] Respondents were randomly assigned to one of the three issue areas.

[9] These three issue areas were selected as a result of an online pilot survey in which we asked respondents to indicate three issues discussed in the TTIP negotiations that are most important to them personally. In the United States, the pilot survey was administered via the crowdsourcing platform *Amazon Mechanical Turk* in September 2015. In Germany, we conducted the pilot survey using the online panel of Research Now in December 2015. We employed a sample size of 700 respondents in each country.

In addition, we randomized participants into groups receiving an additional justification for the treatment or not. Following these information treatments we assessed for each respondent her opinion with regard to the issue area, the TTIP agreement, and international trade in general. We then compare these answers to the same questions in Wave 1 to assess whether our treatments led to an update in respondents' reported opinions. This survey setup, summarized in Figure 1, allows us to determine how respondents process congruent or incongruent information and to compare how their prior opinions submitted in Wave 1 compare to their opinions reported in Wave 2 upon receiving the treatment stimuli.

Figure 2: Overview of Empirical Design



By its design our experiment generates two possible experimental groups: congruence (I) and positive/ negative incongruence (II). Specifically, we may observe situations of congruence, where participants receive confirming information that is consistent with their reported prior opinions from Wave 1. Alternatively, we may observe situations of (positive) incongruence, where participants opposed to the TTIP are exposed to information about positive consequences of the TTIP agreement with respect to the assigned issue area. And we may observe situations of (negative) incongruence, where participants who support the TTIP receive a negative information treatment, which emphasizes adverse implications of TTIP with regard to the specific issue area. In addition, we also observe several different types of

"control" scenarios (III): First, we observe a control group in the classical sense, which consists of individuals (with positive, negative or neutral prior opinions) who do not receive any additional information. And second, we observe a control group in the sense that these are individuals without a prior opinion on TTIP but who receive either positive or negative information. Table 2 below summarizes the experimental groups.

Table 2: Experimental Groups

		Prior opinion in Wave 1		
		Positive	**Negative**	**Neutral**
Information treatment in Wave 2	**Positive**	Congruence (I)	Incongruence (II)	Control (III)
	Negative	Incongruence (II)	Congruence (II)	Control (III)
	No information	Control (III)	Control (III)	Control (III)

We evaluate the outcome of the respondents' motivated reasoning process through a within-survey design by measuring changes in their reported opinions from Wave 1 to Wave 2. Any observed changes in the respondent's reported opinions are compared against changes from other respondents who are assigned to one of our control groups. They are also compared against any changes from respondents who fall within each of the experimental groups – congruence, positive incongruence, and negative incongruence. We finally assess how individuals with the same prior opinions react to different types of information.

We measure respondents' opinion about the overall effect of the TTIP agreement with respect to the specific issue area the respondent was randomly assigned to using a seven-points scale item. The response options ranged from very negative (1) to very positive (7). For each issue area, we provided a short introduction, which highlights that the issue area is part of the TTIP agreement and its controversy among the general public. Table 3 presents the wording of the survey item for each of the three issue areas.

Table 3: Respondents' opinion towards TTIP

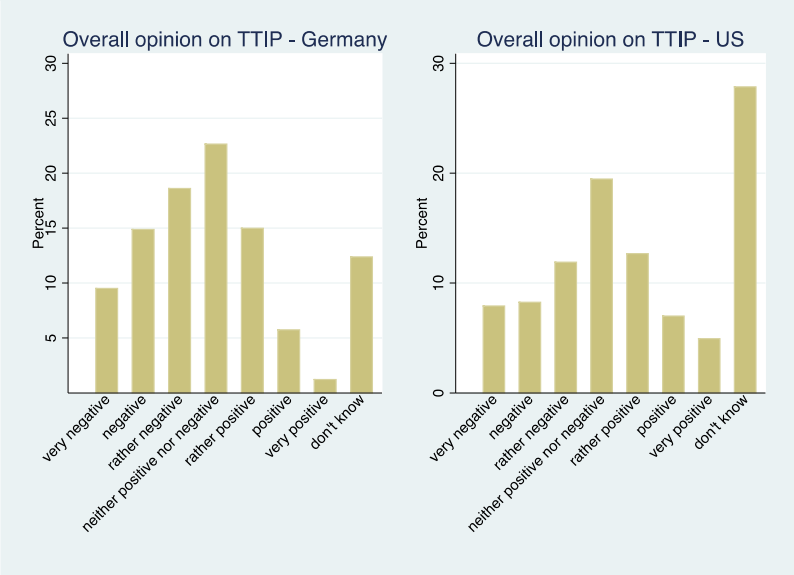
Issue area 1: Economic rationale Overall, do you personally think that the TTIP agreement will have positive or negative effects on *Country's* economy?
Issue area 2: Standard harmonization Overall, do you personally think that the proposed harmonization of safety and quality standards in the TTIP agreement will have negative or positive effects on *Country*?
Issue area 3: ISDS Overall, do you personally think that including an investor-state dispute settlement mechanism (ISDS) in the TTIP agreement will have positive or negative effects on *Country*?

These items were employed in an identical fashion (including the introduction to the issue area) in both survey waves. We use the responses to this item submitted in Wave 1 to identify whether the respondent supports, opposes or is neutral vis-à-vis the TTIP. Respondents who selected one of the two lowest selected response categories (1 or 2) were classified as opponents. Those indicating that TTIP will have positive effects on their country by choosing one of the two highest categories (6 or 7) were counted as TTIP supporters. A respondent was classified as neutral if she selected one of the three middle response categories (3, 4 or 5).

Descriptive Results

In Wave 1, starting with the general evaluation of TTIP, we already observe major differences between the US and Germany. As Figure 3 shows, a majority of the US respondents do not have an opinion on TTIP. Those who have an opinion on TTIP are mostly undecided with about equal numbers in favor or against TTIP. In contrast, the German respondents tend to evaluate TTIP more negatively with a majority (809 respondents) stating that TTIP will overall have negative consequences for Germany. 426 of our 1,881 respondents think that TTIP will have neither positive nor negative consequences and only 413 consider TTIP's effect to be positive.

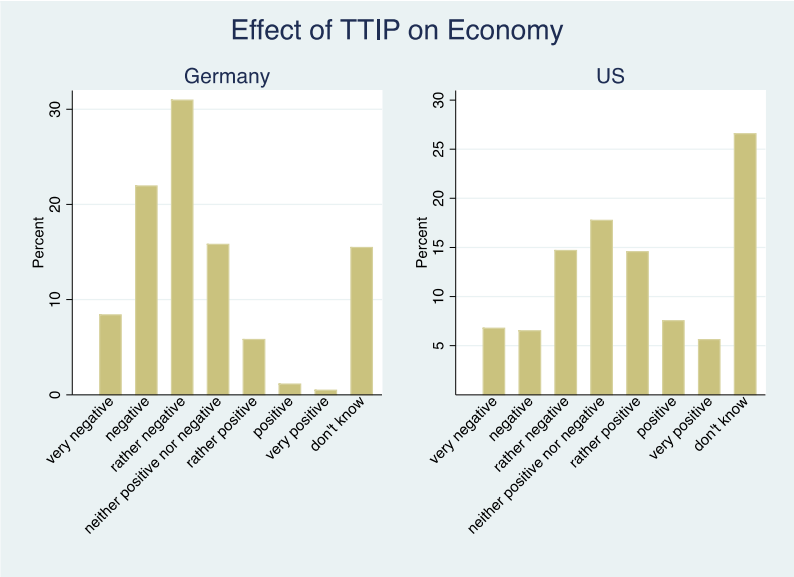
Figure 3: Overall opinion on TTIP



Turning to the economic benefits of TTIP, Figure 4, we observe that German respondents evaluate the prospects of TTIP in a much more negative way with a majority thinking that the

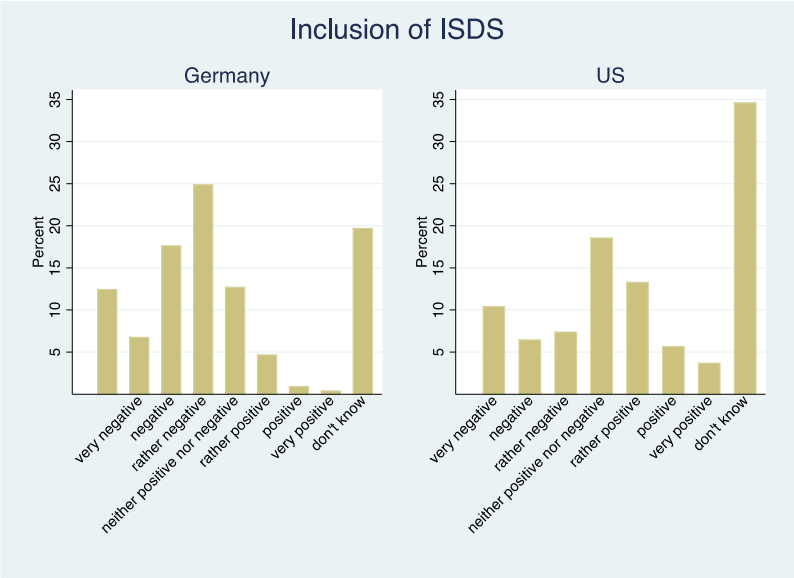
negative effects of TTIP on the German economy will prevail. In contrast, US respondents are again rather balanced between those who consider the economic effects of TTIP to be positive and those who think these effects will be negative.

Figure 4: Economic effects of TTIP



We observe the same pattern for our question on investor-state dispute settlement, see Figure 5. In this case the share of US respondents answering “don’t know” is with almost 35% especially high.

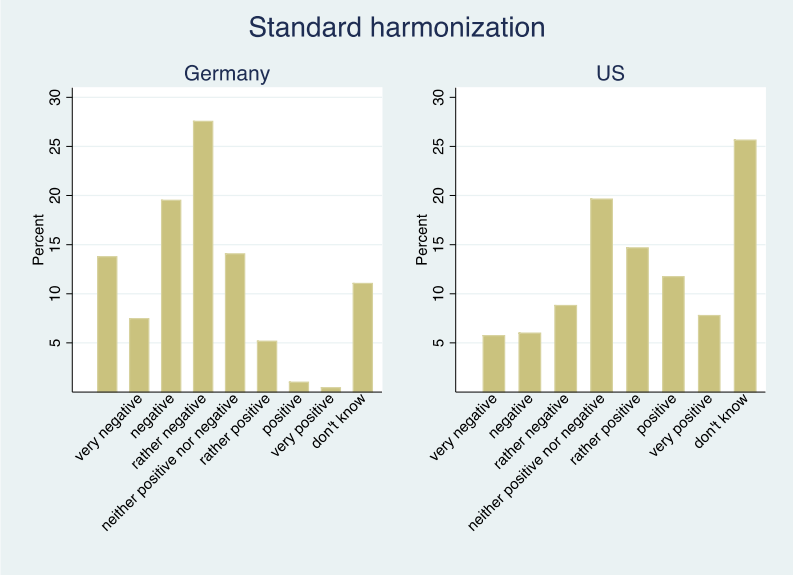
Figure 5: Investor-State-Dispute-Settlement



Finally, with regard to standard harmonization we observe for the first time almost opposite pictures for the US and Germany: Whereas a majority of US respondents judge the harmonization of standards in the context of TTIP as positive, the majority of German

respondents see this as either negative or neither negative nor positive, see Figure 6. This suggests that skepticism towards TTIP in general but also towards the three issue areas in particular, is much more pronounced in Germany than in the US.

Figure 6: Standard harmonization due to TTIP



Experimental Results

Table 4 displays the general results of our experiment by highlighting the impact of our positive, negative, and neutral information treatments on reported prior opinions. In particular, Table 4 shows for both countries, each issue area, and each group – e.g. prior positive opinion and positive treatment or prior negative opinion and no treatment – the group's average opinion in Wave 1, its average opinion in Wave 2 and whether the change in opinion from Wave 1 to Wave 2 is significantly different from zero based on a t-test. We code a respondent's prior opinion in the context of the economic issue area as positive if the respondent indicates that she believes that TTIP will have a positive effect on the economy by choosing a value of 5, 6, or 7 to the question "The TTIP agreement will have positive or negative effects on the U.S. economy?" in Wave 1. Respondent's prior opinion is coded as negative if the respondent indicates that she believes that TTIP will have a negative effect on the economy by choosing a value of 1, 2 or 3 on above question in Wave 1. We code that a respondent has a neutral opinion if she selects the middle category, i.e. 4. We use the same coding procedure to measure prior opinions for each of the three issue areas. The question asked to evaluate standard harmonization is "Proposed harmonization of safety and quality

standards in the TTIP agreement will have negative or positive effects on the U.S.?" The question asked to evaluate ISDS provisions support is "Including an investor-state dispute settlement mechanism (ISDS) in the TTIP agreement will have positive or negative effects on the U.S.?"

Table 4 about here

Overall, we find that while individuals clearly update their opinion, prior opinions strongly matter. In general, all our treatments, both positive and negative and for all issue areas, move individual preferences by providing respondents with new information thus clearly supporting hypothesis 1. Providing negative information to individuals with positive prior opinions results in a more negative opinion and the same holds for individuals with prior negative opinions who are presented with positive information. Also respondents with neutral opinions or opposing prior opinions are moved in the direction of the provided treatment text. However, we need to reject our theoretical expectation that individuals differ in their reactions according to the emotionality of the issue at hand. The results in Table 4 do not offer any support for our expectation that individuals condition their information updating according to the issue area. Instead treatment effects are very similar across the three issue areas not supporting the idea that emotionality either hinders or furthers motivated reasoning.

In line with our theoretical framework and hypothesis 2, we find that prior opinions act as clear constraints in that we are unable to make someone who reports a prior negative or neutral opinion to hold as positive of an opinion as someone who reports a prior positive opinion. Furthermore, someone who has a prior positive opinion, even if her opinion changes to a negative posterior opinion, will generally have a more positive opinion than someone who reports a prior negative opinion. However, someone with a positive opinion can be induced to hold a negative opinion, i.e. complete opinion change while this is not the case for respondents with prior negative opinions. Overall, negative information has therefore a stronger impact than positive information, supporting hypothesis 3. This also holds true for those who report neutral prior opinions.

Table 5 about here

The results so far pertain to the specific issue area but what happens if we ask for respondents' opinion on TTIP more generally? Table 5 provides the same set-up as Table 4

but shows the results using a respondent's overall opinion on TTIP instead of the more specific issue area opinion. Individuals who respond with a value of 5, 6, or 7 to the question, "Overall, the TTIP agreement will have positive or negative consequences for the US?" are coded as holding a prior positive opinion whereas individuals who respond with a value of 1, 2, or 3 coded as holding a prior negative opinion, and individuals who respond with a value of 4 are coded to have a neutral opinion. The results in Table 4 closely match the results for the three issue specific areas reported in Table 3. However, the reported effects are not as strong, which was to be expected due to the more distant relationship between this question and the wording of the treatment texts. However, there are several exceptions: For example, German respondents who hold a prior positive opinion on the TTIP agreement have a stronger negative reaction if they are presented the negative standards harmonization treatment than compared to the more specific standards question.

Table 6 about here

Our design allows us to go even one step further and to analyze how our treatments affect trade opinion in general. Table 6 shows the results for the question: "Overall, do you personally think that growing international trade between Germany/the United States and other countries is good or bad for Germany/the United States?". The results for this question are coded in the same manner as the earlier questions. Respondents who answer with a value of 5, 6, or 7 in Wave 1 are coded as holding a prior positive opinion. Respondents who answer with a value of 1, 2, or 3 in Wave 1 are coded as holding a prior negative opinion, while respondent who answer with a value of 4 are coded as holding a neutral opinion. The pattern of results in Table 5 matches the results from our earlier questions. However, as expected, treatment effects are even less pronounced as the distance between treatment and question text is further enlarged. So for example, individuals who hold a prior negative opinion on trade do not appear to update their opinion on trade in general after being presented with the positive information treatment on ISDS.

However, there are also some exceptions: US respondents who have a prior negative opinion on trade are strongly affected after being presented with positive information on the expected economic benefits of the TTIP on the US economy. Both German and US respondents who report a prior negative opinion on trade have a stronger overall reaction after being presented with positive information on the effect of the TTIP agreement on economic standards. However, the impact of the various information treatments on individuals with

neutral opinions is less apparent. Interestingly, German and US respondents who report negative prior trade opinions, then receive information treatment text indicating that the TTIP agreement will not result in economic benefits, react in the opposite direction and become more positive on trade issues. The same happens when respondents from both countries are presented with the ISDS treatment text. Respondents with reported prior neutral opinions become more positive when presented with the negative standards treatment text.

Table 7 about here

Finally, Table 7 displays the results for our issue specific questions but only concerning those respondents with weak prior opinions. This enables us to evaluate whether the effects of our treatment texts on respondents who are slightly more favorable, neutral, or slightly less favorable towards the TTIP agreement result in more extreme reactions since these are the individuals most likely to change their opinions. In Table 7, we again measure opinion using the issue specific questions. Prior opinion is defined differently as before since we only look at those with a not too extreme opinion: Thus positive prior opinion is coded 1 if someone chose a value of 5 in Wave 1, respondents are coded as having negative prior opinions if they respond with a value of 3, and respondents are coded as holding a neutral opinion if they respond with a value of 4. The coding is the same for all three issue areas.

As expected, the results indicate that respondents with weaker prior positions on TTIP are more easily influenced by our survey treatments, regardless of whether their prior positions are slightly in favor or against trade agreements. Individuals with less strong prior opinions should be more willing to update their positions when presented with new information. This appears to be confirmed by our findings: Individuals with weak positive positions adopt on average more negative positions when presented with negative treatments, and vice versa. This becomes especially apparent for standard harmonization and ISDS. Individuals with weak negative positions or no prior information are likely to become agnostic when exposed to positive treatments.

Table 8 about here

Finally, to test our fourth hypothesis Table 8 shows the results when split according to whether respondents received an additional information or not. In this case, the dependent variable is different as it looks at the change in opinion from Wave 1 to Wave 2. This implies

that a negative value indicates a more negative opinion in Wave 2 and a positive value indicates a more positive opinion in Wave 2. To make the analysis less complex we do not condition these results on the prior opinion of the respondent but simply compare respondents' opinion change against those respondents within the same subject area but who did not receive any informational treatment.

Overall the results in Table 8 show that an additional justification makes mostly no difference, thus not supporting hypothesis 3. The only exception are German respondents in the economic issue area: In this case an additional justification makes the already negative effect even more negative. However, we also observe the exact opposite: German respondents in the standards issue area react less pronounced when given an additional both in the case of positive and negative information treatment. This is also true in the ISDS issue area but only in case of positive information. Maybe these latter effects point to an informational overload rather than to helping respondents better understand the issue at hand.

Conclusion

While existing research has mainly examined (biased) information updating processes when individuals oppose a certain policy, the aim of this paper was to better understand whether and, if so, to what extent supporters, opponents and people "on the fence" with neutral opinions about TTIP differ in their way they process new information. In particular, we examined how people's likelihood to change their prior opinion is affected by the type of the information – positive vs. negative –, the inclusion of a causal explanation and the level of emotionality attached to the information. Overall, analyzing respondents who received incongruent information we do not find any evidence in support of the polarization hypothesis. Rather, we saw respondents adjust their prior opinions in light of new information and in both directions positive and negative opinion changes. In contrast, among respondents who received information that was congruent to their prior opinions we find almost no statistically significant differences between respondents' opinion submitted in t_1 and the opinion in t_2.

Furthermore, our results clearly show that negative information had a greater impact on the way people processed the received information in line with individuals' tendency to avoid risks already found in previous studies. Surprisingly, however, we do not find any impact of both emotionality and the inclusion of causal explanations.

Finally, whereas most studies mainly investigate updating processes among individuals who hold strong views on an issue, we examine how neutral respondents react in light of new

information. Especially in the context of the TTIP debate, the number of respondents stating no clear support or opposition toward the agreement has increased throughout the ongoing negotiation process. Our study can thus help to understand whether these respondents are more likely to shifted toward one of the camps and, if so, which kind of information has greater persuasion power on this group. As theorized, our results indicate that exposure to new information does shift neutral respondents' opinion in a direction consistent with the message provided by the information. However, negative information has a significantly stronger impact on people's mental processing.

These findings have important policy implications. On the one hand, it means that political leaders seeking for a broader support base of the TTIP negotiations will need to reach out to neutral stakeholders rather than continuously focusing on people who have already made up their mind. On the other hand, given the persuasion power of negative information relative to positive messages, this may change the stream of information available to many citizens. In particular, as citizens have a greater incentive to attend to negative information, and information providers have a greater incentive to supply negative information, this will increase the likelihood that negative information will be the platform from which preferences emerge.

In a similar vein: The proposition that negative information exert greater influence in opinion formation raises profound implications for the workings of a representative democracy. Naturally, citizens are inclined against change in the face of uncertainty. Thus those proposing a new direction in public policy will encounter a more formidable task than those advocating the status quo, all else equal. The proposition, if correct, also underlines the rationality of negativity in politics. In the eyes of ambitious politicians, harsh rhetoric and attack advertisements make good sense (Ansolabehere et al. 1994; Jamieson 1992).

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Table 4: Experimental results using issue specific questions

Country	Prior Belief	Information	Economic issue			Standards			ISDS		
			Opinion Wave 1	Opinion Wave 2	Difference	Opinion Wave 1	Opinion Wave 2	Difference	Opinion Wave 1	Opinion Wave 2	Difference
DE	Positive	Positive	5.27	4.83	**	5.44	5.07	***	5.38	4.95	*
US			5.52	5.52		5.97	5.75		5.67	5.19	*
DE	Negative	Positive	2.45	3.13	***	2.08	2.88	***	2.27	3.13	***
US			2.25	3.02	***	2.14	3.32	***	2	3.60	***
DE	Neutral	Positive	4	4.21		4	4		4	4.18	
US			4	4.67	***	4	4.92	***	4	4.4	**
DE	Positive	Negative	5.36	3.69	***	5.52	4.09	***	5.33	3.46	***
US			5.84	3.8	***	5.69	3.33	***	5.5	3.58	***
DE	Negative	Negative	2.29	2.26		2.20	2.30		2.13	2.10	
US			2.39	1.98	**	2	2.08		1.86	2.19	
DE	Neutral	Negative	4	3.22	***	4	3.07	***	4	2.98	***
US			4	3.19	***	4	3.34	***	4	2.91	***
DE	Positive	None	5.41	4.89	**	5.29	4.79	*	5.33	4.67	**
US			5.5	5.4		5.80	5.54		5.42	5.12	
DE	Negative	None	2.27	2.87	***	2.05	2.59	***	2.28	3	***
US			2.41	2.98	***	2.35	3.58	***	1.91	2.56	***
DE	Neutral	None	4	4		4	3.45	***	4	3.70	**
US			4	4.42	*	4	4.66	***	4	4.23	

Table 5: Experimental results using TTIP question

Country	Prior Belief	Information	Economic issue			Standards			ISDS		
			Opinion Wave 1	Opinion Wave 2	Difference	Opinion Wave 1	Opinion Wave 2	Difference	Opinion Wave 1	Opinion Wave 2	Difference
DE	Positive	Positive	5.34	5.03	*	5.45	5.06	***	5.27	4.75	***
US			5.63	5.30	**	5.66	5.56		5.66	5.16	*
DE	Negative	Positive	2.23	3.01	***	2.26	2.65	***	2.18	2.53	***
US			2.07	2.51	**	2.14	3.26	***	2.24	3.04	***
DE	Neutral	Positive	4	4.11		4	3.88		4	4	
US			4	4.14		4	5.13	***	4	4.23	
DE	Positive	Negative	5.38	3.86	***	5.43	3.8	***	5.43	4.29	***
US			5.75	4.05	***	5.86	3.97	***	5.47	3.76	***
DE	Negative	Negative	2.19	2.16		2.19	2.18		2.11	2.10	
US			2.32	2.29		1.91	1.97		2.21	2.40	
DE	Neutral	Negative	4	3.27	***	4	3.28	***	4	2.76	***
US			4	2.78	***	4	3.26	***	4	2.82	***
DE	Positive	None	5.26	4.67	***	5.38	4.72	***	5.34	4.34	***
US			5.79	5.45	*	5.71	5.37	*	5.75	5.05	***
DE	Negative	None	2.13	2.77	***	2.18	2.23		2.33	2.56	**
US			2.27	2.84	***	2.21	2.88	***	2.11	2.71	**
DE	Control	None	4	4.05		4	3.80		4	3.63	**
US			4	4.10		4	4.24		4	3.70	

Table 6: Experimental results using general trade question

Country	Prior Belief	Information	Economic issue			Standards			ISDS		
			Opinion Wave 1	Opinion Wave 2	Difference	Opinion Wave 1	Opinion Wave 2	Difference	Opinion Wave 1	Opinion Wave 2	Difference
DE	Positive	Positive	5.55	5.20	***	5.60	5.16	***	5.66	5.08	***
US			5.74	5.39	**	5.62	5.45	*	5.69	5.22	***
DE	Negative	Positive	2.81	3.63	**	2.66	3.89	***	3	3.33	
US			2.36	3.5	***	2.39	3.57	***	2.59	3.97	***
DE	Neutral	Positive	4	4.32		4	3.54	**	4	4.34	
US			4	4.42	*	4	4.47	*	4	4.22	
DE	Positive	Negative	5.61	4.83	***	5.57	5.12	***	5.65	4.74	***
US			5.76	4.48	***	5.79	4.85	***	5.67	5.07	***
DE	Negative	Negative	2.33	3.91	***	2.75	2.94		2.94	3.82	**
US			2.68	3.18	**	2.5	2.65		2.5	3.16	**
DE	Neutral	Negative	4	4.25	*	4	4.39	**	4	4	
US			4	3.68	*	4	4.5	*	4	4.2	
DE	Positive	None	5.64	5.16	***	5.63	5.27	***	5.60	5.12	***
US			5.84	5.13	***	5.65	5.36	**	5.82	5.18	***
DE	Negative	None	2.88	4.18	***	2.58	3.33	***	2.82	3.47	**
US			2.52	3.29	***	2.48	3.86	***	2.41	2.88	**
DE	Control	None	4	4		4	4.375	*	4	4.43	**
US			4	4		4	4.24		4	4.19	

Table 7: Experimental results using issue specific questions, however, only focusing on respondents with no extreme opinions

Country	Prior Belief	Information	Economic issue			Standards			ISDS		
			Opinion Wave 1	Opinion Wave 2	Difference	Opinion Wave 1	Opinion Wave 2	Difference	Opinion Wave 1	Opinion Wave 2	Difference
DE	Positive	Positive	5	4.80		5	4.79		5	4.93	
US			5	5.24		5	5.37		5	4.78	
DE	Negative	Positive	3	3.47	**	3	3.5	**	3	3.58	***
US			3	3.77	***	3	4.23	***	3	4.06	***
DE	Neutral	Positive	4	4.21		4	4		4	4.18	
US			4	4.67	***	4	4.92	***	4	4.4	**
DE	Positive	Negative	5	3.53	***	5	4.05	***	5	3.23	***
US			5	3.39	***	5	3.17	***	5	3.54	***
DE	Negative	Negative	3	2.63	**	3	2.84		3	2.38	***
US			3	2.21	***	3	3		3	2.69	
DE	Neutral	Negative	4	3.22	***	4	3.07	***	4	2.98	***
US			4	3.19	***	4	3.34	***	4	2.91	***
DE	Positive	None	5	4.77		5	4.61		5	4.62	*
US			5	5.30		5	4.88		5	4.77	
DE	Negative	None	3	3.2		3	3.5	**	3	3.45	***
US			3	3.48	*	3	4.18	***	3	2.56	***
DE	Neutral	None	4	4		4	3.45	***	4	4.09	**
US			4	4.42	*	4	4.66	***	4	4.23	

Table 8: Experimental results focusing on justification

Country	Information treatment group	Treatment comparison group	Economic issue			Standards			ISDS		
			Overall	**Justification**	**No Justification**	**Overall**	**Justification**	**No Justification**	**Overall**	**Justification**	**No Justification**
DE	Positive	No information	No effect	No effect	No effect	Significant	No Effect	Significant	Significant	No Effect	Significant
US			No effect	No effect	No effect	No effect	No effect	No effect	Significant	Significant	Significant
DE	Negative	No information	Significant	Significant, even stronger	Significant	Significant	Significant	Significant, even stronger	Significant	Significant, even stronger	Significant
US			Significant	Significant	Significant	Significant	Significant	Significant	Significant	Significant	Significant