Mean Well to Do Good? Volunteer Motivation Re-Examined

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Abstract:

The provision of social services in most developed countries has become more and more difficult to ensure, and many states rely increasingly on volunteer work. What motivates volunteers is, however, still a relatively under-researched topic. At the theoretical level, there is a consensus that pro-social behaviour is, at least in parts, motivated by altruism, the function of which, however, remains contested. In some recent studies, social psychologists have identified functional categories of volunteering, according to the concept of attitude functions, for volunteer motivation and found evidence that people were more likely to express a willingness to volunteer if they were confronted with persuasive messages according to their volunteer function. Empirical studies relying on volunteer surveys face, however, problems of self-selection. To overcome these problems, we carried out a online experiment to test volunteer motivation in participants and tested the congruence of participants' motivation and their response to persuasive messages according to these attitude functions. The results suggests that there is a systematic interaction between these elements.

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1. Introduction

As western welfare systems have increasingly been coming under pressure from demographic and socio-economic changes, individual responsibility and, with it, the role of volunteering in providing welfare services have gained renewed interest among scholars and policy makers alike. In "Bowling Alone" Putnam (2000) describes a general decline in civic participation in the US, with the exception of volunteering, where a continuous upward trend is to be found. Other studies (Salamon & Sokolowski 2001) confirm this upward trend cross-nationally (Inglehart 2000). Putnam (2000) finds the reason for this phenomenon to be in the above average participation of the post-war generation and there are indications that the recruitment of volunteers may require more effort than was the case in earlier years as volunteers' needs may have changed over time. Regarded in a broader framework of civic participation, this raises the question of individual motivation, and how participation can be influenced by meeting motivational needs.

Motives for action in general, and prosocial action in particular, have been studied from different perspectives, most notably the behaviourist-, cognitive-and biological approaches. In this study, the focus is on the functions that prosocial action serves for individuals and how these functions can be satisfied by matching particular motives with matching affective stimuli.

Targeted incentives[1] or persuasive messages can trigger cognitive processes that represent affective stimuli which, in turn, can satisfy motivational needs in individuals. In recent studies considerable emphasis is put on the interaction between the motivation of potential volunteers and incentives or persuasive messages offered to them (Clary et al. 1998, for example). More precisely, potential volunteers may wish to offer their services based on very different motivations, and if the incentives offered by organizations fail to match these motivations, they may even be counter-productive (e.g., Frey & Goette 1999, Benabou & Tirole 2003). A firm understanding of this interaction between motivations and incentives is still missing, however, because most studies are either hampered by their methodological choices (e.g., surveys) or limited through their focus on a limited set of motivations and incentives.

This study tries to answer the question of how motives for prosocial action interact with persuasive messages by conducting an online experiment with university students.

We tested whether matching the predominant motive for volunteering with a persuasive message that responded to that motive, would produce an increased willingness to volunteer. Furthermore, the most commonly used functional classification of volunteer motives, the Volunteer Functions Inventory (VFI) (Clary et al. 1994) has been put to the test.

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[1]   The effect of selected incentives on volunteer time and satisfaction forms a separate part of our larger research project, which also comprises a field experiment part.

This approach enables us to test the interaction of volunteer motivations and persuasive messages in an experimental set-up. It allows to draw conclusions about the effect of targeted advertising for volunteers which is relevant for the recruitment of individuals for different forms of civic participation.

In the next two sections we discuss how motivations and persuasive messages have been studied in research on volunteer work. Based on this discussion we present in section 4 our main hypothesis we wish to test regarding the interaction between motivations and persuasive message and their joint effect on the disposition to do volunteer work. We also present the experimental design of our study. Section 5 presents our results clearly suggesting that matching persuasive messages with predispositions in terms of motivations generates the largest effect on volunteering. Section 6 concludes and charts the future steps of our research project.

2. Volunteer Motivation

The study of motivation is the study of causes of specific actions (Mook 1996). In studying motivation, there is one main distinction to be made, namely between endogenous and exogenous causes of actions. Endogenous causes are inner processes, i.e. cognition, exogenous causes can be circumscribed as environmental influences, which are studied by behaviourists, for example. A third alternative for motivational studies is the biological approach which deals both with physiological (e.g. neuro-psychology) and evolutionary aspects of motivation (e.g. evolutionary economics) and therefore includes inner and outer influences. While these different perspectives are employed in order to answer different aspects of the question of motivation, there is some consensus that human action is never solely determined by just one or the other cause (Mook 1996). Actions can be studied at the individual- or group level and in the context of volunteering are to be treated as "meaningful social action" (Weber 1972), that is, action that is directed towards others and to which a subjective meaning can be attached.

We define volunteering as regular unpaid work which benefits other people outside the immediate family or social circle. Volunteering can be informal (e.g. regular babysitting a neighbour's child) or within an organizational context. The subjective meaning that can be attached to volunteering is that of prosocial action[2], which is defined as „...acts that are defined by some significant segment of society and/or one's social group as generally beneficial to other people"(Penner et al. 2005: 366).

Penner et al. (2005), instead of distinguishing between endogenous and exogenous influences on motivation find it more meaningful to analyze prosocial behaviour at three levels. At the meso-level, the why and when people help is

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[2]   Prosocial action is the terminology used by social psychology, solidarity would be sociology's equivalent (Fetchenhauer 2006)

being studied. Three mechanisms are involved: learning; social and personal standards; arousal and affect. Arousal and affect theories assume that people behave in ways which help them attain a specific goal – be it egoistic or altruistic in nature. Feelings of upset, sadness or guilt (affect) produces egoistically motivated helping in order to alleviate one's own guilt or upset. Empathy or compassion produces altruistically motivated helping. The stimuli that lead (partly through cognitive processes) to affect (or feelings) can be manifold, for example messages, pictures, experiences etc. Henceforth we will call affective stimuli persuasive messages or incentives. Both have the goal of affecting individuals.

At the micro level, evolutionary theory, biological- and genetic factors as well as development processes have been sought as explanatory factors explaining the differences in individual helping behaviour.

At the macro level studies examine, according to the authors, prosocial behaviour in an organizational context – i.e. volunteering. The most important difference from interpersonal helping is, they say, that "…volunteering is less likely to result from a sense of personal obligation" (Penner et al. 2005: 375). Sociologists (e.g., Wilson 2000) examine macro-level processes, that is processes concerned with social institutions (family & religious organizations) and demographic factors. So it was found that people from volunteer families and members of a religious community tend to volunteer more. The same goes for better educated and wealthier people. The explanation for the latter two factors is thought to be that this segment of society is better integrated into the community and therefore more likely to be asked and feel obliged to volunteer. Other demographic factors are sex and ethnicity – the effect of these is, however, more likely to be linked to social exclusion.

While it is difficult to see how the meso- and macro level can be strictly separated on the grounds that volunteering is not a form of interpersonal helping, it makes, in our opinion, more sense to delineate the macro level of prosocial behaviour as being concerned with societal aspects of behaviour, as is the case in the social capital (Welzel et al. 2005; Curtic et al. 2001; Dekker and Uslaner 2001, for examplte) or cultural value literature (Johnson et al.1996; Welzel et al. 2005; Bardi and Schwartz 2003; Triandis 1989; Curtis et al. 2001, for example).

Addressing these questions of prosocial action, we can draw on a long tradition of work in various disciplines on charitable giving and volunteer work. In the 1930's, (Barnard 1938:139) developed a systematic analysis of incentives for individuals in (for profit) organizations under the assumption that "the contributions of personal efforts which constitute the energies of organizations are yielded by individuals because of incentives. The egotistical motives of self-preservation and self-gratification are dominating forces."

Whereas in the case of for-profit-businesses the prevalence of the congruence of material incentives in order to satisfy material motives may be uncontested, in "The Logic of Collective Action," Olson (1965) also challenged the view that individuals would join a charitable organization without personal reward in order to produce a public good. More recently, reviewing the egoism versus empathy

debate on the nature of altruistic motivation that has occupied scientists from both natural and social sciences for some time, Batson (1998:302) concludes that, for the time being, the so called empathy-hypothesis has won the upper hand and that egotistic motivations, while still a part of the set of motivations that induces individuals to act pro-socially, come secondary or are part of altruism motivated by values instilled by social norms and evolutionary factors. The consensus, so far, is that there must indeed be a number of different motives, altruistic and egotistic, present in volunteers and many studies then concentrated on identifying the structure or order of motives for pro-social behaviour.

Antecedents and maintenance of volunteering at the individual level have been explained with two main theoretical models: The volunteer process model (Omoto and Snyder 2002; Clary et al. 1998) and the role identity (Piliavin and Callero 1991) model. The former is concerned with motives, whereas the latter is concerned with social context. Our focus is on the former approach, on the motivation to volunteer.

The dimensionality of the motivation to volunteer, however, still remains somewhat contested (see Cnaan & Goldberg-Glen (1991) for an overview) and proposals range from unidimensionality (Cnaan & Goldberg-Glen 1991) to six basic dimensions (Clary et al. 1998) in volunteering motives. The six dimensions in the Volunteer Functions Inventory (VFI) are Values, Protection, Career, Social, Understanding and Enhancement. The Value motive focuses on the welfare of others and can be regarded as the most altruistic motive. The Protection motive wants to deflect from negative aspects of the personality, such as guilt, boredom etc. and can be regarded as a predominantly egoistic motive. The Career motive is a utilitarian motive concerned with furthering one's own career prospects. The Social motive reacts to social expectations of an individual's environment and is probably closer to altruism, as it is other-focused. The Understanding motive is concerned with learning new information or skills and is an egoistical motive. Lastly, the Enhancement motive is concerned with enhancing positive– unlike the Protection motive – aspects of one's personality. This can be self-realization, social relations etc.. It is also considered an egoistical type of motive.

As Cnaan & Goldberg-Glen's (1991) study only looks at motivation, not incentives, and as their sample consisted of people that had been volunteering for a minimum of six months, their results on the original motives for volunteering seem somewhat uncertain. The conclusion that "...people will continue to volunteer as long as the experience as a whole is rewarding and satisfying to their unique needs ..." [281] is almost a truism and does not give further insights into either actual motives nor incentives that aid volunteer retention. Thus, a basic problem of motivational studies emerges, namely temporal incongruence. All studies, so far, interviewed volunteers that had been volunteering for some time or people who do not volunteer at all. To our knowledge, no single study has been able to follow the actual process from recruitment to extended service and it remains therefore an open question, whether motives change from initial motives to volunteer to motives that commit volunteers to their task.

A number of studies have examined the effect of motives on volunteer duration

(Finkelstein 2008a, Omoto & Snyder 1995, Penner and Finkelstein 1998, for example) and frequency (Allison, Okun & Dutridge 2002, Finkelstein 2008b, Greenslade and White 2005, Penner and Finkelstein 1998, for example) . All studies have made use of a functional approach to volunteer motives (Clary et al. 1998).

The duration of volunteering (length of service) was found to be positively related to the Enhancement and Understanding motive by Omoto & Snyder (1995) and Finkelstein (2008a), but related to the Value motive in Penner and Finkelstein (1998). A possible reason for this difference could be the cash incentive (to benefit the organization) offered to respondents in this last study which may be responsible for a selection bias. Other-oriented (altruistic) individuals may be more inclined to respond than self-oriented individuals if there is some benefit for the organization by responding. Another important determinant of volunteer duration was found to be satisfaction (Penner and Finkelstein 1998), which may be related to motive fulfilment, however.

The frequency of volunteering seems to be related most strongly to the Value motive (Allison, Okun & Dutridge 2002, Finkelstein 2008b, Greenslade and White 2005, Penner and Finkelstein 1998). Allison, Okun & Dutridge (2002) also test the reliability of the VFI-instrument by using an open-ended probe before administering the VFI-Scale. The correlations between the two instruments were modest, possibly due to limited variation in the sample. Only four comparable dimensions emerged as a result. As discussed above, the number of discernible motives may also be connected to the length of service as volunteers.

Taken together, these studies could imply that Values, followed by Understanding and Enhancement are the most prevalent motives in volunteers. With increasing time of volunteer service, Value motives become less prevalent though and it is only the egoistical motives, Understanding and Enhancement, that play any role at this stage.

As the basic premises of motives for volunteering have been tested and developed further (for an overview see Knoke (1986) or Chinman & Wandersman (1999) for example), the importance of the congruence of motives and incentives was confirmed, at least for organizations with a fairly homogenous membership base. Differences in members across hierarchical levels of the organization or simply the heterogeneity of base members have not been taken into account much though and therefore creating a gap in systematic findings. Clark & Wilson (1961), proposed a much referred to threefold categorization of incentives of organizations to appeal to their members: material incentives, solidary incentives, and purposive incentives. The analysis of motives for pro-social behaviour has been further developed from the profit-neutral, three-dimensional organizational model (Clark & Wilson 1961) to models that take into account the specific complexities of altruism as a motive in the case of volunteering.

Adverse effects of mismatches between motives and incentives have been studied in diverse fields and with various methods recently. In the area of volunteering in the human service area, two studies (Frey & Goette 1999, Benabou & Tirole

2003) studied the negative effect of monetary rewards on volunteer output when intrinsic motives were prevalent in volunteers, although only the former study has an empirical basis. An interesting yet somewhat inconclusive effort in this area has been Puffer & Meindl's (1992) case study on the effect of congruence/ incongruence of motives and incentives on volunteers affect satisfaction and performance. They summarized their results as follows: "To ensure positive affect, volunteers should be given the incentives they value. To ensure good performance, volunteers should be given incentives based on how their motives fit with the organization's values." This latter finding ties in with Frey & Goette's (1999) results and suggests that incentives must reflect organizational values to some extent as indicated by Clark & Wilson (1961).

Clary et al. (1998) ran a total of six studies, with different samples, on the role of motives and incentives for volunteering. They included two studies assessing the dimensionality of motives, one to test their temporal stability, one on the role of persuasive appeal in recruiting volunteers, a further study to predict volunteers' satisfaction and a last one to predict volunteer commitment. As has been described above, their functional approach identified six temporally stable functions of volunteering that overlapped with motivational foundations of volunteering. The framing of volunteer appeals seemed successful in corresponding to the stated motives of potential volunteers. Also, the congruence of motives and incentives reportedly enhanced volunteers' satisfaction with volunteering and their readiness to continue volunteering in the future. Their work is the most promising so far, but suffers from a series of methodological problems. First, by using closed questions throughout the whole interview process, the set of motivations to be uncovered is given at the outset. Second, the experimental study suffers from the absence of a control group, making inferences more problematic. Finally, given the setup of the research design, the authors had to rely on retrospective assessments, which cause considerable problems.

Houle et al. (2005) examine whether different types of volunteer tasks satisfy different types of volunteer motives and whether volunteers would, given a choice, choose such tasks specifically. Therefore, beyond the initial attraction to a volunteer task through matching motives and persuasive appeal, it is assumed, that particular tasks can determine volunteer outcome through matching task type and motives. The attribution volunteer functions to tasks seemed inconclusive – only values and career functions could be attributed to certain tasks. The participants in the study did however tend to prefer tasks that matched their motives. Their results point to an earlier study (Clary et al. 1994), which found persuasive messages to be more effective when matched with an individual's relevant function and thus stressing the importance of matching motivations with benefits.

3. Persuasive Messages

Older theories in persuasion research in the field of social psychology are based on the systematic processing paradigm and the two most influential ones are the information processing model (McGuire 1985) and the cognitive response model

(Petty et al. 1981). The latter differs from the former insofar as it is not the reception of arguments that leads to attitude change but the cognitive reaction (thoughts) that are triggered by the arguments. Later, a dual process model of persuasion – which sees a systematic as well as an unsystematic modus of information processing - gained more influence. Some of the most influential theories now are the elaboration likelihood model (ELM) (Petty and Cacioppo 1986) and, related, the heuristic systematic model (Eagly and Chaiken 1993) .

Loroz (2007) tested in a series of experiments the interaction effects of message frame and reference point in the context of prosocial behaviour. The basis of the study was a hypothesized resource match in processing frame and reference point of the message. According to theory, this would mean that negatively framed massages would be most effective with a self reference point (see also McMath and Prencice-Dunn 2005) . Equally, positively framed messages should be most persuasive with a self/other reference point (cf. applications of prospect theory, e.g. Kahnemann and Tversky 1984). The hypotheses were tested in two experiments on behavioural attitudes and intentions relating to health and the environment. The results mostly supported the hypothesized relationship, particularly for the self reference point for prosocial attitudes. The results for a self/other reference point were less clear, particularly for intended prosocial behaviour. This could indicate, that for actual prosocial behaviour, altruistic motives are an important factor but that there are other possible motives for such behaviour that have more of a self reference point.

Julka and Marsh (2000) match persuasive messages and need in a series of experiments. Based on functional attitude theory – i.e. action is subject to individual attitudes which are, in turn formed to meet individual needs. These needs behind attitudes are termed an attitude function and recent functional perspectives have identified five such functions: knowledge, ego-defensive, value-expressive, social-adjustment and utilitarian. These correspond by and large to Clary et al. (1998) except that in their typology of six volunteer functions, enhancement and career would both fall into the utilitarian function category[3]. The results of the experiment suggest that prior priming – i.e. creating needs through experimental manipulation – does have an effect on the effect of persuasive messages.

Shavitt and Nelson (2002) add to the discussion of this typology the specification that depending on personality type attitude functions can differ. The main body of their article is devoted to the discussion of the consequences of attitude functions in terms of persuasion. The "matching hypothesis" states that "…messages will be persuasive to the extent that they match the functional underpinning of the attitude they target" (140).

Tesser and Shaffer (1990) review studies on attitudes and attitude change and

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[3]   Some older studies put the number of identifiable attitude functions at four (see Anderson and Kristiansen 1990; Herek 1987, for example), leaving out the utilitarian attitude function.

find that the traditional definition of attitude involves three aspects: affect (feeling and emotion), cognition (process and knowing) and behaviour. More recent definitions of attitude are uni-dimensional, however, and have at their centre evaluative responses based on beliefs, feelings and/or past behaviour. Other authors define attitudes as "representations in memory". Values are considered to be antecedents of attitudes which in turn influence behaviour. For the rational actor model it is assumed that intention is the best predictor of behaviour. Intentions, on the other hand are influenced by attitudes and can vary depending on context or behavioural disposition (such as self-monitoring). Non-rational actor models take into account unconscious activation of attitudes and framing in guiding behaviour – prospect theory (Kahnemann and Tversky 1984) being one example of this.

Functional theories of attitude examine the purpose of holding different attitudes , as discussed above. Attitude functions are measured either directly by subjects' self-declaration or indirectly via personality traits. As we have seen, matching theory states that persuasive messages that match an individual's attitude function are more effective.

Our aim is to assess the matching hypothesis in an online-experiment that tests the interaction of motives and affective stimuli, i.e. persuasive messages, but tries to avoid the aforementioned methodological problems. The insights gained, will not only close an important gap in the literature but also be of practical value to third sector organizations in order recruit volunteers.

4. Hypothesis and Design

The main objective of the paper at hand is to gain a firmer understanding of the interaction of motives and persuasive messages in the decision to volunteer.

Drawing on the literature discussed above, we wish to test the matching hypothesis, i.e. the assumed benefit of matching message with motive on the readiness to engage in prosocial action (Clary et al. 1994).

Our main hypothesis focuses on the recruitment phase. As discussed above, it can be assumed that pro-social action, such as volunteering, is determined by a number of identifiable motives (Clary et al. 1998, Omoto & Snyder 1995). They are Protection, Values, Career, Social, Understanding and Enhancement. In order to understand what role these motives play in the recruitment process, we wish to test the following hypothesis:

Recruitment efforts emphasizing one of the identified motives for volunteering will encourage to volunteer most strongly individuals for whom this motive is of importance.

While this hypothesis might strike more than one reader as being almost tautological, this would only be the case if we had precise knowledge about the type of messages that would speak to specific motivations. While previous

research (see above) has yielded some insights on this question on which we will draw, a renewed test of the effects of particular messages in a different setting is of great value.

While a series of studies has already tried to answer the question of volunteer motives and persuasive messages, many of them are open to critiques on methodological grounds (see our discussion above). Studies attempting to answer these questions using survey evidence have to rely heavily on retrospective questions and hardly allow for measuring changes in the motivations over time. Similarly, to assess the effect of persuasive messages or incentives for volunteer work, survey data can only yield self-assessments by the interviewed. Experimental designs may overcome the latter problem, since the researcher has control over the types of messages or incentives the participants are exposed to.

In order to test the interaction of motives and persuasive messages, our design must involve two steps: First a motive questionnaire; then the exposure to a persuasive message. As we are not only interested in establishing a taxonomy of motives for volunteering but also in evaluating the distinction between altruistic and egotistic motives, we will confine our inquiry to volunteering in specific areas that provide a public good, i.e. social welfare, although studies on environmentally responsible behaviour (e.g., Young 2000) have found similar motives in the conservationist area.

4.1 Participants

800 university students (36% male, 64% female) were recruited to take part in this experiment. Half of the students in the German speaking part of Switzerland, the other half in the French speaking part.[4] The invitation to take part was sent to 8000 randomly drawn e-mail addresses. A material incentive (book voucher) was offered for participation.[5]

4.2 Procedure

The basic procedure of the online-experiment can be described as follows: In a first step, participants are asked what their motivations would be to start volunteering - first in an open question, then in a closed format. Based on this

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[4]   Stadelmann-Steffen et al. (2007) found in a recent survey differences in volunteer motives between linguistic regions in Switzerland. French speaking respondents stated egoistic motives slightly less frequently than respondents from the German speaking part. Although it is not altogether clear wherein these differences should lie, it is possible that there are sub-national cultural value differences to be found . We therefore chose to conduct our study for two separate populations – a French speaking and a German speaking one – in order to test these findings. From a student population we expect the Career and Understanding motives to be overrepresented. We don't expect there to be significant differences of gender in terms of motives. From the literature, we expect the Values motive, followed by Understanding and Enhancement, to be the most prevalent motives in volunteers.

[5]   The survey was anonymous to the extent that no name was asked of participants. Not all e-mail addresses were anonymous, however, as they contained parts of or full names.

information we form groups of respondents sharing the same motivation. Each of these "motivational categories" is divided into seven sub-groups for treatments (six functional motive advertisement plus one neutral). In a follow-up questionnaire participants are presented with the advertisement according to their sub-group and asked, whether this appeals to them sufficiently in order to take up volunteering.

Hence, following Campbell & Stanley's (1963) notation (R: random assignment; X: intervention (or treatment); O: observation), our online-experiment can be summarized as follows:[6]

Questionnaire 1	Randomization	Motivational messages	Questionnaire 2
O11	R	X11	O21
O12	R	X12	O22
O13	R	X13	O23
O14	R	X14	O24
O15	R	X15	O25
O16	R	X16	O26
O17	R	X17	O27

As a first step, an e-mail invitation to take part in an two-part online-survey was sent out to 8000 randomly drawn student e-mail addresses. The invitation contained a link to the online-survey. It made no mention of the project contents but cited the incentive to be received after the completion of both parts of the survey.

The first part of the experiment presented participants with an online survey. They were first asked to cite (in order of preference) three possible reasons for doing voluntary work for an nonprofit organization. They were then presented with thirty volunteer motive items from the Volunteer Functions Inventory (VFI) following E. Gil Clary (1994: 1520). For each of the six motives, there are five items (scale from 1 to 6 – not true at all to completely true). Some items were adapted slightly (to a neutral formulation) in order to account for the fact that the majority of respondents were not active volunteers. All questions had to be answered. This first part of the questionnaire allowed to draw conclusions about the prevalent motive for volunteering in respondents.

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[6] For both regions, a pre-test (15 participants) was conducted in order to test motive questionnaire and persuasive message for the online experiment. No incentive was provided at this stage.

The next part of the questionnaire asked whether respondents were currently and/or had ever been active volunteers (and in which field). This part of the questionnaire allowed to test the possibility that active volunteers have a different motive structure from non-volunteers. The last part of the questionnaire consisted of a number of items regarding socio-demographic details of respondents. These were gender, age, employment status, highest educational achievement and income.

The second part of the experiment entailed the analysis of the motive items and, following this, the assignment of a motive type to each respondent. First, the open motive answers were coded (scale 1-6). The results of the open questions were then compared to the answers in the VFI item battery. The correlations were generally low – around 0.15 - regardless of the computational method for VFI-items (mean or maximum values). We decided to refrain from using the open motive questions for the assignment of motive type for two reasons: The coding of the answers for the open questions revealed, that the answers related, partly, to informal volunteering and helping in one's own immediate family. As Penner et al. (2005:375) pointed out, interpersonal helping related to friends and family is predominantly driven by a sense of personal obligation. This may distort results to some extent as the VFI items related to volunteering in nonprofit organizations specifically. Furthermore, there is more room for error in handcoding answers.

Instead, we constructed six motive variables by using the maximum values of the relevant five VFI items.[7] We then chose a sorting procedure which sorts observations starting with the motive variable with the lowest standard deviation.[8] By this method we got six groups of motives of slightly unequal size. The observations in each group were randomized and split into seven groups – six motive groups and one control group – in order to assign a treatment, i.e. the persuasive message. Participants were then sent e-mail links for their treatment group. Thus the second part of the online-experiment consists of administering a persuasive message (treatment) to each participant. The persuasive message consists of an advertisement for volunteer work. The text states that volunteers are sought for various tasks in nonprofit organizations in the social sector. There are seven versions of the advertisement. The advertisements differ only with respect to one sentence in which a personal statement regarding the benefits of

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[7] Based on mean values, the distribution of the observations in the motive categories is rather skewed.

[8] In a first step, motive variable 1 (smallest sd) is sorted in descending order, motive variables 2-6 are sorted in ascending order. While observation 1 for motive variables 2-6 are set as invalid, observation 1 for motive variable 1 will take the value 1 if the assignment variable has not been used before. This procedure is repeated for all observations and all groups until all observations have been assigned a motive. This procedure produces 6 groups of equal size. As a last step, a handful of observations which were mis-assigned because of the generally low values for these motive variables, have to be assigned manually. Like this, the larges motive groups are Values, Understanding, Career and Enhance, the categories Protection and Social are slightly smaller.

volunteering for them from an active volunteer is framed in six different ways. The message is designed in order to appeal to one of the six motives. One advertisement does not contain a persuasive message (control group).

After being exposed to the message, participants are then asked whether a), the message appealed to them and b), whether they felt motivated to answer the advertisement. Again, the answer categories were on a six point scale. After having completed both parts of the online-experiment, participants received their reward (book voucher).

5. Results and Analysis

5.1 Motivations for volunteer work

The distribution of responses for the 30 VFI Motive Questions shows a clear ranking order of the various motivations for volunteer work. The highest median responses are for Values (mean 4.6) and Understanding (mean 4.5) items, followed by Enhancement (mean 4.0) and Career (3.8) and finally Protection (mean 3) and Social (mean 2.9). The findings of previous studies, that the Values motive, followed by Enhancement and Understanding, are most prevalent in volunteers, can be confirmed – even in our student populations.
Figures 1-6 depict the distribution of answers for individual motives by university and gender. The exact wording of the questions can be found in the appendix (Table 1).

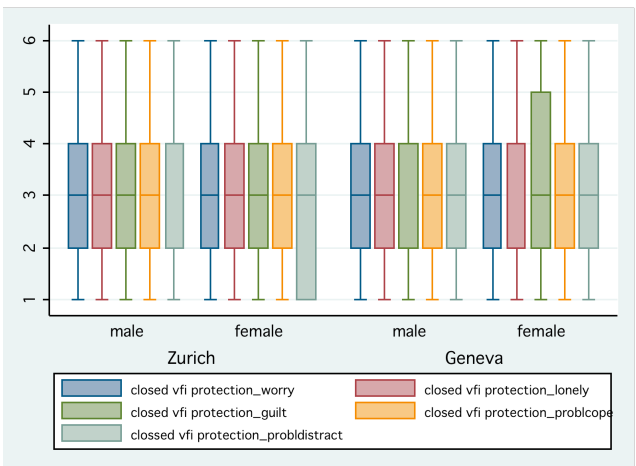Figure 1: Protection Motivation by Gender and University

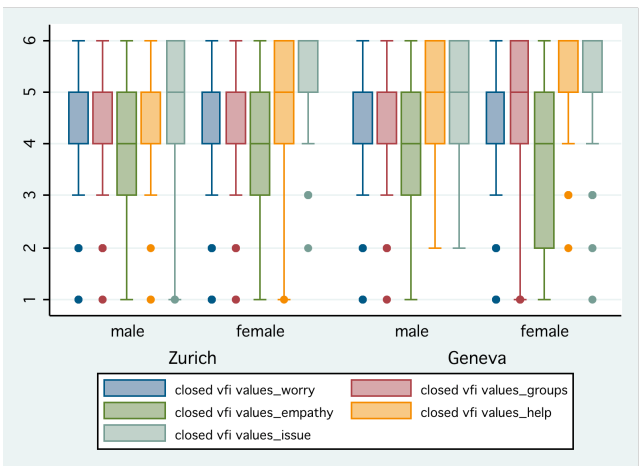Figure 2: Values Motivation by Gender and University

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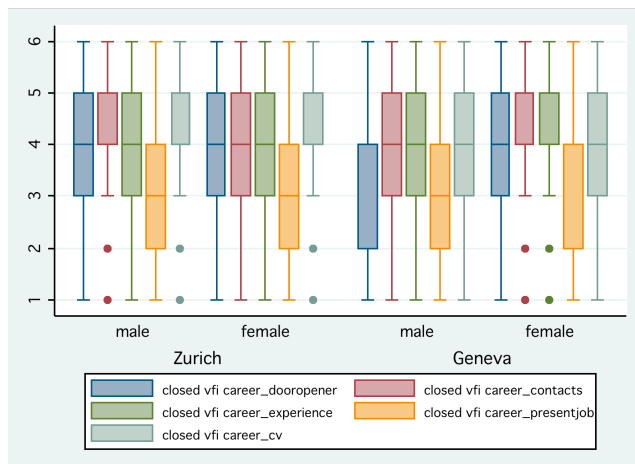Figure 3: Career Motivation by Gender and University

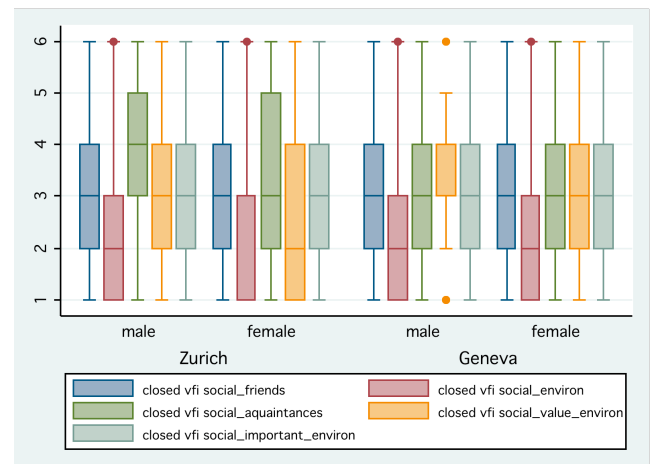Figure 4: Social Motivation by Gender and University

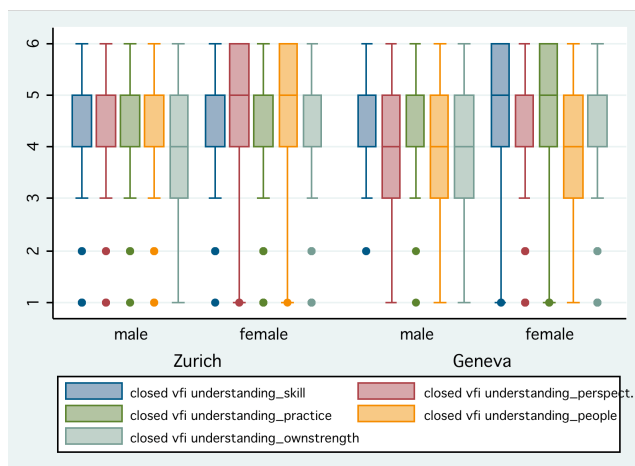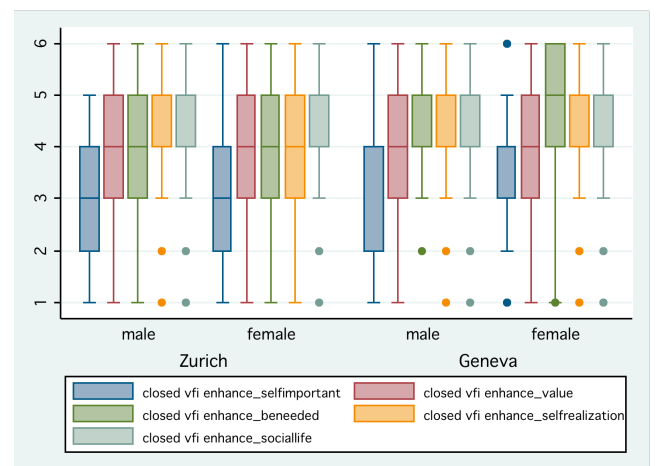Figure 5: Understanding Motivation by Gender and University

Figure 6: Enhance Motivation by Gender and University

For the Protection motive (Figure 1), female students in Zurich score lower on the "helps to cope with own problems" motive, whereas their counterparts in Geneva valued the motive "assuaging own guilt" more highly. Differences are thus entirely down to university, not gender.

The distribution for the Values motives (Figure 2) show stronger preferences for "helping particular groups" for female students in Geneva, but also weaker preferences for volunteering because of empathic feelings. Thus, looking at the detailed distribution no gender or university difference can be found.

Also no clear difference in distribution regarding gender or university can be seen for

the Career motives (Figure 3): The highest scores can be found for female students in Geneva and male students in Zurich, followed by female students in Zurich and lastly, male students in Geneva. Overall, Zurich may have slightly higher scores for the Career items, it is, however, not clearly attributable to either gender or location.

The distribution for the Social motive items (Figure 4) must be regarded in a similar vein. Although, overall, students from Zurich would be more likely to volunteer because their acquaintances already volunteer, female students are much less likely to volunteer because the people surrounding them value such an activity. When we control for present volunteering, it becomes clear that the higher scores in Zurich are entirely driven by those that presently volunteer.

For the Understanding motives (Figure 5), in both Geneva and Zurich, female students score considerably higher on several items than male ones. In this instance, there is thus a gender difference to be found. There is a difference in the types of motives though as students in Geneva value skills and practice motives higher, whereas students in Zurich are more concerned about gaining new perspectives and dealing with different people. The skills motive is, however partly driven by the fact whether a person is doing any volunteer work at present.

The last group of motives, the Enhance motives (Figure 6) indicates a difference in distribution between universities. Generally, Geneva students have higher scores, for this group of motives and particularly the "feeling needed" motive is valued highest female students at Geneva University. This motive in particular is driven, however by present volunteering as well.

We thus find some differences in distribution according to university for the Protection and Enhance motives and differences due to gender for the Understanding motive. The differences across the two universities are minor and might be in part due to the larger proportion of female participants, particularly considering the high percentage of female students at the University of Geneva.[9] [10]

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[9] In the academic year 2007-08 when our study was carried out 61 % of the student body at the University of Geneva was female (http://www.unige.ch/dadm/stat/chiffres0708/ etudiants.html, accessed February 4, 2009). In Zurich the percentage of women in the student body is 56 % (http://www.co.uzh.ch/mis/stud/semester/hs08/studierende geschlechter hs08.pdf, accessed February 4, 2009). Breaking down the median responses by gender suggests, however, only minor differences (one higher median value for the male participants, five higher values for the female participants) between the sexes.

[10] A similar picture presents itself when studying the distribution of maximal values (which is what we used for our selection variable) for the motive items, as is shown in Figure 7 (Appendix). In Figure 7 we see that the first quartile for Protection and Enhance motives are slightly lower for Zurich. When broken up by gender (Figure 8, Appendix), it becomes clear, that the results for Enhance and Protection are indeed mainly driven by university, not gender, as male and female students in Geneva tend to respond in higher categories for these two motive groups than their counterparts in Zurich. There are some gender differences to be found, however, for the Values and Career motives in Geneva. There, female students chose somewhat higher answer categories than their male colleagues. These results contradict the findings of Steffen et al. (2007), who found self-serving motives to be more prevalent in the French speaking part of Switzerland. An alternative interpretation

Having gained some insights on the motives for volunteering, we , in a next step, will consider the matching hypothesis.

5.2 Persuasive messages and their effects

According to our hypothesis, persuasive messages for volunteer work should have the largest effects if these messages correspond to an individual's main motivation to participate in third sector work. Even though our treatment consists of six different persuasive messages and one neutral message for the control group, our main independent variable will be dichotomous and indicate whether or not the message received matched the individual's motivation.

To estimate the effect of this matching, we rely on the responses by the participants to two questions, one asking whether the message appeals to the respondent and the other inquiring whether s/he feels motivated to respond to the call for volunteer work. Participants could respond to these two questions with six values on a scale going from "not true at all" (1) to "completely true" (6). Given the ordinal character of our two main dependent variables, we employ an ordered logit model to assess the effect of our treatments.[11]

Our first test of the hypothesis whether matching persuasive messages to motivations increases the likelihood of volunteer work participation suggests for both of our dependent variables that there is the expected positive effect.[12] Figures 9 and 10 depict in the top panel the estimated distribution in the response variables in the absence of a match between persuasive message and motivation. In the middle panel appears the density of the simulated probabilities for the same situation, while the last panel depicts the changes in the probability densities of responding with one of the six responses due to a matching. The two lower panels of figures 9 and 10 clearly show that the matching of message on motivation increases the likelihood of the message being perceived as appealing and, to a much lesser degree, and statistically not significant, also on the propensity to join a volunteer effort. Hence, we find evidence in support of our hypothesis, but the estimated effects, as figures 9 and 10 show, are rather small.

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could be, that students from the German speaking part of Switzerland tend to answer more cautiously than their French speaking colleagues, i.e. chose lower answer categories. There are some differences to be found due to present volunteering activity, but only those for the Social, Understanding and Values motives reach statistical significance. For Understanding and Values, non-volunteers are more likely to select higher values, for Social motives, people with volunteer experience are more likely to select higher values. This only partly confirms our expectation regarding present volunteering: The Values motive plays a greater role for non-volunteers. (analysis not reported here)

[11] Tests of the ``parallel slopes assumption'' suggests that in some models this assumption is violated. Closer inspection shows that this is due to the fact that many respondents with past volunteering experience select high response categories. Since we control for past volunteering experience in later models, we refrain from estimating the effects using another empirical model.

[12] The tables containing the estimation results appear in the appendix. In the main text we present only graphical illustrations of the estimated treatment effects based on predicted probabilities. To do so we used Imai, King and Lau's (2008) `plot.zelig` of the *Zelig* package.

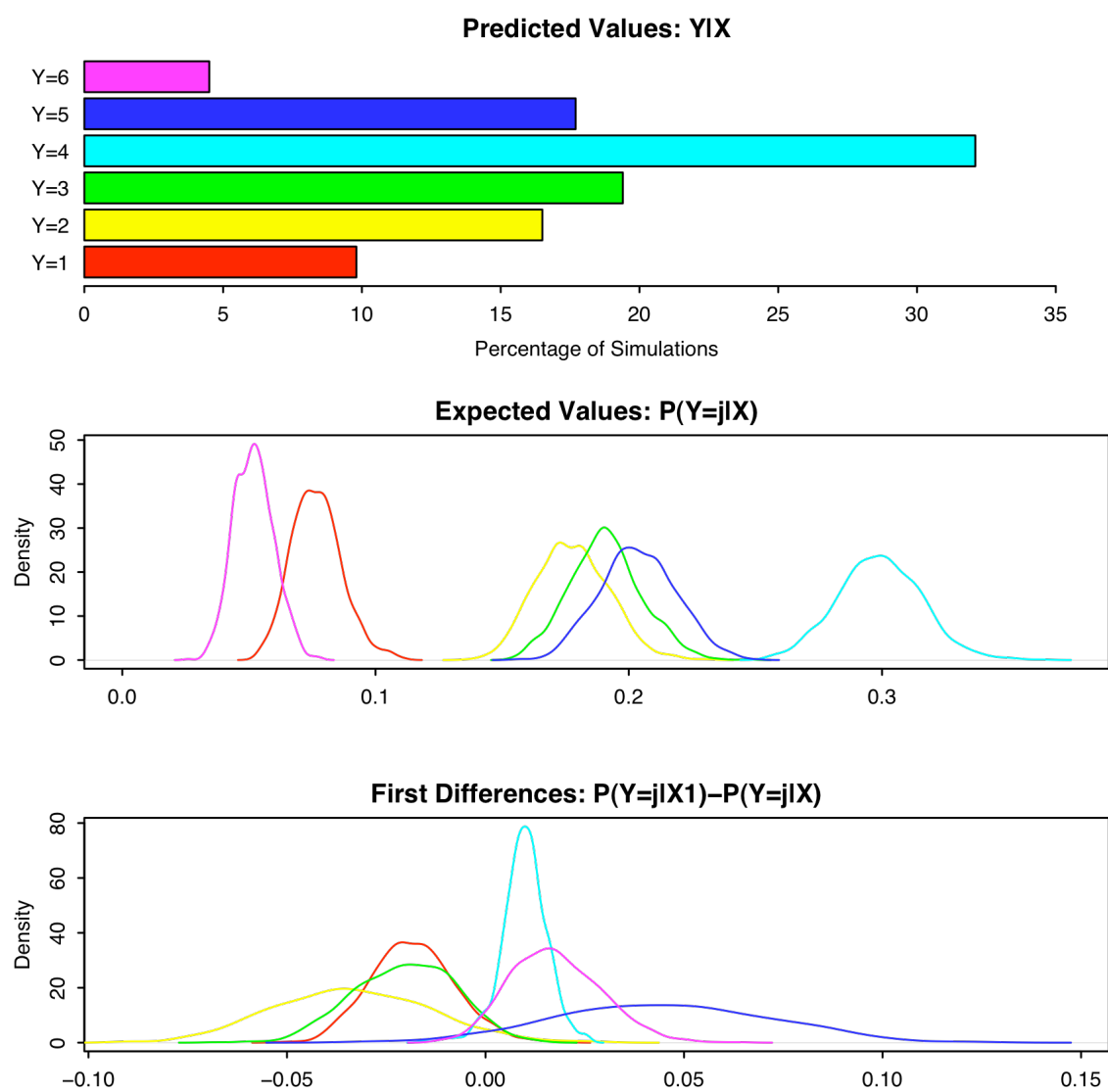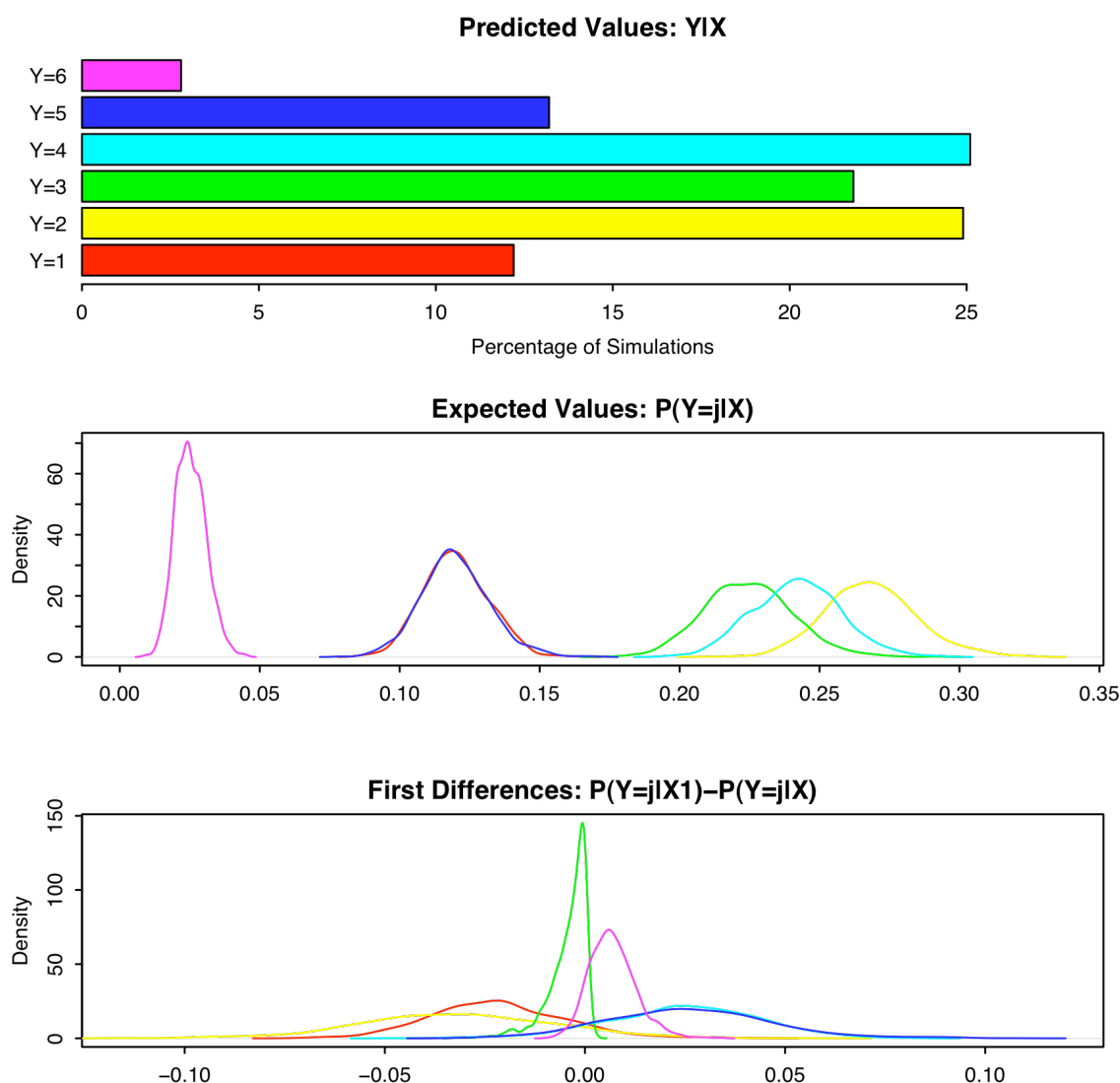Figure 9: Overall effect of matching on appeal of message

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Figure 10: Overall effect of matching on propensity to join

Predicted Values: Y|X

Expected Values: P(Y=j|X)

First Differences: P(Y=j|X1)–P(Y=j|X)

The question thus arises whether the effect depends on the precise treatment in terms of messages received. We test for this possibility first by introducing as an additional independent variable our treatment in terms of the different persuasive messages. As our results indicate (see appendix, Tables 2&3) the effect of this variable is rather small and substantively irrelevant.[13]

The effect of matching persuasive messages with motivations might depend, however, on the type of persuasive message. For this reason we re-estimated our ordered logit model allowing for different effects of the matching variable for each of

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[13] Estimating a model with only the treatment variable suggests that in terms of the Akaike information criterion (AIC) it is clearly less preferable than a model with only the matching variable.

the persuasive messages.[14] Figures 11 and 12 depict the densities of the estimated effects on the probabilities of the different response categories for the "appeal of message," respectively the "propensity to join" variable. Each figure depicts these effects for all six persuasive messages. As both figures illustrate, the effects of the matching depend on the type of persuasive message a respondent receives.

Figure 11 shows that the strongest effect for the matching appears for the persuasive message dealing with the Protection motive (second panel). Individuals receiving this message and having predominantly this motivation are much more likely to respond by choosing the top two values (5 an 6) and much less likely to respond with the three lowest values (1-3). For the Understanding motive we find a similar, but much weaker such effect, while for the remaining motives, especially for Social and Values motivations, we find no effect. It is interesting to note that judging from the last panel in figure 11, matching the Career motive with the according persuasive message actually has a (statistically not significant) negative effect.

Figure 11: Effects of matching as a function of persuasive message on appeal of message [15]

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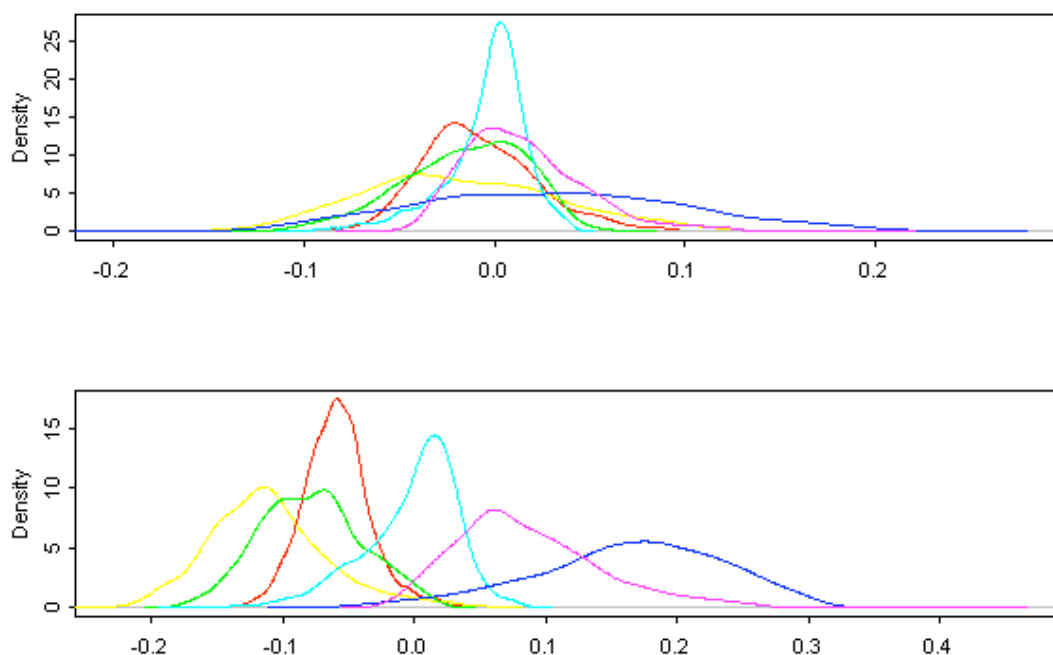
14   Again the estimates for this model appear in the appendix.

15   Top panel: Social; second panel: Protection; third panel: Understanding; fourth panel: Values; fifth panel: Learning; last panel: Career; red: category 1(not true at all); yellow: category 2; green: category 3; turquoise: category 4; blue: category 5; pink: category 6 (completely true)

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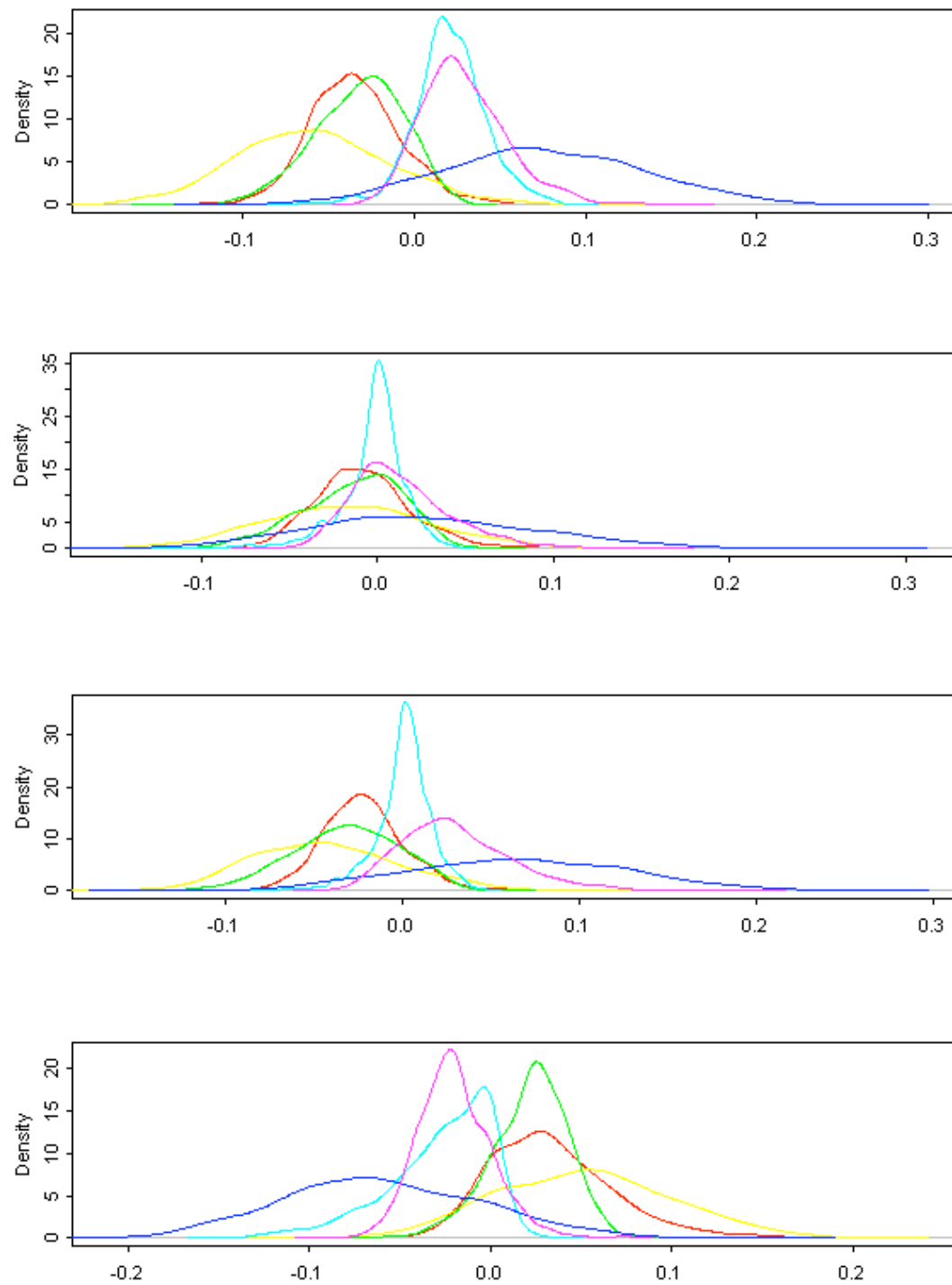
 A quick glance at figure 12 shows that the patterns of effects are similar for the "propensity to join" variable, but much weaker and all statistically not significant. We also find a gain a negative effect of the matching with the "career motivation" (last panel in figure 12).

Figure 12: Effects of matching as a function of persuasive message on propensity to join [16]
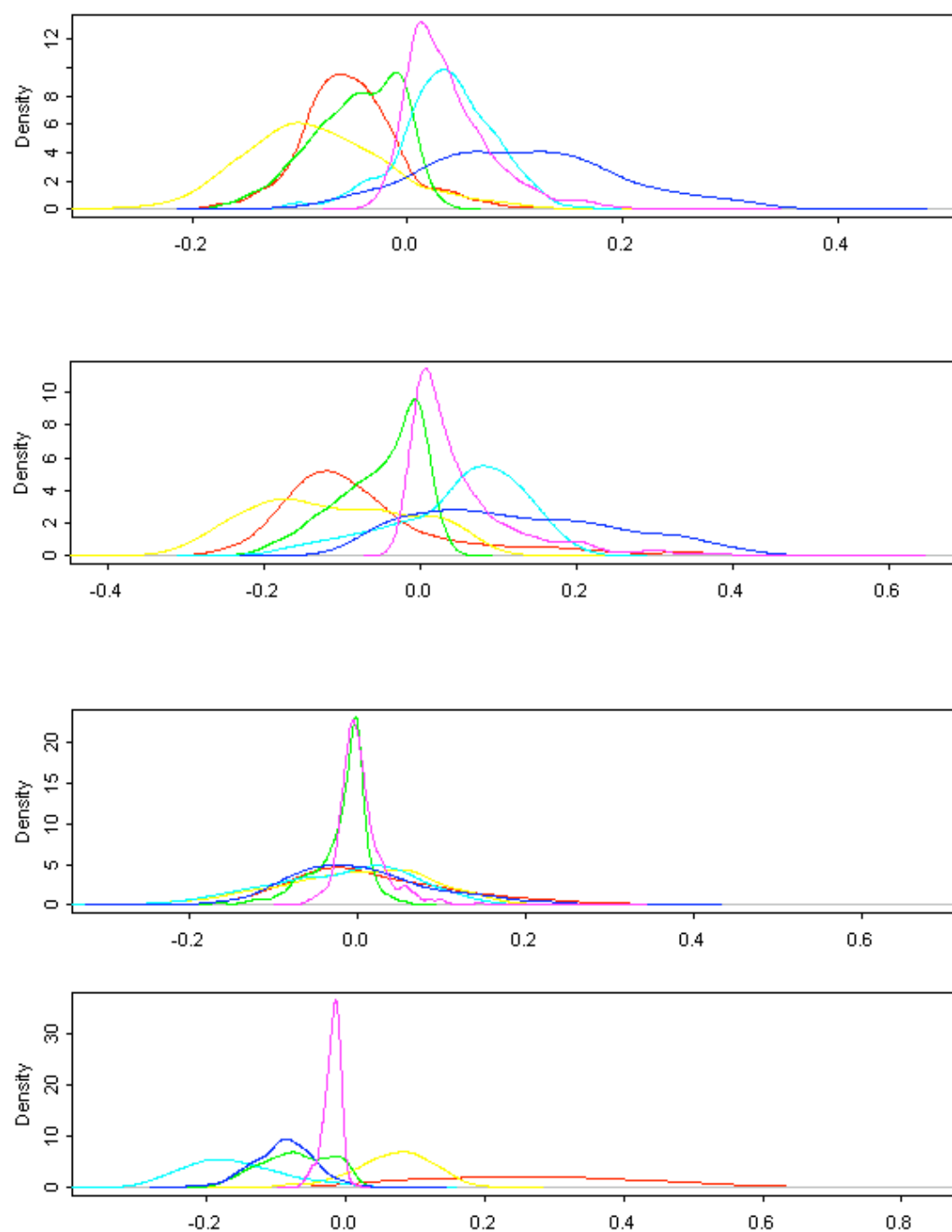
[16] Top panel: Social; second panel: Protection; third panel: Understanding; fourth panel: Values; fifth panel: Learning; last panel: Career; red: category 1 (not true at all); yellow: category 2; green: category 3; turquoise: category 4; blue: category 5; pink: category 6 (completely true)
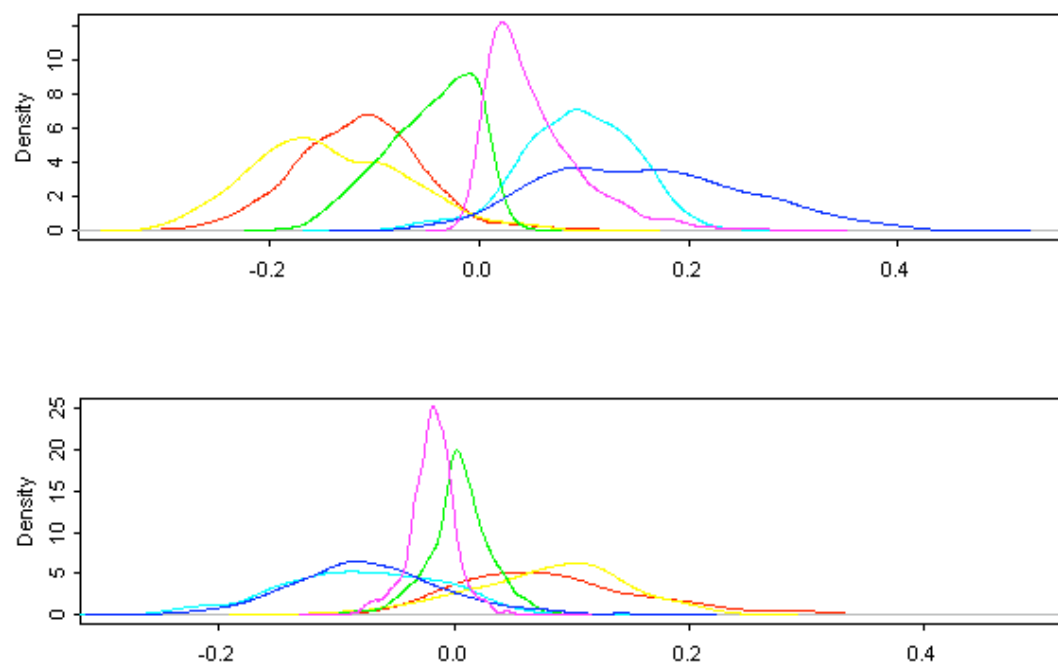
A final issue to address is whether the effects we demonstrated so far are dependent on previous volunteering experience, and whether our effects differ across university context, and thus linguistic region.[17] To assess this we estimated the same models for these four possible combinations of context and past volunteering.[18]

As figures 13 and 14 nicely illustrate, we find differences especially for two persuasive messages.[19] In figure 13 we find that in Zurich matching a persuasive message relating to the Protection motivation increases the appeal of the message, and this independent of whether the individual has a past volunteering experience. This same effect is largely absent in Geneva.

Figure 14 depicts another differential effect related to the Learning motivation. Here we only find an effect due to matching on the appeal of the message in Zurich, provided the respondent has some past volunteering experience. Again, in Geneva, and for respondents not having some past volunteering experience, this effect fails to materialize.

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[17]   In what follows we will only consider the differential effects due to past volunteer work, since the results depicted in tables 4 and 5 (see appendix) suggest that present volunteer work has a much smaller and negligible effect.

[18]   Again, the results for these models appear in the appendix.

[19]   There are also some differences due to the ``value motivation,'' but due to a quirk in the experimental design, we cannot estimate the matching effect in all four models. For this reason we omit this motivation from the present presentation.

Figure 13: Differential effects of matching for protection motivations on appeal of message [20]
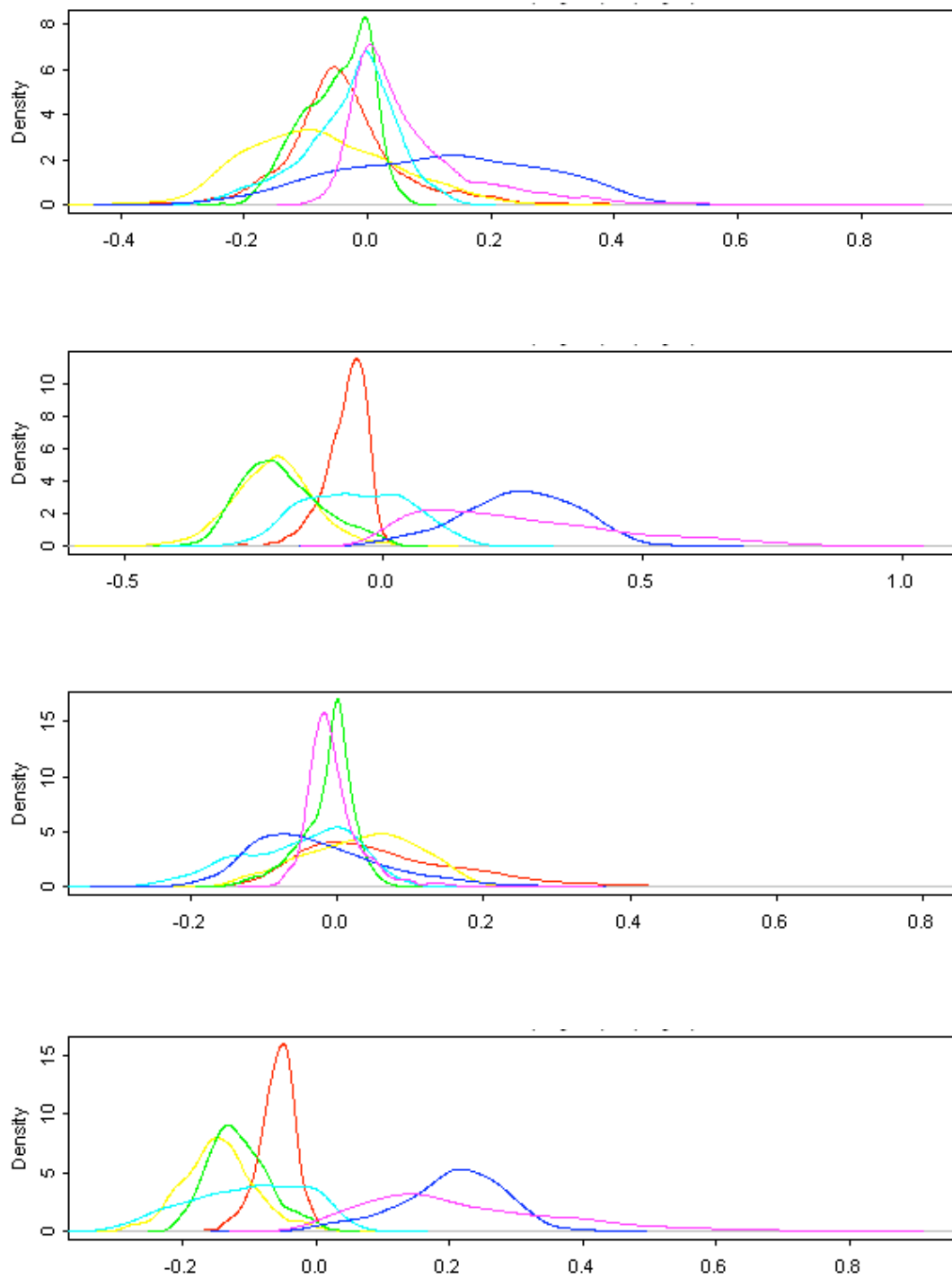
[20]   Top panel: Social; second panel: Protection; third panel: Understanding; fourth panel: Values; fifth panel: Learning; last panel: Career; red: category 1 (not true at all); yellow: category 2; green: category 3; turquoise: category 4; blue: category 5; pink: category 6 (completely true)

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Figure 14: Differential effects of matching for learning motivations on appeal of message [21]
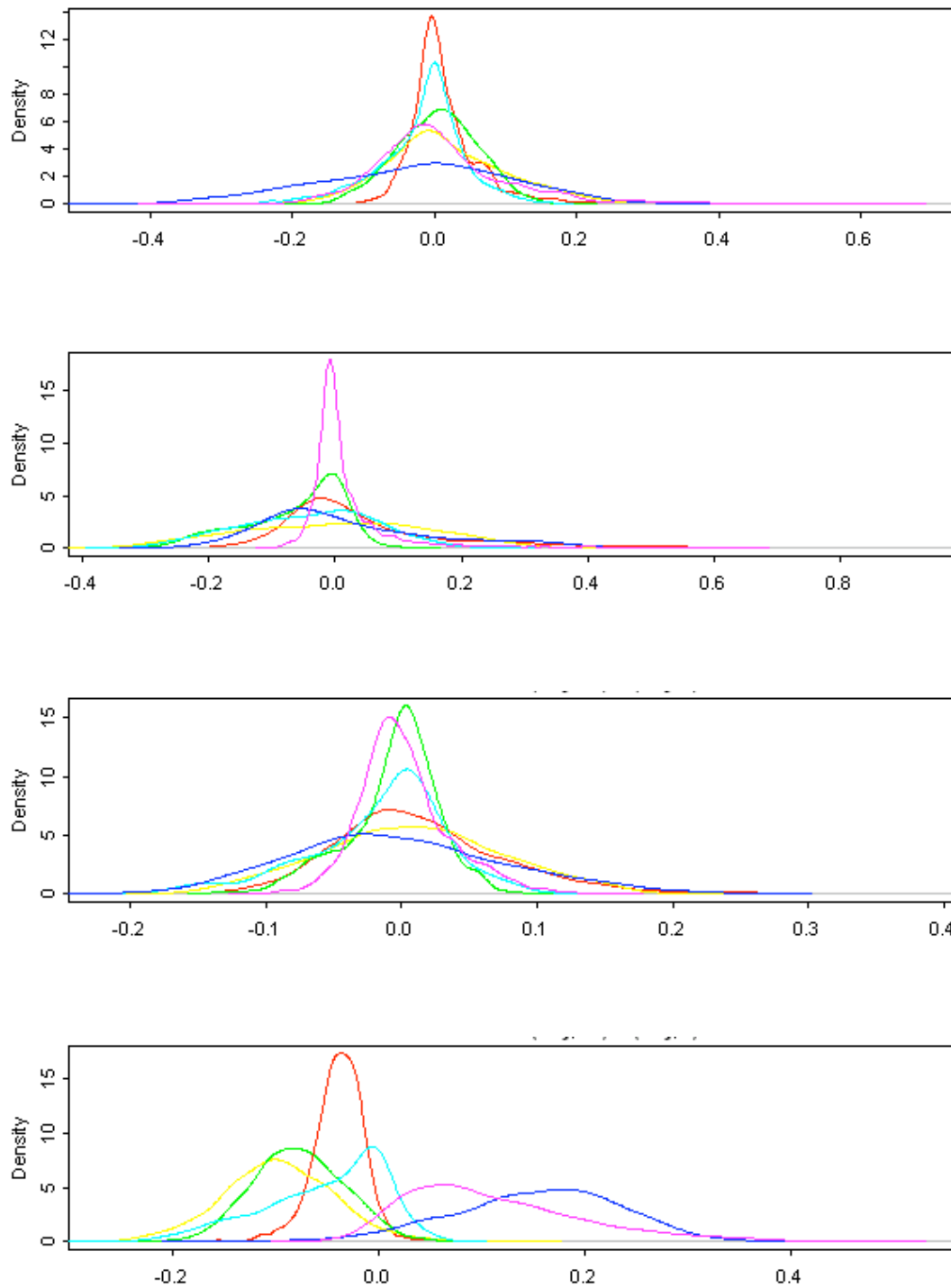
[21]   Top panel: Social; second panel: Protection; third panel: Understanding; fourth panel: Values; fifth panel: Learning; last panel: Career; red: category 1 (not true at all); yellow: category 2; green: category 3; turquoise: category 4; blue: category 5; pink: category 6 (completely true)

Discussion

The aim of this study was to find out more about the interaction of volunteer motives and persuasive messages. To this end, we conducted an online experiment that entailed the completion of a motive questionnaire following Clary et al. (1998) and as a second step, the exposure to a persuasive message regarding volunteer recruitment according to motive type.

We found four motive categories to be predominant in the participants: The most highly rated motive was Values – an other-oriented, altruistic motive - followed by Understanding, Enhancement and Career, which are predominantly self-oriented. This confirms the results of previous studies that found the Values, Understanding and Enhancement motives to be most prevalent. The Understanding and Career motives, which we thought to be prevalent for this student sample, thus do in fact play an important role in reasoning to engage in volunteer activity.

There were some differences in distribution in terms of language region (university) and gender. The Protection and Enhance group of motives were more highly rated in Geneva than Zurich, which was at odds to previous studies. In terms of gender, the Understanding motive seemed more important for female students. Some motives were, as expected, influenced by present volunteering activities of participants, namely the Social and Understanding motives which were more relevant for existing volunteers. The Values motive was found to be more important for non-volunteers.

As for the matching effect, we found that there is a positive influence of matching motive and message in terms of message appeal. This applied to a lesser extent to the propensity to volunteer. Our matching hypothesis, that recruitment efforts emphasizing one of the identified motives for volunteering will encourage to volunteer most strongly individuals for whom this motive is of central importance, was thus confirmed.

The type of message was significant for message appeal in some instances, with the Protection message having the strongest effect followed by Understanding. For the propensity to join, the type of message participants were exposed to had no statistically significant effect. When controlling for present/previous volunteering experience, there was no effect of volunteering experience for Protection in Zurich. For the Understanding motive, it is the other way round. The effect of matching applies only to people with volunteering experience in Zurich, which again, is in line with our expectations.

In order to increase the external validity of our design, we will test, as a next step, the interaction of persuasive messages and motives, as well as motives and selected incentives in a field experiment. Letters for volunteer recruitment, containing persuasive messages, will be sent to random addresses. In co-operation with non-profit organizations, positive replies will be contacted and handed out a motive questionnaire. Upon taking up volunteer work for a non-profit organization, participants will receive selected incentives that respond to a particular functional motive. After a period, participants will complete a second questionnaire regarding their satisfaction with volunteering and their intention to stay on. In this way, the

matching hypothesis can be tested with regard to both messages and incentives. Furthermore, any motivational differences due to volunteer experience can be explicitly controlled for.

Appendix

Table 1 lists the 30 VFI motive items and the actual wording. Tables 2 and 3 report the results on which the graphical presentations for the main effects are based. Tables 4 and 5 report the results controlling for the experimental context and past volunteering experience. Figures 7 and 8 depict the distribution of answers for the five motive groups (maxima) by university and gender.

Table 1: VFI – Closed Motive Question[22]

VFI -- Closed Motive Question	
Variable Name	Answer wording
Protection_worry	No matter how bad one feels, volunteering helps to forget about it.
Protection_lonely	By volunteering one feels less lonely.
Protection_guilt	Doing volunteer work relieves of some of the guilt over being more fortunate than others.
Protection_problcope	Volunteering helps work through own personal problems.
Protection_probldistract	Volunteering is a good escape from own troubles.
Values_worry	I am concerned about those less fortunate than myself.
Values_groups	I am genuinely concerned about particular groups and want to help them.
Values_empathy	I feel compassion toward people in need.
Values_help	I feel it is important to help others.
Values_issue	I can do something for a cause that is important to me.
Career_dooropener	Volunteering can help me to get my foot in the door at a place where I would like to work.
Career_contacts	I can make new contacts that might help my business or career.
Career_experience	Volunteering allows me to explore different career options.
Career_presentjob	Volunteering helps me to succeed in my chosen profession.
Careeer_cv	Volunteering experience will look good on my CV
Social_friends	My friends volunteer.
Social_environ	People I'm close to want me to volunteer.
Social_aquaintances	People I know share an interest in community service.
Social_value_environ	Others with whom I am close place a high value on community service.
Social_important_environ	Volunteering is an important activity to the people I know best.
Understanding_skill	I can learn more about a cause for which I am working.
Understanding_perspective	Volunteering allows one to gain a new perspective on things.
Understanding_practice	Volunteering lets one learn things through direct, hands on experience.
understanding_people	I can learn how to deal with a variety of people.
Understanding_ownstrength	I can explore my own strengths.
Enhance_selfimportance	Volunteering makes one feel more important.
Enhance_value	Volunteering increases self-esteem.
Enhance_beneeded	Volunteering makes one feel needed.
Enhance_selfrealizaion	Volunteering makes one feel better about oneself.
Enhance_sociallife	Volunteering is a way to make new friends.

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[22] Question wording: "How important would each of the 30 possible reasons for volunteering be to you doing volunteer work for a charitable organization?" Response scale: From 1 (not at all important/accurate) to 6 (extremely important/accurate) .

Table 2: Effect of matching on feeling concerned

					past volunteering	
					no	yes
	b	b	b	b	b	b
	(s.e)	(s.e)	(s.e)	(s.e)	(s.e)	(s.e)
match	0.297	0.291				
	(0.181)	(0.184)				
social		0.073	0.085	0.071	0.618	-0.126
		(0.243	(0.251	(0.251	(0.452	(0.304
protection		-0.099	-0.182	-0.175	-0.396	-0.074
		(0.243	(0.249	(0.249	(0.429	(0.307
understanding		-0.140	-0.193	-0.191	-0.734	0.150
		(0.245)	(0.259)	(0.259)	(0.429)	(0.326)
values		0.092	0.106	0.142	0.630	-0.174
		(0.246)	(0.257)	(0.258)	(0.440)	(0.318)
learning		0.119	0.092	0.103	0.146	0.079
		(0.242)	(0.253)	(0.253)	(0.462)	(0.305)
career		0.143	0.284	0.310	0.381	0.257
		(0.242)	(0.253)	(0.253)	(0.455)	(0.307)
match*social			0.216	0.261	-0.018	0.218
			(0.479)	(0.480)	(0.761)	(0.620)
match*protection			1.123	1.169	1.795	0.760
			(0.564)	(0.561)	(0.928)	(0.718)
match*understandin			0.519	0.496	0.637	0.295
			(0.402)	(0.404)	(0.849)	(0.468)
match*values			0.217	0.157	-1.755	1.168
			(0.452)	(0.449)	(0.786)	(0.535)
match*learning			0.441	0.415	0.348	0.491
			(0.427)	(0.430)	(0.872)	(0.493)
match*career			-0.444	-0.345	-0.611	-0.394
			(0.420)	(0.424)	(0.714)	(0.525)
past_vol				0.346		
				(0.154)		
pres_vol				0.009		
				(0.144)		
1|2	-2.487	-2.464	-2.472	-2.472	-2.663	-2.431
	(0.139)	(0.209)	(0.209)	(0.209)	(0.372)	(0.256)
2|3	-1.081	-1.057	-1.063	-1.063	-1.103	-1.070
	(0.087)	(0.178)	(0.179)	(0.179)	(0.309)	(0.221)
3|4	-0.226	-0.199	-0.201	-0.201	-0.177	-0.215
	(0.077)	(0.175)	(0.175)	(0.175)	(0.303)	(0.216)
4|5	1.059	1.089	1.096	1.096	1.020	1.169
	(0.087)	(0.180)	(0.181)	(0.181)	(0.313)	(0.224)
5|6	2.899	2.930	2.947	2.947	3.091	2.945
	(0.162)	(0.226)	(0.227)	(0.227)	(0.402)	(0.277)
dev.	2547.250	2544.700	2539.030	2532.860	802.190	1713.720
n	764	764	764	764	244	520

Table 3: Effect of matching on propensity to join

Table 3	b (s.e)	b (s.e)	b (s.e)	b (s.e)	past volunteering no b (s.e)	past volunteering yes b (s.e)
match	0.236 (0.186)	0.241 (0.190)				
social		-0.089 (0.244)	-0.120 (0.251)	-0.132 (0.251)	-0.574 (0.479)	0.156 (0.301)
protection		-0.442 (0.239)	-0.420 (0.246)	-0.419 (0.247)	-1.280 (0.434)	-0.002 (0.303)
understanding		-0.226 (0.243)	-0.357 (0.255)	-0.350 (0.256)	-1.073 (0.429)	0.031 (0.320)
values		-0.176 (0.243)	-0.140 (0.252)	-0.095 (0.253)	-0.896 (0.412)	0.300 (0.321)
learning		-0.071 (0.242)	-0.097 (0.253)	-0.095 (0.253)	-0.278 (0.442)	0.062 (0.310)
career		0.202 (0.245)	0.325 (0.256)	0.346 (0.256)	-0.465 (0.477)	0.704 (0.310)
match*social			0.511 (0.558)	0.509 (0.559)	-2.532 (1.357)	0.996 (0.590)
match*protection			0.042 (0.504)	0.036 (0.505)	0.944 (0.824)	-0.400 (0.630)
match*understandin			0.858 (0.413)	0.859 (0.415)	1.722 (0.666)	0.365 (0.525)
match*values			0.005 (0.471)	-0.042 (0.468)	0.985 (0.991)	-0.322 (0.537)
match*learning			0.384 (0.441)	0.367 (0.441)	0.269 (0.673)	0.352 (0.603)
match*career			-0.400 (0.437)	-0.326 (0.439)	0.437 (0.752)	-0.812 (0.545)
past_vol				0.224 (0.153)		
pres_vol				0.177) (0.144)		
1|2	-1.995 (0.115)	-2.123 (0.195)	-2.132 (0.195)	-1.907 (0.219)	-2.857 (0.348)	-1.806 (0.240)
2|3	-0.460 (0.079)	-0.582 (0.175)	-0.586 (0.175)	-0.356 (0.202)	-1.145 (0.294)	-0.289 (0.220)
3|4	0.453 (0.078)	0.337 (0.173)	0.339 (0.173)	0.573 (0.202)	-0.093 (0.282)	0.610 (0.221)
4|5	1.766 (0.105)	1.662 (0.186)	1.670 (0.187)	1.911 (0.215)	1.280 (0.300)	1.947 (0.239)
5|6	3.654 (0.229)	3.556 (0.275)	3.568 (0.276)	3.811 (0.296)	3.259 (0.479)	3.818 (0.341)
dev.	2498.790	2490.460	2485.360	2479.400	769.720	1694.010
n	764	764	764	764	244	520

Table 4: Effect on feeling concerned as a function of past volunteering and university

	past volunteering		past volunteering	
	no		yes	
	Geneva	Zurich	Geneva	Zurich
	b	b	b	b
	(s.e.)	(s.e.)	(s.e.)	(s.e.)
social	0.526	0.775	-0.480	0.212
	(0.645)	(0.647)	(0.448)	(0.420)
protection	-0.206	-0.568	-0.380	0.244
	(0.656)	(0.593)	(0.431)	(0.442)
understanding	-0.430	-1.197	-0.056	0.365
	(0.576)	(0.659)	(0.450)	(0.478)
values	0.545	0.741	-0.393	0.035
	(0.609)	(0.651)	(0.426)	(0.490)
learning	0.945	-0.541	-0.283	0.443
	(0.663)	(0.655)	(0.435)	(0.431)
career	0.628	0.093	-0.161	0.647
	(0.631)	(0.672)	(0.451)	(0.424)
match*social	0.604	-0.428	1.045	-0.364
	(1.252)	(0.989)	(0.951)	(0.801)
match*protection	0.789	2.747	-0.407	1.937
	(1.334)	(1.223)	(0.915)	(0.915)
match*understanding	0.127	1.730	0.003	0.547
	(1.003)	(1.575)	(0.679)	(0.653)
match*values	-2.858	-0.621	1.322	1.123
	(1.096)	(1.007)	(0.822)	(0.730)
match*learning	-0.103	-0.177	-0.069	1.147
	(1.047)	(1.556)	(0.685)	(0.712)
match*career	0.502	-0.980	-0.493	-0.299
	(1.245)	(0.895)	(0.777)	(0.713)
1|2	-2.428	-3.104	-2.576	-2.340
	(0.506)	(0.573)	(0.358)	(0.371)
2|3	-0.969	-1.313	-1.356	-0.798
	(0.423)	(0.461)	(0.316)	(0.312)
3|4	-0.253	-0.124	-0.439	0.008
	(0.417)	(0.449)	(0.307)	(0.308)
4|5	0.958	1.190	0.942	1.439
	(0.431)	(0.467	(0.314	(0.322
5|6	3.179	3.169	2.672	3.309
	(0.557)	(0.601)	(0.390)	(0.401)
dev.	391.820	391.040	853.100	847.970
n	123	125	258	263

Table 5: Effect on propensity to join as a function of past volunteering and University

	past volunteering no		past volunteering yes	
	Geneva b (s.e.)	Zurich b (s.e.)	Geneva b (s.e.)	Zurich b (s.e.)
social	0.931 (0.700)	-1.979 (0.681)	-0.074 (0.444)	0.275 (0.420)
protection	0.063 (0.627)	-2.558 (0.626)	0.249 (0.430)	-0.243 (0.431)
understanding	-1.099 (0.646)	-1.341 (0.601)	-0.062 (0.432)	0.166 (0.483)
values	0.364 (0.595)	-2.078 (0.594)	0.405 (0.453)	0.193 (0.461)
learning	0.043 (0.590)	-0.493 (0.712)	0.424 (0.449)	-0.260 (0.435)
career	-0.298 (0.718)	-0.860 (0.667)	0.811 (0.426)	0.607 (0.457)
match*social	-17.972 (0.000)	-0.602 (1.632)	1.013 (1.490)	0.844 (0.665)
match*protection	0.462 (1.196)	1.319 (1.126)	-0.932 (0.734)	0.960 (1.223)
match*understanding	2.281 (0.891)	1.527 (1.096)	0.682 (0.665)	-0.084 (0.884)
match*values	0.199 (1.059)		0.408 (0.677)	-1.527 (0.818)
match*learning	0.092 (0.850)	0.679 (1.160)	-1.374 (0.969)	1.363 (0.739)
match*career	1.932 (1.274)	-0.381 (0.953)	-1.117 (0.943)	-0.721 (0.681)
1|2	-2.803 (0.533)	-3.426 (0.512)	-1.895 (0.340)	-1.819 (0.346)
2|3	-0.736 (0.405)	-1.737 (0.448)	-0.179 (0.305)	-0.426 (0.322)
3|4	0.528 (0.402)	-0.740 (0.420)	0.773 (0.308)	0.461 (0.322)
4|5	1.782 (0.437)	0.920 (0.429)	2.032 (0.334)	1.906 (0.346)
5|6	3.635 (0.632)	3.211 (0.786)	3.866 (0.479)	3.819 (0.489)
dev.	368.730	371.130	825.770	851.980
n	123	125	258	263

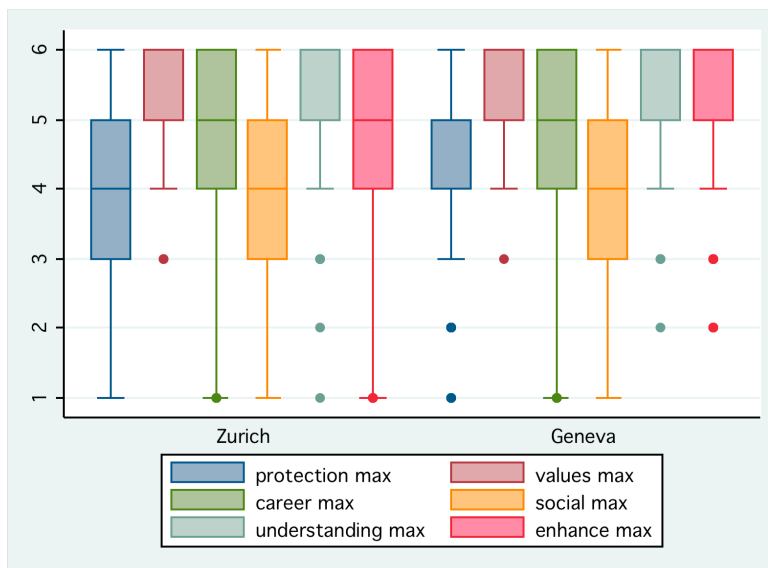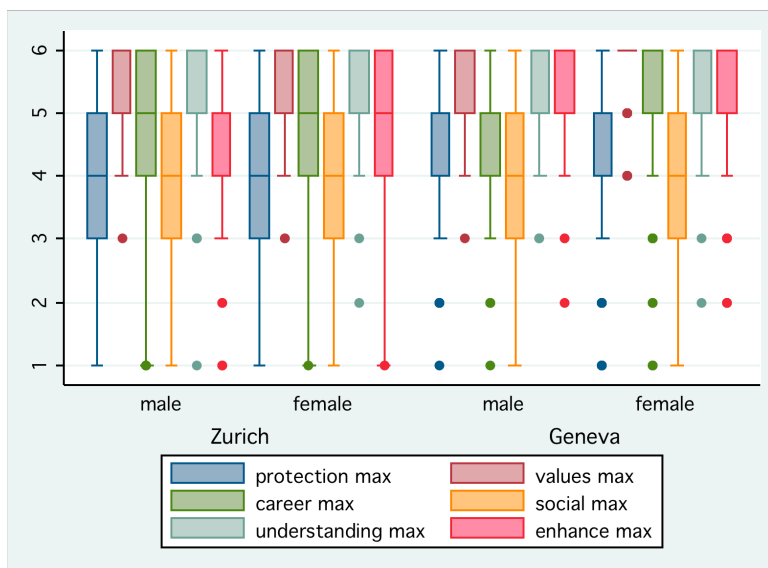Figure 7: Motivations (max) by University

Figure 8: Motivations (max) by Gender and University

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