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**Norms or Rationality? The Rescue of Jews,
Electoral Participation, and Educational Decisions**

Clemens Kroneberg[*]
and Volker Stocké[**]
and Meir Yaish[***]

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[*]Sonderforschungsbereich 504, email: ckronebe@rumms.uni-mannheim.de

[**]Sonderforschungsbereich 504, email: vstocke@rumms.uni-mannheim.de

[***]Sonderforschungsbereich 504, email: myaish@univ.haifa.ac.il

Universität Mannheim
L 13,15
68131 Mannheim

ABSTRACT

In sociology it has been much debated whether the normativist-culturalist or the rational choice perspective better explains social phenomena. Since each has received considerable empirical support, an integrated account of norms and rationality is much needed. The *Model of Frame Selection* offers such an integration. In this model, cost-benefit calculus is replaced by unconditional norm conformity if norms are strongly internalized. We test this proposition in three fields of application: the rescue of Jews in WWII, electoral participation, and the decision among secondary school tracks. In line with the predictions of the *Model of Frame Selection* we find that strong helping norms, intense norms of civic duty, and high educational aspirations lead actors to disregard the risk of helping Jews, the incentive to express political preferences, and the prospects to complete school tracks.

1. Introduction

The understanding and explanation of human action constitutes a core task, and no 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 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. Thus, for example, Subjective Expected Utility (SEU) theory assumes that actors choose an alternative that maximizes their subjectively expected utility.

Although RCT has become an established approach within sociology,[1] 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 (Bohman 1992; Boudon 1998; Elster 1989; Etzioni 1988; Smelser 1992; Yee 1997). Thus it is argued that despite explicit attempts to provide accounts of norms and institutions within RCT, it 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 perspective has until now not resulted in an alternative model from which specific implications for behavior can be deduced (Elster 2000; Yee 1997). Without such a competitive alternative, it is not surprising that RCT has become increasingly popular, especially in quantitative sociological research (Blossfeld and Prein 1998; Goldthorpe 1996).

While both sides 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 (Elster 2000). In this article, we present such an account – the *Model of Frame Selection (MFS)* – and show how it can advance our understanding in three different fields of sociological inquiry: the rescue of Jews in WWII, electoral participation, and educational decisions.

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[1] There are, moreover, structural approaches and empirical studies that do not use any explicit theory of action. These studies and approaches either use RCT implicitly, or are characterized by an eclectic orientation.

The MFS (Esser 2001; Kroneberg 2005) is a formalized theory of action that integrates RCT and the normativist-culturalist approach into a more general account of human behavior, which is exact enough to derive statistically testable hypotheses. Fundamental to the MFS is the notion that under certain conditions individuals act automatically by following strongly internalized norms, while under other conditions they engage in a deliberative cost-benefit calculus. In this model, the strength of norm internalization is itself a crucial determinant of an actor's variable rationality.

In this article, then, we test the moderating role of norm strength in the above-mentioned three fields of application. The rescue of Jews in WWII and voter turnout are both prominent examples in the ongoing debate on the limitations of RCT (for instance, see Elster 2000; Monroe, Barton, and Klingemann 1990; Opp 1997; or Blais 2000; Friedman 1996; Green and Shapiro 1994), while the explanation of educational choice is a core subject matter in sociological research, given its importance for social stratification in modern societies. Since the three fields span a wide spectrum from low-cost to high-cost situations and from historical to more recent phenomena, an analysis of all three seems well suited to test the theoretical applicability and empirical validity of the MFS across contexts.

2. The Model of Frame Selection

The Model of Frame Selection (MFS) was formulated by Esser (2001), bringing together important insights from economic, sociological, and psychological theories of action. More recently the model has been formalized by Kroneberg (2005, 2006a), and it is a considerably reduced version of this formal model that we present and apply here. Following classical sociological concepts of action (Parsons 1937; Thomas and Thomas 1928), the MFS takes into consideration how actors define a given situation and which parts of their incorporated repertoire of behavior they identify as relevant (for a similar approach, see Lindenberg 1989, 2002). Building on recent developments in cognitive psychology (cf. DiMaggio 1997), both processes are conceptualized as the activation of *mental models*. First, actors interpret a situation by activating an appropriate mental model of the situation, a process called *frame selection*. The frame defines the situation, thereby answering the question, "What kind of situation is this?" (Goffman 1974). In a second step, actors activate a corresponding mental model of behavior. This selection of a *script* (e.g. a norm, routine, or habit) answers the question, "What kind of behavior is appropriate?" (March and Olsen 1989). Having made these selections, an actor finally faces the question, "What am I going to do?", and the answer to this third question is called *action selection*. Lacking the data needed to analyze

the frame and script selections, we focus primarily on action selection in this paper. That said, the concept of script is highly important to our analysis since in laying down how scripts can guide behavior, the MFS incorporates central notions of the normativist-culturalist perspective. Although the concept has a much broader meaning, in our applications we equate scripts with norms, i.e. scripts that strongly prescribe a certain behavior because of its inner value and that are tied to personal feelings of obligation (Elster 1989).

In theorizing the ways in which norms can guide behavior, the MFS recognizes actors to be capable of *variable degrees of rationality* when selecting an action. As has been emphasized in phenomenological social theory (Schütz 1970), everyday behavior typically follows traditions, routines, and habits whose validity is taken entirely for granted. Moreover, actors do not consider the full range of available alternatives and relevant incentives in the case that they adhere to strongly internalized norms or values (Elster 1989; Etzioni 1988; Weber 1978). Only under certain circumstances do actors engage in a systematic consideration of future consequences and make subjectively rational choices.

Building on dual-process theories in social psychology (Chaiken and Trope 1999; Fazio 1990), the MFS implements the assumption of variable rationality in two ways. First, it formalizes both a controlled and an automatic *mode of information processing*, assuming that an actor can select an alternative either in one or the other mode. Second, it also incorporates the *determinants* of the mode of information processing (see below). Action selection in the *reflecting-calculating mode* (rc-mode) represents a deliberate choice in which consequences and their probabilities of occurrence are processed systematically. This mode corresponds to the forward-looking conception of rationality developed within RCT. Accordingly, we formalize behavior selection in the rc-mode by using SEU theory, that is, we assume that an actor chooses the alternative A_i (out of the choice set A) that maximizes her subjectively expected utility:

$$SEU(A_i) > SEU(A_j) \qquad \text{for all } j \in A, j \neq i \tag{1}$$

In contrast, the *automatic-spontaneous mode* (as-mode) stands for selection of a behavior that is based solely on a strongly activated script that has become encoded in the past (Vanberg 2002). The as-mode thereby frees the actor from scrutinizing competing alternatives. According to the MFS, automatic-spontaneous behavior conforming to a script is more likely, the more powerfully this script has been activated in a situation and the more forcefully it regulates the respective behavioral choice. In our applications, we assume that

the script S_j clearly prescribes the choice of action A_k and that the script's activation depends solely on its general availability, which we denote by a_j ($\in [0,1]$). Thus, the activation weight (AW) of action A_k in the as-mode after the script S_j has been activated simply equals the script's availability:

$$AW(A_k|S_j) = a_j. \tag{2}$$

In the as-mode, the alternative A_k that is prescribed by the script gets selected. In its unreduced form, the MFS takes into account that the activation of the script-based alternative might be lower because the situation cannot be defined unambiguously, because the particular script might not be perfectly accessible in this kind of situation (e.g. due to competing scripts), or because it might not sufficiently regulate the respective behavioral choice (cf. Kroneberg 2005, 2006a). Although we do not present their formalization, we discuss those influences whenever they are important in the subsequent applications.

By focusing on the definition of the situation and actors' variable rationality, the MFS goes beyond the narrower explanatory framework of RCT, which depicts actors as if they always had stable preferences and behaved like forward-looking utility maximizers. It thereby becomes possible to differentiate between different ways in which norms can guide behavior. If an actor follows a norm in the as-mode, she will be immune from rational incentives.[2] This captures Elster's notion that strongly internalized norms can have a "grip on the mind" (Elster 1989: 100). In the rc-mode, behavior is sensitive to rational incentives, which make up the SEU weights in equation 1. Among those can also be normative incentives, but here norms operate as psychic benefits or costs, or as instrumental incentives tied to possible social sanctions (see Yee 1997). As such, social norms are no longer "incommensurable" (Taylor 1996), but their value is exchanged against that of other non-normative incentives. However, the heuristic and explanatory gains that come with this new perspective are not visible unless we introduce another part of the model.

If behavior depends decisively on the mode in which it is selected, knowledge of the *conditions under which* a specific mode governs behavior is crucial. In the MFS, those conditions are specified in the *mode selection*. It determines whether the action will be selected automatically (as-mode) or in a reflecting-calculating mode (rc-mode), and thus analytically precedes any action selection. As assumed in most dual-process theories (Chaiken and Trope 1999), and supported by empirical evidence, four variables determine an

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[2] This by no means excludes the possibilities that the *subscription* to the norm is based on a highly reflected moral reasoning or that adherence to the norm leads to substantially "rational" *consequences*.

actor's degree of rationality in a situation: an automatic-spontaneous mode becomes more likely the lower the *opportunities* and the *motivation* for conscious deliberation (Fazio 1990), the higher the *effort* necessary for this mental activity, and the higher the *accessibility* of a ready-to-use mental model. The MFS formalizes the relationships between these determinants in analogy to an *unconscious* meta-decision whose outcome depends on which mode seems to be optimal given the situational circumstances (for a similar approach, see Heiner 1983). Substantially, the values of all parameters of the mode selection reflect mentally encoded experiences and directly perceived properties of the situation (see Kroneberg 2005, 2006a).[3] Corresponding to the four variables just introduced, 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 (see Fazio 1990). The strength with which the script has been activated, $AW(A_k|S_j)$, operates analogous to an expectation that it is appropriate just to rely on this ready-to-use program in the present situation; that is, to select the as-mode. The decision-theoretical specification of the mode selection implies that an actor will select the as-mode if the additional utility that may result from a reflecting-calculating choice is smaller than the additional costs of this mental activity (for the derivation, see Kroneberg 2005, 2006a):

$$p(1 - AW(A_k|S_j))U < C \qquad\qquad (3)$$

Rearranging terms and using equation 2, we see that an automatic-spontaneous rule-following will prevail if, and only if, the availability (a_j) of the script exceeds a certain threshold:

$$a_j \geq 1 - C/pU \qquad\qquad (4)$$

We are now able to account for various mixed-population-phenomena. Under the assumed conditions actors with a strongly internalized norm ($a_j \geq 1 - C/pU$) will follow it automatically without consideration of other alternatives and incentives, whereas actors with a lower internalized norm ($a_j < 1 - C/pU$) will act based on a reflecting-calculating mode, and therefore systematically consider other alternatives and incentives (see Figure 1). This, then, implies the following hypothesis:

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[3] This point is vital to the proper understanding of the model. The mode selection does not represent a rational decision and it cannot, 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).

The effects of "calculated" incentives on the disposition to behave in a certain way decrease, the more strongly a norm regulating this behavior is internalized. In case of a very strong internalization of the norm, incentives are irrelevant for guiding behavior.

This hypothesis postulates that there exists an interaction effect between script availability and calculated incentives.

-- figure 1 here --

3. Empirical Applications

In the following we confront the main hypothesis of the Model of Frame Selection (MFS) with social reality in three different fields of application: the rescue of Jews in WWII, electoral participation, and educational decisions. Each of these fields evinces two contrasting theoretical positions: a RCT perspective which maintains that the behavior of interest can be explained as the result of cost-benefit maximization, and a normativist-culturalist perspective which argues that people follow, often without any deliberation, deeply internalized social norms, personal convictions or values. After a short summary of these approaches and the empirical evidence supporting them, we apply the MFS to resolve the conflicting positions within a more comprehensive explanation.

Due to data limitations we cannot provide measurements of all model parameters. Among other things, we have to assume that the threshold $1 - C/pU$ in equation 4, i.e. the ratio of reflection costs to motivation and opportunities for reflection, is the same for all actors.[4] Moreover, both because of measurement difficulties and substantive interest, we test our main hypothesis not with respect to the *disposition* for a certain behavior, but directly with respect to the behavior itself. Even though this reduces the statistical power of our tests, we are nevertheless able to test the hypothesis of an interaction between script availability and calculated incentives.

In each application, the statistical test proceeds in two steps. *First*, we specify a logistic regression model in which both the script's availability and an incentive variable enter independently. This is the specification that follows from RCT and assumes that the

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[4] This makes it more difficult to empirically demarcate the as- and rc-modes. However, since a_j, $p \in [0.1]$ and $U, C \geq 0$ by definition, the right-hand side threshold $1 - C/pU$ can take on only values equal to 1 (if $C = 0$) or smaller. This means that if the internalization of the norm is perfect, $a_j = 1$, the as-mode should prevail independent of the other parameters. Thus, even without direct measurement of C/pU, we can generate clear and testable predictions.

behavior for all subjects is based on the same cost-benefit calculus. *Second*, we add a product term between the norm and incentive variables to capture the interaction effect predicted from the MFS.

3.1 The Rescue of Jews in WWII

Theoretical approaches and empirical evidence

The rescue of Jews from Nazi persecution is often characterized as acts of altruism (Monroe et al. 1990; Oliner and Oliner 1988; Varese and Yaish 2000). The fact that the majority of these rescue activities carried a high degree of risk to both the rescuers and their families (Varese and Yaish 2005) provides a unique opportunity to test propositions about the normative bases of altruistic behavior that might be easily generalized to other, less extreme situations. Below we briefly review a debate in the literature on the determinants of these rescue activities (for a full review see Varese and Yaish 2000), between the view that norms and personality traits guide rescuers in their altruistic activities (Monroe et al. 1990; Oliner and Oliner 1988) and the view that situational factors and cost-benefit calculus are more crucial for explaining such behavior (Opp 1997; Varese and Yaish 2000, 2005). This debate forms the background to our analysis, in which, adhering to our theoretical model presented above, we show how the two views can be integrated.

In studying the rescue of Jews in WWII many social scientists brought to the fore normative/personality explanations. 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) argues that the altruistic behavior of the French citizens of Le Chambon was motivated by a moral principle (Elster 1989: 193). Already somewhat akin to our theoretical model, 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).[5] For Monroe and her associates these altruistic acts are explained in terms of an altruistic self-identity that stretches beyond group affiliation, mere empathy, and calculation of expected utility. In a similar vein, Geras (1995: 36) argues that rescuers of Jews were motivated by a sense of belonging to 'human kind'. The significance

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[5] As will become clear below, however, we do not think of this as a general rule that applies to *all* individuals.

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 prosocial orientation.

Although these studies emphasize the importance of norms and personality traits for altruistic behavior, they do not ignore situational factors and show that rescuers were aware of the possible costs of their actions. According to Monroe and her associates, however, this awareness did not influence the decision to rescue but was only relevant to putting it into practice in that it simply made them more cautious (Monroe et al. 1990: 108).

Students on the other side of the debate mentioned above argue the view 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. For example, Opp (1997) argues explicitly against the normative explanation of Monroe and her associates 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 human kind' influenced these decisions, they should simply be perceived as (non-egoistic and psychic) utilities and costs that potential rescuers could expect from rescuing, or from refraining from doing so (Opp 1997: 228, 230-231).[6]

In the first multivariate analysis of the Oliners' data, Varese and Yaish (2000) provide some support for a RCT account of the rescue of Jews by demonstrating that rescuing was associated with incentives such as having a cellar and 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 a RCT perspective, being asked might simply have provided the opportunity for enacting a pre-existing preference to rescue and solved the information dilemmas that existed in this high-risk setting (Varese and Yaish 2000).

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[6] 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 (Opp 1997: 228). It is precisely at these points, however, that his informal account of how situational attributes affect the (non-)perception of costs and benefits (i.e., his bridge assumptions) do the explanatory job rather than rational choice theory per se. In contrast, the MFS includes the situational factors identified by Opp as an integral part of the theory itself and predicts their influence a priori.

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 spontaneously to respond.

This argument was elaborated by Varese and Yaish (2005), who produced the most integrated theoretical account of the rescue of Jews so far. Again, by analyzing the Oliners' data the authors showed that a positive statistical interaction exists between being asked for help and an individual's prosocial orientation. This finding is particularly relevant to our current study for two reasons. *First*, the positive interaction 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. *Second*, it points to the importance of scripts for rescue behavior since a prosocial orientation is conceptually closely related to an internalized helping norm.

Starting from those findings and arguments, we will now apply the MFS in order to yield an integrated account based on the notion that rescue behavior might follow from either an automatic-spontaneous or 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 is in existential need for help. This made potential rescuers also aware of the kind of behavior that is normatively expected of them: to help the one in need. However, potential rescuers might have also been affected by an alternative norm: keeping their own family safe (cf. Varese and Yaish 2000). Given the objectively high risk entailed by rescuing 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. But since we lack data on the degree to which the norm to keep one's own family safe is 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 helping norm and that keeping one's family safe is simply an incentive within an actor's cost-benefit calculus. Insofar as the helping norm – understood here as an internalized social norm or a personal identity-based conviction – clearly prescribes the offer of help, we can further assume that the script regulates the behavior of interest completely.

Thus, the mode in which potential rescuers reacted to a request for help depended mainly on the availability or internalization of the helping norm. Potential rescuers for whom the internalization exceeded the relevant threshold (see equation 4) rescued Jews on purely

normative grounds.[7] Only those with an internalization less than the threshold deliberately weighed the costs and benefits of helping Jews. Statistically, this hypothesis implies an interaction effect between the rationally calculated incentives with regard to helping Jews and the internalization of the helping norm.

Sample, method and operationalization

Our study is based on a secondary analysis of data collected by The Altruistic Personality and Prosocial Behaviour Institute (APPBI), which were first analyzed by Oliner and Oliner (1988), and then by Varese and Yaish (2000, 2005). Studying 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 during the WWII period. A solution to this problem can be achieved by the use of *retrospective* samples – known also 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 (N = 346 + 67 = 413), and assign to the *control* sample only those who did not help anyone during the war (N = 97).[8] Since our incentive measure ("perceived risk") was obtained only from those who were asked to help, and since

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[7] The threshold in equation 4 is a function of the opportunities (p) and costs (C) of reflection as well as the motivation (U) therefor. Those are likely to have varied depending on the situational circumstances of the decision (not) to rescue. Being asked for help should have been associated on average with fewer opportunities to reflect and higher costs of reflection. However, because of the high stakes entailed, the general motivation for deliberation should have been relatively high. Thus, the mode depended ultimately on whether the internalization (a_j) of the helping norm was high enough to cross the right-side threshold.

[8] For a full description of the data collection methods and procedures, see Oliner and Oliner (1988: app. C). For a full description of the application of the case control method to these data, see Varese and Yaish (2000, 2005).

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 respondents reported two events in their interviews. In our analysis, we take this clustering into account by using robust standard errors. After allowing for a listwise deletion of missing values, our sample consists of N = 177 events. Since there are only 33 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 variables used in our analysis.

- The dependent variable corresponds to the case and the control samples (1 = helped, 0 = did not help).

- *Perceived risk index* taps the incentive parameter in our theoretical model. This index is an arithmetic average of the perceived risk to oneself and 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). To compare the relative size of the effects, we z-standardized this and the following independent variable before entering them into the analysis.

- *Prosocial orientation index* 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 A). The factor can be interpreted as the extent to which respondents are characterized by emotional empathy for pain and personal feelings for social responsibility (Oliner and Oliner 1988: 174) – which corresponds to the internalization of a helping norm 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 measure of an individual's prosocial orientation during WWII rather than merely a retrospective rationalization of the act of rescuing. This assumption is somewhat supported by the extensive psychological literature that 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 variance between both groups.

Results

We begin with Model 1.1 in Table 1, which corresponds to the additive specification suggested by RCT. The effects of the norm and incentive variables in this model operate in the expected direction, indicating that prosocial orientation is positively associated with rescuing Jews in WWII, while the perceived risk is negatively associated with rescuing Jews – the latter coefficient being only marginally significant (p = 0.09).

  In Model 1.2 we allow for an interaction between perceived risk and prosocial orientation. As can be seen in Table 1, this interaction effect has the expected sign, though it is not statistically significant (B = 0.44, p = 0.11).[9] However, since the effect is clearly of substantial magnitude and given our data restrictions, this somewhat higher degree of uncertainty seems acceptable. Substantially, the estimated interaction parameter postulates that the negative effect of perceived risk on helping Jews in WWII is strongly reduced as the degree of norm internalization increases. As expected, among respondents with the highest prosocial orientation the effect of perceived risk is weak and statistically insignificant (B = 0.34, p = 0.57).[10] Conversely, among the respondents with the weakest prosocial orientation, this incentive has a significant negative effect (B = -1.71, p < 0.05) that is substantially stronger than the insignificant average effect in the additive Model 1.1. This means that the explanatory power of the rational incentive variable actually increases if we go beyond the additive RCT specification.

-- table 1 here --

Figure 2 depicts how this interaction effect translates into the probability of providing help to Jews in WWII. Clearly, this probability decreases substantially as the perceived risk rises, but only among those with a low (here: the lowest) internalization of the helping norm. Those having internalized this norm to the highest degree are estimated to help Jews

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[9] If we do not use robust standard errors (to account for clustering of events by respondents), the interaction effect becomes marginally significant (p = 0.07).

[10] This is the effect (on the logarithmic odds to rescue) of an increase in perceived risk by one standard deviation conditional on the prosocial orientation being at its empirical maximum (which is 1.36). This and the subsequently reported conditional effects can be computed using the coefficients of the corresponding models and the minimum and maximum values of the z-standardized variables provided in the Appendix (Hosmer and Lemeshow 2000: 74-78). For example, the reported value of 0.34 is calculated as -0.26 + 0.44 (1.36).

regardless of the risk involved. As the 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 it is here where they clearly differ.

-- figure 2 here –

3.2 Electoral participation

Theoretical approaches and empirical evidence

Voting has been judged as the simplest, yet the most important political act in democracies (Aldrich 1993; Brady, Verba, and Schlozman 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" (Downs 1957) was the first to offer a 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 an instrumentally rational citizen will not go to the polls because the likelihood that his vote will be decisive is extremely small, so that the expected utility is not higher than the direct and opportunity costs of voting. This prediction is obviously at odds with the empirically substantial turnout rates.

   Many attempts have been made to provide a RCT account of voting that is in line with reality. It has been argued that the much higher *subjective* expectation to exert an influence on the election outcome (rather than the *objective* probability) should be considered (Opp 2001) or that the expected benefit of voting may still be positive if voters are altruistic so that they care about the *nation-wide* benefits of welfare policies (Jankowski 2002). Empirically, however, these instrumental accounts of voter participation have either not been confirmed consistently or have explained only a minor part of the variability in participation (Blais 2000; Mueller 2003). Much more successful have been wide rational choice approaches that abandon the assumption of purely instrumental or outcome-oriented behavior. These portray voting as a consumption rather than as an investment activity, arguing that people vote because they directly receive utility out of performing their civic duty as a citizen or expressing their political preference (Brennan and Lomasky 1993; Riker and Ordeshook 1968). 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 (see 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). However, rational choice theorists correctly maintain that their critics just referred to "normative, cultural, psychological, and institutional" factors (Green and Shapiro 1994) without specifying a precise model of how they determine behavior (Chong 1996). The MFS has been developed to provide such an alternative.[11] Its application can yield a more comprehensive explanation, and argue 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 (Kroneberg 2006b). Evidence in support of such a view stems from previous research 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: 101-103) and – more peculiarly – that rainfall significantly reduces the probability of voting only among respondents scoring low on the civic duty indicator (Knack 1994: 199).[12]

Theoretical integration within the Model of Frame Selection

In the case of national or state elections, citizens typically know that an election is 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 regarded a civic duty (e.g. Blais 2000: 92-114).

Again, the crucial task is to distinguish those who follow an automatic-spontaneous mode from those who engage in a reflecting-calculating mode in the decision-making process of

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[11] Meanwhile, however, some formalized behavioral models of turnout have been proposed (e.g. Bendor, Diermeier, and Ting 2003). Although we cannot discuss those contributions due to space restrictions, it should be noted that in contrast to the MFS, these models generally do not integrate RCT and do not recognize the normative nature of what seems to be habitual behavior.

[12] However, those studies fall short of providing a critical test of the interaction effect derived below since they estimate separate regressions for sub-samples with low and high attachment to the civic duty norm.

whether or not to cast a vote. For the sake of simplicity, we assume that the civic duty norm is the only (more or less) accessible script for an election day. This 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 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 so that participation occurs spontaneously is neither very low nor very high.[13]

Citizens for whom the internalization of the civic duty norm exceeds the threshold definitely go to the polls on purely normative grounds. Only citizens with internalization less than the threshold deliberately weigh the costs and benefits of voting, encompassing instrumental as well as non-instrumental incentives. Accordingly, we expect the effects of calculated incentives on the disposition to participate in an election to decrease, the more strongly the civic duty norm is internalized. In case of a very strong internalization, other incentives are irrelevant (their effect is statistically not significant).

Sample, method and operationalization

To test our hypothesis, we conduct a secondary analysis of data collected in the context of a state election in the German state of North Rhein-Westfalia in 1995.[14] 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 during the week before the election and then re-interviewed during the week after it (with 27% attrition between the two interviews). This property of the survey allows us to analyze two different dependent variables: "self-reported intention to vote" and "self-reported participation in the election". Both variables are highly skewed, with 90.4 percent of the respondents reporting that they definitely will participate, and 88.8 percent indicating that

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[13] 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-side threshold is crossed.

[14] We thank Steffen Kühnel and Dieter Ohr for generously providing the data.

they have voted.[15] Given that the official turnout at the election was only 64.1 percent, the substantially higher level of reported turnout in the sample may result from its socio-demographic selectivity, especially with regard to education (Kühnel and Ohr 1996), as well as from over-reporting. Statistically, the relatively few observations in the non-voting category restrict our analysis to a limited number of parameters that can be estimated with sufficient precision (Hosmer and Lemeshow 2000: 346-347).

   - The *civic duty norm* consists of factor scores based on a factor analysis of three indicators (all pairwise correlations are statistically significant and range from 0.31 to 0.46). In addition to the standard item that in democracies it is the duty of every citizen to participate regularly in elections, there are two other indicators that 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 consciousness (cf. the question wording and descriptive statistics in appendix B).

   - *Incentives to participate*: As both theory (Brennan and Lomasky 1993) and empirical studies (Mueller 2003) have shown, political preferences may be expected to be a major incentive for participation. Therefore, the following items were indicators of incentives to participate: perceived existence of a preferred candidate for the office of state prime minister, and perceived existence of a party that particularly represents one's interests and beliefs (the tetrachoric correlation between both items was 0.36). Since these are dichotomous variables, we combine them into an unweighted additive index.

   To make sure that there is no bias due to the socio-demographic composition of the sample, we control for sex, age, and education in the analysis. In addition, the factor scores measuring the internalization of the norm and the political preference index are z-standardized to enable comparison of the relative size of these coefficients. Descriptive statistics of the main explanatory variables are provided in Table B2 in appendix B.

Results

In describing the results of our analysis, we first concentrate on intended participation. Model 1.1 in Table 2 corresponds to the additive specification suggested by RCT. Both key

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[15] The question measuring the intention to vote differentiated between "definitely not", "rather improbable", "rather probable", and "definitely". Since there were very few observations in all categories except the last, we decided to combine the lower categories. As a consequence, our intention variable in fact differentiates between those indicating their definite participation and all other respondents.

explanatory variables significantly ($p < 0.05$) affect intentions to participate in the expected direction: net of the other variables in the model, stronger internalization of the civic duty norm as well as stronger political preferences are associated with a higher probability to intend to vote. Comparing the coefficients of these variables, we see that the effect of the civic duty norm is stronger than that of the incentive variable.

-- table 2 here --

In Model 1.2, we allow for an interaction between the incentive variable and the civic duty norm. The interaction effect is statistically significant and has the expected negative sign; that is, the positive effect of political preferences on intended participation diminishes as the degree of norm internalization increases. By computing conditional effects, we see that when the civic duty norm is internalized to the highest degree (B = 0.17, p = 0.54), pronounced political preferences do not affect participation. In contrast, where norm internalization is weakest, the effect of pronounced political preferences is even stronger (B = 1.07, p < 0.05) than the estimated effect in the additive Model 1.1. Thus, by introducing the interaction effect derived from the MFS, we increase the explanatory power of rational incentives for a subgroup of citizens.

Figure 3 depicts how this interaction effect translates into the probability of intending to participate. Here it is evident that this probability increases substantially with the incentive of existing political preferences, but only for those with a low (here: the lowest empirically observed) internalization of the civic duty norm. Those who have internalized this norm to the highest degree are estimated to participate regardless of whether they also have a non-normative incentive to do so.

-- figure 3 here --

As can be seen from the next two columns of table 2 (model 2.1. and model 2.2) and from figure 4, the same pattern holds when we look at reported participation behavior. However, the estimated effects are somewhat smaller here than in the case of intentions. This may be due to the shrinkage in sample size (especially given that the frequency of non-voters was already low before) or to unmeasured variables that affected participation behavior shortly before or on the day of the election.

-- figure 4 here --

3.3 Educational Decisions

Theoretical approaches and empirical evidence

In educational sociology, too, a normativist-culturalist perspective and a RCT perspective can be identified, such that both disagree on the main determinants of educational decisions. The normativist-culturalist perspective explains educational decisions and the resulting educational outcomes by sub-cultural values (Hyman 1966), effects of social norms (Kemper 1968), and differences in subjects' attitudes to education (Mickelson 1990). These determinants, moreover, are assumed to be created and stabilized through the interpersonal situation within which the actors are socialized. These notions have been integrated and elaborated within the influential Wisconsin Model of educational stratification (Sewell, Haller, and Portes 1969). This model postulates that students' aspiration levels create a certain self-commitment to attain a high level of academic performance, and are assumed to moderate the effects of material conditions, as well as those of the social context, on educational outcomes. The Wisconsin Model has been criticized for not differentiating enough between the actors' *idealistic wishes* as a determinant of academic motivation and their *realistic plans* as a consequence of opportunities and constraints (Howell and Frese 1981). However, the theoretical concept of idealistic aspirations and their consequences for the early commitment to a particular educational career still influences contemporary educational sociology. The second important theoretical contribution of the Wisconsin Model was the explanation of the adolescents' ambitions as the result of social influence processes (Woelfel and Haller 1971). On the one hand, significant others were assumed to shape the students' aspirations by communicating normative expectations about the appropriate academic performances and educational careers. This role as socializing 'definers' has been attributed to teachers, and more especially to the adolescents' parents. On the other hand, members of the peer group were assumed to serve as 'models' for how ambitious pupils should behave in school (Picou and Carter 1976).

The Wisconsin Model thus predicts that pupils' academic aspirations, and thereby their achievement motivation, are the result of *conformity* with the expectations of significant others, and of *imitation* of achievement standards observed in a given social context. Basically, then, educational behavior is seen as being *passively* determined by dispositions acquired through processes of social influence in the *past*. This position contrasts sharply with RCT accounts of educational decisions (Breen and Goldthorpe 1997; Eriksson and Jonsson 1996; Esser 1999: 266-275).

According to RCT, actors are assumed to *actively* decide among educational options. In so doing, actors take into account the *future* consequences of their decisions. Although the versions of RCT differ somewhat in the relative importance they attach to different determinants of educational decisions, they do agree on three main factors. *First*, direct and indirect costs incurred when children realize educational certificates are said to influence educational decisions. It is assumed that more long-standing certificates are more costly, and that the same objective expenses are more burdensome for families with fewer economic resources (Erikson and Jonsson 1996). *Second*, and consistent with human capital theory, the various RCTs assume that differences in economic labor market returns to education motivate differential educational investments (Becker 1964: 59). Based on social position theory, educational certificates are furthermore evaluated by actors according to how likely they are to satisfy an intergenerational status maintenance motive (Boudon 1974; Breen and Golthorpe 1997; Esser 1999: 266-275). The *third* factor, which all versions of RCT assume to be of pivotal importance, concerns the prospect that a child will be able to succeed in completing the various educational certificates.

Thus, in arriving at educational choices, actors evaluate the different returns of available educational options and weigh these utilities with the probability of successfully attaining the respective certificate. After subtracting the costs necessary to realize the educational credentials, they choose the option with the highest net expected utility. Contrary to what is assumed for the subjects' aspirations within the Wisconsin Model, these decisions neither establish a commitment nor are they of any significance for the students' motivation to achieve. Instead, they will simply be revised when new information about the appropriate values of the decision parameters becomes available.

Both theoretical positions have received considerable empirical support. In line with the Wisconsin Model, studies consistently found that children's educational aspirations are positively correlated with the actual and perceived aspirations of their parents and peer group (Buchmann and Dalton 2002; Duncan, Haller, and Portes 1968; Hauser 1972; Marjoribanks 1986, 1995; Sewell et al. 1969; Trusty 2000). Further confirming evidence comes from studies on the consequences of adolescents' aspirations for educational outcomes, in which they were shown to predict test scores (Fejgin 1995), grades (Seginer and Vermulst 2002) and educational attainment at the age of 20 (Marjoribanks 2003). In addition, parents' and peers' aspirations, under statistical control for the students' academic achievement, affected

the probability that adolescents in the tenth grade would still be enrolled in school two years later (Rumberger 1995).

At the same time, many studies have proved the relevance of the determinants of educational outcomes predicted on the basis of RCT. Lower costs for educational investments, associated with more economic capital in families, were found to increase the probability of attending college (Light and Strayer 2000), and higher foregone labor-market incomes reduced educational participation (Beneito et al. 2001). Just as important, differences in labor-market returns from education were also found to be relevant (e.g. Beattie 2002). Evidence that educational decisions are affected by the prospects of completing school certificates is provided by studies showing that higher achievement test scores (Light and Strayer 2000) and grade-point averages (Alexander and Entwisle 2001) lead to more advanced educational certificates. However, above and beyond the effects of the objective probability of academic success (measured by grade-point average), subjective beliefs have not been found to affect school continuation decisions (Need and de Jong 2000). Finally, conducting a simultaneous test of different RCT parameters, Becker (2003) showed that the choice of secondary school in the German educational system was affected by indicators of labor-market returns, costs of educational investments, and parents' trust in their children's ability to successfully complete ambitious school degrees.

Theoretical integration within the Model of Frame Selection

Available empirical evidence suggests that educational outcomes are determined partly by aspirations and partly by cost-benefit calculus. As in our other fields of application, the Model of Frame Selection (MFS) claims to integrate these results and the underlying theoretical views into a more encompassing explanation.

Here our concept of a normative script corresponds to the *idealistic aspirations* emphasized in the Wisconsin Model. These must be clearly distinguished from *realistic aspirations*, which refer to the educational outcomes the actors anticipate for the future taking into account the actually known opportunities and constraints (see Haller 1968). In contrast to these rational, although not perfectly calibrated forecasts (Morgan 1998), idealistic aspirations are unconstrained and normatively grounded wishes about what students would like to achieve in school. Actors who strongly subscribe to a norm of high educational achievement activate a corresponding script when facing a situation in which decisions have to be made between alternative educational tracks. This script prescribes the

selection of the most ambitious educational track and actors feel committed to accomplish all the measures necessary to fulfill the normative expectations.

The critical question now is whether actors will follow the activated achievement norm in the as-mode, without reflections on the future consequences of the resulting selections. Since decisions about academic careers will have serious consequences for the children's future occupational chances, their social recognition in society, and their well-being during their school years, actors are assumed to be highly motivated to adopt a reflecting-calculating mode of information processing.[16] Furthermore, in the case of major educational decisions, the families can be expected to be aware of the necessity of these selections long beforehand, and thus to have ample opportunity to reflect on which option to choose. In addition, the costs of such deliberations can be assumed to be low. Thus, with sufficient *opportunity*, low *costs*, and high *motivation*, the conditions generally favor the execution of the rc-mode. However, the MFS predicts that if the internalization of the achievement norm is *very* high, the actors will still follow the script without deliberation.[17] Otherwise, the rc-mode will prevail and the determinants predicted from RCT are expected to explain educational decisions.

Obviously, this field of application offers the possibility of a particularly rigorous test of the hypothesis of the MFS. Not only is the decision among school tracks a 'high-cost' decision, which may have serious consequences for the actor, as is the case with the decision to rescue Jews, but here also a much greater opportunity for reflection exists. The following analysis focuses on the determinants of decisions among secondary school tracks at the end of primary school in Germany. In the German school system, secondary track selection takes place in the second half of the fourth grade in primary school, an early point in children's school careers. Since the children are between 9 and 10 years old at this time, the parents are assumed to be the more important actors in this decision. As follows from our discussion, the MFS predicts an interaction effect between parents' idealistic aspirations and rational incentives, such as the children's prospects for school success. Moreover, in case of *very* high idealistic aspirations, the parents will unconditionally opt for the highest school track independent of how likely the children will be able to successfully complete this track.

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[16] This means that the actors know – without consciously processing this knowledge – that in this kind of situation careful deliberation tends to pay off.

[17] Formally, since p equals 1 and C/U is very small in equation 4, the internalization has to be nearly perfect (a_j close to 1.0) so that the right-side threshold (itself close to 1) is crossed.

Sample, method and operationalization:

We utilize data from a longitudinal study of families who in 2003 had children in the third grade of primary school in the state Rhineland-Palatinate, Germany. Altogether 977 families (44.7% response rate) agreed to take part in the interview of the first panel wave, where the parents' aspirations and socio-demographic characteristics were recorded. A follow-up interview was conducted when the children had reached the middle of the fourth grade, after families received the mid-term grade report and shortly before the choice of the type of secondary school. Since at this time the parents were endowed with the most recent information about their children's achievement, the indicator for the success probabilities was collected in this wave. The third panel wave was conducted at the end of the fourth grade in summer 2005; here the parents reported their final decision about their children's type of secondary school. Due to panel attrition complete data were available for 793 of the families in the initial sample. The data utilized in our study were provided by the person in the family who was declared as being primarily responsible for the school-related issues of the target child. This was in 94.1 percent of the families the mother, in 5.5 percent the father, and in 0.4 percent another person. The following is a description of the variables we used in the analysis.

- *Type of secondary school selected:* In Rhineland-Palatinate, the primary school's recommendation of a secondary school track is not binding, so that the families were therefore free to select among the following school tracks: (1) lower secondary school ('Hauptschule'), which foresees completion of the ninth grade, (2) intermediate secondary school ('Realschule'), which foresees completion of the tenth grade, and (3) upper secondary school ('Gymnasium'), which provides the opportunity to enter university upon completion of the thirteenth (and final) grade. In other available school types, different certificates can be obtained, depending on the track and how long the children stay on at school. Altogether 14 percent of the parents selected one of those other school types. These where regarded as not having decided on the educational certificate for their children and therefore were excluded from our analysis. Of the 682 remaining families, 5.0 percent selected a lower, 27.0 percent an intermediate, and 68.1 percent an upper secondary school for their children. We employ the analysis strategy proposed by Mare (1980) and construct the dependent variables representing two transitions: (1) from lower secondary school to a more ambitious track, and (2) from intermediate to upper secondary school, conditional on selection of at least the

intermediate school type. At the upper transition, the population at risk consists of 629 families, out of which 456 (72.5 percent) made this transition. Our theoretical hypotheses are tested for both transitions.

  - *Probability of successful completion of school certificates:* The students' proven school performance is a strong predictor of their future academic success (Alexander and Entwisle 2001). It is assumed that parents making a decision in the rc-mode are aware of this association and utilize their children's grades at the time of the decision as the best evidence for predicting the likelihood that they will be able to realize educational degrees of varying difficulty in the future. Thus, we use the students' grade-point average (GPA) based on their marks in German, Mathematics, and Social Studies from the mid-term report of the fourth grade as an indicator for the parents' subjective beliefs about their children's probability of success in completing advanced educational certificates (for descriptive statistics cf. table C1 in appendix C). Again, this and the following variables were z-standardized to allow a comparison between effects.

  - *Idealistic aspirations:* The parents' idealistic aspirations are assessed on the basis of their answers to questions on how ideally they regard each of the three secondary school certificates for their children, without consideration of the children's present school performance and thus their actual likelihood of being able to complete these certificates (see the question wording in appendix C). As an indicator of how strongly the parents feel obliged at each of the two transitions to select the higher instead of the lower educational track, we compute difference scores between the ideality judgments of adjacent degrees. Thus, for the lower transition, we subtract the ideality ratings of the lower from the average ratings of an intermediate and upper secondary certificate, whereas for the upper transition we subtract the rating of an intermediate certificate from that of an upper certificate (for descriptive statistics see Table C1 in appendix C).

Results

The additive Models 1.1 and 2.1 in Table 3 show that – as predicted by RCT – the children's GPA and the parents' idealistic aspirations have an independent effect on the parents' decisions about the educational tracks: the probability of a transition from a lower secondary school track to a higher track, and from an intermediate secondary school to an upper secondary school, increase significantly with the child's GPA, and when the parents evaluate the more ambitious certificate as increasingly more ideal than the less ambitious one. At both

transitions, the relative sizes of the two parameters indicate that the students' proven academic abilities are a much more important determinant of the educational decisions.

-- table 3 here --

In Models 1.2 and 2.2 we introduce product terms between the children's GPA and the transition-specific measures of parents' educational aspirations to test for the interaction effect as predicted by the MFS. At the lower transition, the hypothesized negative interaction effect is strong and statistically significant (B = -2.16, p < 0.05): Among parents with the lowest aspirations, a one-standard deviation increase in children's GPA is associated with a much higher chance to make the lower transition (B = 14.13, p < 0.05) whereas among parents with very high aspirations there is no such effect (B = 1.02, p = 0.47).[18]

At the higher transition, however, the effect is only marginally significant (B = -0.51, p < .10). This higher level of uncertainty may be due to the smaller sample size at this transition (children not at risk of making this transition are excluded from the analysis) and to the fact that at the upper transition, grade-point averages are substantially more homogeneous than at the lower transition (s.d. 0.55 vs. 0.63). As a result, the GPA's main effect also is substantially weaker at the upper than at the lower transition, and the interaction term is less likely to reach the conventional statistical significance level.

-- figure 5 here --

Based on Model 1.2, figure 5 shows for the empirically observed range of the children's GPA, how the interaction effect translates into predicted probabilities for making the lower transition. As indicated by the bold broken line, increasingly better marks have a very strong effect on the probability that parents in the sample who have the least ambitious aspirations for their children will choose a more ambitious than a lower secondary school track. On the contrary, among the parents with the highest aspirations in the sample, the average transition probability for children with the poorest grades observed in the sample was already at over 0.8 and quickly reached unity as academic ability improved. Please note that the increasing uncertainty of the predicted values at both ends of the academic ability continuum is due to the very low frequency of cases with the respective trait combination.

In the case of the transition from intermediate to upper secondary school as depicted in figure 6, the results are less pronounced as was to be expected from the only marginally significant interaction effect. Furthermore, however, even in the case of very high

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[18] These conditional effects have been computed as described in footnote 10.

aspirations, the probability of making the upper transition rises with increasing GPA and is statistically different from 1 if the GPA is low. The insensitivity towards rational incentives is thus not fully demonstrated.

-- figure 6 here --

4. Discussion

In sociological theory two prominent and contradictory theoretical approaches for explaining social phenomena can be distinguished: normativist-culturalist explanations and rational choice theory (RCT). Whereas in the former, individuals' feelings of normative obligation are assumed to be the main behavioral determinant, the latter explains behavior as the outcome of a cost-benefit calculus. Since both explanations have obtained considerable supporting evidence, the crucial question to be asked is: Under what conditions is behavior guided by spontaneous norm conformity, and when is it grounded in a cost-benefit calculus? In this paper this question was empirically confronted by means of the Model of Frame Selection (MFS) (Esser 2001; Kroneberg 2005, 2006a). This model states that in an unambiguously defined situation, actors with deeply internalized normative obligations are not sensitive to instrumentally rational incentives because they automatically put normative scripts into practice. This reasoning led to the prediction that the effect of rational incentives on behavior decreases as the strength of the actors' convictions about the normatively appropriate behavior increases. We tested this expected interaction effect between norm strength and rational incentives in three fields of sociological inquiry: the rescue of Jews in WWII, participation in political elections, and educational decisions.

Consistent with previous research we found that the factors predicted under the normativist-culturalist and the rational choice approaches had statistically significant effects on each respective behavior. Those factors were the perceived risk attached to helping Jews and the internalization of the helping norm in the case of rescuing Jews, political preferences and the civic duty norm in the case of voter participation, and the probability of successfully realizing ambitious educational credentials and high idealistic aspirations in the case of educational decisions. However, these results are also consistent with a 'wide' version of RCT that allows for a certain behavior itself, rather than its consequences, to yield consumption benefits – for example, from acting in accordance with internalized norms (Opp 1999; Yee 1997).

Evidence specifically in support of the MFS has to come from interaction effects that reveal the effects of rational incentives to be substantially reduced when actors have strongly

internalized the relevant norms. Taking the conventional level of statistical significance as the only criterion, the evidence looks mixed. The analyses of intended and reported voter participation, as well as that of the transition from a lower secondary school track to more ambitious kinds of schools clearly support our main hypothesis. On the other hand, the interaction effect falls short of the conventional significance level in the cases of educational decisions with regard to the upper transition ($p < 0.10$) and rescuing Jews in WW II ($p = 0.11$). However, we think that also the latter analyses – albeit less clearly – provide support for the presence of the hypothesized interaction between rational incentives and norm internalization. First, the direction and size of the interaction effect is in both cases consistent with our theoretical expectations. Second, in each case there are good reasons for allowing for the somewhat higher degree of uncertainty with which those effects could be estimated. In the case of rescuing Jews in WWII, the data restrictions are particularly severe, and taking into account the loss in statistical power that goes with having only 33 observations in one category of the binary dependent variable, the resulting estimate can still be regarded as positive evidence. With regard to educational decisions at the upper transition, the uncertainty about the average effect may be due to the reduced sample size and the lower variability in grade-point averages at this transition. Third, in the case of educational decisions, the conditions for observing the hypothesized interaction are particularly demanding. The MFS expects that in this situation of high stakes (as opposed to voter participation) and nearly unlimited time to decide (as opposed to the rescue of Jews in WWII), the automatic-spontaneous mode is much less prevalent and that parents' idealistic aspirations would have to be *very* high so as to lead to unconditional adherence to the norm. Our measure of aspirations might therefore have been insufficient to empirically identify this level of aspirations. This could also explain why we did not observe the full insensitivity to rational incentives predicted for very high parental aspirations (see figure 6).

Overall, then, our analyses provide acceptable empirical support for the main hypothesis derived from the MFS. The MFS not only allowed us to approach the rescue of Jews in WWII, electoral participation, and educational decisions in a theoretically unified way, but it also yields in each case an understanding that recognizes the heterogeneity of social actions: Some of them are guided by forward-looking deliberation, others by adherence to strongly internalized norms. Given that the cases to which we applied the MFS are very diverse – comprising low-cost as well as high-cost, recent as well as historical, ordinary as well as extreme situations – there is good reason to believe in the generalizability of our results, and

the validity of the MFS. Nevertheless, many questions about the MFS remain open for future research. For example, due to data limitations we had to make various assumptions about the values of parameters which were expected to exert an independent influence on the mode of information processing and ultimately on behavior (such as the opportunities and motivation for a reflecting-calculating mode). In particular, we 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 by no means clear, however, that a request for help was not in fact a trap by supporters of the Nazi regime (cf. Varese and Yaish 2000) or that the norm to keep one's own family safe was of lower significance than the helping norm. Similarly, different social milieus might differ not only in the extent to which they value high educational achievement, but there may even be some in which contradictory norms exist that exert leveling pressures on parents not to aim too high for their children (cf. Gambetta 1987). Such substantial omitted factors might also have contributed to the less clear-cut findings in some of our analyses; so even with respect to the cases considered, further applications of the MFS promise to be rewarding.

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APPENDIX A (Rescue of Jews)

Table A1: The personality items in the prosocial orientation factor and exploratory factor analysis (iterated principal factors)

Personality item	Factor loading
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
I cannot feel good if others around me feel sad.	0.52
The feelings of people in books affect me.	0.47
I get very upset when I see an animal in pain.	0.50
It upsets me to see helpless people.	0.47
I get angry when I see someone hurt.	0.49
The words of a song can move me deeply.	0.38
I feel very bad when I have failed to finish something I promised I would do.	0.43
I get very involved with my friends' problems.	0.46
If it is worth starting, it is worth finishing.	0.48
Seeing people cry upsets me.	0.45
Response scales from 1 (strongly agree) to 5 (strongly disagree).	

Table A2: Descriptive statistics for the explanatory variables

	Value range	Mean [a]	Std.
Prosocial orientation (factor scores) [b]	-1.16 / 2.90	0.18	0.93
Prosocial orientation (z-scores)	-3.29 / 1.36	-0.17	1.07
Perceived risk to oneself	1 / 5	2.07	1.36
Perceived risk to one's family	1 / 5	2.05	1.40
Perceived risk index (z-scores) [c]	-2.41 / 0.88	-0.01	0.97

[a] In the case of dummy variables, the mean equals the relative frequency of the category coded 1; [b] Factor scores based on the indicators in Table A1; [c] Unweighted additive index based on the two risk indicators. All statistics are based on the effective sample used in the regression analyses (N = 177).

APPENDIX B (Electoral Participation)

Table B1: Civic duty norm indicators and exploratory factor analysis
(iterated principal factors) (N = 983)

Indicator	*Factor loading*
In democracy it is the duty of every citizen to participate regularly in elections.	0.52
If I missed an election, I would have a guilty conscience afterwards.	0.64
Not to vote would contradict my personality.	0.71

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 explanatory variables

	Value range	Mean [a]	Std.
Civic duty norm (factor scores) [b]	-1.62 / 0.86	0.01	0.82
Civic duty norm (z-scores)	-1.97 / 1.05	0.01	1.00
Preferred candidate (for Prime Minister)	0 , 1	0.79	--
Preferred party (interests and beliefs)	0 , 1	0.72	--
Political preferences (z-scores) [c]	-2.27 / 0.74	0.01	1.00

[a] In the case of dummy variables, the mean equals the relative frequency of the category coded 1; [b] Factor scores based on the indicators in Table A3; [c] Unweighted additive index based on the two preference indicators. All statistics are based on the effective pre-election sample used in the regression analyses (N = 938).

APPENDIX C (Educational Decision)

Parents' idealistic educational aspirations (English translation, original items in German)

'Disregarding entirely your child's present school performances and the educational certificate your child is likely to achieve in future, could you please tell me, using this scale, how much the following educational certificates correspond to your personal ideal conception?'. [Response scale from 1 (does not correspond at all to my ideal certificate) to 7 (corresponds perfectly to my ideal certificate).]

'How closely does a lower secondary school certificate correspond to your ideal of a certificate for your child?'

'And to what extent does an intermediate secondary school certificate correspond to your ideal?'

'And how strongly does an upper secondary school certificate correspond to your ideal?'

Table C1: Descriptive statistics for the explanatory variables

	Value range	Mean	Std.
Children's marks [a]			
- German	2.0 / 6.0	4.8	0.73
- Mathematics	2.0 / 6.0	4.7	0.81
- Social Studies	2.0 / 6.0	5.1	0.71
Grade-point average	2.3 / 6.0	4.9	0.63
Grade-point average (z-scores)	-4.1 / 1.8	0.0	1.00
Parents' ideality ratings [b]			
- Lower secondary certificate	1.0 / 7.0	1.8	1.34
- Intermediate secondary certificate	1.0 / 7.0	4.8	1.31
- Upper secondary certificate	1.0 / 7.0	6.3	1.27
Differences in ideality ratings [c]			
- Intermediate/upper sec. certificate – lower sec. certificate	-3.0 / 6.0	3.7	1.49
- Upper sec. certificate – intermediate sec. certificate	-6.0 / 6.0	1.5	2.04
Differences in ideality ratings (z-scores)			
- Intermediate/upper sec. certificate – lower sec. certificate	-4.5 / 1.5	0.0	1.00
- Upper sec. certificate– intermediate sec. certificate	-3.7 / 2.2	0.0	1.00

[a] Grades range between 1 (insufficient) and 6 (excellent); [b] Ratings range between 1 (does not correspond at all to ideal certificate) and 7 (corresponds perfectly); [c] Difference scores range from –6 (lower certificate evaluated as much more ideal) to +6 (higher certificate evaluated as much more ideal). All statistics are based on the effective sample used in the regression analyses (N = 655).

Tables and Figures
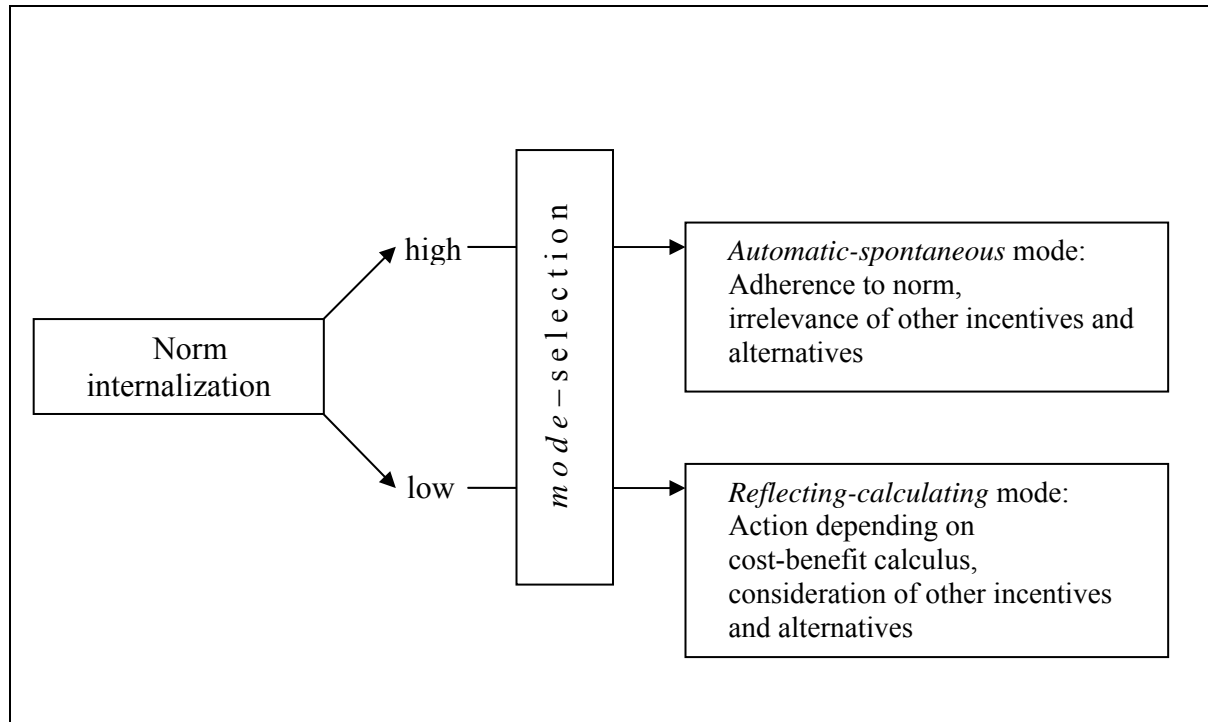
Figure 1: Action selection in the as-mode vs. the rc-mode

Table 1: Effects of perceived risk and prosocial orientation on rescuing Jews in WWII (logistic regression results, with robust standard errors)

	Model 1.1 B (Std. Error)	Model 1.2 B (Std. Error)
Prosocial Orientation	0.67 (0.17)*	0.60 (0.17)*
Perceived Risk	-0.48 (0.29)[+]	-0.26 (0.31)
Prosocial × Risk	--	0.44 (0.28)
Constant	1.46 (0.29)*	1.45 (0.28)*
Model log-likelihood	-75.19	-73.47
Pseudo R^2	0.117	0.137
N	177	177

Significance: * $p < .05$; + $p < .10$. All shown variables are z-standardized. Not shown, but controlled for in all models, is level of educational qualification (university degree, apprenticeship, high school certificate, elementary school).

Figure 2: Effect of perceived risk on rescuing Jews in WWII for respondents with high and low prosocial orientation (predicted probabilities from Model 1.2)
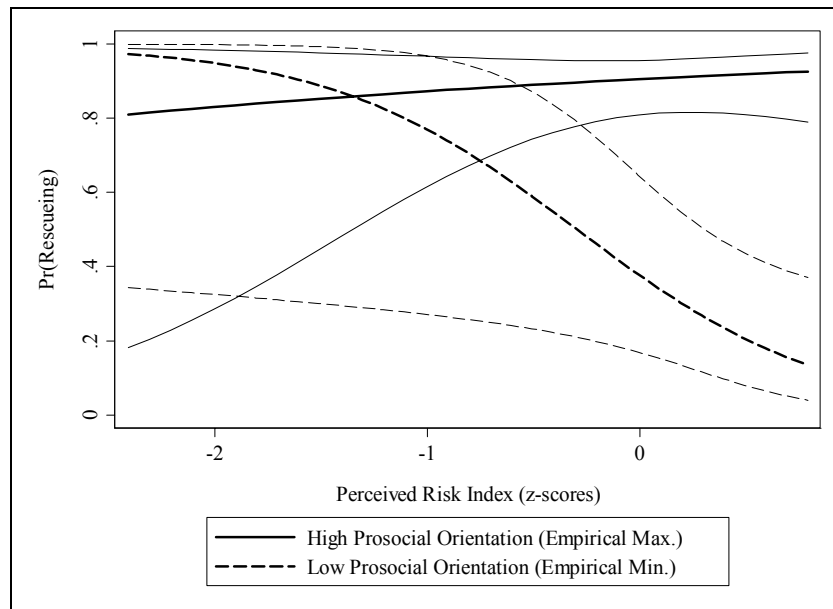
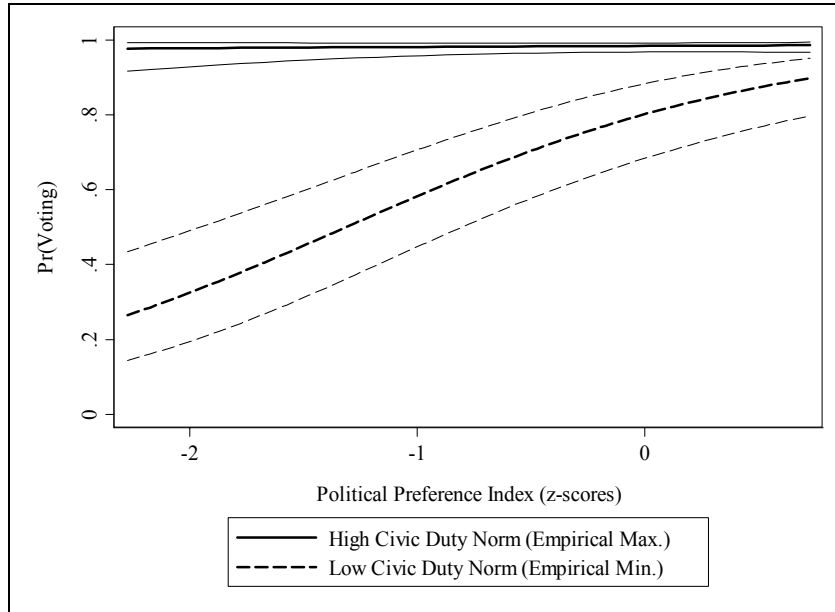The probabilities are depicted for respondents who just attended elementary school.

Table 2: Effects of political preferences and civic duty norm on participation in the North Rhine-Westfalia state election in 1995 (logistic regression results)

	Intention to participate		Reported participation	
	Model 1.1 B (Std. Error)	Model 1.2 B (Std. Error)	Model 2.1 B (Std. Error)	Model 2.2 B (Std. Error)
Civic duty norm	1.08 (0.14)*	0.92 (0.16)*	0.71 (0.14)*	0.65 (0.15)*
Political preferences	0.75 (0.12)*	0.48 (0.17)*	0.31 (0.12)*	0.10 (0.17)
Preferences × norm	--	-0.30 (0.13)*	--	-0.27 (0.13)*
Constant	2.32 (0.53)*	2.13 (0.54)*	0.87 (0.56)*	0.80 (0.57)
Model log likelihood	-208.01	-205.38	-198.26	-196.06
Pseudo R^2	0.298	0.307	0.178	0.187
N	938	938	689	689

Significance: * $p < .05$; + $p < .10$. All shown variables are z-standardized. Variables not shown, but controlled for in all models, are sex, age (in years), and education (high school certificate, secondary school certificate, compulsory education).

Figure 3: Effect of political preferences on *intended* participation for citizens with high and low civic duty norm (predicted probabilities from Model 1.2)

The probabilities are depicted as estimated for male respondents of mean age with compulsory education.

Figure 4: Effect of political preferences on *reported* participation for citizens with high and low civic duty norm (predicted probabilities from Model 1.2)
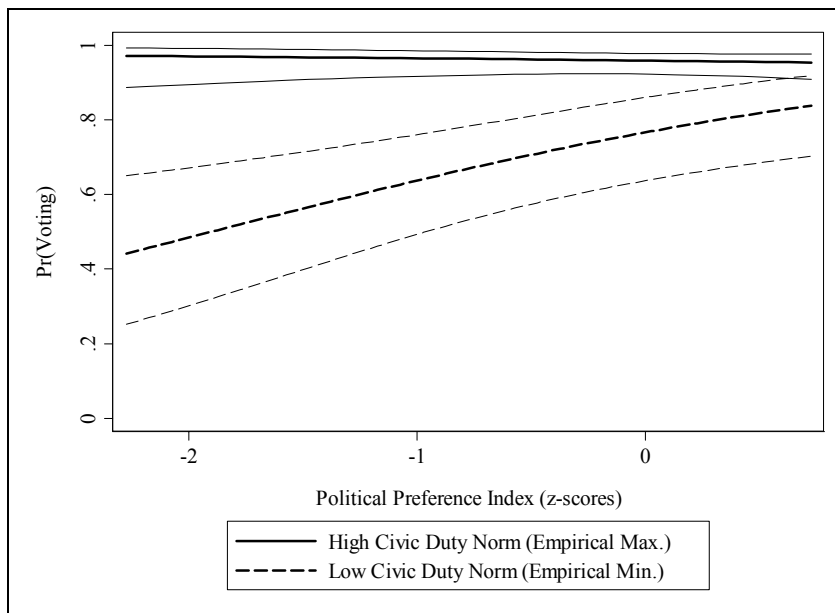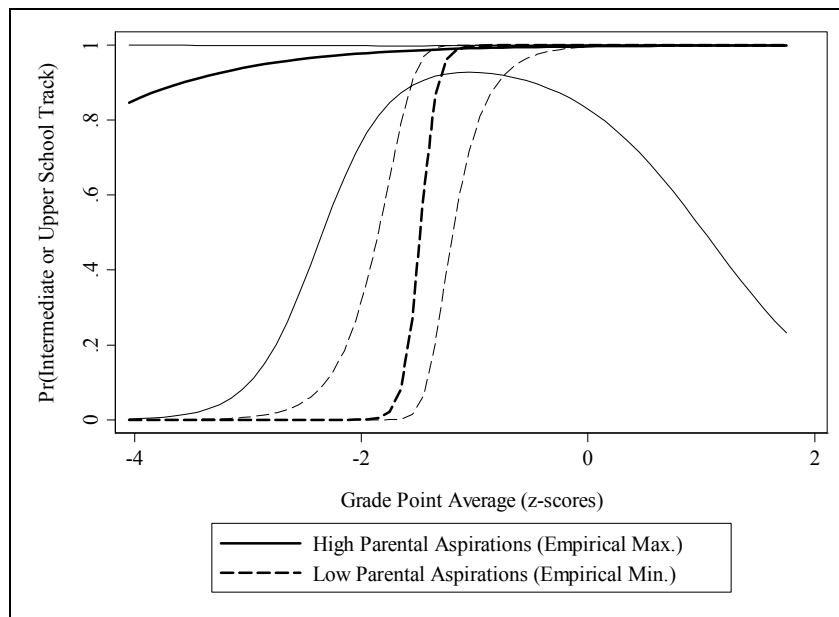

The probabilities are depicted as estimated for male respondents of mean age with compulsory education.

Table 3: Effects of children's grades and parents' idealistic aspirations on the choice of
secondary school track (logistic regression results)

|	Lower transition		Upper transition	
	Model 1.1 B (Std. Error)	Model 1.2 B (Std. Error)	Model 2.1 B (Std. Error)	Model 2.2 B (Std. Error)
Grade-point average	4.43 (0.94)*	4.36 (1.02)*	2.79 (0.25)*	2.79 (0.26)*
Idealistic aspirations	0.66 (0.29)*	-2.49 (1.50)+	0.53 (0.17)*	0.25 (0.24)
Grades × aspirations	--	-2.16 (1.05)*	--	-0.51 (0.31)+
Constant	9.29 (11.99)	11.05 (12.79)	-6.17 (5.19)	-5.69 (4.91)
Model log-likelihood	-28.85	-25.67	-160.48	-159.02
Pseudo-R²	0.736	0.765	0.566	0.570
N	655	655	629	629

Significance: * $p < .05$; + $p < .10$. All shown variables were z-standardized. Variables not shown, but controlled for in all models, are parents' class position (six-category EGP-scheme), their highest school certificates (three categories), their occupational prestige (Treiman-prestige scores), children's age (in months) and sex.

Figure 5: Effect of children's grade-point average on the lower transition probability for parents' with high and low aspirations (predicted probabilities from Model 1.2)

The probabilities are depicted as estimated for unskilled manual workers with lower secondary education who are parents of a girl. The parents' occupational prestige and age of the child are fixed at the sample mean.

Figure 6: Effect of children's grade point average on the upper transition probability for parents' with high and low aspirations (predicted probabilities from Model 2.2)
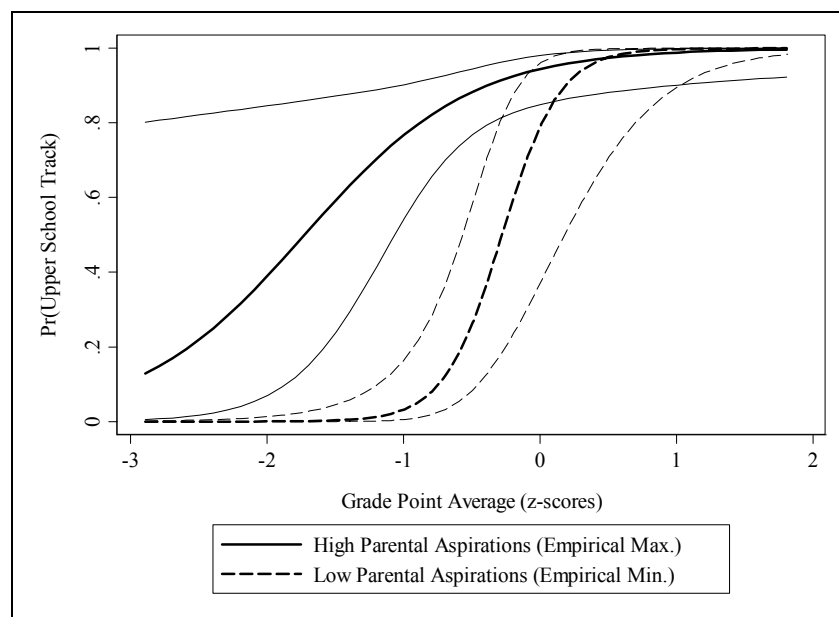
The probabilities are depicted as estimated for unskilled manual workers with lower secondary education who are parents of a girl. The parents' occupational prestige and age of the child are fixed at the sample mean.

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