

## Deontological and consequentialist preferences towards arms exports: A comparative conjoint experiment in France and Germany

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**Abstract.** Despite fierce politicization in arms-exporting democracies, we lack systematic research on mass public preferences on arms transfers. We propose that citizens either apply a deontologist (rejecting transfers categorically) or consequentialist (trading-off economic, strategic and normative aspects) calculus of preference formation. Conducting population-representative survey experiments ( $N = 6617$ ) in Germany and France, two global top-five major arms exporters, we find that 10–15 per cent of respondents follow deontologist considerations, a preference structure potentially relevant for all foreign policies involving the use of military force. Still, a majority shows differentiated preferences, giving largest weight to normative considerations, with assessments affected by moderating features (e.g., scenarios of just war). Principled rejection of arms trade and a large consequentialist weight for normative factors are more pronounced in Germany compared to France, indicating that public opinion might pose a stronger constraint for government policy in this country. Respondents' preferences match opinion polls on post-Russian invasion Ukraine armament, indicating high external validity of our experiments.

**Keywords:** deontologist ethics; foreign policy; international trade; public opinion survey experiment; weapon exports

### Introduction

When countries export arms, they deliver a very peculiar good: Economically, arms trade nourishes a sizable industry with a global turnover of \$361 billion for the 25 largest companies alone.<sup>1</sup> With respect to security, arms transfers affect both the global balance of power but also the specific security environment of exporting and importing states (García-Alonso & Levine, 2007). Normatively, arms are a coercive technology with the potential to kill, employed for 'just wars' as well as for aggression or suppression (Bellamy, 2006). Notably, eight of the 10 largest exporting countries are democracies (Wezeman et al., 2020), but, to our knowledge, research on the institutional and preferential preconditions of democratic accountability for this policy area is lacking.

The heated public debates in NATO countries surrounding weapons transfers to Ukraine before and after the Russian invasion in 2022 provide a case in point. In a prominent example, the German government first opposed such exports categorically but turned its position drastically after the invasion.<sup>2</sup> At the same time, public opinion flipped – from about two-thirds opposed to two-thirds approving the transfers of even offensive weapons (see Online Appendix section A.1).<sup>3</sup> As Ukrainian president Wolodymyr Zelenskyy put it: 'I gladly notice that the position of Germany moves favourably towards Ukraine. And I think this is absolutely logical, given the majority of the German population supports this move' (daily video address on 10 April 2022, own translation). Hence, we propose that it is both theoretically worthwhile and practically relevant to understand

public opinion on arms transfers. We thereby tie into an ongoing debate in the recent literature, indicating that citizens hold reasoned preferences on foreign policy and that their attitudes matter for government decision-making (see Online Appendix section A.2).

With this article, we address three core questions: To what extent does opposition 'per se' prevail in mass public preferences regarding arms exports? How do citizens weigh strategic, economic and normative factors when deciding on arms exports? Do these considerations vary in two major Western arms-exporting democracies, Germany and France? Theoretically, we propose that we need to differentiate two fundamental types of preference formation of citizens. First, for some, preferences could be determined by fundamental convictions. With so-called deontological motivations (Chen & Schonger, 2022), citizens do not reason *under which conditions*, but *whether at all* arms should be traded. Empirical investigations of the presence of deontological preferences are generally rare, but even more so in the field of foreign policy preference formation (see for exceptions Dill & Schubiger, 2021; Nincic & Ramos, 2011). To our knowledge, only research on a nuclear taboo has systematically investigated whether principled objection structures citizen preferences, with some evidence pointing against (e.g., Dill et al., 2022; Press et al., 2013) and other evidence towards (e.g., Rathbun & Stein, 2020) principled preferences. We investigate whether deontologist motivations are important for arms trade as a prominent policy decision that directly relates to the use of military force, and where principled arguments are frequently put forward in public discourse. Second, for other citizens, much like governments, arms trade could constitute a multi-dimensional policy object that combines economic, geo-strategic and normative aspects, as political economy theories argue (García-Alonso & Levine, 2007). These citizens would apply a consequentialist mode of decision-making, but we do not know how they reconcile potential trade-offs between these three dimensions in their calculus. Of course, the prevalence and manifestation of these two types of preference formation could differ between countries, constraining governments to differing degrees. We therefore explicitly investigate citizens' preferences in two divergent cases with distinct histories and institutions, Germany and France – both global top-five exporters of arms, but the latter a nuclear power with high geopolitical ambitions, the former with a posture of a 'civil power'.<sup>4</sup>

Empirically, we draw on a population-representative online survey with 6617 (voting-age) citizens, half from each country, giving us sufficient power to investigate even complex conditional relationships. We triangulate from respondents' replies to experimental rating tasks, open-ended survey questions, and established survey scales to identify deontologist respondents. Conjoint choice experiments allow us to identify nuanced trade-offs between economic, strategic and normative aspects of arms transfers. Our theoretical argument, empirical analysis and sample size calculation follow an extensive pre-registration (see Online Appendix B).

Our results imply that around 10–15 per cent of respondents voice principled opposition to arms trade even under the most favourable context conditions. A majority strongly conditions their support on the economic, strategic and normative characteristics of an arms transfer, with the latter bearing the strongest relative weight. Notably, certain attribute configurations moderate these relative weights. For example, defensive wars attenuate concerns for trade with states in conflict. International supply competition alleviates normative concerns and enhances the relevance of the economic and strategic dimensions. Comparing French and German respondents, we show that the general calculus is similar for both populations, while German respondents are more likely to express principled opposition and give larger weight to unfavourable normative contexts in general.

We hence contribute a public opinion perspective to an otherwise state- and elite-focused literature (e.g., Kinne, 2016; Thurner et al., 2019). We identify how different arguments on arms trade in elite-level political discourse reflect in the distribution of citizen preferences and the weights assigned to the arguments. Theoretically (García-Alonso & Levine, 2007) and anecdotally, we would, for example, expect that deontologist preferences are unlikely at the government level<sup>5</sup> and that the weights that citizens attach to the economic, geo-strategic and economic dimensions of arms trade differ from that of governments.<sup>6</sup>

More broadly, our insights relate to a growing literature investigating heterogeneity in the preference formation processes of citizens. On the one hand, our results indicate that deontologist preferences could be an overlooked aspect of public opinion on foreign policy making, at least whenever deadly force is in question. On the other hand, our arguments and results are associated with recent findings in related areas where (domestic) economic benefits, security and normative considerations interact (albeit to varying degrees) – for example, decisions on military interventions (Dill & Schubiger, 2021; Tomz & Weeks, 2020), provision of foreign aid (Heinrich et al., 2018), international trade (Lechner, 2016) or foreign direct investment (Rudolph, Kolcava, et al., 2023).

In the next section, we delineate a theory of how arms transfer preferences of citizens are formed and how they might differ in two major European exporters. Then, we describe our empirical design including data collection and data analysis. The Conclusion section outlines the results regarding our major research questions. Finally, we conclude the article by highlighting especially its policy relevance.

### **Citizen's decision-making on arms exports**

Political economy models of state-level decision-making on arms exports explain decision-making primarily on instrumental grounds, that is, they focus on the economic and geo-strategic aspects of a trade (García-Alonso & Levine, 2007; Levine et al., 1994). Normative aspects of a weapons trade, in particular, legal principles (e.g., the UN Arms Trade Treaty, the EU Council Decision (CFSP) 2019/1560, the German War Weapons Control Act), can additionally constrain exports, for example, to conflict zones or authoritarian regimes. How such legal principles come into being is not explained by these models themselves, and, usually, the relevance of normative aspects is conceived as only indirectly affecting the government calculus (via geo-strategic interest, e.g., as arms trade can fuel internal conflict (see Pamp et al., 2018), which might lead to poverty, terrorism or migration flows) (Levine et al., 1994). At the government level, this triad of aspects entails complex trade-offs, where economically beneficial deals may be detrimental to a country's strategic objectives (e.g., when trading with unreliable partners) just as normative concerns may stand in the way of economically/strategically beneficial deals (e.g., when trading with human rights violating regimes).

But how do citizens assess the trade of arms? Recent scholarship has transcended the view that citizens' decision-making is shaped exclusively by materialist considerations and has consequently expanded the foundations on which preferences form. This evolving literature shows, for example, that normative reasoning can shape public support for sanctions or even war (Onderco, 2017; Tomz & Weeks, 2020); that the public cares about human rights violations in other countries, sacrificing domestic economic benefits to punish human rights violators (Allendoerfer, 2017); and that citizens take into account non-economic factors in trade preference formation (Kolcava

et al., 2021; Rudolph, Quöß, et al., 2023). However, these findings are mostly motivated by a consequentialist calculus, where citizens form preferences over policies based on the effects they have. But citizens might also form preferences regardless of their consequences, that is, based on deontological motivations (Alexander & Moore, 2021). While both motivations might lead to the same observed preference in any concrete case, their nature is very different – as evident in the contrast between Weberian *Gesinnungsethik* and *Verantwortungsethik* as the respective basis for political behaviour (Weber, 1926). Hence, we aim to disentangle in the first step the prevalence of deontologist from consequentialist reasoning; only then can we, in the second step, theorize on the concrete trade-offs that any actual arms trade might have, would it (not) be conducted; and develop, in the third step, arguments about potential differences by country contexts.

### *Deontological motivations*

Take an exemplary trade that substantively raises the domestic economy, supports a strategic partner country and goes to a peace abiding, or even an aggressively attacked state. If the political economy literature has its assumptions right, and geo-strategic, economic and normative concerns are the core determinants of utility functions, governments, just as well as citizens, should approve such a trade. Irrespective of whether their reasoning focuses on economic, normative or strategic arguments, this trade should be maximizing their utility.

But citizens (and politicians) may be fundamentally opposed to any arms transfer for principled reasons, viewing any transfer of weapons as an unconditional bad.<sup>7</sup> For example, radical pacifist views would fall in this category (Cady, 2010). Radical pacifists would see any violence as inappropriate, that is, as an immoral mean, irrespective of the ends this mean is to support. As any trade of arms would enable such violence, it is rejected. Such motivations are the most plausible source of principled opposition in our case: in (European) political discourse, they are prominently voiced by civil society organizations connected to the peace movement and pacifist advocates (e.g., Holden, 2017).

Importantly, pacifism is not the only possible foundation for principled opposition (e.g., isolationists might similarly reject any transfer) and the grounds on which principled opposition is based likely differ by country contexts. Rathbun and Stein (2020) make the compelling argument that morality and egoism should not be conflated with deontological and consequentialist decision-making – either mode of decision-making can be based on moral reasoning. But we argue that it is important to know about the size of principled preferences, as such citizens put stronger constraints on governments. Consequentialists support the transfer of arms under specific context conditions – which changes the nature of the game to one of policy design (e.g., Bechtel et al., 2017) and persuasion (e.g., Gadarian, 2010) to bridge potential gaps between elite and population preferences (Smetana & Onderco, 2022). A relevant share of deontologists, however, decreases the manoeuvrability of governments (Zhang, 2019). Additionally, we propose that deontologist citizens are likely to attach higher importance to party positions in this area and are hence more likely to hold political parties to account for their policy (Gerber et al., 2011).

So far, the prevalence of fundamental convictions has rarely been invoked to explain the structure of citizens' foreign policy preferences.<sup>8</sup> As a first goal of this article, we will therefore identify the extent to which opposition 'per se' prevails in mass public preferences regarding arms transfers. On the aggregate level, the share of citizens that follow such preferences could

thus be indicative of challenges to an instrumentally oriented government strategy for reasons of democratic accountability.

*Economic, strategic and normative dimensions of arms trades and their weight in a consequentialist calculus*

Citizens that follow a consequentialist calculus attach individually varying weights to the likely consequences of weapon deals for the sending and receiving country. We, therefore, assess, as a second goal of this article, the relative weight of three core dimensions (see also Dill & Schubiger, 2021), economic, strategic and normative consequences of an arms trade.

If citizens give large weight to the economic dimension, the welfare consequences of arms exports (job market/income consequences) should strongly determine public preferences. As the immediate welfare consequences of an arms trade are readily observable and have direct positive consequences for the domestic economy, economic attributes of arms trades provide easy-to-follow guidance when forming decisions. We propose that utility maximization should entail a strict increase of approval for arms transfers with increasing economic benefits, all else equal.

If citizens give large weight to geo-strategic interests, they should take into account the potential security implications of an arms deal. Just as in a government's optimization problem, arms deals can be considered harmful or beneficial to a country's long-term security environment, depending on whether a trade supports allies or adversaries (García-Alonso & Levine, 2007). As these security implications are not easily observable, citizens and even political elites have to follow cues provided by attributes of the receiving country. First and foremost, trade with geo-strategic partners should be considered beneficial, as this trade comes about with positive security externalities for the sending country. If citizens give large weight to this dimension, we should observe higher support for trade with such geo-strategic partners.

Last, if citizens give large weight to the normative dimension, we propose that the consequences of an arms trade for the receiving country are at the centre stage of considerations.<sup>9</sup> These normative considerations are steered by legal considerations and moral dilemmas. Contrary to principled opposition, the likely effects of weapons trades are considered. On the basis of *hypothetical imperatives*, citizens would form preferences over arms trades based on their effects (Chen & Schonger, 2022). Citizens would differentiate whether arms will likely be used to repress a population (compared to upholding a lawful state monopoly of power) or whether arms are employed for rightful defensive or unlawful offensive purposes (Bellamy, 2006). Theories of just war (Cady, 2010) would argue that the use of violence, and thereby arms trade, may be morally acceptable or even required if it serves rightful ends – three attributes of receiving countries are easily observable for citizens and informative in this respect: the receiving country's regime characteristic, especially if it is a democracy; its human rights situation; and whether it is currently engaged in violent conflict. Arms exports should fall under rightful ends if they support democratic and human rights upholding regimes (as an indication that arms are used to ensure a lawful state monopoly of power rather than to oppress) and should be approved where they support justified violence, particularly defence against terrorists, rebels or foreign state aggression.

We will apply a research design that forces citizens to form decisions that reveal trade-offs between these three dimensions. Psychological literature points to the ease of attitude accessibility (Krosnick, 1989) to explain which aspects guide decision-making: questions of war and peace,

human rights violations, or autocratic leadership all relate to fundamental principles of social life and are both easy to understand and important to many citizens. Hence, the normative dimension relates to networks of frequently accessed attitudes in memory; also, such questions of war and peace or human rights directly relate to emotions, which are particularly accessible (Rocklage & Fazio, 2018). High attitude accessibility, in turn, would explain a large weight of this normative dimension in decision-making. This could also come about as the strategic aspects of an arms trade are not easily observable for citizens, and as the economic aspects are detached from the day-to-day life of citizens (leading to low egotropic motivations) – and even if sociotropic motivations were strong (but see Schaffer & Spilker, 2019), these sociotropic motivations are likely discounted due to the low absolute share the arms industry holds in Western economies.<sup>10</sup>

However, we also expect that the weight of economic, strategic, and normative aspects is influenced by the presence or absence of moderators, that is, the relevance of these dimensions can be activated by specific attribute configurations. This relates to the question of how stable the decision calculus of citizens is, and whether the weight of the three dimensions varies by context conditions. Concretely, we investigate how five aspects affect the relative weight of normative, economic and geo-strategic attributes: first, the influence of international supply competition over market shares, which is a strong determinant of non-Pareto-efficient outcomes in political economy models (García-Alonso & Levine, 2007); second, economic interests as a mediator for the relevance of normative arguments, as proposed in the foreign aid literature (e.g., Heinrich et al., 2018); third, wars of rightful regimes as a use of force more likely to be legitimate compared to wars of oppressive regimes; fourth, higher caution in trade approval when the military equipment to be traded is more lethal (Cady, 2010); and fifth, whether exports to geo-strategic partners find higher approval when these are democracies (who likely are more reliable) (Johns & Davies, 2012). In sum, this will inform on the one hand to what extent the basic citizen calculus differs from standard political economy models directed towards strategic aspects and the economy, by prominently incorporating now a normative dimension. On the other hand, the question on moderators will be indicative of the reactivity of public opinion with respect to arms transfers given particular nuanced side constraints for decision-making.

### *German–French differences*

As a third goal of our article, we investigate to what extent both deontologist motivations and the consequentialist calculus differ between country contexts. For this, we draw on Germany and France as divergent cases, with an anti-militarist and restrained foreign policy culture in post-war Germany following the experience of World War II (Endres, 2018, 51ff.), and with French political culture striving for international ‘rang’ (rank) and ‘grandeur’ (greatness) (see, e.g., Krotz, 2015, 68ff.), where the military, the use of military force as well as the national arms production have high legitimacy (Krotz, 2015, 114ff.). We expect that German citizens show relatively less support for weapons deals on average, are more likely to exhibit deontologist preferences and react more strongly to norm-related dimensions. This would provide a case in point that public opinion constrains governments’ arms trade behaviour to a differing extent based on deep societal preferences.

Figure 1 provides a summary of the expectations outlined so far.

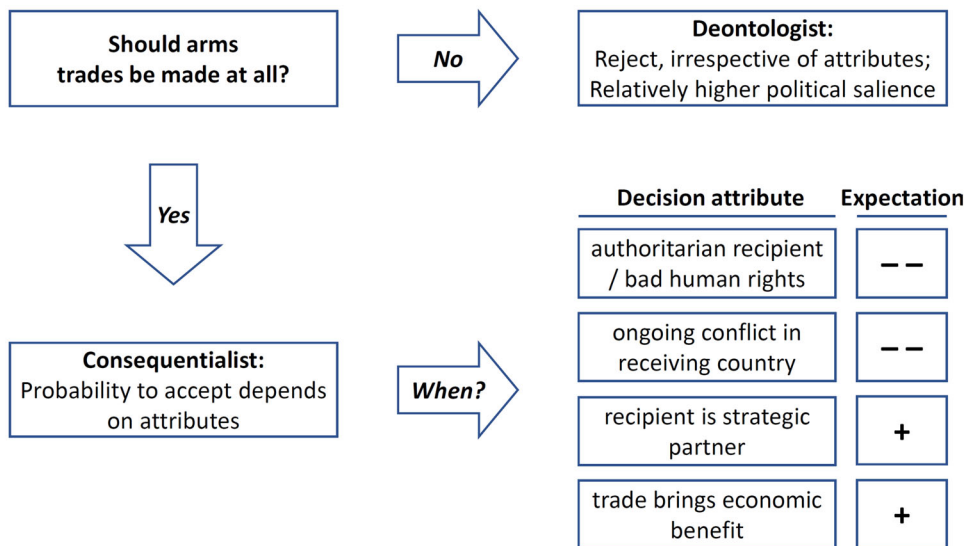


Figure 1. Summary of theoretical expectations. + (--) indicates the expected positive (strong negative) relation between the expression of a decision attribute on a citizen's approval of an arms trade. [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

## Research design

The following section presents our research design. Online Appendix B discusses differences to the pre-analysis plan.

### Data and survey design

Drawing on a population-representative quota sample of 6617 respondents from Germany ( $N = 3250$ ) and France ( $N = 3367$ ) (field time October 2020–January 2021) with Kantar's opt-in online panel, we fielded standard survey questions as well as conjoint and vignette survey experiments. We set quotas on age, education, gender and region.<sup>11</sup> Our procedure and the survey instrument were approved by the Ethics Commission of the Social Science Faculty of LMU Munich. Online Appendix section A.3.1 details how we adhered to core Principles for Human Subjects Research.

Figure 2 presents the survey flow. Respondents started with standard survey questions on socio-demographics and political attitudes, before entering the core of our research design, the conjoint experiment. For this, we introduced respondents to a scenario in which they were to assess two hypothetical arms transfers (*profiles*), taking care to avoid any positive or negative framing effects when introducing the topic. Two profiles were presented in a tabular format, side-by-side, differing along nine theoretically chosen attributes with two to five uniformly randomized attribute levels (details on attributes and levels in the next subsection). Respondents then faced six choice and rating tasks (see Online Appendix Figure A.2 for an example). We use the rating task for our first objective – assuming that deontologist respondents rate even the most favourable profile lowly and provide low ratings throughout all 12 rating tasks. We use the choice task for our second objective – to identify the weights and trade-offs of a consequentialist calculus. We hence

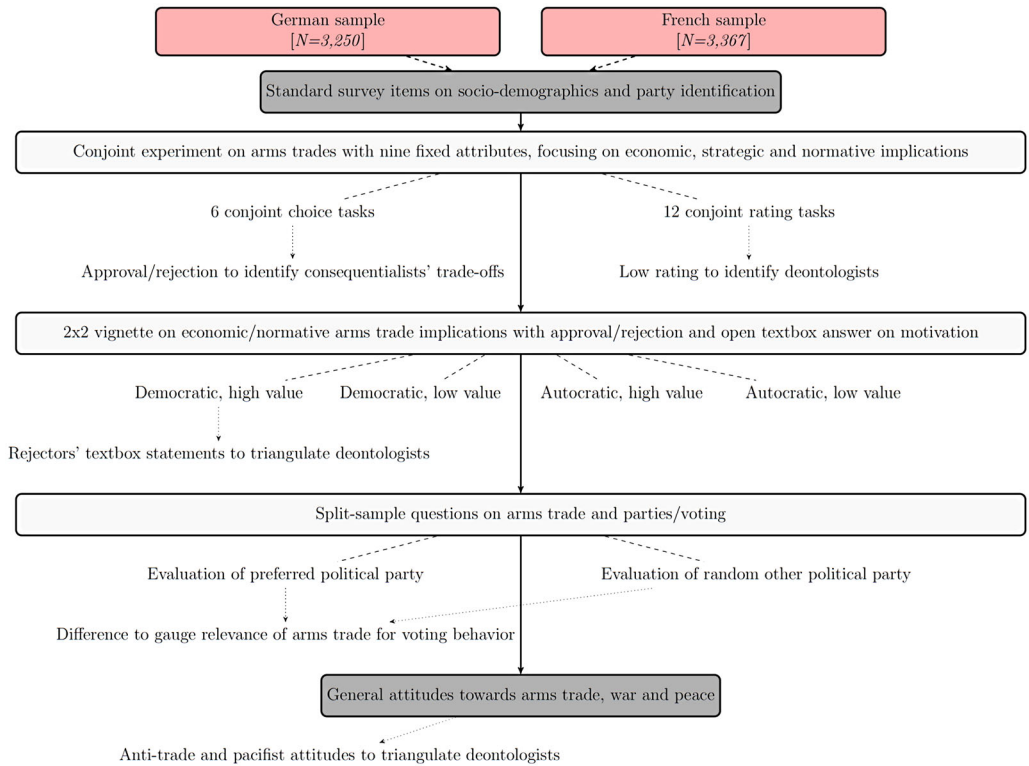


Figure 2. Survey flow. Presented are question blocks used for the analyses in this article. For details, see the pre-registered survey instrument. [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

work with  $N \cdot 6 \cdot 2 = 79,404$  observations on the profile level. Extensive pre-registered power simulations (Schuessler & Freitag, 2020) motivated this sample size.

As low ratings could also be driven by consequentialist rejection, that is, respondents not seeing what they personally would deem a favourable context beyond our choice of attributes and attribute values, or just by random noise, we triangulate deontologist motivations with additional survey items. The key for this is, first, an experimental vignette (Mutz, 2011) focusing on the trade-off between large/small economic gains and a human rights abiding democracy versus a human rights violating autocracy in a  $2 \times 2$  design. Respondents had to explain their motivation for (dis)agreement with at least two sentences in a text box. Respondents had to enter text to proceed with the survey. We used respondents that rejected a ‘favourable’ vignette (democracy/high value) and traced whether they voice deontologist motivations in their open-ended justifications. Second, we use replies to a standard survey item battery on general attitudes towards arms transfers, expecting deontologists to perceive arms trade as ‘morally bad’, ‘not permissible’ even under favourable conditions and ‘to be restricted’ in principle. Online Appendix section A.4 provides details. Third, we expect deontologists to have difficulties in the choice task – hence, we investigate whether their choices are attenuated towards zero in the conjoint experiment (see below). Overall, we propose that this triangulation provides a sensible approximation to a hard-to-measure subgroup.



In a final experimental question, we also investigate the importance of arms transfers for respondents' voting behaviour with a split-survey experiment, to assess our expectations that the position of political parties on arms trade is more important for deontologist respondents. Our survey also contained several standard survey items on preferences towards war and peace (Bizumic et al., 2013).

As speeding and satisficing are well-known issues in online surveys, the survey company excluded respondents faster than 40 per cent of the median survey time during data collection.<sup>12</sup> Further problematic cases (especially straight-liners and super-speeders in standard item batteries or super-speeders in all conjoint tasks) were also excluded.<sup>13</sup>

### *Set-up of the conjoint experiments*

To operationalize the trade-offs that consequentialist respondents face, we selected nine attributes (summarized in Table 1). These attributes mimic typical aspects present in public discourse; hence, the information is actually available to citizens. This also implies that economic consequences are rather concrete (monetary value/employment benefits), while normative/strategic implications are rather abstract and proxied by target country characteristics. Concerning attribute levels, we focus on the range of observable values for these attributes to present respondents with realistic trade-offs and to speak to actual arms trade policy.

Details are presented in Online Appendix section A.5. In short, we translate the economic dimension into three aspects: gross welfare added (range: observed exports in 2019); employment consequences (negligible to 5000, a medium-sized firm); exports to an important trade partner (yes/no). We translate the strategic dimension of arms trading to negative/positive security externalities, which link to alliance status. We capture this by a security partnership between seller/target (yes/no). Concerning the normative dimension, global regulatory commitments highlight regime type (democratic vs. non-democratic), human rights situation ((no) (strong) violation of human rights) and conflict status of the target country (five common types). We present two more attributes as potential moderating factors: the product to be traded (defensive equipment to large-scale weapons), which also prevents respondents from inferring weapon type and its harm potential from the monetary value of the deal; and international competition ('unknown' vs. allies vs. rivals trading). We explicitly stay silent on the country that is to be traded with, to avoid unrealistic profiles and idiosyncratic country perceptions affecting preference formation.

Attributes are presented in block-random or random order, constant within respondent (Rudolph et al., 2022). Online Appendix section A.6 provides details on our estimation strategy, which draws mainly on average marginal component effects (AMCEs) (Hainmueller et al., 2014). This allows us to focus on marginal shifts in overall public opinion with changes in attribute levels. We also estimate marginal means (MMs) and average component effects (ACPs) as suggested by recent methodological research (Ganter, 2023; Leeper et al., 2020).

## **Results**

### *Deontologist motivations*

We start with an indication of baseline preferences on arms deals. To this end, we turn to the average ratings of respondents in the conjoint experiment. Over all packages, support on the

*Table 1.* Dimensions, wording of attributes and levels for the conjoint experiment

Dimensions	Attributes	Levels
Normative	Government elected democratically?	– Democratically elected – Not democratically elected
	Human rights situation in the country?	– Human rights respected – Freedom of expression suppressed – Dissidents persecuted/incarcerated/tortured
	Military conflicts in the country?	– Peace in the country – Civil war with rebels – Country at war, under attack – Country at war, attacks
Strategic	Is country important for security of Germany/France?	– Important partner – Not an important partner
Economic	Does country trade goods with Germany/France?	– A lot of trade of goods – Little trade of goods
	Economic profits for Germany/France in million Euro in total?	– 1 m – 10 m – 100 m – 1000 m (1 bn)
	How many jobs in Germany/France will be lost without delivery?	– 100 – 1000 – 5000
Moderators	What is to be delivered?	– Military protective equipment – Small arms (e.g., rifles, pistols) – Large weapons (e.g., tanks, aircraft, ships) – Military reconnaissance and surveillance systems
	Do other countries already supply weapons?	– Unknown – France/Germany – China and Russia – NATO partners (USA, UK, France/Germany)

*Note:* English translation of the conjoint attributes and levels. For original wording see master questionnaire.

seven-point rating scale is at 3.23 with a median of 3. Defining a rating of 4 and above as (tentative) approval, a majority of the arms trades we presented to respondents would therefore be rejected.

However, ratings are very heterogeneous. Particularly, we detect around 10–15 per cent of respondents exhibiting deontologist motivations. As outlined in the Data and survey design section, we derive this estimate with two approaches. First, we identify a highly favourable arms trade package in the conjoint experiment, contrasting this with an unfavourable package. As presented in Figure 3, the distribution of the respective ratings differs starkly. Whereas a favourable package sees a mean of slightly above four, as well as a median of four, an unfavourable package sees a median of two and a mean of 2.7. This implies that the median citizen can become favourable with respect to arms deals in specific situations on an absolute scale. But this also indicates that most arms deals, even if preferred under a forced choice design, see absolute ratings below a median of

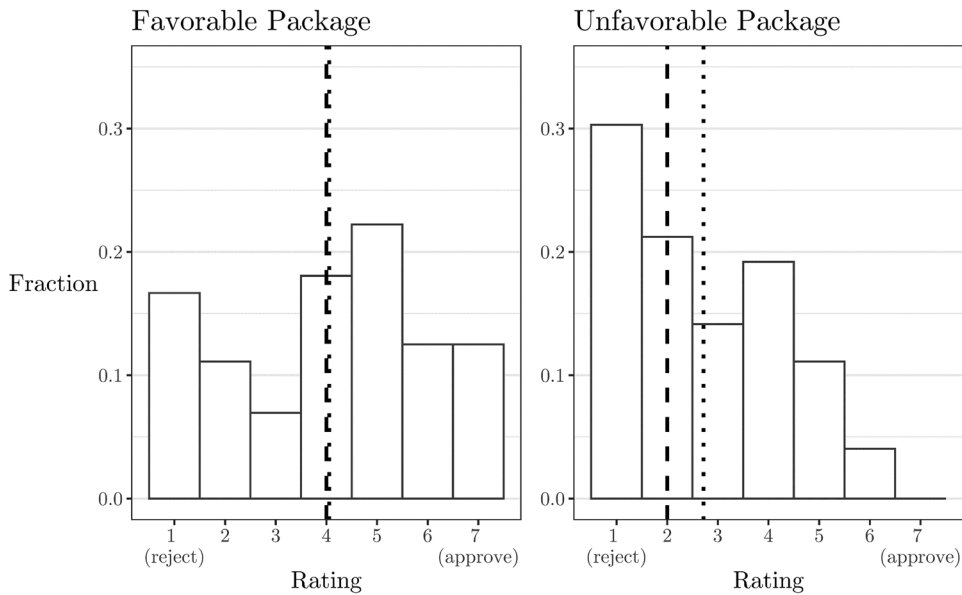


Figure 3. Distribution of support for an (un)favourable package.  $N = 72$  (left panel)/99 (right panel). The dotted (dashed) line indicates the mean (median). A favourable package is defined with the following attribute levels: democratic; human rights upheld; no (civil) war; trade/security partner; high/medium monetary/employment benefit; defensive weapons traded; NATO/FR/GER also trading. An unfavourable package is the inverse of this list.

four, that is, are assessed as unfavourable. Notably, a sizable share of the population (15 per cent) is strictly opposed even in a very favourable scenario, indicating principled opposition.<sup>14</sup>

Second, we focus on the set of respondents rejecting all choice tasks, irrespective of attribute configuration, and an additional rejection of arms trades in a favourable textual vignette (15 per cent of respondents, 13 per cent in France and 21 per cent in Germany). We term this group ‘rejectors’. These ‘rejectors’ potentially are an upwardly biased estimate of deontologists respondents might have a threshold for approving arms trades not captured by our scenario or respondents might, randomly, not have seen profiles they would accept. Hence, we triangulate the extent to which these rejectors actually hold deontologist preferences by way of stated motivations in open-ended survey responses and respondents’ general attitudes towards arms transfers and war and peace.

Table 2 indicates that among the 15 per cent of rejectors, around 75 per cent voiced clear deontologist motivations in the open-ended survey question. Hence, open responses would suggest a lower bound of  $188/1654 = 11.4$  per cent deontological respondents (9.7 per cent in France and 16.1 per cent in Germany). We might even miss some respondents with principled opposition that respond with unclear statements in the open-ended question. We further validate this finding by assessing the general attitudes of these respondents towards arms transfers. Figure 4 shows that among rejectors, only a small minority of 1–11 per cent would agree to statements that deontologists should reject. A similar picture emerges from rejectors’ replies to a battery of items on general attitudes towards war (see Online Appendix Figure A.3).

Overall, this points to a share of deontologist respondents of around 10–15 per cent, indicating that a substantial part of the population is in fundamental opposition to weapon transfers.

Table 2. Classification of open text answers for rejectors

Classification of open response		<i>n</i>	Percent
Germany			
	Fundamental rejection	115	78.23
	Consequentialist rejection	18	12.24
	Unclear	9	6.12
	Illegible	5	3.40
Total		147	100.00
France			
	Fundamental rejection	73	73.00
	Consequentialist rejection	12	12.00
	Unclear	11	11.00
	Illegible	4	4.00
Total		100	100.00

Note: Rejectors defined as respondents with max. rating 3 in all twelve conjoint tasks plus rejection of textual vignette. Experimental subset of respondents who saw a positive vignette used (247/1654 = 14.93 per cent of respondents). Hence, open responses would suggest a lower bound of 188/1654 = 11.37 per cent deontological respondents. When defining rejectors as respondents with max. rating 1 in all twelve conjoint tasks, this lower bound is approx. 7 per cent.



Figure 4. Responses to general attitudes towards arms transfers for rejectors in the conjoint rating tasks. [Colour figure can be viewed at wileyonlinelibrary.com]

*How norms, economic and strategic aspects influence preference formation*

Next, we turn to the causal effect of specific attribute levels on the probability of choice in the choice task using AMCEs.<sup>15</sup> The counterfactual comparison refers to level changes within a profile (Bansak, 2021). As AMCEs are estimated on the same scale, they are substantively comparable, yet bounded by the number of levels (Ganter, 2023; Leeper et al., 2020). Therefore, inter-attribute comparisons have to be conducted with some care. As a rule of thumb, one can multiply AMCEs by the number of levels of the attribute  $l$  divided by  $(1 - l)$ . In our case, this does not change interpretations substantially; hence, we can infer the relative importance of attributes directly from the relative size of AMCEs.

Figure 5 first presents the attributes of the normative dimension: An arms transfer to an autocratic (compared to a democratic) regime decreases support by  $-0.105$ , that is, around 11 percentage points, on average. A similar difference becomes evident for the state of human rights: compared to no violations, (strong) violations cause an average decrease in choice probability of  $-0.148$  ( $-0.192$ ), that is, we see a penalty up to 20 percentage points for such unfavourable contexts. Turning to the conflict situation, and compared to a country at peace, an arms export to a country at war that acts aggressively leads to a decrease in the acceptance of such a transfer by around 16 percentage points ( $-0.164$ ). For countries at civil war with rebels, the effect is roughly half the size. Although negative in direction, and significant, the effects of countries defending themselves against an aggressor or a terrorist group are, in line with expectations, much smaller. This already indicates that weapons deals are not substantially penalized when used for ‘just’ causes – but notably, we also do not see that respondents take such ‘just’ causes as an indicator that weapons should be traded. Turning to the economic dimension of arms trades (compared to lowest levels), very high monetary values increase support substantially by around 7 percentage points ( $0.071$ ). The number of jobs at risk exerts a positive, albeit substantively small effect on the average acceptance of an arms transfer, by around 1.5 percentage points ( $0.014$ ). On average, respondents, therefore, do not seem to give the job argument, oftentimes referenced in public debates, much weight in their calculus. Lastly, respondent support increases more strongly with trade with important trade partners, by around 4 percentage points ( $0.035$ , compared to not important). Turning to the security dimension of arms trades, respondents also react in a relevant way to trade with important security partners by 6 percentage points ( $0.06$ , compared to not important). Lastly, we interpret the main effects of two moderators, weapon type and international competition. A change in weapon type from large or small weapon systems to weapon systems with indirect harm potential (surveillance technology/protective equipment) increases average support (the penalty for large weapons systems is around 8 percentage points ( $-0.075$ )). Moreover, providing information on which countries already supply weapons (baseline: ‘unknown’) increases support with allied states trading ( $0.084$  with NATO partners) and decreases support with adversaries trading ( $-0.023$ ).

Overall, it becomes evident that arms exports see substantively and significantly higher support when alleviating potential normative concerns, with non-linear, disproportionate increases in choice probabilities when human rights are fully upheld, and when the fighting context is terrorist combative, defensive or peaceful. While economically and strategically beneficial attribute values also see an increased choice probability, respondents react less strongly to these dimensions. The data hence support our theoretical expectation that normative, economic and security-related considerations shape preferences for arms trade – but most influential is the normative dimension.

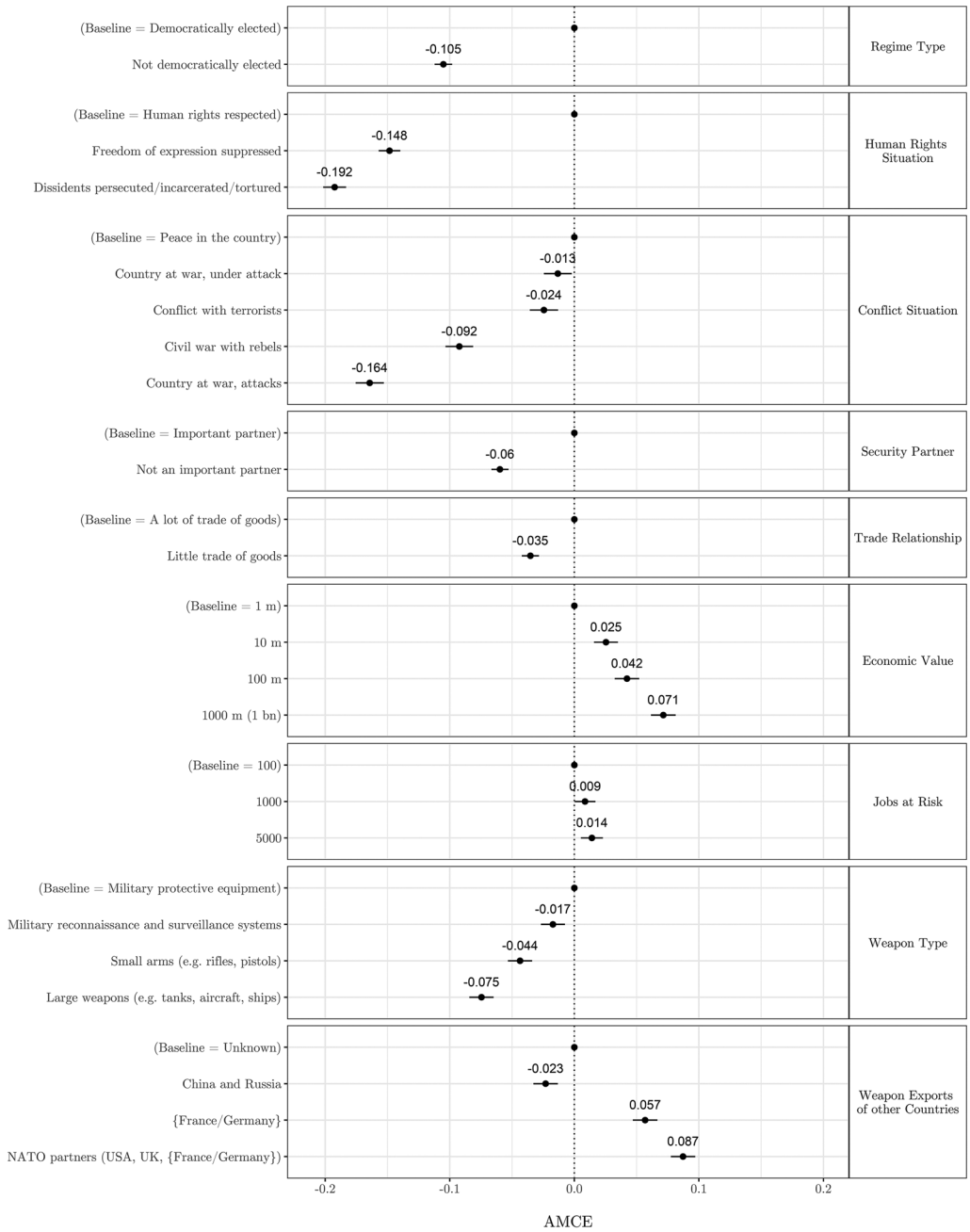


Figure 5. AMCEs for the choice task.

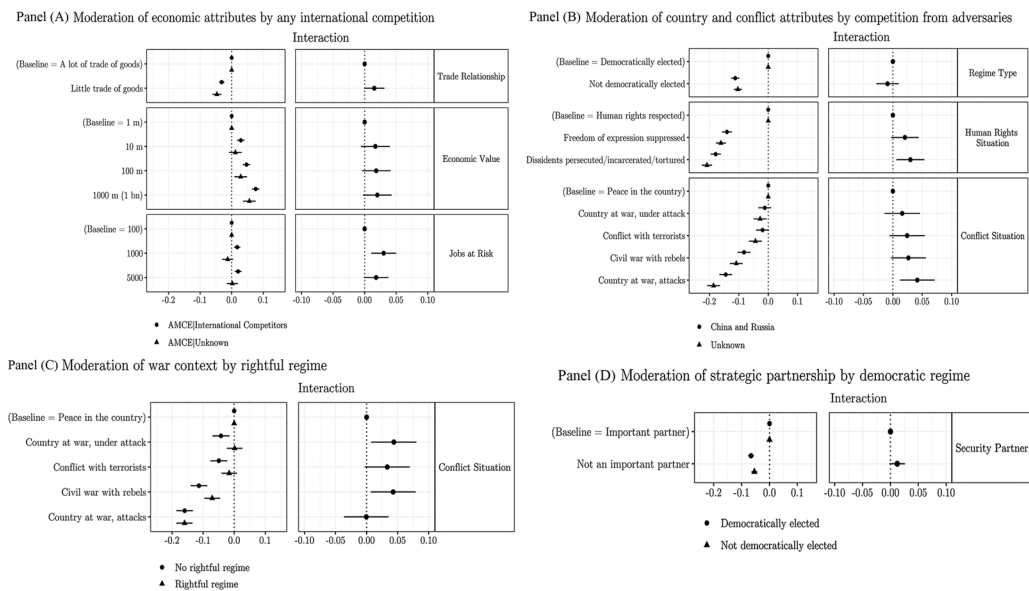


Figure 6. Four tests for interaction effects: AMCEs and AMCEs for attributes listed by the moderator indicated in panels A–D.

Changes in the pattern of ratings are very similar (see Online Appendix Figure A.5). We also reach similar conclusions when interpreting average component preferences that more directly allow for inter-attribute comparisons of preferences (Ganter, 2023) (see Online Appendix Figure A.6).

Last, we discuss how deontologist versus consequentialist respondents reply to the choice task (see Online Appendix Figure A.7). We expected that deontologists consider information on the implications of arms transfers to a lesser extent (or not at all), hence react less to the conjoint experimental stimuli in the forced-choice setting, and, if at all, react to the normative dimension. This is also what we find: Choices of deontologist respondents are dampened compared to consequentialists. For economic and strategic aspects they are attenuated to zero or close to zero, for the normative dimension deontologists respond with a comparable, though attenuated pattern. This also implies that all our conclusions for the discussion of AMCEs above hold for consequentialist respondents.

### Trade-offs in the calculus

We now turn to the question of whether the specific contextual setting of an arms transfer moderates the observed effects.<sup>16</sup>

Concerning international supply competition, we find that this enhances the weight of economic and strategic arguments. With any other country supplying weapons to the target country (see panel A of Figure 6), transfers to commercial trade partners ( $p = 0.061$ ), high-value deals ( $p = 0.082$ ) and medium- to high-employment deals ( $p = 0.003/p = 0.066$ ) see higher levels of support. While small in absolute magnitude, interaction effects are around one third of the main effects for trade partnership and monetary value and only seem to show up at all under competition for employment effects. With adversaries supplying weapons to the target country (see panel B of Figure 6), support

for arms transfers to unfavourable contexts becomes more likely. While autocratic regime type is assessed similarly negative in both scenarios, moderate ( $p = 0.083$ ) and severe human rights violations are more likely accepted ( $p = 0.014$ ), as is intra-state ( $p = 0.081$ ) and aggressive inter-state war ( $p = 0.006$ ). Again, effects are absolutely small but meaningful in relative terms: we see a reduction of the penalty for human rights violations of around 14 per cent and the penalty for inter- or intra-state war of around 22 per cent. Concerning the question of whether positive economic consequences of arms deals dampen the relevance of adverse normative contexts, we do not find any evidence (see Online Appendix Figure A.8): AMCEs differ only marginally, and war situations (compared to peace) are even more detrimental to choice with high economic value. Concerning the question of whether trade with rightful regimes (defined as human rights upholding democracies) in war is more likely to be supported compared to trade with oppressive regimes in war, we find support. As already discussed above, trade to war contexts see a much higher choice probability if they are defensive compared to offensive, with a substantial difference in choice probabilities of around 15 percentage points. As well, when weapons likely support a rightful state monopoly of power (see panel C of Figure 6), defensive war contexts ( $p = 0.018$ ) and target countries in conflict with terrorists ( $p = 0.072$ ) no longer receive a meaningful penalty, while the penalty for civil war contexts decreases ( $p = 0.020$ ) by 38 per cent. Notably, we observe no change in preferences for aggressive inter-state wars comparing rightful and unrightful regimes. Last, as can be seen from Online Appendix Figure A.9, respondents become more cautious to approve trade with countries in conflict when the military equipment to be traded is more lethal. Altogether, this indicates that citizens' decision-making along the normative dimension is influenced by considerations of just war theory, that is, *right cause, right authority and proportionate response* (Cady, 2010). Finally, we investigate an implication of democratic peace theory: indeed (see panel D of Figure 6), trade with strategic partners exhibits higher choice probabilities (22 per cent of main effect), when these partners are democracies ( $p = 0.086$ ).

In summarizing these findings, we conclude that relevant moderations of decision attributes appear and that (besides no evidence for economically beneficial contexts alleviating normative concerns) the weight of the economic, strategic and normative dimensions can be activated by contextual factors. This highlights that, even if the normative dimension seems to drive preference formation on aggregate, citizens show a very nuanced calculus concerning arms trade.

### *German–French differences and policy relevance*

Lastly, we assess whether German and French respondents show different preference structures and discuss why this might be relevant for the decision-making of governments. To start with, respondents from Germany and France show nuances in their average response to the conjoint experiment. Figure 7 presents MMs by country for the choice task (see Online Appendix Figure A.11 for AMCEs). This reveals first of all that the general pattern of preferences is similar in both countries. Second, however, German respondents take severe human rights situations more strongly into account, have a stronger preference for peaceful contexts (and are less supportive of 'wars on terror'), react weaker to the monetary value of the deal (although slightly stronger to employment benefits), have a stronger distaste for large weapons and react more strongly to NATO compared to French co-deliveries. Overall, German respondents, therefore, show, on average, a more sensitive reaction to characteristics of the target country and the nature of the deal (i.e., to 'good' vs. 'bad' deals for the recipient population) and less reaction to



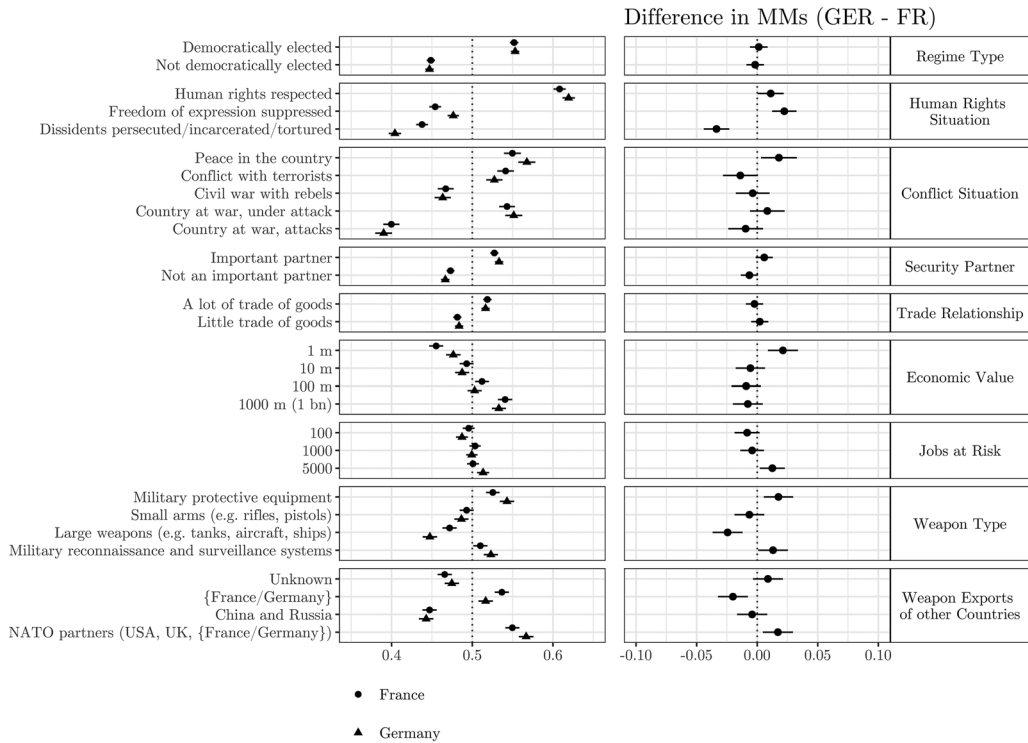


Figure 7. Marginal means by country and country difference for all attributes.

economic co-benefits. This goes hand in hand with an, on average, more sceptical rating of arms deals in Germany compared to France (see Online Appendix Figure A.10). For all displayed profiles, German respondents assess arms trades with a mean of 3.05 and median of 3 (i.e., rejection), French respondents with a mean of 3.40 and median of 4 (i.e., tentative acceptance). Correspondingly, 29 per cent (21 per cent) of displayed arms trades are vividly rejected by German (French) respondents (rating of 1), and 59 per cent (49 per cent) see a clear rejection with a rating below the scale mid-point in Germany (France).

Why does this matter? As we argue, the German public seemingly has a different structure of disapproval, making it difficult to find common grounds for arms exports on French terms. To provide an indication for this, we investigate the distribution of ratings for arms trade profiles crossing over a favourable versus unfavourable governance and conflict context and a high versus a low economic value of a trade. As indicated by Online Appendix Figure A.12 (upper four plots), the share of respondents that are fundamentally opposed to an arms trade (rating of 1) is substantially higher in Germany when the trade goes to an unfavourable governance and conflict context: 20 percentage points higher with low economic value, and 7 percentage points higher with high economic value. Similarly, even arms trade to good governance contexts at high economic values see fundamental opposition from around 23 per cent of German, but only 13 per cent from French respondents. Hence, while median support for arms trade aligns in both countries with a good governance and conflict context (at 4), it differs substantively when the governance and conflict situation is bad (by one scale point, 2 in Germany vs. 3 in France). Thus, opposition to

bad governance and conflict contexts is much more pronounced in Germany. This consequently reflects in the predicted ratings for specific realistic arms trade scenarios, where France and Germany might have to coordinate government policy. As displayed in Online Appendix Table A.5, with unfavourable governance and conflict situations predicted support is substantively lower in Germany compared to France: around 0.7 rating points with a low-value transfer (example of Azerbaijan) or around 0.6 rating points with a high-value transfer (example of Saudi Arabia). Support is only comparable once the governance and conflict situation is positive (see examples of Costa Rica and France/Germany). Hence, public opinion constrains the menu of acceptable arms trades more strongly in Germany compared to France.

Also, the share of deontologist respondents is substantively larger in Germany (14–16 per cent) compared to France (7–10 per cent) (see the results presented in the Deontologist motivations section). This is an additional potentially relevant constraint to the German compared to the French government. We proposed in the theory section that principled opposition should reflect more strongly in citizens' political decision-making. To test this empirically, we provide supplementary analyses in Online Appendix Table A.6. We asked respondents about the importance of party positions on arms trade for their election decision, experimentally varying whether they reply for the electoral importance of the position of their (on other grounds) preferred party versus any other party. Respondents that evaluate their preferred party unsurprisingly attach substantively and significantly higher issue importance (around 0.5 points on a five-point scale). Contrasting replies to this question by deontologist versus consequentialist respondents, we find that deontologists attach even more importance to arms trade in decision-making (by about 0.2 scale points), with an additional premium if the question concerns their preferred party on other grounds (by about 0.5 scale points). This indicates that deontologists constrain government manoeuvrability not only because of firm policy views but also because they are more likely to hold parties to account for policy diverging from their preferences in practice. Of course, we can expect these constraints to vary by the partisan composition of governments and the respective share of deontologists among these parties' supporters (see Online Appendix section A.7.6 for tentative evidence that deontologist preference structures are more prevalent among respondents with a far-left or green party vote intention).

All in all, we conclude that German respondents are more caring for the normative context in target countries, react less positively to its economic benefits and that a larger share of German respondents is in fundamental opposition compared to French respondents. Respondents in principled opposition attach higher importance to the policy issue, which implies likely stronger constraints for the German government overall. In a German–French cooperation in the realm of defence, the German population could, hence, prove to be a bottleneck and cooperation might only be possible on German terms – if France is willing to accept these.

## Conclusion

If the frequently implored European defence and security policy should ever realize, high up on the EU agenda after the Russian invasion of Ukraine in 2022,<sup>17</sup> France and Germany are 'bound to lead' (Nye, 1990) together. This implies that not only the respective EU member states' elites but also their public support such strategic alliances and agree on a common denominator with respect to security policy, including arms exports. The struggle to find common ground concerning arms

transfers to Ukraine among EU and NATO countries both before and after the Russian invasion in 2022, accompanied by heated public debates, provides a case in point for the challenges this entails.

In this article, we explored this common ground from a public opinion perspective, focusing on the German and French public. So far, little to nothing is known about mass public preferences for arms exports. Experimental studies on attitudes towards this foreign policy issue do (to our knowledge) not exist for these two countries, nor any other country worldwide. Using conjoint and vignette experiments, we investigated the extent of principled opposition to any arms trade, and the weight of three core dimensions, normative, economic and strategic aspects, for citizens' opinion formation. Respondents in both countries give largest weight to the normative implications of arms exports, while also taking the economic and strategic aspects of a deal into account. Also, respondents react in nuanced ways to side constraints that can further exports (e.g., when supporting defensive wars or trading in a competitive environment), even if a majority of respondents is rather sceptical. However, a larger share of respondents is in fundamental opposition towards arms exports in Germany and exports to autocratic, human rights abusive or conflict-prone contexts find stronger opposition in Germany compared to France. Hence, we find some signs of a cross-country divergence in average preferences between the publics. Overall, the German government is likely constrained to a larger extent by its public and joint action seems feasible rather on German than French terms.

These findings have clear policy relevance: the specific circumstances of an arms transfer can induce substantial swings in public support. For example, our experiment indicates (tentative) approval ratings for about 65 per cent of respondents, and opposition for about 35 per cent of respondents in a post-invasion Ukraine-type situation (see Figure 3), corresponding closely to what we see in real-world public opinion polls on the matter (see Online Appendix section A.1). While (tentative) approval to trade in such 'positive' scenarios is similarly high in both France and Germany, support in Germany (but not in France) drops strongly if conditions are less 'positive' (e.g., comparing a pre-invasion Ukraine scenario, where the country is at civil war). We take this as an indication that our experiment, fielded in a period of peace in Europe in late 2020, is doing well in identifying a preference structure relevant also for extreme scenarios, and hence has high external validity. Consequently, Online Appendix A.7.2 presents further illustrations of the bounds of support based on predicted ratings, contrasting packages that correspond to concrete country examples. They indicate that a favourable context in the normative as well as strategic and economic realms seems to need to come together for public acceptance of an arms trade on average. Altogether, the upper bound of support for arms transfers appears to be rather low in general and even lower in Germany compared to France. At the same time, our findings are both in line with the assertion of different strategic cultures in Germany and France (Endres, 2018; Irondelle et al., 2015), and with the anecdotal evidence of a strong public backlash against morally repulsive, even if economically and strategically beneficial, arms deals. Based on the cross-country differences we observe, it seems plausible that the societal 'strategic cultures' of Germany and France differ to an extent that in any cooperation the countries are constrained by their respective publics to a lowest common denominator in arms export policy (Putnam, 1988) – which here is the restrictive German approach to the trade of arms. These results also hold lessons for the feasibility of an EU-wide arms export control policy and can contribute to explaining why these are 'in crisis' (Wisotzki & Mutschler, 2021). As arms exports are just one facet of a joint European security and defence policy, our results highlight broader challenges for policy design in this regard: a far-reaching unified European defence policy seems challenging in the near future.

With respect to theory, our findings tie to a larger recent literature that points to the relevance of deeply rooted values and beliefs leading to well-structured foreign policy preferences (Kertzer et al., 2014; Kertzer & Zeitzoff, 2017). While in our case these seem to be primarily centred around the foreign countries' normative context, substantial subsets of the population also attribute weight to a rather strategic and/or economic calculus (Bechtel et al., 2019). Even more, we also trace a segment of the population exhibiting deontological preferences (surprisingly large with around 10–15 per cent of respondents, with substantial variation between countries), which seemingly clusters in specific parties (rather on the political left) and is seemingly more attentive to voting along its principles. This mode of decision-making has largely been overlooked in the literature but is theoretically intriguing: it leads to a wedge between what theory lets us expect for governments' arms trade decision-making (a consequentialist calculus focused on economic and security implications (García-Alonso & Levine, 2007) and citizen preferences (consequentialists putting strongest weight on the foreign countries' normative context; citizens in fundamental opposition rejecting any exporting-strategy throughout). Given its likely foundation particularly in pacifist motivations in our case, this wedge might be relevant beyond arms exports, for all policies involving questions of war and peace.

We see several important avenues for future research: first of all, future research could extend to other country contexts, particularly the United States and the United Kingdom as important democratic exporters. Second, future research should compare whether the strong normative foundation of arms trade policies is indeed peculiar to the domain of exports in military goods, or whether respondents would despise any trade (so also in non-military, and particularly elite consumption goods) with dictatorships and human rights violators to a similar extent. Third, future research could explore motivations for deontologist preferences.<sup>18</sup> Last but not least, our research focuses on the fundamental preferences of the public vis-à-vis the export of weapons. But our supplementary analysis indicates that principled opposition to arms exports directly relates to the issue being important for voting. In future research, it would be worthwhile to investigate to what extent the issue affects actual political behaviour, for example, voting decisions, and to what extent these preferences can be politicized, for example, when parties are campaigning for or against far-ranging policy decisions such as European integration in the defence and security domain. In other foreign policy areas, the literature has already established that the public is both a vigilant observer of foreign policy (e.g., Kertzer & Zeitzoff, 2017) and that its preferences matter for foreign policy-making (e.g., Goldsmith & Horiuchi, 2012) – for example, for trade policy (e.g., Dür & Mateo, 2014) or military force (e.g., Tomz et al., 2020).

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Commission of the Social Science Faculty of LMU Munich (GZ 20-01). Data and replication code are available at <https://doi.org/10.7910/DVN/C6PTYD> and in supplement S2.

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## Conflict of Interest

The authors declare no conflict of interest.

## Online Appendix

Additional supporting information may be found in the Online Appendix section at the end of the article:

Figure A.1: Polls on arms exports in Germany and France around the Russian invasion of Ukraine in early 2022.

Figure A.2: Survey screen with exemplary display of conjoint experiment (German version).

Table A.1: Realised quotas and target quotas (source: Destatis/INSEE).

Table A.2: Realised regional quotas and target quotas (source: Destatis/INSEE).

Table A.3: Additional respondent characteristics.

Table A.4: Examples of statements from open text box on motivations for rejection of a high-value arms transfer to a human rights abiding democratic country context.

Figure A.3: Responses to general attitudes towards war for rejectors in conjoint.

Table A.5: Predicted average support for specific arms transfers (rating outcome).

Figure A.4: Marginal means for all attributes.

Figure A.5: AMCEs for the rating outcome.

Figure A.6: ACPs (Ganter 2023) for the forced-choice outcome and for all attributes.

Figure A.7: CAMCEs and differences in CAMCEs by deontologist vs. consequentialist respondents.

Figure A.8: Interaction of economic value with norm related attributes.

Figure A.9: Interaction of weapon type with norm and economic related attributes.

Figure A.10: MMs by country and country difference for all attributes (rating outcome).

Figure A.11: AMCEs by country and country difference for all attributes (choice outcome).

Figure A.12: Distribution of ratings over different arms trade profiles by country.

Table A.6: Issue importance of arms trade for election decision.

Table A.7: Germany: rejectors and party support.

Table A.8: France: rejectors and party support.

Data S1

## Notes

1. See <https://www.sipri.org/media/press-release/2020/global-arms-industry-sales-top-25-companies-85-cent-big-players-active-global-south>.
2. As in this case, many arms deliveries are not purely commercial sales but provided subsidized as military aid. This is encompassed when we speak of arms exports in the following, and we use the terms arms/weapons export/transfer/trade interchangeably.
3. While there is, to our knowledge, no scientific literature on arms trade preferences, polling agencies, as contractors of NGOs, media outlets or government agencies, at times collect citizens' preferences on specific

- arms exports to inform current political debates. Early 2022, just before/after the Russian invasion of Ukraine, was such a time, and we identified all polls that were publicly accessible – they indicate that public opinion is very responsive to external events, as we see a strong shift in approval with the onset of the invasion, albeit from polls of different survey companies with different question wording/sampling methodology.
4. We thus follow a most different systems design logic (within European Union [EU]/NATO democracies), that is, a multi-method approach with cases embedded in a quantitative design.
  5. Some legislative parties apparently follow deontologist motivations at certain times. But anecdotally, already the prospect of governmental responsibility can seemingly lead such parties (e.g., the German Greens) to turn to a consequentialist logic ([https://www.deutschlandfunk.de/nach-waffenexport-aeusserungen-habeck-und-die-gruenen-haben.720.de.html?dram:article\\_id=497859](https://www.deutschlandfunk.de/nach-waffenexport-aeusserungen-habeck-und-die-gruenen-haben.720.de.html?dram:article_id=497859)).
  6. Notably, the political economy literature (e.g., Levine et al., 1994) sees normative aspects as only indirectly affecting the government calculus (via geo-strategic interest).
  7. Principled support is a theoretical possibility but unlikely to be relevant for arms trade.
  8. To our knowledge, fundamental convictions have primarily been related to the use of weapons of mass destruction as proposed by theories of a ‘nuclear taboo’. For example, Blair et al. (2022) show that a sizable share of the population holds ‘taboo-like’ preferences. Still, Press et al. (2013) propose that US citizens primarily reject nuclear weapon use for consequentialist, rather than principled motivations, a preference structure identified for other Western countries as well (Dill et al., 2022). Outside of this field, rare applications include the question of civilian protection (e.g., Dill et al., 2022), war on terror (e.g., Nincic & Ramos, 2011) and support for war (Dill & Schubiger, 2021).
  9. We are aware that normative reasoning can also affect the weight of the above-mentioned attributes. For example, high in-group solidarity could lead to a (morally founded) precedence of economic attributes (Rathbun & Stein, 2020). Hence, we do not argue that a large weight of economic or geo-strategic aspects implies amoral decision-making.
  10. For example, German arms exports in 2018 amount to 4.82 billion Euro, with GDP at 3388.2 billion (0.14 per cent) (see <https://www.bmwi.de/Redaktion/DE/Publikationen/Aussenwirtschaft/ruestungsexportbericht-2018.html>).
  11. Online Appendix Tables A.1 and A.2 display realized and target quotas, A.3 non-quota characteristics.
  12. This threshold was agreed upon with the survey company before gathering the data.
  13.  $N = 514$ . This is unlikely to bias our measure of deontologist preferences. Deontologists would not generally super-speed through the first conjoint task (with instructions). Also, item batteries are partly reverse-coded; hence, straight-liners cannot hold consistent preferences.
  14. Supplementary analysis indicates that among these 15 per cent (18 per cent in Germany, 13 per cent in France), 67 per cent (76 per cent in Germany, 57 per cent in France) never voice a rating above 1 in any choice task, indicating a lower bound for deontologist responses at 10 per cent (14 per cent in Germany, 7 per cent in France) with this approach.
  15. For corresponding MMs and ACPs, see Online Appendix Figures A.4 and A.6.
  16. For this, we calculate average marginal component interaction effects (AMCIEs). For example, we interact the AMCEs for attributes in the economic dimension by whether the attribute on ‘Which other countries trade?’ is set to ‘unknown’ versus any other level.
  17. <https://www.consilium.europa.eu/en/press/press-releases/2022/03/21/a-strategic-compass-for-a-stronger-eu-security-and-defence-in-the-next-decade/>
  18. While the open-ended survey responses indicate first and foremost pacifist reasoning, fundamental rejection can also be fuelled by anti-migration attitudes (exemplary response: ‘i generally reject arms deliveries. first deliver weapons and then have to take in refugees. no, not with me’) or non-interventionism (exemplary response: ‘France has no business interfering in what happens elsewhere, there are far too many things to do at home’).

## References

Alexander, L., & Moore, M. (2021). Deontological ethics. In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy* (Winter 2021 edition). <https://plato.stanford.edu/archives/win2021/entries/ethics-deontological/>

- Allendoerfer, M. G. (2017). Who cares about human rights? Public opinion about human rights foreign policy. *Journal of Human Rights*, 16(4), 428–451.
- Bansak, K. (2021). Estimating causal moderation effects with randomized treatments and non-randomized moderators. *Journal of the Royal Statistical Society Series A: Statistics in Society*, 184(1), 65–86.
- Bechtel, M. M., Genovese, F., & Scheve, K. F. (2019). Interests, norms and support for the provision of global public goods: The case of climate co-operation. *British Journal of Political Science*, 49(4), 1333–1355.
- Bechtel, M. M., Hainmueller, J., & Margalit, Y. (2017). Policy design and domestic support for international bailouts. *European Journal of Political Research*, 56(4), 864–886.
- Bellamy, A. J. (2006). *Just wars: From Cicero to Iraq*. Polity Press.
- Bizumic, B., Stubager, R., Mellon, S., Linden, N.V., Iyer, R. & Jones, B. M. (2013). On the (in)compatibility of attitudes toward peace and war. *Political Psychology*, 34(5), 673–693.
- Blair, C. W., Chu, J. A., & Schwartz, J. A. (2022). The two faces of opposition to chemical weapons: Sincere versus insincere norm-holders. *Journal of Conflict Resolution*, 66(4–5), 677–703.
- Cady, D. (2010). *From warism to pacifism: A moral continuum*. Temple University Press.
- Chen, D. L., & Schonger, M. (2022). Social preferences or sacred values? Theory and evidence of deontological motivations. *Science Advances*, 8(19), eabb3925.
- Dill, J., & Schubiger, L. I. (2021). Attitudes toward the use of force: Instrumental imperatives, moral principles, and international law. *American Journal of Political Science*, 65(3), 612–633.
- Dill, J., Sagan, S. D., & Valentino, B. A. (2022). Kettles of Hawks: Public opinion on the nuclear taboo and noncombatant immunity in the United States, United Kingdom, France, and Israel. *Security Studies*, 31(1), 1–31.
- Dür, A., & Mateo, G. (2014). Public opinion and interest group influence: How citizen groups derailed the Anti-Counterfeiting Trade Agreement. *Journal of European Public Policy*, 21(8), 1199–1217.
- Endres, F. (2018). *Öffentliche Meinung und strategische Kulturen*. Springer.
- Gadarian, S. K. (2010). The politics of threat: How terrorism news shapes foreign policy attitudes. *The Journal of Politics*, 72(2), 469–483.
- Ganter, F. (2023). Identification of preferences in forced-choice conjoint experiments: Reassessing the quantity of interest. *Political Analysis*, 31(1), 98–112.
- García-Alonso, María D. C., & Levine, P. (2007). Arms Trade and arms races: A strategic analysis. In *Handbook of Defense Economics* (Vol. 2, pp. 941–971). Elsevier.
- Gerber, A. S., Huber, G. A., Doherty, D., & Dowling, C. M. (2011). Citizens' policy confidence and electoral punishment: A neglected dimension of electoral accountability. *The Journal of Politics*, 73(4), 1206–1224.
- Goldsmith, B. E., & Horiuchi, Y. (2012). In search of soft power: Does foreign public opinion matter for US foreign policy? *World Politics*, 64(3), 555–585.
- Hainmueller, J., Hopkins, D. J., & Yamamoto, T. (2014). Causal inference in conjoint analysis: Understanding multidimensional choices via stated preference experiments. *Political Analysis*, 22(1), 1–30.
- Heinrich, T., Kobayashi, Y., & Long, L. (2018). Voters get what they want (when they pay attention): Human rights, policy benefits, and foreign aid. *International Studies Quarterly*, 62(1), 195–207.
- Holden, P. (2017). *Indefensible: Seven myths that sustain the global arms trade*. Bloomsbury Publishing.
- Irondelle, B., Mérand, F., & Foucault, M. (2015). Public support for European defence: Does strategic culture matter? *European Journal of Political Research*, 54(2), 363–383.
- Johns, R., & Davies, G. A. M. (2012). Democratic peace or clash of civilizations? Target states and support for war in Britain and the United States. *Journal of Politics*, 74(4), 1038–1052.
- Kertzer, J. D., Powers, K. E., Rathbun, B. C., & Iyer, R. (2014). Moral support: How moral values shape foreign policy attitudes. *The Journal of Politics*, 76(3), 825–840.
- Kertzer, J. D., & Zeitzoff, T. (2017). A bottom-up theory of public opinion about foreign policy. *American Journal of Political Science*, 61(3), 543–558.
- Kinne, B. J. (2016). Agreeing to arm: Bilateral weapons agreements and the global arms trade. *Journal of Peace Research*, 53(3), 359–377.
- Kolcava, D., Rudolph, L., & Bernauer, T. (2021). Voluntary business initiatives can reduce public pressure for regulating firm behaviour abroad. *Journal of European Public Policy*, 28(4), 591–614.
- Krosnick, J. A. (1989). Attitude importance and attitude accessibility. *Personality and Social Psychology Bulletin*, 15(3), 297–308.

- Krotz, U. (2015). *History and foreign policy in France and Germany*. Macmillan.
- Lechner, L. (2016). The domestic battle over the design of non-trade issues in preferential trade agreements. *Review of International Political Economy*, 23(5), 840–871.
- Leeper, T. J., Hobolt, S. B., & Tilley, J. (2020). Measuring subgroup preferences in conjoint experiments. *Political Analysis*, 28(2), 207–221.
- Levine, P., Sen, S., & Smith, R. (1994). A model of the international arms market. *Defence and Peace Economics*, 5(1), 1–18.
- Mutz, D. C. (2011). *Population-based survey experiments*. Princeton University Press.
- Nincic, M., & Ramos, J. (2011). Torture in the public mind. *International Studies Perspectives*, 12(3), 231–249.
- Nye, J. S. (1990). *Bound to lead: The changing nature of American power*. Basic Books.
- Onderco, M. (2017). Public support for coercive diplomacy: Exploring public opinion data from ten European countries. *European Journal of Political Research*, 56(2), 401–418.
- Pamp, O., Rudolph, L., Thurner, P. W., Mehlretter, A., & Primus, S. (2018). The build-up of coercive capacities: Arms imports and the outbreak of violent intrastate conflicts. *Journal of Peace Research*, 55(4), 430–444.
- Press, D. G., Sagan, S. D., & Valentino, B. A. (2013). Atomic aversion: Experimental evidence on taboos, traditions, and the non-use of nuclear weapons. *American Political Science Review*, 107(1), 188–206.
- Putnam, R. D. (1988). Diplomacy and domestic politics: The logic of two-level games. *International Organization*, 42(3), 427–460.
- Rathbun, B. C., & Stein, R. (2020). Greater goods: Morality and attitudes toward the use of nuclear weapons. *Journal of Conflict Resolution*, 64(5), 787–816.
- Rocklage, M. D., & Fazio, R. H. (2018). Attitude accessibility as a function of emotionality. *Personality and Social Psychology Bulletin*, 44(4), 508–520.
- Rudolph, L., Kolcava, D., & Bernauer, T. (2023). Public demand for extraterritorial environmental and social public goods provision. *British Journal of Political Science*, 53(2), 516–535.
- Rudolph, L., Quöß, F., Buchs, R., & Bernauer, T. (2023). Environmental concern leads to trade skepticism on the political left and right. *International Studies Quarterly*, 66(5), sqac060.
- Rudolph, L., Freitag, M., & Thurner, P. (2022). *Ordering effects vs. cognitive burden – How should we structure attributes in conjoint experiments*. SocArXiv. <https://www.doi.org/10.31235/osf.io/yq4g3>
- Schaffer, L. M., & Spilker, G. (2019). Self-interest versus sociotropic considerations: An information-based perspective to understanding individuals' trade preferences. *Review of International Political Economy*, 26(6), 1266–1292.
- Schuessler, J., & Freitag, M. (2020). *Power analysis for conjoint experiments*. SocArXiv. [www.doi.org/10.31235/osf.io/9yuhp](http://www.doi.org/10.31235/osf.io/9yuhp)
- Smetana, M., & Onderco, M. (2022). Elite-public gaps in attitudes to nuclear weapons: New evidence from a survey of German citizens and parliamentarians. *International Studies Quarterly*, 66(2), sqac017.
- Thurner, P. W., Schmid, C. S., Cranmer, S. J., & Kauermann, G. (2019). Network interdependencies and the evolution of the international arms trade. *Journal of Conflict Resolution*, 63(7), 1736–1764.
- Tomz, M. R., Weeks, J. L. P., & Yarhi-Milo, K. (2020). Public opinion and decisions about military force in democracies. *International Organization*, 74(1), 119–143.
- Tomz, M. R. & Weeks, J. L. P. (2020). Human rights and public support for war. *The Journal of Politics*, 82(1), 182–194.
- Weber, M. (1926). *Politik als Beruf* (Vol. 2). Duncker & Humblot.
- Wezeman, P. d., Fleurant, A., Kuimova, A., Da Silva, D. L., Tian, N., & Wezeman, S. T. (2020). Trends in international arms transfers, 2019. SIPRI Fact Sheet. [https://www.sipri.org/sites/default/files/2020-03/fs\\_2003\\_at\\_2019.pdf](https://www.sipri.org/sites/default/files/2020-03/fs_2003_at_2019.pdf)
- Wisotzki, S., & Mutschler, M. (2021). No common position! European arms export control in crisis. *Zeitschrift für Friedens- und Konfliktforschung*, 10(2), 273–293.
- Zhang, K. (2019). Encountering dissimilar views in deliberation: Political knowledge, attitude strength, and opinion change. *Political Psychology*, 40(2), 315–333.

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