

# NORMS AND RATIONALITY IN ELECTORAL PARTICIPATION AND IN THE RESCUE OF JEWS IN WWII

## AN APPLICATION OF THE MODEL OF FRAME SELECTION

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### ABSTRACT

The rescue of Jews in WWII and electoral participation both constitute prominent puzzles for rational choice theories of human behavior and have given rise to lengthy debates about norms and rationality. To explain both phenomena, we apply the *Model of Frame Selection*. This theory of action provides an integrated account of norms and rationality, where cost-benefit calculus is replaced by unconditional norm conformity if actors hold strongly activated normative convictions. In support of this hypothesis, our empirical analyses show that strong feelings of social responsibility led actors to disregard the risks of helping. Likewise, intense norms of civic duty can make electoral participation independent of the incentive to express political preferences and the expectation to influence the election outcome. At the same time, the real strength of calculated incentives is revealed by identifying the actors who indeed seem to engage in a reflecting–calculating mode of decision-making.

KEYWORDS • action theory • altruism • rational choice theory • turnout • voting paradox

### 1. Introduction

The understanding and explanation of human action constitutes a core task, and without doubt an ambitious challenge, for social scientists. Although it unites the social sciences, members of the various disciplines traditionally approach it differently. On the one hand, classical sociological theories of action emphasize the autonomous effects of

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normative and cultural factors, for example, in normative or interpretive sociology. According to this normativist–culturalist perspective, action is primarily based on social norms, identities, systems of meaning, or cultural repertoires – although it rarely denies the importance of instrumental rationality altogether. On the other hand, standard economic theory and various forms of rational choice theory (RCT) in sociology explain behavior as the outcome of some kind of optimization that involves the weighing of expected costs and benefits.

Although RCT has become an established approach within sociology, it still faces enduring criticism for one-sidedly trying to reconstruct every form of norm-guided behavior as if it were based on a rational choice (Etzioni 1988; Elster 1989; Bohman 1992; Smelser 1992; Yee 1997; Boudon 2003; Collins 2004). It is argued that RCT is still incompatible with the fact that social norms may sometimes guide behavior in an ‘autonomous’, ‘not outcome-oriented’, ‘unconditional’ (Elster 1989), or ‘incommensurable’ (Taylor 1996) way. Nonetheless, even critics of RCT concede that the existing normativist–culturalist perspectives so far have not resulted in an alternative model from which specific implications for behavior can be deduced (Yee 1997; Elster 2000).

While proponents on either side of the debate can point to considerable empirical support for their claims, the discussion over rationality or norms as determinants of human behavior continues, and an integrated account of their interaction is much needed (Emirbayer and Mische 1998; Elster 2000). Such an account is provided by the Model of Frame Selection (MFS), which is a formalized theory of action that integrates elements of RCT and normativist–culturalist perspectives (Esser 2001; Kroneberg 2005; 2006). Fundamental to the MFS is the notion that under certain conditions individuals act unconditionally by following strongly internalized norms, while under other conditions they engage in a deliberative cost–benefit calculus. The model allows one to derive statistically testable hypotheses about the conditions under which one or the other mode of selection prevails.

In this article we first sketch how the influence of internalized norms has been traditionally incorporated into RCT, and the criticism this has provoked. We then introduce the MFS as an integrative theory and apply it to two prominent puzzles of rational choice theories of human behavior: the rescue of Jews in WWII and electoral participation. The former is a case of extraordinary altruism in the face of high risks, and the latter exemplifies participation in the provision of a public good where the individual contribution has marginal impact. Both cases have therefore become prominent examples in the ongoing debate on the limitations of

RCT (see, e.g. Monroe et al. 1990; Green and Shapiro 1994; Friedman 1996; Opp 1997; or Blais 2000; Elster 2000; Boudon 2003). Moreover, an analysis of these two cases seems well suited to test the theoretical applicability and empirical validity of the MFS, since they span a wide spectrum from low-cost to high-cost situations, and from historical to more recent phenomena.

Our results support a main hypothesis of the MFS. The incentive to express political preferences and the expectation to influence the election outcome are shown to be less relevant for participation, the more strongly the norm to vote is internalized. Likewise, the perceived risks of helping Jews mattered less, the stronger actors' feelings of social responsibility were. In both cases, actors with the *strongest* norm internalization were not influenced by calculated incentives. At the same time, the real strength of calculated incentives is revealed when we focus on actors with *weak* internalization, who indeed seem to weigh costs and benefits.

## 2. Internalized norms as incentives: the traditional rational choice perspective

Within RCT, internalized norms are usually incorporated as some sort of psychological cost or benefit. Acting in accordance with an internalized norm is simply an 'outcome' valued by the actor. It therefore enters the subjective expected utility (SEU) of an action  $A_i$  just as other incentives do.<sup>1</sup> To express this formally, order the utility arguments  $x_j$  in a way, such that the non-normative outcomes have indices 1 to  $k$ , and the normative (or psychological) utility arguments have indices  $k + 1$  to  $n$ . The SEU weight then becomes

$$\text{SEU}(A_i) = \sum_{j=1}^k p_j u(x_j) + \sum_{j=k+1}^n p_j u(x_j), \quad (1)$$

where  $p_j$  denotes the subjective probability of outcome  $j$ , and  $u(x_j)$  the utility of outcome  $j$ .

Utility functions of this kind form the basis of various rational choice models, e.g. in behavioral game theory (cf. Camerer 2003) or in the study of electoral behavior (e.g. Riker and Ordeshook 1968; Brennan and Lomasky 1993) or collective action (e.g. Finkel 2008). The general idea behind these models is that people weigh tangible incentives against psychological cost and benefits, such as feelings of guilt or the feeling of having done the normatively right thing. They are also in line

with psychological theories that assume individuals care about cognitive dissonance or balance (Festinger 1957).

There can be no doubt that such a weighing of costs and benefits often takes place and represents an important manner in which norms can influence behavior. However, there are limitations to such 'rationalist incorporations of norms' (Yee 1997). In particular, they have been repeatedly criticized for missing at least three important aspects of norm-oriented behavior.

First, whether or not a particular norm becomes relevant is a highly contingent process. It requires that individuals have already acquired an understanding or interpretation of the situation at hand (Cicourel 1973; Goffman 1974). In particular, the conditionality of norms means that they demand adherence only under certain, more or less specified, conditions (Hechter and Opp 2001).

Secondly, there are situations in which an internalized norm is clearly relevant, but competes with other programs of behavior such as personal routines, institutional rules or simply competing internalized norms. It therefore becomes necessary to address when such conflicts become salient and how they are resolved (March and Olsen 1989).

Finally, internalized norms may sometimes guide behavior in an 'autonomous', 'not outcome-oriented', 'unconditional' (Elster 1989), or 'incommensurable' (Taylor 1996) way. In such cases, internalized norms are not just one incentive among others, but can lead actors to *disregard* other non-normative incentives altogether (Etzioni 1988).

The MFS is an attempt to account for these phenomena while preserving the explanatory power offered by RCT. In what follows we focus attention on the third aspect listed above. This constitutes the greatest challenge to the standard incorporation of internalized norms into RCT because it violates the basic assumption 'that some kind of "trade-off" will always be possible' (Borch 1968: 21; see also Elster 1979: 126–7).<sup>2</sup>

## 2. The Model of Frame Selection

The MFS was originally formulated by Esser (2001), bringing together important insights from economic, sociological, and psychological theories of action. More recently the model has been fully developed and formalized by Kroneberg (2005; 2006). Central to the MFS are three elements: (1) the idea that behavior is guided by frames and scripts, (2) the assumption of variable rationality, and – most importantly – (3) mode selection, which is the specification of conditions under which actors

engage in a systematic consideration of future consequences rather than acting spontaneously. Below we introduce those elements in turn.

### 2.1 *Frames and scripts*

The MFS explains how an actor interprets a situation (*frame selection*), which program of behavior he or she activates (*script selection*), and which action the actor is willing to perform (*action selection*). Individuals first have to comprehend what kind of situation they are facing (Goffman 1974). They do so by activating a mental model of a situation, or *frame*, that seems to match the concrete situation at hand and that subsequently defines this situation (Thomas and Thomas 1928; Parsons 1937; Lindenberg 2002). The relevance of this process is corroborated by numerous psychological experiments that show how individuals' behavior is strongly affected by the meaning they assign to a situation (see, e.g., Kay et al. 2004; Liberman et al. 2004). In part, the importance of framing stems from the fact that individuals may activate corresponding programs of behavior or *scripts* (Vanberg 2002). Examples thereof are internalized norms, routines, habits, or other emotional or cultural reaction schemes (see, e.g., Elster 1989: 100–5). In the MFS, this process is called *script selection*, since again there may be alternative programs of behavior (e.g. a personal routine vs. an institutionalized norm) among which a selection has to be made (March and Olsen 1989).

Although the MFS allows one to study the processes of frame and script selection on their own, this article focuses on action selection, mainly due to data limitations. Nevertheless, as will become clear at the end of this section, our hypothesis about the determinants of behavior rests on a number of assumptions concerning these preceding processes.

### 2.2 *The assumption of variable rationality*

The MFS assumes that actors are either engaging in a systematic consideration of future consequences while weighing costs and benefits, or following unquestioned rules or unconditional normative beliefs.<sup>3</sup> The latter scenario represents a particularly powerful way in which frames and scripts can influence behavior. Dual-process theories in social psychology capture this difference by distinguishing a controlled from an automatic *mode of information processing* (cf. Fazio 1990; Chaiken and Trope 1999). The MFS adopts this distinction and formalizes two different modes of selection, assuming that an actor can select an alternative in one or the other mode.

Action selection in the *reflecting–calculating mode* represents a deliberate choice, in which consequences and their probabilities of occurrence are processed systematically. The reflecting–calculating mode can be formalized by assuming that an actor chooses the alternative  $A_i$  (out of the choice set  $A$ ) that maximizes his or her subjectively expected utility:

$$SEU(A_i) > SEU(A_j) \text{ for all } j \in A, j \neq i. \quad (2)$$

In contrast, the *automatic–spontaneous mode* stands for a selection of behavior that is based solely on a strongly activated script (Vanberg 2002). This means that an actor does not weigh the costs and benefits of different alternatives. Rather, he or she selects the behavioral alternative  $A_k$  that is most strongly activated under the script  $S_j$ , i.e., that has the greatest activation weight  $AW$  ( $\in [0,1]$ ):

$$AW(A_k|S_j) > AW(A_i|S_j) \text{ for all } i \in A, i \neq k. \quad (3)$$

Based on this dual-mode perspective, one can differentiate different ways in which internalized norms may guide behavior. In the reflecting–calculating mode, internalized norms are just one incentive among others. Here, the actor is sensitive to and trades off several *calculated incentives* (i.e. the costs, benefits and expectations which make up the SEU weights in equation 2). In contrast, when it comes to the automatic–spontaneous mode, internalized norms trigger behavior in a direct manner. This captures Elster’s notion that norms can have a ‘grip on the mind’ (Elster 1989: 100) and goes beyond the standard incorporation of norms within RCT described in the previous section.

### 2.3 The mode selection

The dual-process perspective just introduced raises two crucial questions: Why should actors base their behavior on an automatic–spontaneous selection rather than taking into account all relevant incentives? Under which conditions can they be expected to do so?

The latter question has been addressed extensively in cognitive social psychology. As assumed in most dual-process theories, and well supported by experimental evidence, four variables determine the mode of information processing (Fazio 1990; Chaiken and Trope 1999): an automatic–spontaneous mode becomes more likely, the fewer the *opportunities* and the lower the *motivation* for conscious deliberation, the greater the

effort necessary for this mental activity, and the higher the *accessibility* of a ready-to-use program. Conversely, human beings seem to engage in a more effortful and more comprehensive mode only if it seems necessary, possible, and profitable to do so.

Building on these insights, the MFS assumes that behavior follows the mode that seems optimal given situational circumstances. Whether it is the automatic–spontaneous or the reflecting–calculating mode that governs a selection can itself be conceptualized as the outcome of a meta-selection. This so-called *mode selection* formalizes the relationship between the four determinants, using a simple decision-theoretic modeling strategy (for a similar approach see Heiner 1983). Corresponding to the four variables, the mode selection depends on the opportunities for reflection,  $p \in [0, 1]$ ; on the motivation for reflection,  $U (> 0)$ ; on reflection costs,  $C (> 0)$ ; and on how strongly a script  $S_j$  that prescribes action  $A_k$  is activated.<sup>4</sup>

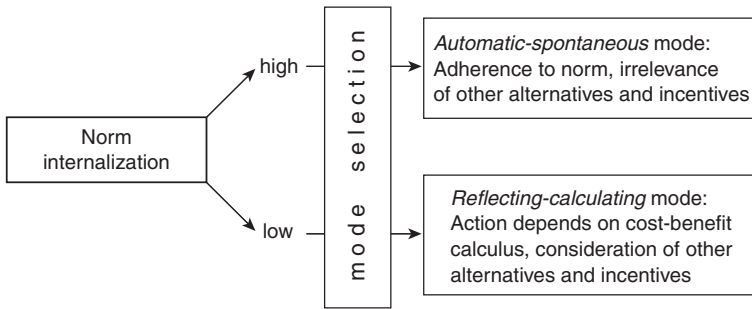
The decision-theoretic specification of the mode selection implies that an actor will select the automatic-spontaneous mode if, and only if, the activation weight exceeds a certain threshold (Kroneberg 2005; 2006):

$$AW(A_k|S_j) \geq 1 - C/(pU). \quad (4)$$

The derivation of this result is presented in Appendix A. Based on this inequality, it is possible to derive a number of empirically testable hypotheses.

Assume for the moment that the activation weight of action  $A_k$  depends solely on the general cognitive availability of the script, which we denote by  $a_j \in [0, 1]$ :  $AW(A_k|S_j) = a_j$ . In the case of norms, this corresponds to the norm's degree of internalization. It then follows that actors who have internalized a norm strongly enough ( $a_j \geq 1 - C/(pU)$ ) will follow it unconditionally without consideration of other alternatives and incentives. In contrast, actors with a degree of internalization lower than the threshold ( $a_j < 1 - C/(pU)$ ) will act based on a reflecting–calculating mode, and therefore will consider systematically other alternatives and incentives (see Figure 1). Thus, we can derive the following *ceteris paribus* hypothesis:

*Hypothesis: The more strongly a norm prescribing a certain behavior is internalized, the weaker are the effects of calculated incentives on this behavior.<sup>5</sup> If internalization is very strong, the norm is enacted irrespective of the presence and strength of such incentives.*



**Figure 1.** Action selection in the automatic-spontaneous mode vs. in the reflecting-calculating mode

This hypothesis implies a statistical interaction of particular sign and strength between norm internalization and the influence of calculated incentives, which can be tested using survey data.<sup>6</sup> Before we proceed to do so, note that we derived the hypothesis under a simplifying assumption: that the activation weight of action  $A_k$  depends solely on the degree of norm internalization. In its unreduced form, the MFS assumes that the activation is also affected by three additional factors: how sure the actor is about the kind of situation he or she is facing, how accessible the script is in the situation, and how clearly the script prescribes action  $A_k$  (see Appendix A). The MFS allows derivation of additional *ceteris paribus* hypotheses that pertain to these sources of variation (cf. Kroneberg 2006). Moreover, it has the advantage of clearly explicating the scope conditions of the above hypothesis: it is supposed to hold true only if the situation can be defined rather unambiguously, if the norm is sufficiently accessible in this kind of situation, and if the norm sufficiently regulates the respective behavioral choice (cf. Kroneberg 2005; 2006). We therefore discuss those three additional influences whenever they are important in the following empirical tests of the derived hypothesis.

### 3. Empirical applications

In the following we show how the MFS can be applied to explain electoral participation, and the rescue of Jews in WWII (for an application of the model to crime, see Kroneberg et al. forthcoming). After giving a short summary of the debates between rational choice and



normativist–culturalist accounts in each of these fields, we apply the MFS to resolve the conflicting positions within a more comprehensive explanation. Using quantitative data we then test the main hypothesis derived above.

### 3.1 Electoral participation

#### **Theoretical approaches and empirical evidence**

Voting has been judged the simplest, yet the most important, political act in democracies (Aldrich 1993; Brady et al. 1995). In the social sciences, however, voter participation still constitutes a major theoretical puzzle that has been at the center of debates between opposing theoretical traditions. Reacting to predominantly culturalist accounts of voting behavior, Downs in his *Economic Theory of Democracy* (1957) was the first to offer an RCT of voter participation. As is well known, however, his analysis led to the famous ‘voting paradox’, and since then turnout has always been ‘the major example of the failure of rational choice theory’ (Aldrich 1993). The voting paradox results from the notion that the instrumentally rational citizen will not go to the polls because the likelihood that his vote will be decisive is extremely small, which causes the expected utility to be lower than the direct costs and opportunity costs of voting. This prediction is obviously at odds with the empirically substantial turnout rates.

Many attempts have been made to provide an RCT account of voting that is in line with reality. For example, it has been argued that the expected benefit of voting may still be positive if voters are altruistic, so that they care about the *nation-wide* benefits of political decisions, such as those about welfare policies (Jankowski 2002; Edlin et al. 2007). Another argument points to the *subjective* expectation to exert an influence on the election outcome, which could be much higher than the respective *objective* probability (Opp 2001). Empirically, however, these instrumental accounts have explained only a minor part of the variability in participation or have not been confirmed consistently (Blais 2000; Mueller 2003). Much more successful have been *wide* rational choice approaches that abandon the assumption of purely instrumental or outcome-oriented behavior (Opp 1999). These portray voting as a consumption rather than as an investment activity. The argument is that people vote because they directly receive utility out of performing their civic duty as citizens, expressing their political preference, or affirming their political efficacy (Riker and Ordeshook 1968; Brennan and Lomasky 1993). These consumption benefits of voting do

not depend on decisively influencing election outcomes, so they may well outweigh the relatively low costs. In line with this explanation, a clear majority of studies have found that these consumption benefits dominate participation decisions (Blais 2000; Mueller 2003).

Nonetheless, such 'taste for voting' explanations have provoked enduring criticism for rendering RCT tautological, or at least weakening its explanatory power (cf. Opp 1999). The other side of this criticism is the claim that the normative commitments in which voting is grounded cannot adequately be captured by simply adding an additional utility term to a voter's cost-benefit calculus (Taylor 1996; Yee 1997; Engelen 2006). However, rational choice theorists correctly maintain that it is not enough just to refer to 'normative, cultural, psychological, and institutional' factors (Green and Shapiro 1994) without specifying a precise model of how they determine behavior (Chong 1996).<sup>7</sup>

The MFS has been developed to provide such an alternative. Its application can yield a more comprehensive explanation, and strengthen the view that some citizens maximize subjectively expected utility, whereas others participate on account of deeply internalized social norms without engaging in a deliberate cost-benefit calculus. Previous research provides supporting evidence, showing rational incentives to be much more predictive of participation in sub-samples with low attachment to the civic duty norm (Barry 1970: 17–18; Blais 2000: 101–3). More peculiarly, rainfall was found to significantly reduce the probability of voting only among respondents scoring low on the civic duty indicator (Knack 1994: 199). However, those studies fall short of providing a critical test of the interaction effect derived above since they estimate separate regressions for sub-samples with low and high attachment to the civic duty norm.

### **Theoretical integration within the Model of Frame Selection**

In the case of national or state elections, citizens typically know that an election is to be held on a certain date, and the situation is fairly clearly defined as 'election day.' Having activated this knowledge, the citizen also knows what kind of behavior is normatively expected: In functioning democracies voting is considered a civic duty (e.g. Blais 2000: 92–114). This civic duty norm also regulates the behavior of interest completely, insofar as it clearly prescribes participation. Furthermore, it can be assumed that citizens typically have sufficient opportunities to think about whether to participate or not, and that the costs of reflection are relatively low. Whereas these factors make a reflecting-calculating decision more likely, the fact that in most Western democracies the

decision to vote or not is generally a low-cost decision means that the motivation to reflect is rather low. Accordingly, the threshold that the internalization of the civic duty norm has to pass in order for participation to occur spontaneously is neither very low nor very high.<sup>8</sup>

Citizens for whom the internalization of the civic duty norm exceeds the threshold definitely go to the polls on purely normative grounds. Only those citizens whose internalization is less than the threshold deliberately weigh the costs and benefits of voting, encompassing instrumental as well as non-instrumental incentives. Accordingly, and in line with our general hypothesis, we expect the effects of calculated incentives on participation to decrease, the more strongly the civic duty norm is internalized. If internalization is very strong, such incentives should be irrelevant.

### **Sample, method, and operationalization**

To test our hypothesis we conducted a secondary analysis of data collected in the context of a state election in the German state of North Rhine-Westfalia in 1995.<sup>9</sup> These data – designed explicitly for a direct test of rational choice theories of voting (Kühnel and Ohr 1996) – provide direct measures of incentives, and multiple indicators of the internalization of the civic duty norm. The sample consists of 1,002 randomly drawn respondents, who were interviewed the week before the election and then re-interviewed the week after it. This feature of the survey allows us to analyze two indicators of voter participation: ‘self-reported intention to vote’ and ‘self-reported participation in the election’.

While the latter can be regarded as the more conservative indicator of behavior, the intention to vote has the advantage of being measured at the same time as our incentives variables. It is therefore not influenced by unexpected (and unmeasured) constraints that might become relevant on the day of the election. Moreover, our analysis of self-reported participation might be biased due to selective sample attrition, which amounts to 27% between the two interviews. In order to correct for potential biases, we estimate a probit model with sample selection (Van de Ven and Van Praag 1981). As shown in Appendix B, remaining in the sample is strongly associated with interviewers’ ratings of respondents’ cooperativeness and with how easily respondents could be reached during the pre-election wave.<sup>10</sup>

Both dependent variables are highly skewed, with 90.4 percent of the respondents reporting that they definitely will participate, and 88.8 percent indicating that they have voted.<sup>11</sup> Given that the official turnout at the election was 64.1 percent, the substantially higher level of reported

turnout may result from over-reporting. However, it could also be due to the socio-demographic selectivity of the sample, especially with regard to education (Kühnel and Ohr 1996). We therefore control for education (as well as for sex and age) in our regression models, including the selection equation that predicts participation in the post-election wave.

Our *civic duty norm* measure consists of an unweighted additive index of three indicators (pairwise polychoric correlations range from 0.47 to 0.65). In addition to the standard item that in democracies it is the duty of every citizen to participate regularly in elections, two other indicators measure the personal feelings of obligation linked to this norm: how far non-participation would contradict one's own personality, and how far it would lead to a guilty conscience (cf. the wording of the question and descriptive statistics in Appendix B). *Incentives to participate*: Based on both theory (Brennan and Lomasky 1993) and empirical studies (Mueller 2003), we expect political preferences to be a major incentive for participation. We use the presence or absence of party identification as an indicator for the incentive to express one's political preferences. Another major incentive is individuals' subjective expectation that their vote will influence the outcome of the election. If voting is conceived of as an *instrumentally* rational action, this expectation should increase the chance of participation more strongly if an individual has a clear political preference. However, even in the absence of such a positive statistical interaction, the belief that one's own vote is significant can be seen to constitute an important incentive: Rather than being part of outcome-oriented instrumental considerations, this belief could lead individuals to derive *consumption* benefits from participation, namely 'the satisfaction of affirming one's efficacy in the political system' (Riker and Ordeshook 1968: 28).

Because we are interested in maximum average effects, and in order to compare the relative size of the effects, we standardized all explanatory variables (except age) on the unit interval before entering them into the analysis.

## Results

We first describe the results for *intended* participation. Model 1.1 in Table 1 is a probit regression into which both the internalization of the normative script and the incentive variables enter *independently*. This specification follows from RCT under the assumption that the behavior

of all subjects is based on the same cost–benefit calculus.<sup>12</sup> Note that this model also does not entail an interaction between party identification and the belief that one’s vote is influential. The reason is that, when estimated, we did not find a positive interaction effect between perceived significance and party identification (analysis not reported). Hence, the two incentive variables seem to matter primarily as consumption benefits of participation. The coefficients show that the civic duty norm and the perceived significance of one’s vote strongly increase the chances of intending to participate in the election. In contrast, the existence of a party identification does not seem to affect the intention to participate.

In Model 1.2, we add product terms between the civic duty norm and both incentive variables in order to test the hypothesis derived from the MFS. Both interaction effects are statistically significant and have the expected negative signs. This means that the positive effects of perceived influence and party identification on intended participation *diminish* as the degree of norm internalization increases. The second part of the hypothesis derived from the MFS is also confirmed. By computing *conditional* effects, we see that when the civic duty norm is internalized to the highest degree, neither perceived influence ( $B = 1.76 - 1.81 = -0.05$ ,  $p = 0.925$ ) nor party identification ( $B = -0.52$ ,  $p = 0.159$ ) affect intended participation.<sup>13</sup> In contrast, where norm internalization is weakest, the impact of these incentives is much stronger than their average effects as estimated in Model 1.1. This is true not only with respect to perceived influence but also with respect to party identification ( $B = 0.65$ ,  $p < 0.05$ ) which was estimated to be of no substantial relevance in Model 1.1 ( $B = 0.17$ ,  $p = 0.239$ ). Thus, by introducing the interaction effects derived from the MFS, the normative insensitivity towards incentives, *as well as* the real strengths of these incentives, become visible.

Figure 2 illustrates for the perceived influence indicator how the interaction effect translates into the probability of intended participation. Here it is evident that this probability increases substantially with the perceived influence, but only among those with a low (here: the lowest empirically observed) internalization of the civic duty norm (bold broken line). Those who have internalized this norm to the highest degree are estimated to participate regardless of their perceived influence.

Models 1.3 and 1.4 in Table 1 give the results for *reported* participation. The specification without interaction effects in Model 1.3 yields somewhat different results than does the identical specification for intended participation. Party identification now has a much stronger, statistically significant impact. On the other hand, perceived influence

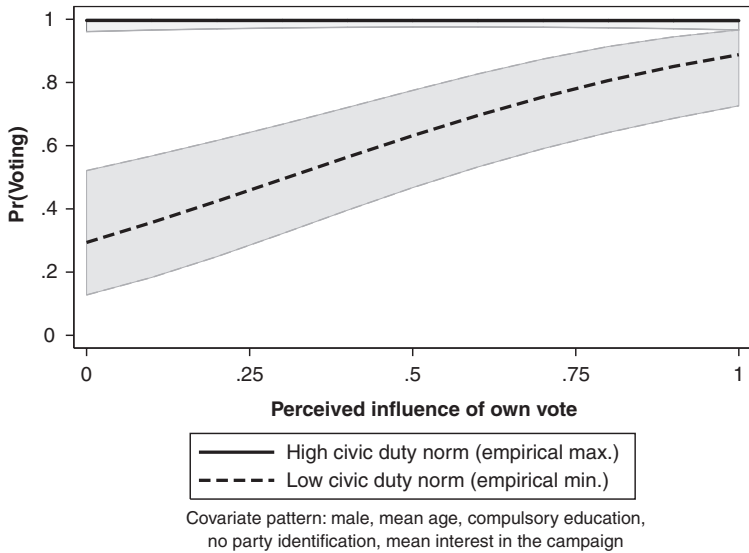
**Table 1.** Results from probit models of participation in the North Rhine-Westfalia state elections in 1995

	<i>Probit models of intention to participate</i>		<i>Probit selection models of reported participation: Outcome equations<sup>†</sup></i>	
	<i>Model 1.1</i> <i>B (std. error)</i>	<i>Model 1.2</i> <i>B (std. error)</i>	<i>Model 1.3</i> <i>B (std. error)</i>	<i>Model 1.4</i> <i>B (std. error)</i>
Age (in years)	0.01* (0.01)	0.01* (0.01)	0.02* (0.01)	0.02* (0.01)
Female	-0.23 (0.14)	-0.23 (0.15)	-0.24 (0.15)	-0.26** (0.15)
Education: (ref.: Compulsory education)				
Secondary school certificate	-0.10 (0.18)	-0.09 (0.18)	0.00 (0.18)	-0.00 (0.18)
High school certificate	0.20 (0.18)	0.22 (0.19)	0.55* (0.20)	0.57* (0.21)
Interest in campaign	1.17* (0.33)	1.12* (0.33)	0.70* (0.32)	0.74* (0.33)
Civic duty norm	1.35* (0.24)	3.21* (0.61)	0.71* (0.25)	1.93* (0.61)
Perceived influence	0.95* (0.26)	1.76* (0.45)	0.31 (0.28)	0.81** (0.48)
Party identification	0.17 (0.15)	0.65* (0.25)	0.36* (0.15)	0.85* (0.29)
Perceived influence × norm		-1.81* (0.81)		-1.00 (0.77)
Party identification × norm		-1.17* (0.53)		-0.95* (0.48)
Constant	-0.96* (0.30)	-1.69* (0.38)	-0.56 (0.36)	-1.14* (0.45)
<i>N</i>	892	892	914 (652 censored)	914 (652 censored)
Pseudo <i>R</i> <sup>2</sup>	0.2955	0.3195		
-2*Log likelihood	389.03	375.79	1292.32	1285.56
$\chi^2$ -improvement (d.f.)		13.24 (2)*		6.76 (2)*

*Notes:* All shown variables except age are standardized on the unit interval.

<sup>†</sup>The simultaneously estimated selection equations are presented in Table B3 (see Appendix B). \* $p < 0.10$ ; \*\* $p < 0.05$  (two-tailed tests).

has no statistically significant effect on reported participation. One explanation could be that the subjectively perceived influence changed between the pre-election interview and the day of the election due to



**Figure 2.** Effect of perceived influence on intended participation for citizens with high and low civic duty norm (predicted probabilities and 95% – C.I from Model 1.2)

polls or other influences. This would also explain why the impact of party identification does not diminish, since this is a rather stable attribute that can be expected to be less subject to short-term influences.

Model 1.4 includes the interaction effects derived from the MFS. The estimated negative interaction between norm internalization and party identification is statistically significant and strong, again clearly supporting our hypothesis. The interaction effect with perceived influence also has the expected sign and size, but cannot be estimated with sufficient certainty ( $p = 0.193$ ). This is not surprising, given that this incentive was already insignificant in the additive Model 1.3. However, whereas this earlier model would lead us to believe that perceived influence was irrelevant for reported participation, introduction of the interaction effect shows that there seems to be a considerable effect of this incentive among respondents with weakest internalization of the civic duty norm ( $B = 0.81, p < 0.10$ ). Also note that inclusion of both product terms together leads to statistically significant improvement in model fit ( $\chi^2(2) = 6.76, p < 0.05$ ). Taken together, this is again clear evidence that inclusion of both interaction effects leads to more valid estimates of the determinants of electoral participation. The patterns of predicted probabilities (not shown) are basically the same as those for intended participation.

Overall then, our analyses of intended and reported voter participation clearly support the hypothesis derived from the MFS.

### *3.2 The Rescue of Jews in WWII*

#### **Theoretical approaches and empirical evidence**

The rescue of Jews from Nazi persecution has been characterized as extraordinary acts of altruism (Oliner and Oliner 1988; Monroe et al. 1990; Varese and Yaish 2000). In contrast to voter participation, which in Western democracies is usually a low-cost situation, these rescue activities most often carried a high degree of risk to both the rescuers and their families. Studying this phenomenon therefore allows us to test the validity of the MFS in high-cost situations and to draw conclusions about the normative bases of altruistic behavior that might be easily generalized to other, less extreme situations. Furthermore, here too, an intense debate between rational choice and normativist approaches has developed (Monroe et al. 1990; Monroe 1991; Opp 1997; Elster 2000; Varese and Yaish 2000).

In studying the rescue of Jews in WWII, many social scientists have pointed to norms and personality traits as the factors underlying these altruistic activities (Oliner and Oliner 1988; Monroe et al. 1990). For example, the actions of the Danes who saved Jews have been described as deriving from 'clear convictions ... in accord with the inner truth of man's own rational nature, as well as in accordance with the fundamental law of God: "Thou shalt love thy neighbor as thyself"' (Merton 1971: 167, quoted in Gross 1997: 128). Similarly, Elster (1989: 193) argues that the altruistic behavior of the French citizens of Le Chambon was motivated by a moral principle. Monroe and her associates even claim that the concept of a cost-benefit calculus was 'meaningless' for rescuers of Jews in WWII (Monroe et al. 1990: 117; see also Monroe 1991; 1996). The authors explain these acts in terms of an altruistic self-identity that stretches beyond group affiliation, mere empathy, and calculation of expected utility. Geras (1995: 36) likewise argues that rescuers of Jews were motivated by a sense of belonging to 'humankind'. The significance of personality traits was stressed by Oliner and Oliner (1988), who conducted one of the most systematic and intensive studies to date on the rescuers of persecuted Jews in WWII. The Oliners constructed a personality profile for the rescuers in their sample, and argued that rescuers acted altruistically because they had an 'altruist personality' consisting of a strongly held, extensive prosocial orientation.

Students on the other side of the debate argue that the decision to rescue Jews in WWII was affected by situational factors, such as the varying



opportunity to help, and that these factors should be considered in addition to individuals' preferences (Opp 1997; Varese and Yaish 2000; 2005). For example, going explicitly against the normative explanation of Monroe and her associates, Opp (1997) argues that the rescue of Jews in WWII is best explained as the outcome of a rational choice. To the extent that norms or a 'sense of belonging to humankind' influenced these decisions, they should simply be perceived as (non-egoistic and psychological) utilities and costs that potential rescuers could expect from rescuing, or from refraining from rescuing (Opp 1997: 228, 230–1).<sup>14</sup>

In the first multivariate analysis of the Oliners' data, Varese and Yaish (2000) provide some support for an RCT account of the rescue of Jews by demonstrating that rescuing was associated with incentives, such as the number of rooms in the rescuer's home. Interestingly, however, among all variables in their analysis, *being asked* to help stood out as the most important factor in predicting rescue activity. As pointed out by Elster (2000: 694), this effect is inherently ambiguous. In an RCT perspective, being asked might simply have provided the opportunity to enact a pre-existing preference to rescue and solved the information dilemmas that existed in this high-risk setting (Varese and Yaish 2000). However, rather than being merely a situational factor, being asked might also have acted as a *trigger* for rescue activities, in the sense that it made the need for help so emotionally and normatively salient that individuals decided immediately to respond.

In a further analysis of the Oliners' data, Varese and Yaish (2005) showed that a positive statistical interaction exists between an individual's being asked for help and that individual's prosocial orientation. This finding is in line with the MFS because it indicates that a request for help may serve to define the situation as an opportunity to help a person in need. Furthermore, the significance of prosocial orientations suggests that in many cases, normative scripts, in the sense of strongly held personal convictions, might have been the basis for the decision to rescue. Starting from those findings and arguments, we will now apply the MFS to yield an integrated account based on the notion that rescue behavior might follow from an automatic–spontaneous mode or from a reflecting–calculating mode.

### **Theoretical integration within the Model of Frame Selection**

As noted above, it is realistic to assume that in the rescue of Jews in WWII, a request for help clearly defined the situation as one in which someone was in existential need of help. Of course, what people deemed the right way to react in this situation varied considerably, depending on

the person's relation to the Nazi regime and on their own attitude towards anti-Semitism. However, since we are concerned with explaining who rescued Jews (and not with who delivered Jews to the authorities, for example) we focus only on *potential rescuers*. For *this* group, the relevant normative script was the personal feeling of obligation to help the one in need (Monroe 1991; 1996). But potential rescuers might in this situation also have been affected by a competing norm: keeping their own family safe (cf. Varese and Yaish 2000). Given the objectively high risk entailed by rescue activities, this norm might have become especially salient for some actors.

Thus, in the rescue of Jews in WWII the script selection is not at all trivial. However, since we lack data on the degree to which the norm to keep one's own family safe was internalized, we cannot determine which respondents faced a norm conflict, nor how this was resolved. In our analysis, therefore, we have to assume that in such a situation the relevant script is the felt obligation to help, and that keeping one's family safe is simply an incentive within an actor's cost-benefit calculus. Insofar as the normative script clearly prescribes the offer of help, we can further assume that it regulates the behavior of interest completely.

Thus, the mode by which potential rescuers reacted to a request for help depended mainly on the strength of the felt obligation to help. Potential rescuers for whom the internalization of this script exceeded the relevant threshold (see equation 4) rescued Jews on purely normative grounds.<sup>15</sup> Only those for whom internalization was less than the threshold deliberately weighed the costs and benefits of helping Jews. Statistically, this hypothesis implies an interaction effect between the felt obligation and the calculated incentives, most importantly the perceived risk of helping. Where the felt obligation to help was very strong, such incentives should have been irrelevant.

### **Sample, method, and operationalization**

We performed a secondary analysis of data collected by the Altruistic Personality and Prosocial Behaviour Institute (APPBI) in the 1980s, which were first analyzed by Oliner and Oliner (1988). More recent multivariate analyses have been conducted by Varese and Yaish (2000; 2005) and Oliner (2004).<sup>16</sup> Probing the rescuers of Jews during the Nazi occupation of Europe is best seen as a study of rare events, since the dependent variable ('rescuing Jews') would not be easily identified in a random sample of men and women who lived in Europe then. A solution to this problem can be achieved by the use of *retrospective* samples – also known as *case-control* samples (see, e.g., Xie and Manski

1989). In the collection of the APPBI data, Oliner and Oliner (1988) followed this sampling method, matching the case and the control samples on age, sex, education, and geographic location during the war. By implication, these socio-demographic variables should not affect the response variable ('helping Jews'). However, in our sub-sample we did find a significant net effect of the respondents' level of education and therefore controlled for this variable in our analyses.

The APPBI data are made up of two samples (total  $N = 510$ ) that consist of three sub-populations: (a) identified rescuers ( $N = 346$ ), (b) self-reported rescuers ( $N = 67$ ), and (c) non-rescuers ( $N = 97$ ). In our analysis we include in the *case* sample both the identified rescuers and the self-reported rescuers, and assign to the *control* sample only those who did not help anyone during the war (cf. Varese and Yaish 2000; 2005). Since our incentive measure ('perceived risk') was obtained only from those who were asked to help, and since in our theoretical model the ambiguity of the situation is an important factor that should be held constant, we restrict the analysis to those individuals who were asked to help ( $N = 247$ ).

These 247 individuals account for 286 events of help (or refusal to help), since 39 of the respondents interviewed reported two events. In our analysis, we take this clustering into account by using robust standard errors. We excluded cases with missing values on our variables of interest, as well as those respondents for whom interviewers reported that they had only a poor memory of the events and a poor understanding of the questions. As a result, our sample consists of  $N = 174$  events. The dependent variable of the following analysis corresponds to the case sample and to the control sample (1 = helped, 0 = did not help). Since there are only 32 cases in one category of our dependent variable ('rejection of a request for help'), the statistical power of our tests is rather low. We therefore allow for a somewhat higher degree of uncertainty than is implied by conventional significance levels. In the following we introduce the main explanatory variables used in our analysis. Again, these were standardized on the unit interval before entering them into the analysis.

*Perceived risk index* taps the incentive parameter in our theoretical model. This index is an arithmetic average of the perceived risk to oneself and to one's family ( $r = 0.48$ ), both measured on a 5-point scale (1 = no risk at all; 2 = slight risk, 3 = don't know, 4 = moderate risk, 5 = extreme risk).<sup>17</sup>

The variable *prosocial orientation* measures the availability of the relevant script. The index was first introduced by Oliner and Oliner (1988), and consists of the factor scores on the first of three factors that

are produced by a factor analysis of 42 personality items (see Appendix C). The factor can be interpreted as the extent to which respondents are characterized by emotional empathy for others' pain and personal feelings of social responsibility (Oliner and Oliner 1988: 174). It therefore corresponds closely to the personal feeling of obligation to help someone in need, as emphasized in our theoretical model.

Since the personality items relate to the *present time*, we have to assume that the prosocial orientation measured at the time of the interview is a valid gauge of an individual's prosocial orientation during WWII, rather than merely a retrospective rationalization of the act of rescuing. This assumption is supported by extensive psychological literature, which found that attitudes and orientations are developed early in life and remain fairly stable thereafter (see the discussion in Varese and Yaish 2005). Furthermore, in our sample we observe for both helpers and non-helpers the full range of the prosocial orientation measure and no significant difference in variances between the two groups.

## Results

Again, we start with an additive specification without any interaction effects. Model 2.1 in Table 2 shows that the effects of the norm variable and the incentive variable operate in the expected direction: prosocial orientation is positively associated with rescuing Jews in WWII, while the perceived risk is negatively associated with rescuing Jews. However, the latter coefficient is not statistically significant.

In Model 2.2 we add a product term between perceived risk and prosocial orientation to test the hypothesis derived from the MFS. The interaction effect has the expected positive sign, meaning that the *negative* effect of perceived risk on helping Jews in WWII is *reduced*, the higher the prosocial orientation. Although it is statistically significant only on the 10% level (two-tailed test), this somewhat higher degree of uncertainty seems acceptable, since the interaction is clearly of substantial magnitude and since statistical power is rather low due to there being only 32 observations in one category of the dependent variable.

The second part of the hypothesis derived from the MFS is also confirmed. When computing conditional effects (cf. note 13), we see that among respondents with the highest prosocial orientation, there ceases to be any significant relationship between perceived risk and rescuing Jews in WWII ( $B = -3.16 + 3.90 = 0.74$ ,  $p = 0.443$ ). Conversely, among the respondents with the weakest prosocial orientation, the negative effect of perceived risk now becomes clearly significant ( $B = -3.16$ ,  $p < 0.05$ ) and

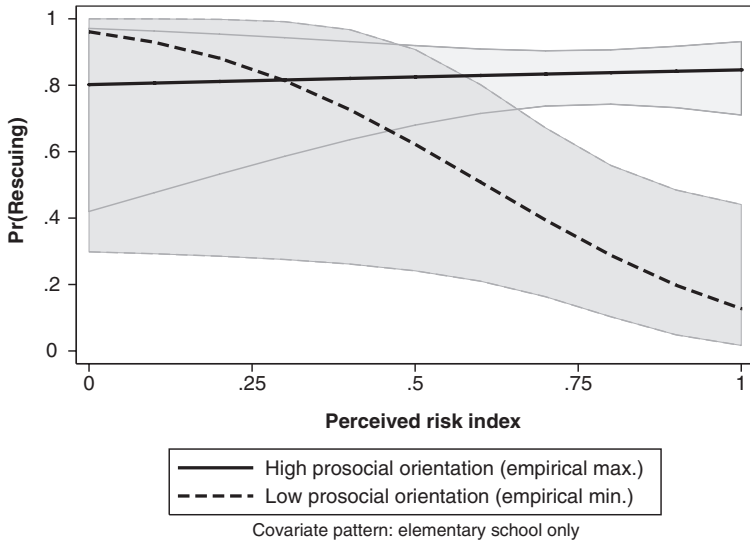
**Table 2.** Results from probit models of rescuing Jews in WWII

	<i>Model 2.1</i>		<i>Model 2.2</i>	
	<i>B (standard error)</i>		<i>B (standard error)</i>	
Education (ref.: Elementary school)				
Apprenticeship	0.42	(0.34)	0.40	(0.35)
High school certificate	0.69*	(0.27)	0.77*	(0.29)
University degree	0.03	(0.24)	- 0.02	(0.24)
Prosocial orientation (PO)	1.80*	(0.43)	- 1.23	(1.71)
Perceived risk	- 0.68	(0.48)	- 3.16*	(1.36)
PO × perceived risk			3.90**	(2.15)
Constant	0.07	(0.44)	2.01**	(1.13)
<i>N</i>	174		174	
Pseudo <i>R</i> <sup>2</sup>	0.1148		0.1394	
-2*Log likelihood	147.02		142.94	

Notes: Huber-White robust standard errors in brackets. All shown variables are standardized on the unit interval.

\**p* < 0.10; \*\**p* < 0.05 (two-tailed tests).

is substantially stronger than the insignificant average effect in the additive Model 1.1. Thus, the explanatory power of the incentive variable increases markedly if we go beyond the additive RCT specification.



**Figure 3.** Effect of perceived risk on rescuing Jews in WWII for respondents with high and low prosocial orientation (predicted probabilities and 95% - CI from Model 2.2)

Figure 3 depicts how this interaction effect translates into the probability of providing help to Jews in WWII after being asked to do so. Clearly, this probability decreases substantially as the perceived risk rises, but only among those whose prosocial orientation is low (here: lowest) (bold broken line). Those having internalized this normative script to the highest degree are estimated to help Jews regardless of the risk involved. As the 95 percent confidence envelopes plotted alongside each estimated probability curve indicate, the estimation of the probabilities is more certain at relatively high levels of perceived risk, and this is where they clearly differ.

#### 4. Summary and conclusions

The MFS (Esser 2001; Kroneberg 2005; 2006) provides an integrated account of norms and rationality, specifying the conditions under which behavior results from unquestioned normative beliefs, rather than from a cost–benefit calculus. It implies that in an unambiguously defined situation, actors with strongly held normative convictions will try to follow them without considering other alternatives and incentives. This reasoning led to the hypothesis that with increasing strength of actors' normative convictions, the effects of calculated incentives on behavior decrease and are ultimately absent. Using quantitative data we tested this interaction effect on two very diverse cases: the rescue of Jews in WWII, and participation in political elections.

Overall, our analyses clearly support the main hypothesis derived from the MFS. The consumption benefit derived from expressing one's political preferences and the perceived influence of one's vote matter less for the decision to go to the polls, as the actors normatively feel more strongly obliged to vote. Likewise, upon being asked to help Jews in WWII, potential rescuers were less influenced by the perceived risk to oneself and to one's family, the stronger their prosocial orientation. In both cases the direction and the size of the interaction effects completely meet our theoretical expectations. Specifically, it can be shown that where normative beliefs are strongest, the incentives cease to be relevant at all. With only minor exceptions that seem to originate in data restrictions and the difficulties involved in measuring perceived incentives, the interaction effects can also be estimated with sufficient certainty. Given that the two cases to which we applied the MFS are very diverse – comprising low-cost as well as high-cost, recent as well as historical, and ordinary as well as extreme situations, there is good reason to believe in the generalizability of our results.

The MFS not only allows us to approach the rescue of Jews in WWII and electoral participation in a theoretically unified way, it also yields in each case an understanding that recognizes the heterogeneity of social actions: Some actions are guided by forward-looking deliberations, others by adherence to strongly internalized norms. Even with respect to the cases considered, however, the potential of the MFS is far from exhausted. Due to data limitations, we had to disregard a number of parameters that are expected to exert an independent influence on the mode of information processing, and thus ultimately on behavior (e.g. the opportunities and motivation for a reflecting–calculating mode). We also had to assume that the actors could unequivocally define the situations they faced, and that it was equally clear to them what these situations normatively required. It was not always clear, however, that a request for help was not in fact a trap set by supporters of the Nazi regime (cf. Varese and Yaish 2000), or that the norm of keeping one’s own family safe was of less significance than the obligation to help.

In the area of voting behavior, the MFS could provide a framework within which to relate and integrate models of forward-looking (e.g. Edlin et al. 2007) and backward-looking rationality (e.g. Bendor et al. 2003) that have so far been elaborated separately. Clearly, rational choice theories of turnout remain important to explain changes at the margin (Engelen 2006: 436), namely precisely among those individuals who decide in a reflecting–calculating mode whether or not to go to the polls. However, the MFS would lead us to hypothesize that changes at the margin can also result from communication processes that affect the normative framing of voting (see, e.g., Blais and Young 1999). Here and in other areas of research, ample opportunities exist for further applications of the MFS, and for the kind of integrated analyses of norms and rationality that it offers.

### **APPENDIX A: Decision-theoretic formalization of the mode selection**

The following derivation of the mode selection follows Kroneberg (2005; 2006). Denote by  $A = \{A_1, \dots, A_K\}$  the set of alternatives among which a selection is made. Depending on which substantial selection we are looking at, these can be either frames, or scripts, or different courses of action. The mode selection determines whether this selection takes place in an *automatic–spontaneous* (as-) mode or in a *reflecting–calculating* (rc-) mode.

Note that, since the *rc*-mode represents the more effortful alternative, it will govern a selection only if it seems feasible and necessary/profitable. The two relevant *states of the world* are therefore (1) whether or not sufficient opportunities for reflection exist, and (2) whether or not the alternative that is directly accessible is valid. Denote as  $p$  the probability that sufficient opportunities for reflection exist. Denote as  $AW(A_i)$  the probability that the alternative which can be automatically selected is valid. Assuming independence, the probability that any *combination* of the two states of the world will occur equals the product of the respective probabilities.

We can now specify the payoffs that result from selection of the two modes: In the *as*-mode, the actor selects the alternative  $A_i$  that has the highest activation weight. It therefore does not matter whether or not sufficient opportunities for reflection exist. If  $A_i$  is valid, the *as*-mode results in a payoff denoted as  $U_i$ . If it is invalid, it will lead to a wrong selection, and therefore to costs  $C_w$ . Weighted with the respective probabilities, this yields

$$SEU(as) = AW(A_i)U_i - (1 - AW(A_i))C_w. \quad (A1)$$

The *rc*-mode inevitably brings about reflection costs  $C$  in the form of time (opportunity costs) and energy. However, the greater effort might pay off if the alternative that would be selected in the *as*-mode is *not* valid ( $1 - AW(A_i)$ ). If, in this situation, sufficient opportunities for reflection exist ( $p$ ), the *rc*-mode will allow the actor to identify some other, valid alternative, resulting in a payoff of  $U_{rc}$ . If  $A_i$  is not valid, but reflection fails due to insufficient opportunities ( $1 - p$ ), *or* if the spontaneously accessible alternative  $A_i$  is valid anyway, the same alternative will be selected in either mode. Adding up the expected payoffs of the *rc*-mode yields

$$SEU(rc) = p(1 - AW(A_i))U_{rc} + (1 - p)(1 - AW(A_i))(-C_w) + AW(A_i)U_i - C. \quad (A2)$$

The *rc*-mode will be selected if  $SEU(rc) > SEU(as)$ , which is equal to

$$p(1 - AW(A_i))(U_{rc} + C_w) > C. \quad (A3)$$

Thus, an actor selects (in) the *rc*-mode if, and only if, compared to an automatic-spontaneous selection, the additional utility of this mental activity exceeds its additional costs  $C$ . Note that the sum  $(U_{rc} + C_w)$  represents what can be gained by selecting the *rc*-mode rather than the *as*-mode. This corresponds exactly to the notions of motivation put forward in social psychology (Fazio 1990: 92). For simplicity, define  $U \equiv U_{rc} + C_w$ .



If one considers the condition for the as-mode,  $SEU(as) \geq SEU(rc)$ , solving for the highest activation weight yields

$$AW(A_i) \geq 1 - C/(pU). \tag{A4}$$

In this decision-theoretic context,  $AW(A_i)$  is the probability that the alternative which can be automatically selected is valid. At the same time, it is the strength with which an alternative is activated in a situation. The rationale is that a strong activation signals to the actor that an alternative is highly relevant or applicable.

If we focus on action selection, the activation weight is denoted by  $AW(A_k|S_j)$  and gives the activation of a course of action  $A_k$  under a script  $S_j$ . The MFS assumes that activation is greater, the more clearly the situation could be defined (match  $m_i$  of a frame  $F_i$  to the situation), the more accessible the script  $S_j$  is in this type of situation ( $a_{jii}$ ), the more strongly the actor has mentally anchored this script ( $a_j$ ), and the more strongly it regulates the respective behavioral choice ( $a_{kij}$ ):

$$AW(A_k|S_j) = m_i \cdot a_{jii} \cdot a_j \cdot a_{kij}, \tag{A5}$$

where all parameters lie in the unit interval. If we focus not on action selection, but on the foregoing frame (script) selection, the activation weight corresponds only to the first (first, second, and third) of these four factors (cf. Kroneberg 2005, 2006). Finally, note that the mode selection itself represents a spontaneous process and that therefore the values of all parameters result solely from directly perceived attributes of the situation and from mentally encoded experiences.

### APPENDIX B (Electoral participation)

**Table B1.** Civic duty norm indicators and exploratory factor analysis of polychoric correlation matrix (iterated principal factors) ( $N = 983$ )

<i>Indicator</i>	<i>Factor loading</i>
In a democracy it is the duty of every citizen to participate regularly in elections.	0.62
If I missed an election, I would have a guilty conscience afterwards.	0.76
Not to vote would contradict my personality.	0.85

*Notes:* English translations, original items in German. Response scale from 1 (do not agree at all) to 3 (agree completely).

**Table B2.** Descriptive statistics for the main explanatory variables ( $N = 892$ )

	<i>Value range</i>	<i>Mean<sup>a</sup></i>	<i>Standard deviation</i>
Civic duty norm <sup>b</sup>	0/1	0.66	0.32
Party identification <sup>c</sup>	0,1	0.70	—
Perceived influence <sup>d</sup>	0/1	0.74	0.27

<sup>a</sup> In the case of dummy variables, the mean equals the relative frequency of the category coded 1.

<sup>b</sup> Unweighted additive index based on the indicators in Table B1.

<sup>c</sup> Item: 'Many people in the Federal Republic lean towards a particular party over a long time, although they may from time to time vote for another party. How about you? Do you tend, in general, to lean toward a particular party?'

<sup>d</sup> Item: 'What do you think is the significance of your vote for the outcome of the state election on the 14<sup>th</sup> of May? Does your vote at this election have *great* significance, *medium* significance, *minor* significance, *almost no* significance, or *no* significance at all?'

**Table B3.** Selection equations of the probit selection models of reported participation – Dependent variable: Participation in post-election wave

	<i>Model 1.3</i>		<i>Model 1.4</i>	
	<i>B</i>	<i>(standard error)</i>	<i>B</i>	<i>(standard error)</i>
Age (in years)	0.01*	(0.00)	0.01*	(0.00)
Female	0.15	(0.10)	0.15	(0.10)
Education:				
(ref.: Compulsory education)				
Secondary school certificate	– 0.00	(0.12)	– 0.00	(0.12)
High school certificate	– 0.04	(0.12)	– 0.04	(0.12)
Interest in campaign	– 0.10	(0.19)	– 0.11	(0.19)
#calls (until interviewed in 1st wave)	– 0.24*	(0.06)	– 0.24*	(0.06)
Square root of #calls	0.75*	(0.28)	0.74*	(0.29)
Interviewer's rating of respondent's cooperativeness:				
(ref.: moderate/changing)				
bad	– 0.95*	(0.25)	– 0.95*	(0.25)
good	0.87*	(0.11)	0.87*	(0.11)
Constant	– 0.85*	(0.35)	– 0.84*	(0.35)
<i>N</i>	914		914	
	(652 censored)		(652 censored)	
– 2*Log likelihood	1292.32		1285.56	
$\rho$	–0.38		–0.34	

*Note:* The simultaneously estimated outcome equations are presented in Table 1.

\* $p < 0.05$  (two-tailed tests).

## APPENDIX C (RESCUE OF JEWS IN WWII)

**Table C1.** Personality items of the prosocial orientation factor and exploratory factor analysis (iterated principal factors) ( $N = 450$ )

<i>Personality item</i>	<i>Factor loading</i>
I cannot feel good if others around me feel sad.	0.52
I get very upset when I see an animal in pain.	0.50
I get angry when I see someone hurt.	0.49
If it is worth starting, it is worth finishing.	0.48
It upsets me to see helpless people.	0.47
The feelings of people in books affect me.	0.47
I get very involved with my friends' problems.	0.46
Seeing people cry upsets me.	0.45
I feel very bad when I have failed to finish something I promised I would do.	0.43
The words of a song can move me deeply.	0.38
Every person should give time for the good of the country.	0.36
I feel I am a person of worth at least on an equal basis with others.	0.30

*Note:* Response scales from 1 (strongly disagree) to 5 (strongly agree).

**Table C2.** Descriptive statistics for the main explanatory variables ( $N = 174$ )

	<i>Value range</i>	<i>Mean</i>	<i>Standard deviation</i>
Prosocial orientation (factor scores) <sup>a</sup>	0 / 1	0.67	0.23
Perceived risk to oneself	1 / 5	3.94	1.35
Perceived risk to one's family	1 / 5	3.97	1.39
Perceived risk index <sup>b</sup>	0 / 1	0.74	0.29

<sup>a</sup> Factor scores based on the indicators in Table C1.

<sup>b</sup> Unweighted additive index based on the two risk indicators.

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#### NOTES

1. Throughout this paper, we speak of subjective expected utilities (SEU) in order to emphasize that costs and benefits are weighted with subjective expectations/decision weights rather than objective probabilities. This usage conforms to that of value-expectancy theories in psychology and also underlies most applications of RCT in sociology. Note, in particular, that we do not subscribe to Savage's (1954) more specific SEU theory and its measurement axioms.
2. We thank the anonymous reviewer who pointed out that it is precisely with regard to this so-called Axiom of Archimedes that the MFS contradicts the standard incorporation of internalized norms into RCT.
3. The assumption of variable rationality means that it is only under certain circumstances that actors will engage in a systematic consideration of future consequences and make subjectively rational choices. Thus, the MFS uses the term 'rationality' in the sense that an actor considers the full range of available alternatives and relevant incentives (similarly Schütz 1970; Weber 1978). Note, however, that such behavior might still be called 'rational' if this term is used differently. In particular, unconditional rule-following does not imply that actors have inconsistent preferences. We therefore do not argue on empirical grounds with the version of RCT that requires actors only to have transitive preferences and to behave as if they maximized some utility function. Understood in this way, RCT simply does not share our aim to explain behavior, since utility functions are then merely representations of choice behavior (Gintis 2006: 48–9; Lovett 2006). In contrast, the MFS attempts to incorporate RCT understood as a family of explanatory models of how actions result from forward-looking rationality.
4. The values of all parameters of the mode selection reflect mentally encoded experiences and directly perceived properties of the situation. This point is vital for a proper understanding of the model. The mode selection does not represent a conscious forward-looking decision, nor can it, since the decision on whether to search for more information cannot be based on properties of this unknown information (such as its utility or the probability of discovering it).
5. Note that RCT also predicts some kind of interaction effects between incentives: Due to the nonlinear form of discrete choice models, all explanatory variables are assumed to interact with regard to the probability of a certain behavior. The MFS goes beyond these model-inherent interaction effects by predicting variable-specific interaction effects between norm internalization and other incentives (cf., e.g., Nagler 1994: 249–50). The latter can be tested using product terms (just as in linear regression models).

6. Based on survey data it is hardly possible to directly measure the relevant threshold in equation 4, that is, the ratio of reflection costs to motivation and opportunities for reflection. Notwithstanding that, the MFS allows the derivation of *ceteris paribus* hypotheses. With regard to the derived hypothesis, note the right-hand side threshold  $1 - C/(pU)$  can take on only values close to 1 (if  $C$  approaches 0) or smaller (since  $C$ ,  $p$ , and  $U$  are by definition non-negative). It follows that if the internalization of the norm is perfect,  $a_j = 1$ , the automatic–spontaneous mode should prevail independent of the other parameters.
7. Meanwhile, however, some formalized behavioral models of turnout have been proposed (e.g. Bendor et al. 2003). In contrast to the MFS, these models generally do not integrate RCT as a special case and view participation only as habitual behavior – thereby missing its significant normative component.
8. Formally,  $p$  equals 1 and  $C/U$  is neither very low nor very high in equation 4. Thus, the mode depends on whether the internalization ( $a_j$ ) of the civic duty norm is high enough so that the right-hand threshold is crossed.
9. We thank Steffen Kühnel and Dieter Ohr for generously sharing with us the data. For a full description of the data collection see Kühnel and Ohr (1996), for a previous analysis see Kühnel and Fuchs (1998).
10. Theoretically, it seems justified to use these variables as ‘exclusion criteria’ given that the outcome equation includes the respondents’ subscription to the civic duty norm and their interest in the campaign. We also established empirically that the exclusion criteria have no effect on participation net of the latter variables.
11. Because of few observations, our intention measure combines those who do not intend to vote and those who claim to be undecided into a common category. In consequence, the dependent variable differentiates those indicating their definite participation from all other respondents.
12. Behavioral game theory has resulted in several models of social preferences that explicitly go against this assumption and point to heterogeneity with respect to preferences (see Camerer 2003). As stated already above, we do not argue against these models, since they use utility functions merely as a representation of preferences and acknowledge the importance of both bounded rationality and framing effects (Gintis 2006).
13. Since all variables have been transformed to the unit interval, the effects of the incentive variables conditional on the norm internalization taking its empirical minimum can be read directly from the regression tables: They are equal to the ‘main effects’ of the incentive variables. Their conditional effects for maximum norm internalization, however, have to be calculated. This is done by adding the coefficient of the respective product term to the corresponding ‘main effect’.
14. Far from being a narrow rational choice explanation, in some points Opp’s explanation of rescue behavior comes remarkably close to the explanation in the MFS we develop below. Yet it is precisely at these points that his auxiliary (or bridge) assumptions about how situational attributes affect the (non-)perception of costs and benefits, rather than RCT per se, do the explanatory job (see Opp 1997: 228). In contrast, the MFS includes, as an integral part of the theory itself, the situational factors identified by Opp and predicts their influence a priori.
15. The components of the threshold in equation 4 are likely to have varied, depending on situational circumstances. Being asked for help should have been associated on average with fewer opportunities to reflect (lower  $p$ ) and with higher costs ( $C$ ) of reflection. However, because of the high stakes entailed, the general motivation for

- deliberation (U) should have been relatively high. Thus, the mode depended ultimately on whether the availability ( $a_i$ ) of the normative obligation to help was high enough to cross the right-hand threshold.
16. We thank Samuel P. Oliner for generously sharing with us the data he collected on rescuers of Jews during the Nazi occupation of Europe. For a full description of the data collection see Oliner and Oliner (1988: Appendix C). For an analysis of the relationship between Christian religious cultures (as operationalized by denomination and level of religiosity) and rescue behavior, see the more recent analysis by Pearl M. Oliner (2004).
  17. On the items that make up our perceived risk indicator, we treat 'don't know' answers as a middle category. This is done in order to retain as many cases in the analysis as possible. However, our results (including levels of statistical significance) are robust against excluding these cases as missing.

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